

April 25, 2014

Town of Madbury Planning Board
Attn. Fritz Green, Planning Board Chair
13 Town Hall Road
Madbury, New Hampshire 03823

RE: Huckins Road Subdivision

Huckins Road Madbury – Tax Map 2, Lot 20

Dear Mr. Green,

We are in receipt of a review letter from Jack Mettee, AICP dated April 10, 2014, concerning the above referenced project and have addressed the comments below. For clarity, our responses are in **bold** print.

1. Consistency with the Town of Madbury Zoning Ordinance.
Article IV: General Provisions, Section 4. Septic Locations
Comment: It would be helpful if the applicant revised the plan sheets to amend the building set back note to include the fact that it is also a septic system setback (Sheet 2 of 10). It would also help if the Sheet 2 of 10 included typical setback dimensions on the plan.

RESPONSE: Survey Plan to be updated to read building / septic

Article V: General Agricultural and Residential District
Comment: Four (4) of the eight (8) of the lots have contiguous areas of greater than 90,000 sf and could conceivably accommodate a two-family dwelling. The applicant has indicated that the lots will be for single-family dwellings. The Board may want to confirm this with the applicant and issue a condition of approval either verifying this or requesting that in the future if any of the lots are two-family dwellings, the Board may also seek a subsequent review.

RESPONSE: As stated on plan 3 of 10, note 7, the proposal is for single family development.

Article IX: Wet Area Conservation District
Comment: There are no vernal pools indicated. The Board may want to ask the applicant to verify this.

RESPONSE: No vernal pools were found on site.

2. Consistency with Subdivision Requirements/Standards

Section 15: Monuments—permanent monuments should be set as required by the Planning Board.

RESPONSE: A certificate of monumentation shall be provided by the surveyor.

Article IV: Required Exhibits and Data

Comments: Section 1, Names: The cover sheet does not specifically name the subdivision. Subsequent plan sheets refer to it as Residential Development, Long Hill Road. The proposed subdivision is actually on Huckins Road. This nomenclature should be amended.

RESPONSE: Plan set updated to state Huckins Road, subdivision shall be known as Jasper's Corner.

Section 5, Streets:

There will need to be a name for the proposed subdivision street.

The applicant will need to meet the requirements for building on a Class VI roads per RSA 674:41

(1) The local governing body after review and comment by the planning board has voted to authorize the issuance of building permits for the erection of buildings on said class VI highway or a portion thereof; and

(2) The municipality neither assumes responsibility for maintenance of said class VI highway nor liability for any damages resulting from the use thereof; and

(3) Prior to the issuance of a building permit, the applicant shall produce evidence that notice of the limits of municipal responsibility and liability has been recorded in the county registry of deeds

RESPONSE: Updating to meet criteria.

Article V: Subdivision Standards

Section 2: Driveway Visibility – The applicant is required to provide 200 feet for site distance for each driveway for each lot for access on to the unnamed subdivision road.

Comment: The lots on the cul-de-sac may not literally meet this standard. The applicant should provide a note indicating this standard is met or request a waiver, if necessary. In addition, while the site distance from the intersection of the proposed subdivision road and Huckins Road seems to be sufficient, a note on the plan indicating this would be helpful.

RESPONSE: Site distance for driveways to be added to the plan.

Section 3: Shared Driveways - The applicant has not indicated the need for any shared driveways.

Comment: The Planning Board may want to inquire if the applicant has any intention of installing such driveways.

RESPONSE: No shared driveways are proposed.

Section 8: Required Off-Site Improvements—The applicant will need to extend Huckins Road approximately 350 feet in order to provide access to the proposed unnamed subdivision road.

Comment: While this activity is addressed on the P1 Plan and Profile, Sheet 4 of 10, it would be helpful to provide a note on the Subdivision Plan to indicate this off-site construction activity is to be undertaken.

RESPONSE: Huckins Road to be updated to Class 5 standards.

Section 12: Septic Systems and Water Supply – The applicant has provided for individual on-site septic systems and on-site water supplies for each lot. Potential well sites and associated 75-foot radii are depicted on Subdivision Site Plan, Sheets 3 of 10.

Comment: The applicant would make the drawing clearer if at least one water well radius image was labeled with a 75-foot label.

RESPONSE: Dimension added to note on sheet 3 of 10.

