

# MEMORANDUM

**TO:** Richard Harris, AICP, Director of Planning, South Hadley, MA

**FROM:** M. James Riordan, AICP, LEED AP, Senior Project Manager

**DATE:** October 19, 2020

**SUBJECT:** North Pole Estates Questions for the Peer Reviewer from the October 5, 2020 Public Hearing

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## Introduction

Weston & Sampson was requested by the Town of South Hadley (the Town) to provide response to Planning Board questions from October 5, 2020 to support peer review of the Definitive Plan of Development for North Pole Estates. This letter provides our responses to questions. As with our previous peer-review materials, this letter report is prepared pursuant to our February 11, 2020 contract with the Town, which specifies consideration of the conditions of the Preliminary Subdivision review and requirements under specific Town Bylaws. Requirements of specific Town Bylaws are discussed further under the Peer Review section of this letter report.

## Questions and Peer Reviewer Responses

Below, we provide responses to the Planning Board questions for the peer reviewer. We structured this section of the letter to include questions in italics blue text followed by our responses in black text.

### *Hydrogeological Assessment Study*

*Page 11/376 of the OTO Hydrogeological Assessment Study says: "Thousands of cubic yards of sand and gravel are anticipated to be removed from the Site to support the subdivision development."*

- *This is one of the few, perhaps the only, reference in the OTO narrative about the quantity of earth removal planned for the development. In your opinion, does the OTO study adequately account for the 500,000 cubic yards of material proposed to be removed in their analysis and does it address the potential consequences/concerns with said removal?*

As described in the OTO Hydrogeological Study (HAS) and identified independently as such by others, the North Pole Estates property comprises a significant (if not majority) of the recharge area for the sand and gravel aquifer tapped by the nearby South Hadley District No. 2 Dry Brook Well Field. The capacity of the corresponding recharge area is in part dependent not only on the lateral extent but also vertical extent of the comprising sand and gravel materials (i.e., its volume). Any reduction in this volume will directly relate to a potential reduction in recharge capacity (e.g., reduction in the amount of pore-space storage available to infiltrating precipitation runoff). The HAS indicates that thousands of cubic yards of sand and gravel (actual quantity not provided in the HAS) will be removed from the North Pole Estates property in order to complete the proposed project [pg 9 of the HAS, or (11/376) of the corresponding pdf]. As such, a loss of available temporary storage and natural filtration for on the order of 30 to 50 gallons of infiltrating precipitation runoff per cubic yard of removed sand and gravel could occur (contingent upon the effective porosity and degree of residual saturation of the corresponding material). In light of the referenced volume of 500,000 cubic yards (understood by Weston & Sampson to be an approximate) of sand and gravel that may be removed in connection with the proposed development, this loss of temporary recharge storage and natural filtration potential for recharge entering the local aquifer could be significant. The impact of such a loss is not addressed by any analyses provided in the HAS. Such analyses should include and be based upon a mapping of the lateral and vertical extents of the intended sand and gravel removal relative to the existing site topography.

*The HAS appears to be based on an outdated grading plan (since the perc testing issue, etc.)*

- o *For accuracy and reliability purposes, do you believe that the report should be revised to be based on the most current grading plan for the 9 lot subdivision and not a hypothetical build-out?*

Impacts and development activities (e.g., sand and gravel removal, stormwater management, grading, etc.) associated with the currently proposed subdivision would typically be assumed to be different than those associated with the complete buildout considered by the HAS. As such, it would be appropriate for the HAS to specifically address the currently proposed subdivision, and not a future plan which could change based on the conditions encountered during the completion of the proposed smaller development.

*In light of the repeated references to the 23 acres of open space (for a hypothetical buildout and not the development under review) as an asset, additional safety measure for protecting the water as well as its association with the report's conclusion,*

- o *Do you feel the analysis should be reviewed to reflect the 9 lot subdivision with no set aside OS?*

According to the HAS, the total North Pole property is about 115 acres in area. Assuming a proposed total of 23-acres of open space, about 92 acres remains available for the proposed development (including dwellings and roadways). The area corresponding to the proposed 9-lot subdivision is in turn a minor, though contiguous fraction of the remaining 92 acres, leaving the remainder of the property in the near future to stay in its current state of usage and development. As discussed above, it could be useful for future development considerations for the HAS to specifically address the currently proposed subdivision, and not a future plan which could change based on the conditions encountered during the completion of the proposed smaller development.

*The HAS contains a disclaimer indicating that it cannot be relied upon by “third parties” and was prepared for their client’s “exclusive benefit” only.*

- *In your experience, is such a disclaimer typical or standard for this type of study? Please explain. Does this clause nullify use by the PB (or any other entity except their client) in making any determination on this project?*

In my experience, this disclaimer is commonly associated with correspondence (e.g., reports, analyses, evaluations, etc.) that is prepared in connection with a project and/or property that may be reviewed by numerous “third party” entities interested in the insuring, purchasing, developing, and/or provision of funding in connection with the respective property (primarily relative to environmental conditions). In my experience it is not typically applicable to reviewers associated with regulatory and/or municipal bodies. As such, the PB should be able to use the contents of the HAS for its consideration of the proposed development application, including the bases of questions associated with the potential impacts of the proposed North Pole Estates development on the local water resources, aquifer, and drinking water supplies.

