

May 24, 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 May 15, 2019, stamped 5/15/19.
- Plan SUP A4, dated February 8, 2018, last revised May 15, 2019.
- 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.
- Plan entitled “Auto-Turn Movements, Goodridge Brook Estates, Lancaster, MA”, prepared by Green International Affiliates, Inc., not dated or stamped.
- Architectural plans entitled “Goodridge Brook Estates, Buildings A and B, prepared by Architects’ Studio, dated 3/4/19 and stamped.

- 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 5/15/19 and stamped.
- A revised List of Waivers, prepared by GLM Engineering Consultants, Inc., dated February 25, 2019, last revised February 28, 2019.

Hamwey Engineering, Inc. has the following comments. This list also includes comments from my past review letters 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 sewer capacity should be confirmed with the Sewer Commission. **
2. The applicant will be submitting the plans to the Conservation Commission.
3. Will the ZBA require speed limit signs?
4. Sewer pump station calculations should be submitted. **
5. 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”?
6. It should be noted that the majority of the site’s upland area is proposed to be developed.
7. The applicant should submit a list of all local, state and federal permits/approvals that will be required.
8. The individual site plans should be stamped.
- 9 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. Variance to reduce the diameter of the cul-de-sac. The required pavement diameter is 120' (design 102') and the required property line diameter is 160' (design 120'). ZBA should request input from the Fire Department. **
2. Variance to allow a dead end street for collector streets. ZBA should request input from the Fire Department. **
3. 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. **
4. Variance to install iron rods at front lot corners and easements. ZBA should require the bounds.
5. Variance 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. Variance of the building height. 32' is allowed, approximately 57' is requested. ZBA's decision.

Wetland By-Laws

1. Waiver to alter land within the 25' no build/no alteration zone. This should not be allowed.
2. Waiver to alter land within to 200' Riverfront Zone. Only the allowed amount of area of alteration should be granted.

PLAN SHEET 4 - 5

1. The nose/beginning of the raised median should be cut back at Sterling Road to allow emergency vehicle turning movement. It appears on the Auto Turn Movements plans that the fire trucks entering the site will have to drive over the median curb.

PLAN SHEET 6 - 7

1. Show the type and size of the water services to the buildings. **
2. Show the size and type of the sewer force main. **
3. 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.

4. Show how the sewer force main is connected to the SMH in Sterling Road.
5. Label all the pipe sizes and slopes of the drainage system for the revised parking and building layout.

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?

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.

PLAN SHEET L1 & L2

1. Tree height should be 12' minimum.

A note has been added to the detail on Sheet L2, "MINIMUM TREE HEIGHT 12 FEET", but the planting schedule on Sheet L1 does not reflect this height. The contractor may order the wrong size trees which would create a problem during construction.

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.

ARCHITECTURAL PLANS A002 & A210

1. The Fire department should review these plans and report their findings to the ZBA.
2. A building height of 32' is allowed. A variance is requested for a height of approximately 57'.
3. The back of the buildings are 5 stories, totaling 52.5' to the ceiling of the top occupied floor, plus the height of the roof structure (approximately another 20').
4. I don't believe that the "building heights by code (51' & 64'") are correct.

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. Paved Fire Access Lane

Please contact me if you have any questions.

Very truly yours,
HAMWEY ENGINEERING, INC.



Fred A. Hamwey, Jr., PE
President

cc: Michael Antonellis (Planning Director)
Michael Franciosi (Lighting Designer)