Section 14: Proof of Compliance: The applicant needs to provide proof of compliance for each of the following:

- Feasible locations for water supply/waste water disposal
- Easements
- Topographic limitations
- Test pits
- Percolation Tests

Comment: The applicant has provided evidence for feasible locations for water supply/waste water disposal, test pits and percolation tests. There appear to be no topographic limitations. The subdivision Plan P 2 Plan and Profile, Sheet 5 of 10 indicates a drainage discharge location that will require a drainage easement. This should be noted on the plan and a condition should be placed on any approval requiring that a legal description be provided to the Planning Board and made part of the submission to the Registry of Deeds.

RESPONSE: Drainage easement shall be labeled and bearings and distances called out on sheet 2 of 10.

Section 18: Storm-water Runoff – No separate stormwater or erosion/sediment control plan drawing has been provided by the applicant. Stormwater management measures can be surmised from various drawings such as Plan P 2 Plan and Profile, Sheet 5 of 10 and Sheets 9 (Construction Details) and 10 (Erosion Control Details). The applicant has provided a Drainage Study that addresses the requirement to ensure post development stormwater discharge at

the perimeter of the subdivided property should not exceed the pre-development rate.

Comment: The Planning Board should ask the applicant to fully discuss how stormwater will be managed. I would be interested in having a further explanation of how the constructed gravel wetland will function, how it will be maintained, etc. The Road Construction Standards of the Subdivision Regulations (Section 4.) encourages landscaping in the center of cul de sacs. How does the applicant intend to address this provision? Further discussion of this issue is also in the Impact Statement Section below.

RESPONSE: Stormwater run-off collect through road side swales and culverts will be treated by the sedimentation forebay and stored by the gravel wetland. The gravel wetland will also allow for the percolation of stormwater flows. These are well established practices as required by the NHDES. Landscaping around the perimeter has also been added.

I received the Drainage Analysis and Sediment & Erosion Control Plan Report, dated March 18, 2014 at the last PB meeting on April 2nd. I have reviewed the report and have the following comments.

- *As an engineering explanation of the HydroCAD modeling, the report is satisfactory. It analyzes the pre- and post-development stormwater flows and peak discharge rates for standard year/rainfall intervals and explains the post development stormwater management system that provides the setting for proper stormwater management.*
- *There is a statement on an unnumbered page under the ANALYSIS heading that claims that the installed stormwater system (culverts, etc.) will maintain the existing drainage pattern and surface water hydrology. I know what is being said, but the existing natural drainage “pattern” has been disrupted so I don’t know how it can be stated that it is maintained.*

RESPONSE: The existing overall area drainage pattern shall remain basically the same. Storm water is flowing to the same hypothetical analysis point.

- *In the text there are several locations where the report refers to drawing sheets that do not appear to be included in the report. E.g., on page 1, Reference: Sheet W-1 Existing Conditions Watershed Plan—the plan included but it is labeled Sheet No. 1 of 2 not W-1. A reviewer can discern the difference, but it does cause confusion.*

RESPONSE: The report and plans shall be updated to remove confusion.

- *On page 3, Section 4.3 there is a reference to “Green Book”. Can the applicant explain what this is?*

RESPONSE: The green book is a reference to the NH Stormwater Manuals, Volumes 1-3 dated December 2008. The manuals can be found on the NHDES website.

- *On page 4, the Construction Sequence differs from the one on the plan Sheet 10 of 10. Please explain/rectify. In addition, a number of the Maintenance procedure/standards in Section 4.10, page 5 are not consistent with what is on plan Sheet 10 of 10, Erosion Control Details Some of these do not seem to apply to this development, such as #2 that references bioretention systems. Similarly #'s 3, 6, and 10.*

RESPONSE: The standard details shall be updated to better reflect the requirements of the development. A stormwater management operations and maintenance plan has been developed for this project (see attached).

- *Are Sheets 1 and 2 in this report the same as Sheets 9 and 10 in the plan set? Please verify.*

RESPONSE: Sheets 9 & 10 are standard details sheets while sheets W-1 and W-2 of the drainage analysis reflect pre and post stormwater modeling efforts.

3. Other Comments on the Subdivision Plan Sheets

Overall these plans are suitable for illustrating the nature of the proposed subdivision. Below are general comments with respect to the format of the plan sheets. The following would be helpful to the overall readability and presentation of data for Planning Board review.

- a. Providing a subdivision name and having this name be place on all sheets.
- b. Changing the reference on various plan sheets from Long Hill Road to Huckins Road.
- c. Editing plan sheets for typos; e.g. Cover Sheet, Index Listing 6—“*Sections*” misspelled.
- d. Sheet 1 of 10 under HISS Key to Soil Types under #6 there is a reference to a publication, but not clear which publication this is. Also in the legend on the lower right of drawing there is missing data for zoning dimensions. These are noted elsewhere (Sheet 2 of 10), but should be included here if the applicant chooses to maintain these notes on both sheets.
- e. Sheet 3 of 10: there are several test pit types (acceptable/failed) and labels that are difficult to read under the septic reserve area cross-hatch. These should be made clearer. Acceptable/failed test pit symbols in legend are also difficult to distinguish. Drainage easement on Lot 3 should be identified.

