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## **Planning Board**

**Town of Salisbury**

**5 Beach Road**

**Salisbury, MA 01952**

To: Town of Salisbury Zoning Board  
From: Town of Salisbury Planning Board  
Date: February 1, 2021  
Subject: Planning Board Recommendations regarding the proposed M.G.L. Chapter 40B development by 6 Forest Road LLC

Dear Madam Chairperson and Members of the Board,

Consistent with the requirements of Chapter 40B, Section 21 of Massachusetts General Laws, the Planning Board is herein providing the Zoning Board with our recommendations pertaining to the proposed development by 6 Forest Road LLC. Our recommendations fall into two categories: design review and consistency with Salisbury's Master Plan.

The design review comments are provided as recommendations for the Zoning Board to consider should the Board decide to move forward with an approval versus an outright denial. The Master Plan comments are provided as a recommendation for the Zoning Board to evaluate the project within the context of the Town's Master Plan.

### **Design Review**

While we recognize that the proposed development is not a subdivision, it has many similarities to a conventional subdivision and to a development that would ordinarily fall under Salisbury's Flexible Residential Development (FRD) zoning article. An FRD offers increased density as a bonus for meeting other criteria that is deemed desirable to the Town, such as the build out of affordable housing. An FRD approach may be an option for the Zoning Board to propose as an alternative.

Under the authority vested in the Planning Board by MGL c. 41, § 81M, the Board has adopted Rules and Regulations Governing the Subdivision of Land in the Town of Salisbury. Similarly, the Board has adopted rules and regulations governing development under the FRD. The Planning Board believes that adherence to the Town's development standards for subdivisions and FRDs is in the best interest of the residents of Salisbury.

At a public meeting of the Planning Board on January 13<sup>th</sup>, 2021, the Board identified several elements of the design which failed to meet or conflict with the Town's development standards and design guidelines. These are the Planning Board's recommendations for your consideration:

1. Salisbury's Site Plan Design Standards § 465-13(H) specify that "construction requirements for roads, parking, streets, and drainage shall be in accordance with the Massachusetts Highway Standards, as published by the State of Massachusetts". Even though the "road" may not be deemed a street by the assessor, or DPW, and is not a public right of way, the residents of Meadowview will certainly rely upon it in the same manner as they would a conventional roadway. Therefore, the Planning Board recommends that the Zoning Board require compliance with these standards for the paved area on the plan labeled as "Meadowview Lane". Salisbury's Subdivision regulations § 465-29 provides more specific street construction standards (including width, planting strips and sidewalks – see § 465 Table C-1) that we also recommend be required.
2. § 465-42C requires that curbings shall be installed along each edge of the roadway in all streets. § 465-31C states that the curbing shall be either standard granite or precast concrete. The Planning Board has typically required that it be granite as it has historically proven to be the most resilient and long lasting. The proposal calls for bituminous (asphalt) curbing which is inconsistent with Salisbury's standards.
3. Since the proposed development is a condominium, the Planning Department has informed us that the "road" is technically considered a driveway and as such is not eligible for consideration for acceptance as a Town street. However, the Planning Board still recommends that any approval should stipulate that the paved area labeled as Meadowview Lane will remain private in perpetuity and that the homeowner's association documents state that maintenance and snow removal is the responsibility of the Association.
4. A comprehensive and detailed landscape plan should be prepared by a licensed Landscape Architect as required in Salisbury's Site Plan Review regulations § 465-12(B)4. Additionally, the landscape plan should comply with Salisbury's subdivision landscape design guidelines in § 465-18. The Planning Board recommends that the Zoning Board consider requiring the use of xeriscaping principles (*the practice of designing landscapes to reduce or eliminate the need for irrigation*), using drought tolerant plants and a variety of native tree species of varying maturity heights. Groupings of three trees or more and locating trees and shrubs away from the house façade should be considered. Additionally, we recommend incorporating the State's 40B design standards for streetscaping guidance. Some of the specific relevant guidelines of § 465-18 are, in part:
  - a. The landscape should be preserved in its natural state in so far as practical. Tree and soil removal shall be minimized. Native and noninvasive trees with a caliper greater than 20 inches (measured at four feet) shall not be removed ... grade changes shall be in keeping with the general appearance of the neighboring...areas. Individual building sites shall be oriented so as to maintain maximum natural topography and to take advantage of natural drainage patterns.
  - b. Streets shall be designed and located in such a manner as to maintain and preserve natural topography, significant landmarks, and trees; to minimize cut and fill; and to preserve and enhance views and vistas on or off the subject parcel.

