JONES & BEACH ENGINEERS, INC.

85 Portsmouth Avenue
Post Office Box 219
Stratham, NH 03885
Telephone: (603) 772-4746
Fax: (603) 772-0227

Post Office Box 484
Alton, NH 03809
Email: jbe@jonesandbeach.com
http://www.jonesandbeach.com

December 23, 2013

LAND USE OFFICE
DEC 26 2013
RECEIVED

Town of Barrington
Attn. Marcia Gasses
333 Calef Highway (Route 125)
PO Box 660
Barrington, NH 03825

RE: Review Response Letter - Proposed Gas Station & Convenience Store
PB Case #SR 12/410
Calef Highway (Route 125), Barrington, NH
Tax Map 238 Lot 4
JBE Project No. 10144

Dear Ms. Gasses,

Jones & Beach Engineers, Inc., is in receipt Engineering Review Comments from Jeffrey Adler, PE, of DuBois & King, Inc., dated December 12, 2013, their comments are in italics and we offer the following responses on bold:

1. *The cueing plan shows that 6 vehicles can be accommodated from the menu board without blocking any parking spaces. It appears that probably another 3 could be accommodated between the menu board and window. We previously noted that if it is intended to sell coffee at the drive-thru window, cueing of 10-15 vehicles (from the window) is common. We recommend that the drive-thru use be identified, and that a drive-thru lane of appropriate length be designed in a manner that does not conflict with parking or circulation patterns. (REPEAT COMMENT)*

Response: The current site design provides for approximately 9-vehicle cueing (from the window) without impacting parking. An additional 4-vehicle can cue with limited parking impact. The drive-thru is intended for drive-thru coffee service, but no use has been leased at this time. We believe sufficient cueing and parking are proposed to eliminate any issues on the site. It has been noted that parking is in excess of the required parking.

2. *There are parking spaces in the front setback. (REPEAT COMMENT) In order to comply with Article 4.9.2.1, we recommend that these spaces be eliminated or related to another area of the site. The Applicant may also request a waiver of this requirement.*

Response: Parking spaces have been removed from the front setback area.

3. *The sidewalk dimension is not labeled along the south side of the building, but the engineer states in the response letter that the dimension is 5.5'. We recommend that the*

dimension be adjusted to 8' to account for vehicle overhangs pursuant to Articles 4.9.2.4 and 4.9.5.4 (REPEAT COMMENT).

Response: Curb stops have been incorporated for the fives spaces adjacent to the south side of the building. The proposed curb stops will limit the potential for vehicle overhang of the sidewalk providing the required 4' travel path.

4. *According to Article 4.9.13.1, the maximum allowable parking is 10% over the calculated value, which is this case is 40 spaces, for a maximum of 44 spaces. The Planning Board will need to consider their request for 58 spaces between the two lots where a maximum of 44 are allowed. It is noted that the convenience store/fast food along requires 33 spaces, and 28 are provided exclusive of the spaces included in the parking easement to the grocery store. (REPEAT COMMENT)*

Response: The proposed parking spaces for Lot 4 (Convenience Store) has been reduced to 37. The required parking for Lot 4 is 33 spaces, 37 spaces is 10% of the required spaces. Parking spaces for Lot 5 have been reduced to 18 spaces.

5. *The watershed plan has been updated to include additional analysis points, and shows an increase in runoff at Analysis Point #3, the southerly lot line of Lot 83. Based on the contours shown on the plans, it appears that this area actually drains to a catch basin located just to the northeast of the proposed driveway connection, behind the church. We recommend that the drainage calculations be updated to reflect this, and that the results be evaluated for conformity with Article 4.7.1.1.*

Response: The watershed plan and drainage calculations have been updated as suggested.

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6. *We recommend that the location of Test Pit #4 be added to the plans.*

Response: Test Pit #4 has been depicted on Sheet C1.

7. *The velocity requirements of Article 4.7.7.2 are not met by the proposed design. We recommend that the engineer make the appropriate revisions to the design, or request a waiver from the Planning Board.*

Response: A waiver will be requested from Article 4.7.7.2.

