

From: kball@acheronengineering.com
Sent: Thursday, March 07, 2019 3:29 PM
To: Amanda L. Lessard
Cc: 'Matt Hancock'; 'David Fowler'; 'Brock Gourley'
Subject: RE: 3324.18 Durant Homestead - Review of CR received on 3/4/19

Good afternoon, Amanda.

Matt Hancock Properties and Acheron has gone over the town review comments below provided and prepared by Gorrill Palmer. You will find in red below, Matt Hancock properties responses and intentions to address the comments for the town staff and Planning Board's consideration.

Please let me know if you have any comments or concerns.

Kirk

Kirk Ball, PE
Acheron Engineering
207-368-5700

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From: Amanda L. Lessard <allessard@windhammaine.us>
Sent: Wednesday, March 06, 2019 4:36 PM
To: 'kball@acheronengineering.com' <kball@acheronengineering.com>
Subject: FW: 3324.18 Durant Homestead - Review of CR received on 3/4/19

From: Owen Chaplin <ochaplin@gorrillpalmer.com>
Sent: Wednesday, March 06, 2019 4:35 PM
To: Amanda L. Lessard <allessard@windhammaine.us>
Cc: Will Haskell <whaskell@gorrillpalmer.com>
Subject: 3324.18 Durant Homestead - Review of CR received on 3/4/19

Hi Amanda, I. . We ask that the staff consider this information during their recommendations to the Planning Board and when the Planning Board reviews the waiver request.

We reviewed the response to comments sent in an email by Acheron Engineering dated March 4, 2019.

We have the following comments on the response (numbers refer to our prior comments dated 2/14/2019):

1. Response Acceptable.
2. Response Acceptable.
3. Response Acceptable.
4. Response Acceptable.
5. The applicant has requested a waiver for the requirements in Section 911.B.1(c)(1)(iii) of the ordinance relative to the location of the private wells. The applicant also indicates that this standard references dug wells, not drilled wells. We do not find reference to the standard only applying to dug wells in the language. Gorriell Palmer is aware of other issues with winter salt (from roadways) contaminating wells near roads in other communities. Ultimately, the decision to grant this waiver is up to the Board. We recommend compliance with this standard. As mentioned previously 8 of the 25 well locations were identified that do not meet the requirement, Lots 1, 2, 3, 4, 5, 7, 9, and 10. To support this waiver request well locations were evaluated further. Results show that wells on 3 of the 8 lots (Lots 4, 7 and 10) can be moved to locations that are not desirable but meet the standard; the well for Lot 9 can be relocated to Lot 8 with an easement to meet the standard; wells for Lots 1, 2, 3, and 5 cannot be relocated to meet the standard without encroaching on the 100 foot setback from a wastewater subsurface disposal system, required by the in the Subsurface Disposal Rules or be within an area identified with potentially elevated nitrate levels from subsurface disposal systems.

As an alternative, the construction of the wells for lots 1, 2, 3 and 5 could be specified on plans in accordance with Table 7A of the Maine Subsurface Disposal Rules and Table 400.I of the Well Drillers and Pump Installers Rules. Table 7A and 400.I allows for a reduction in the setback between a private potable water supply and a disposal field with design flows less than 1,000 gpd, based on the depth of well casing or liner seal below ground level. Specifically, the casing depth for lots would be as follows; Lot 1 would be specified to be, >40 feet to 55 feet below ground level, Lot 2, > 70 feet to 86 feet below grade, Lot 3, > 70 feet to 86 feet below ground level and Lot 5, > 86 feet below grade. This will allow wells to be located closer to disposal beds to meet the requirement of Section 911.B.1(c)(1)(iii) and would not require the Planning Board to grant a waiver from the requirement.

Matt Hancock Properties (MHP) requests that the Windham staff recommend granting the waiver and Planning Board grant the waiver requested for Lots 1, 2, 3 and 5. MHP does not dispute that wells in other communities have been contaminated with road salt from roadways. However, when wells are constructed per current state standards, the chance of well contamination from traveled ways is very rare. If well contamination from traveled ways is common occurrence then it would be a public health concern of the Department of Health and Human Services (DHHS) and setbacks from traveled ways would be a requirement in the Well Drillers and Pump Installers Rules. DHHS has determined that contamination from subsurface disposal systems is a concern and has established setback requirements to reduce the likelihood.

6. Response Acceptable.
7. Response Acceptable
8. Response Acceptable.
9. Response Acceptable.
10. Construction entrance should be located at the edge of pavement on Chute Road as shown on the construction entrance detail. The revised plan shows the construction entrance approx. 60' from Chute Road. The location of the construction entrance will be revised to the edge of pavement on Chute Road.
11. Building lot setbacks should clearly show that wetlands are excluded. The revised plan shows the setbacks intercepting the wetlands, but do not clearly show that the wetlands are excluded

from the building envelopes. Plans will be revised to include a setback line in the same location as the wetland boundaries within lots. In addition a note will be added to plans that indicated wetlands are excluded from the building envelope.

12. The applicant has requested a waiver for the requirements in Section 911.M.5(a)(2). We have no technical concerns with this waiver request.
13. Response Acceptable.
14. Response Acceptable.
15. Is the road proposed to be private, or presented to the Town for public acceptance? If the applicant is seeking Town Acceptance for Penny Whistle Lane, the vertical alignment should meet the design controls in AASHTO Green Book (7th Edition). In addition, Maine Legislature Statue (2075) Title 29-A, Chapter 19, subchapter 1 'Rules of the Road' prohibits speed limits of 15 mph on municipal roads except on roads on islands or dead end roads less than a 1/4 mile in length. Therefore, the sag curve proposed at Sta. 5+50 should be designed for a speed limit at least 20 mph. However, if Penny Whistle Lane is to remain private, the applicant shall provide 15 mph speed limit signs as described in the comment responses. The applicant is also required to include the private road notation in Section 911.M.5(a)(5)(v). The road has been presented to the board for public acceptance. The sag curve design at station 5+50 will be revised to have a "K" factor of 17.52 which will meet the AASHTO Green Book standard for a 20 mph speed limit. The speed limit sign detail will be revised to indicate a speed limit of 20 mph.
16. The Typical Section on sheet C-11 has been revised to meet the required ditch depth. However, it does not appear that the grading plans were updated to match the typical section. We recommend that the grading plans be updated to match the typical road section to avoid confusion during construction. Contours indicating the bottom of the road side ditches on all grading plans will be shifted 1-foot to match the typical section.

Additional Comment:

17. Sheet C-10 provides an approximate depth of bedrock along the proposed roadway (based on test pits). There are several sections where drilling/blasting will be required to get the bedrock below subgrade. To avoid potential subsurface water pockets, MaineDOT specifications call for shattering all rock to a depth of 4' below subgrade to eliminate water pockets (Section 203.051). For example, excavating the bedrock to subgrade at SSTP14 (Sta. 18+80) could create a water pocket uphill at SSTP18 (Sta. 20+80) where the bedrock was noted to be deeper. How does the design engineer plan to avoid subsurface water pockets? A note on the plan should be added to direct the contractor on this matter. A note will be added to plans directing the contractor shatter all rock to a depth of 4-feet below subgrade when the construction of Penny Whistle Lane creates the potential for water pockets.

Thank you

Owen C. Chaplin, PE | Project Engineer



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