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COMMUNITY DEVELOPMENT
& PLANNING

CIVIL / SITE ENGINEERING

January 22, 2019

Mr. Robert Truax
GLM Engineering Consultants, Inc.
16 Exchange Street
Holliston, MA 01746

Re: Goodridge Brook Estates
Sterling Road, Lancaster, MA
(HEI File no. 18002.00)

Dear Rob:

Hamwey Engineering, Inc. performed a review of the following revised/additional information regarding the proposed Goodridge Brook Estates project on Sterling Road in Lancaster, MA.

- Plan entitled "Site Development Plan of Land, Goodridge Brook Estates, Multi Unit & Single Family Subdivision Layout, Lancaster, MA", prepared for Crescent Builders, Inc., prepared by GLM Engineering Consultants, Inc., dated February 8, 2018, last revised December 27, 2018 and stamped 1/2/19.
- Previously submitted Lighting Plan entitled "Goodridge Brook Estates, Lancaster, MA, prepared by Electrical Professionals, LLC, dated 9/14/18, approved by lighting design engineer 11/4/18, including a Light Pole Foundation Base drawing, dated 11/26/18 and light fixture catalog cut sheets.
- Stormwater Management Report entitled "Goodridge Brook Estates, Sterling Road, Lancaster, MA", prepared for Crescent Builders, Inc., prepared by GLM Engineering Consultants, Inc., dated July 5, 2018, last revised 12/27/18 and stamped 1/2/19.

Hamwey Engineering, Inc. has the following comments. This list also includes comments from my November 27, 2018, review letter that have not been addressed or still require further discussion.

The applicant is asking for the comments that are doubled asterisked (**) to be a condition in the decision and/or addressed prior to submitting an application for Building Permit. Comments that are not fully addressed prior to the ZBA's decision will probably require a large number of extensive revisions to the plans. These revisions would have to be reviewed and the reopening of the ZBA's public hearing process is a strong possibility.

It is recommended that technical design comments not be conditioned, and the conditions be limited to only approvals from the Conservation Commission, state and federal permits.

GENERAL

1. The availability of water (flow & pressure) should be confirmed with the Water Department. **
2. The availability of sewer capacity should be confirmed with the Sewer Commission. **
3. The applicant will be submitting the plans to the Conservation Commission.
4. Will the ZBA require speed limit signs?
5. Sewer pump station calculations should be submitted. **
6. A Special Permit may be required for the apartment complex driveway (greater than 1000'). The applicant has responded that "the permitting for the 40B application is through the ZBA". I am asking the ZBA, "does this supersede the Special Permit requirement"?
7. It should be noted that the majority of the site's upland area is proposed to be developed.
8. The applicant should submit a list of all local, state and federal permits/approvals that will be required.
9. Confirm with the Water Department that they will accept the water line to be installed outside of the traveled way (paved portion of the roadway).
10. Ninety-six units are proposed in the three multi-unit buildings, with 191 parking spaces adjacent to the multi-unit buildings (1.99 spaces/unit). Five additional parking spaces are proposed at the bus shelter and playground area.
11. Confirm adequate access for emergency vehicles with the Fire and Police Department. **
12. The following condition should be added to the ZBA's decision.

“The Applicant must submit an affidavit from a Professional Engineer confirming that the required sight lines are provided at the driveways after they are constructed and prior to the issuance of the first Certificate of Occupancy for the project.”

WAIVERS/VARIANCES

Subdivision Rules and Regulations

1. Waive the Environmental Analysis. ZBA’s decision.
2. Variance to reduce the diameter of the cul-de-sac. ZBA should request input from the Fire Department. **
3. Variance to allow a dead end street for collector streets. ZBA should request input from the Fire Department. **
4. Variance of the right of way & pavement widths (proposed 40’ & 24’). The requirements for a minor street (Road B) are 50’ & 24’ and for a collector street (Road A) are 60’ & 30’. ZBA should request input from the Fire Department. **
5. Variance to install iron rods at front lot corners and easements. ZBA should require the bounds.
6. Request to allow Modified Cape Cod berms. The requirement is bituminous concrete berms. I don’t believe this request is necessary.
7. An additional variance is required for the centerline radii of Road “B” (150’ required, 100’ provided).

Zoning By-Laws

1. Variance of the lot area and frontage. ZBA’s decision.
2. Variance of the yard setbacks. ZBA’s decision
3. Waiver of building permit fees for the affordable units. ZBA’s decision.
4. Waiver of occupancy permit fees for the affordable units. ZBA’s decision.
5. Waiver of sewer fees for the affordable units. ZBA’s decision.
6. Waiver of water fees for the affordable units. ZBA’s decision.