- c. All proposed landscaping shall be designed to complement and add to the visual amenities of the area by maximizing its visibility for persons passing the site or overlooking it from nearby properties and public ways.
5. The off-street parking for each unit shown on the applicant's renderings is inconsistent with what is shown on the applicant's site plan. The Planning Board recommends requiring three off-street parking spaces per unit: one inside the garage and two side by side in the paved driveway. The driveway spaces should be a minimum of 20 feet long to prevent vehicles from intruding on the sidewalk or street.
6. There appears to be an inadequate number of guest parking spaces and some of them are located too far from some units. This could lead to parking on the street. Given the narrow-paved surface of 24' (Salisbury's standard is 30-34' see § 465 Table C-1), this could lead to public safety issues. Additionally, the State's 40B design guidelines (page 30) state that parking access should be to the side or rear and that parking areas should be masked from street frontages. Consider redesigning all visitor parking spaces so that they are in "lots" separated from the street, avoiding the necessity of frequent incidental maneuvering in the street, and therefore complying with Salisbury and State standards.
7. Confirm that all parking spaces are a minimum of 10'x20' as required by the zoning by-law.
8. The number of units proposed represents an excessive density considering the neighborhood's zoning of one and two acres per dwelling. This level of density may adversely impact the surrounding neighborhoods through increased traffic and overuse of the public infrastructure. The Planning Board recommends that the developer be required to perform any necessary improvements to the infrastructure that is directly impacted by the development (water, sewer, street paving and sidewalks, etc.).
9. The proposed plans show only one building design. A development without a variety of styles and varying design elements is not in keeping with Salisbury's diversity of housing styles and materials. The State's 40B "Key Design Issues" recommends that the reviewing authority consider the development's architecture and facades and refers to building facades as "...a combination of design elements that when artfully composed create a harmonic impression." The Planning Board recommends requiring a mix of building styles, colors, materials and possibly a variety of single, two family and three family structures as well as a mix of flats and townhomes.
10. Consider requiring front porches that are at least 8' deep and 10' wide to facilitate a community feeling and foster an environment consistent with New England's traditional neighborhoods.
11. In a "traditional neighborhood development", a 20 to 30-foot setback of the building is considered optimal for creating a walkable community and facilitating community interaction.

12. Consistent with Salisbury's design standards, lighting should be dark sky compliant and not spill onto abutting properties or the public way. As stated in Salisbury's regulations § 465-13(c):

*The goals of exterior lighting shall be to make development safe and to identify and accent key elements in the project's design. Fixtures shall be of the cutoff luminaire type and be consistent with the overall architectural theme of the development. Accessways, parking areas, and pedestrian walkways shall have adequate lighting for security and safety reasons. Flood and area lighting is prohibited.*

Similar requirements can also be found in the State's 40B design guidelines on page 31.

13. M.G.L. c. 40B, §23 states that the Zoning Board "shall have the authority to use testimony of consultants". The Planning Board recommends that the Zoning Board avail themselves of this provision, at the applicant's expense, to engage a peer review by a licensed, registered Architect to advise the Board on the proposal's aesthetics, the spacing between dwelling units, setbacks, design characteristics, and appropriateness for the community (i.e., contextual design).
14. The Planning Board recommends that the approval quantify the specific number of two and three-bedroom affordable units and stipulate that the affordable units be evenly dispersed throughout the development. This would be consistent with the law's intent that affordable units be indistinguishable from market units.
15. Consider requiring that public access to the adjacent Greenbelt property be deeded or reserved for public use via a recorded easement. The developer should provide a public parking lot on Forest Road for at least four cars. Additionally, they should be required to mark the access with prominent signage showing that it is public and identifies it as access to the Greenbelt's Pettengill farm trail. If use of the Greenbelt easement is deemed unfeasible, the developer should be required to provide an alternative means for public access to the adjacent Salisbury conservation trails. There should be specifications for the trail (e.g. 6 ft wide with a BinPack surface (stone dust mixed with gravel)). There should be a permanent public access easement granted to the Town or an approved conservation entity. The homeowner's association should be responsible for maintenance of the part of the trail located on its property as well as that portion located on Town of Salisbury Conservation land.
16. The Zoning Board should coordinate with the Town Planner to work with property owners, over which the Greenbelt trail traverses, to establish appropriate markings, fencing, etc. to discourage trespass upon the nonpublic portion of the property.
17. Consider requiring that some of the units be more "deeply" affordable to recognize the Salisbury median income of \$81,000 per household rather than the greater Boston median income of \$96,000.