- f. Sheet 9 of 10, Details: This sheet is crowded with details for subdivision construction from utility trench details, to sign post installation to stormwater devices making it a challenge to read and review. In addition, it is difficult to correlate the stormwater details with those illustrated on the Road Plan and Profile (Sheet 5 of 10). The applicant should consider providing a separate drainage and erosion control plan as a new/separate sheet. While some of the details are clarified in the Subdivision Impact Statement, improving the clarity of this drawing or adding another would be helpful.
- g. Similar to Sheet 9, Sheet 10 is crowded with detail and it is not always clear which diagram goes with which explanatory text. Can the applicant improve the layout/clarity?

RESPONSE: All points to be addressed where possible.

Subdivision Impact Statement

The applicant provided a written Subdivision Impact Statement. The following comments address statements made in these documents.

- Under Schools the applicant cites 0.53 students per dwelling unit based on the 2000 census. This ratio should be clarified since the number of school children is usually a function of the number of bedrooms in a residential unit and this application has no information in this regard. Also since the 2010 Census has been published, can this ratio be updated? The applicant also refers to improving the subdivision road to accommodate school bus service. This should be further clarified.
RESPONSE: It is our professional opinion that the calculation be based on actual census data rather than a general bedroom count
- Under Traffic the applicant suggests that there will be a total of 14 vehicle trips during the am and pm peaks. While the numbers may be small, it might also be useful to know what the daily trip end total is expected to be.
RESPONSE: 10 trips per day per house of 70 trip ends per day, 35 entering and 35 exiting.
- Under Population the applicant indicates there would be approximately 17-18 new residents assuming two adults. No comment.
- Under Municipal Costs the applicant considers just municipal costs. Considering only municipal costs, the applicant suggests that municipal costs will not create major change. While this may be correct intuitively, it would be helpful if the applicant provided information with expected per unit tax revenues versus per unit costs for services—road, police, fire, etc. School costs also need to be addressed.
RESPONSE: The homes constructed are expected to range in price between \$350,000 and \$450,000. An average value would therefore be \$400,000 at \$24.52/1,000 or \$9,800 per house, \$68,700 total tax revenue per year. It is the opinion of this office

- that this will adequately offset the cost to be incurred by the municipality for services from the town.**
- Utilities/Safety—No Comment
 - Under Taxes—can the applicant provide approximate revenues to be expected. In addition, can the applicant provide the amount of Current Use penalty tax to be expected.
RESPONSE: \$68,700 total tax revenue per year can be expected. The property is not under current use based on review of town records therefore no penalties are anticipated.
 - Under Drainage—it would be helpful if the applicant better described the drainage system including the constructed gravel wetland in the cul-de-sac. Can Low Impact BMP's (e.g., small on-site rain gardens) be employed? It would also be helpful if the applicant provided information about the long-term maintenance of the stormwater/ drainage system. See also Note f. in section above.
RESPONSE: Individual home improvements can be constructed to limit stormwater runoff concerns however control over these types of uses and designs would be difficult. The Drainage Analysis has been designed to mitigate differences in stormwater flows and additional impervious surfaces caused by the development.
 - Solid Waste; Groundwater; Pollution—No Comment
 - Under Erosion, the applicant indicates that there will be minimal disturbance to vegetative cover, although this does not include the disturbance for each house lot. Can the applicant offer a rule-of thumb for such disturbance?
RESPONSE: It is anticipated that each house lot will create an addition 8-10,000 square feet of disturbance. Review of the Drainage Analysis subcatchment areas will show that these improvements have been included in our calculations.
 - Under Ecology, the applicant states that the subdivision would not impact the ecology of the site. Although minimal, there will some impact to the existing ecology. It is not clear what information this statement is based on, since, for example, there was no reporting on such site ecological phenomena as wildlife. Some further information on this would be helpful.
RESPONSE: The area of focus for development does not provide critical habitat data for wildlife. Such habitat areas are undeveloped and are protected by buffers and setbacks.

We trust the information and revised plans submitted here will address all cited areas of concern for this application.

If you have any questions, please feel free to contact this office.

Very truly yours,
BEALS ASSOCIATES PLLC

Christian O. Smith, PE
Principal