### **Traffic Study**

- *Have your concerns re: sight distance obstructions/lines been resolved to your satisfaction when the matter was discussed at a previous public hearing in the spring?*

*A member of the public highlighted a discrepancy regarding the number of trucks entering/leaving site presently vs. during future development. In a PH, the applicant stated that the amount of traffic will be roughly the same w/approx. 1 truck every 25 minutes. However, when looking at the amount of cubic yards proposed to be removed and divided by the 3 year time frame which is planned for excavation, it appears there will be a truck leaving/entering roughly every 3 minutes during business hours.*

- *Do you feel this analysis is accurate, and if so, should the traffic study be revised to reflect this information? Are there other impacts/consequences that might this have on the traffic study?*

The applicant provided copies of the sight line profiles for the three proposed driveways in June 2020. These plans were reviewed, and it was noted that the sight line for the two northern driveways were not measured from a distance of 14.5 feet from the edge of travel way as required in the American Association of State Highway and Transportation Officials (AASHTO) Highway Safety Manual and as provided for Frosty Lane Drive. It was requested that these plans be updated for review. It has been suggested that these driveways are not being constructed as part of this project and, therefore, should not be part of the review. Whether or not these driveways are being constructed as part of this application, we recommend that the Town obtain updated plans for review before any permits are issued for construction on these lots.

In addition, it was noted that the existing driveway to the gravel operation sight lines were not provided. The Applicant provided a statement in their letter dated June 12, 2020 that:

The available sight distance for vehicles approaching the Gravel Operations Driveway on Hadley Street (Route 47) is such that a driver would have sufficient time to react appropriately to a truck exiting the driveway. Similarly, trucks exiting the driveway are expected to observe approaching vehicles on Hadley Street (Route 47) and complete their maneuver during an appropriate gap in traffic.

To date, we have received no such sight-distance information for this location. Previously the Applicant had indicated this driveway would be used as the access point for trucks used to remove the material required to construct Frosty Lane and the reviewer felt the sight lines at this driveway should be reviewed because of the increase in truck traffic associated with the construction. Based on the discussion at the June meeting it was the reviewer's understanding that the Applicant offered to build Frosty Lane from the roadway back into the site and utilize the proposed roadway (Frosty Lane) location for access to the site because there appeared to be no sight line issues.

While the sight lines for the proposed Frosty Lane meet the minimum standards, it appears that a number of large trees would need to be removed in order to provide the unobstructed sight lines. We request that the applicant show the size and location of the trees that will need to be removed both on the property and within the right-of-way (ROW) along the proposed sight lines for verification and clarity. A note should be added to the plans indicating the trees to be removed. In addition, the applicant should note whether the removal of these trees within the ROW will trigger a Massachusetts Environmental Policy Act (MEPA) review.

Lastly, the Applicant indicated that the number of trucks coming in/out of the site for material removal would be on the order of 1 - 2 trucks every 25 minutes based on the time it takes to load a truck. Given the large volume of material to be removed, the Applicant should provide calculations to back up this information. This should be based on how much material per truck load divided into the total amount of material to be removed which would equate to the total number of truck loads required. Then the volume of trucks required should be dispersed over the construction schedule to determine the trucks into and out of the site per workday and then per hour.

### *Definitive Plan*

Regarding the question of whether application conforms to Agricultural Zoning District Definition, in a memo to the PB dated 9/14/2020, the applicant stated: "The grading proposed is incidental to the construction of the road and proposed subdivision lots. No revised grading is warranted."

- o Do you agree with this statement? Please explain why / why not.

A determination of whether or not the proposed grading meets the definition of "incidental" was specifically excluded from our scope of work and, therefore, we cannot currently answer this question. We would, however, note that the proposed volume of material to be removed has been estimated at approximately 474,000 cubic yards of soil. Based on the applicant's testimony at recent hearings, we understand that the subdivision proposed is actually limited to an 8-lot subdivision (not a 9-lot

subdivision or 60-plus as indicated in the overall subdivision concept). We also understand that four of the eight homes proposed are Approval-not-Required (ANR) homes and should not be considered as part of this subdivision application. Additionally, two of the homes have been previously constructed and, therefore, do not constitute new construction. This leaves the Planning Board with an application for two new homes. We have not previously encountered construction of two single-family lots requiring the removal of a volume of soil as large as proposed. In our experience, soil is typically reused on site to avoid the expense of import/export of soil. This approach intends to result in something approaching zero net removal and generally limits adverse impact to the landscape. Given this, we find the proposed volume of soil removal to be at best atypical and not clearly essential for the purpose of constructing this subdivision.

360-33 (B) of the Subdivision Regulations says:

“Due regard shall be shown for all natural features such as large trees, watercourses, scenic points, historic spots and similar community assets, which, if preserved, will add to the attractiveness and value of the subdivision and the Town.”

- o Given this requirement/definition, would you consider Dry Brook Hill to be a “natural feature” of South Hadley, and if so, would you consider the excavation of 500,000 cubic yards from the feature to demonstrate “due regard”?

Dry Brook Hill is clearly a natural feature of the landscape. It includes large trees and provides for a view of the Connecticut River and is, therefore, a principal feature of the natural scenery. The proposed 474,000 cubic yards of soil removal will permanently alter the landscape. As to whether the proposed excavation provides due regard, we consider whether the permanent alteration of the landscape inherent in the proposed excavation is essential to the by-right purpose proposed. As discussed above, we find the volume of soil removal to be at best atypical and not clearly essential.