## Master Plan

The Planning Board is also responsible for executing and administering the Town of Salisbury's Master Plan (MGL c. 41, § 81D) and Salisbury Code § 465-1. In this context, over the past 10 years, the Planning Board, in collaboration with the Zoning Review Committee and the Town Planner, has worked to update the Town's zoning by-laws to address the need for affordable housing and to gain local control over 40B developments. These zoning updates added the following new by-laws: Inclusionary Housing Requirements, Village Overlay District, Village Residential Overlay District, Outer Village Residential Overlay District, Lafayette-Main Commercial District, and The Salisbury Beach Overlay District. One of the primary objectives for enacting these zoning changes was to encourage higher density residential development in the areas of the Town that would generate local pedestrian traffic to foster a healthy retail and business environment. The two primary zones for this are the Town Center and the Beach Center. A corollary objective was to provide the Town with the ability to address our affordable housing needs without by-passing the provisions of our Zoning By-laws and Master Plan, both of which were approved by the Citizens of Salisbury at Town Meeting.

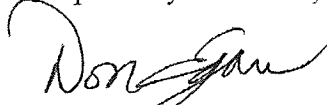
Salisbury has been highly successful in producing affordable housing. With the efforts of the Town Planner, Board of Trustees of the Salisbury Affordable Housing Trust Fund, and other Town Boards, Salisbury has exceeded the State's 10% goal every year since 2016, including the current year. While there may be a forthcoming Census based adjustment, it is important to note that there are several projects currently approved or underway which will add more units to our affordable housing inventory and a substantial amount to Salisbury's Affordable Housing Trust Fund. We have asked the Planning Department to provide you with additional details.

With these statistics in mind, it appears that the Forest Road proposal is not necessary to meet Salisbury's affordable housing threshold and that Salisbury is not obligated to approve such a project under the Chapter 40B statute. Under state law, it is the Zoning Board's purview to determine whether the proposed project is in the Town's best interest. Accordingly, the Planning Board is highlighting that the Town currently exceeds the 10% affordability threshold, has many contributing projects in the pipeline, and has implemented inclusionary zoning provisions to help keep us above the 10% threshold.

This type of development, which does not comply with the underlying zoning, is inconsistent with the Town's Master Plan.

Should the Zoning Board decide to pursue a path of approval for this project, the Planning Board recommends that the developer be required to adhere to Salisbury's well established design standards as enumerated above and further detailed in the Subdivision Control Regulations, the Planning Board Regulations, and the State's 40B Design Handbook.

Respectfully Submitted,



Don Egan, Chairperson  
Town of Salisbury Planning Board





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*Land Surveyors and Civil Engineers*

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April 12, 2021

Town of Salisbury  
Planning Department  
5 Beach Road  
Salisbury, MA 01952

Attn: Lisa Pearson, Planner

Re: 6 Forest Road  
Comprehensive Permit Application and Plan Review

Dear Ms. Pearson:

In response to design review comments provided by the Board's consulting engineer, Joseph Serwatka, dated January 18, 2021 we have prepared the following responses and revised Site Plans for the Board's consideration.

**Cover Sheet C-1**

1. A Zoning Table is provided with Existing and Proposed dimensions. It may be helpful to also have a table to compare the Subdivision Rules and Regulations requirements to what is being proposed, similar to what is presented in Exhibit O of the application. It should be noted that Exhibit O references sections 7A.4, 7A.10 and 7B.1 only. It may be necessary to include sections 7A.7, 7A.9, 7A.11, 7A.25.3, 7B.3 in the list of requested exceptions, or provide discussion on each.

*Response: Waivers have been added for sections 7A.7 and 7A.11. We don't believe a waiver is required for section 7A.9, 7A.25.3 or 7B.3. For 7A.9, where the proposed street varies more than 10 degrees from a right angle, we show a 15-foot radius on the north side and a 45-foot radius on the south side. For 7A.25.3, the Town's technical consultant has provided his review for sight distance and overall safety. With regards to 7B.3, the Salisbury Fire Chief has found the roadway layout acceptable.*

**Existing Conditions C-2**

1. The plan depicts several resource areas (e.g. wetlands, riverfront, floodplain) that would normally be reviewed and approved by the conservation commission prior to the submission of plans. The reason is obvious as any revisions brought about as part of the resource areas review could severely impact the layout of any potential development of the site. In this case, the plan depicts several hundred wetland flags spread over several wetland systems, riverfront setbacks, and a floodplain delineation which, to the best of my knowledge, have not yet been reviewed/approved by the commission. The guidelines for 40B reviews recommends that "if there is an indication of a wetland on the site... ask whether such a determination has been officially made and have it shown on the submitted plans with the date of determination". I would recommend that the plans be revised to depict resource areas (i.e. wetlands, riverfront, floodplain) that have been reviewed and approved by the conservation commission.