8. *Article 4.7.7.3 requires a 36" minimum depth of cover. We recommend that the design be checked and revised as necessary. Should waivers of this requirement be requested, we would recommend that the appropriate details be provided to show how shallow pipes will connect to precast structures. (REPEAT COMMENT) The engineer indicates that the slab top alternate will be utilized in shallow conditions, however, this does not accommodate all of the shallow conditions shown on the plan.. The details call for an 8" grate, 2 courses (minimum) of brick, an 8" slab thickness, and a 4" joint between the precast sections. To maintain the integrity of the joint, a 6" depth is commonly assumed between the joint and top of pipe. Assuming the preceding, some of the pipes (for example, Catch Basin #14) have*

been designed in a manner that would require horizontal penetration of a portion of the 8" top slab (bottom of top slab el. ~204.4 and top of pipe el. ~204.5. We recommend that the engineer review the drainage system design in conjunction with the details, and make the appropriate revisions to achieve the requirements of Article 4.7.7.3. Should the applicant instead choose to request a waiver, we would recommend that the engineer supply the necessary details to facilitate proper construction.

Response: Due to site constraints, 36" cover cannot be maintained for all drainage pipes. The site has been revised to maintain the maximum cover available. Catch basin detail, Sheet D2, has been revised to depict the Alternative Shallow Catch Basin.

9. *The drainage trench detail does not meet the requirements of Article 4.7.7.4 for depth of cover, bedding and backfill materials, and excavation depth in ledge.*

Response: The drainage trench detail has been revised to meet Article 4.7.7.4 requirements.

10. *Catch basin detail should be amended to include a polyethylene liner downspout in accordance with Article 4.7.8 (REPEAT COMMENT) It is noted that an outlet hood (a.k.a snout) has been added, which is not required by the Town's regulations.*

Response: Catch basin detail has been revised to meet 4.7.8 requirements.

11. *We recommend that the engineer review Detention System #1 in conjunction with landscape plantings. (REPEAT COMMENT) It appears that the root balls and future root growth could conflict with the drainage system.*

Response: The drainage system and landscape plan have been revised to prevent future conflicts.

12. *The Grading and Drainage plan shows Detention System #2 as 7 36" pipes, 140' long, for a total of 980' of 36" pipe. The drainage calculations call for 56 36" pipes, 20' long for a total of 1,120' of 36" pipe. We recommend that the plans be modified to match the drainage calculations, and dimensions of the system be called out to facilitate proper construction.*

Response: The Grading and Drainage plans have been updated to eliminate any discrepancies.

13. *We recommend that the engineer review the detail for DMH #1 & #9. When comparing the plans, details, and drainage calculations, several discrepancies were noted. Inverts, and structure numbers should be checked. It is also noted that the top of the weirs will be within the cone section, and the lengths should be adjusted accordingly in the drainage calculations.*

Response: Details for DMH #1 and #9 have been revised as required. The drainage calculation have been updated as required.

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14. *We recommend that the engineer examine the grading design along the northerly lot line. We noted a 205 contour directly on the lot line. We further recommend that the landscape architect confirm that the specified plantings are suitable for the 2:1 slope. (REPEAT COMMENT) It is also noted that a sidewalk has been added in this area, which traverses the 2:1 slope. We would recommend that the grades be revised to something more reasonable, or that steps be incorporated into the design.*

Response: The grading along the northerly property line has been revised to provide better access across the proposed sidewalk.

15. *There appears to be a swale along the northern property line but there is no grading shown (REPEAT COMMENT) The engineer states that there is no swale proposed, so we would therefore recommend that the flow arrows adjacent to Route 125 be deleted.*

Response: Flow arrows adjacent to Route 125 have been revised.

16. *The lighting plan (sheet L1) is not stamped by an electrical engineer (REPEAT COMMENT) The engineer points out that this has been discussed with the Board.*

Response: As indicated, this item has been discussed with the Board.

17. *We recommend that a reduced-size site plan be attached to the Operation and Maintenance manual depicting the location and quantity of each component for use by personnel performing the inspections. (REPEAT COMMENT) The engineer has agreed to include the site plan set in the Operations Maintenance Manual.*

Response: A reduced-size set of plans will be included with the Operation & Maintenance Manual.

We enclose twelve reduced size copies and four full size copies of revised site plans, a revised Drainage Analysis and Stormwater Management/Spill Prevention Manual for the above referenced project. If you have any questions, or need further assistance, please contact our office. Thank you very much for your time.

Very truly yours,
JONES & BEACH ENGINEERS, INC.

Barry W. Gier

Barry W. Gier, P.E.
Senior Project Manager

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cc: Jeffrey Adler, DuBois & King, Inc.
The Three Socios, LLC

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