PLAN SHEET 1

1. The date of the NOTE: Stormwater Management Report should be July 5, 2018, last revised 12/27/18.

PLAN SHEET 4

1. Show landscaping. **

PLAN SHEET 5

1. Is the one long entrance adequate for emergency vehicles? Confirm with the Police Department. **

PLAN SHEET 6 - 7

1. Show the type and size of the water services to the buildings. **
2. The Fire Department may want a hydrant opposite the 46 unit building. Check with the Fire Department. **
3. Show the size and type of the sewer force main. **
4. The size of the snow storage areas appear to be very small compared to the amount of pavement and sidewalks that will require snow removal. Please submit detailed calculations showing the adequacy of the snow storage areas.

The applicant will accept a condition in the decision that if the snow removals areas are not sufficient then the excess snow will be removed from the site.

5. Show how the sewer force main is connected to the SMH in Sterling Road.
6. What are the circle symbols along the sewer force main at Stations 3+00, 6+00 and 8+50?

PLAN SHEETS 9 - 11

1. Show all the required bounds (along the ROW, each front lot corner & easement corners) as reinforced concrete. A variance for iron rods at the front lot corners is requested.
2. The centerline radii for Road "B" is designed at 100'. The required centerline radius is 150'. A variance is requested.

PLAN SHEETS 12 - 14

1. At the cul-de-sac, the required pavement diameter should be 120' and the required property line diameter should be 160'. A variance has been requested.
2. The required right-of-way width for a collector street (Road A) is 60' and a minor street (Road B) is 50'. A variance is requested.
3. The required pavement width for a collector street (Road A) is 30'. The proposed plan shows a 24' width. A variance has been requested.
4. Do the proposed street trees fit within the right-of-way? Do they interfere with the water mains and E/T/C lines?

The applicant will plant the trees outside of the right-of-way. Is this acceptable to the ZBA?

5. Is the one long entrance adequate for emergency vehicles? Confirm with the Police Department. **
6. Should the entrances to Roads A & B line up with the Town of Lancaster ROW's on the north side of Sterling Road?
7. Confirm with the Water Department that they will accept the water line installed outside of the traveled/paved portion of the road. **
8. Does the Conservation Commission consider that the isolated wetlands are protected under their regulations?

PLAN SHEETS 16 - 17

1. What is the size and type of the force main? **

PLAN SHEET 19

1. The note "...ensuring no loss of service during construction", should apply to all sewer services (houses, commercial, industrial, etc.) along Sterling Road.

PLAN SHEET 21

1. Typical Right of Way Cross Section Detail: Variance requested.
 - a. The required right-of-way width for a minor street is 50' and a collector street is 60'. The detail shows 40'.
 - b. The required pavement width for a collector street is 30', detail shows a 24' width.

2. Typical Street Sign Detail:
 - a. Show the post embedded in concrete.
3. Stop Sign Detail:
 - a. Label the concrete for embedding the post.

PLAN SHEET 22

1. Detention Basin Typical Section:
 - a. Show the dimension from the surface of the earth berm to the core material.

LIGHTING PLAN

I am not an Electrical Engineer, so portions of my comments maybe incorrect.

1. The plan should be stamped by a Mass. Registered Electrical Engineer.
2. The plan only shows the lighting for the apartment complex. No lighting is shown for the subdivision roadways.
3. The foot candles opposite the apartment building along the west property line exceed 0.3 foot candles.
4. Are there any lights proposed on the buildings?
5. The plan should state that the lighting design meets the requirements of the Town of Lancaster Zoning By-Law and the Town of Lancaster Subdivision Rules and Regulations.

ADDITIONAL REQUIRED DETAILS

1. Sewer Pump Station and Calculations **
2. Wetland Crossing (should be shown on the design plans).

The applicant will show the wetland impact details on the plans submitted to the Conservation Commission. After they receive an Order of Conditions, the details should be shown on the Construction Drawings. This should be added as a condition in the decision.

3. Fire Lane

Goodridge Brook Estates
Sterling Road
Lancaster, MA

January 22, 2109

Please contact me if you have any questions.

Very truly yours,
HAMWEY ENGINEERING, INC.

A handwritten signature in cursive script, reading "Fred A. Hamway, Jr.", followed by a small double-checkmark symbol.

Fred A. Hamway, Jr., PE
President

cc: Orlando Pacheco (Town Administrator)
Deb Dennis (Lancaster ZBA)
Michael Antonellis (Planning Director)
Michael Franciosi (Lighting Designer)