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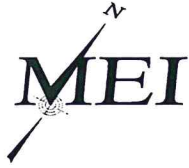
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*Response: Tom Hughes and Mary Rimmer walked the site and reviewed the entire length of the resource area delineation. The wetland lines were revised in some locations. The wetland lines shown on the revised plans are the updated lines as approved by the Conservation Commission.*

2. Existing topography should be depicted on abutting lots 88-90 to determine whether they contribute runoff to the site, and if this runoff may be blocked by the proposed site grading.

*Response: Additional topography has been added in this area. No runoff from these lots is being blocked by proposed site grading.*

3. The plan should show the extents of the remaining 6" AC watermain (200 feet +/-) in Forest Road. My recommendation, and perhaps DPWs as well, would be to replace this with a new section of 8" D.I. watermain.

*Response: The existing conditions plan shows the extents of the water main on Forest Road from Lafayette Road to Schoolhouse Lane and beyond (see sheet C-3).*

4. Existing cross culverts in Forest Road should be described completely, with pipe size and inverts to indicate flow direction. This will be important relative to the design for a sidewalk along Forest Road.

*Response: All cross culverts have been labeled accordingly (see sheet C-3).*

**Typical Sections/Legend/General Notes C-3**

1. The roadway cross-sections appear to depict sloped granite curbing, but a vertical granite curb and Cape Cod berm detail appear on the plan. Bituminous curb is not approved by DPW which looks for vertical granite curbing. A sloped granite curb detail should be added if such a waiver is proposed, but a grass/landscape strip must be provided between the curb and sidewalk.

*Response: The cross-sections have been revised to show vertical granite curbing wherever a sidewalk is proposed.*

2. The sewer forcemain depicted in the cross sections should contain a label with minimum/maximum amount of cover, typically 3-5 feet. The sewer detail sheet labels 4' of cover. The forcemain depicted in the profile sheets, up to 10 feet deep in a paved roadway, is not recommended by me, and likely not by the DPW/sewer department.

*Response: The sewer forcemain has been revised to maintain approximately 4 feet of cover the entire length.*

3. Note 7 leaves tree removal up to the discretion of the "owner". All trees greater than 20" should be tagged and any designated for removal must be shown on the plan. Typically a proposed tree cutting line is staked in the field based on the approved plans, and reviewed/approved by the planning board/conservation commission. The board may want the note revised to require town, rather than owner, approval.





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*Response: The note has been revised to require Town approval instead of owner approval.*

4. Note 13 makes individual building (condo) owners responsible for the maintenance of their sewer service from the building to the sewer main (in this case the forcemain). It is not advisable, and likely economically infeasible, for condo owners to be responsible for the service under the paved roadway. The condo owner could be responsible for the sewer service from the building to the lateral assembly (shutoff) at the edge of pavement, while the association would be responsible for the remainder as well as the forcemain.

*Response: We agree with the reviewer's comment. The note has been revised accordingly.*

**Grading Plan C-4 through C-6**

1. The plan should be revised to show the proximity of Schoolhouse Lane. The subdivision regulations, section 7A.7, require street intersections to be offset a minimum of 200 feet from centerline to centerline. The separation to Schoolhouse Lane appears to be only about 150 feet. At a minimum, this should be added to the list of requested waivers.

*Response: Schoolhouse Lane has been added to the plan.*

2. As mentioned previously, additional topography should be provided on abutting lot 88 to determine the direction of runoff. Also, additional contours and/or spot grades should be provided in Forest Road, as would be typical. Finally, the cross culverts under Forest Road should be fully described with pipe size(s) and inverts.

*Response: Additional topography has been added in this area. No runoff from these lots is being blocked by proposed site grading. All cross culverts have been labeled accordingly (see sheet C-3).*

3. The flow of runoff from the existing catchbasin and pipe in front of lot 88 will likely be blocked by the construction of the proposed roadway and sidewalk over the existing roadside swale. The engineer should present a plan to allow for the continued conveyance of this runoff.

*Response: We disagree with the reviewer's comment. There is nothing in the proposed grading that would indicate that the flow from the existing drain pipe will be impeded.*

4. The subdivision regulations require streets to be laid out to intersect as nearly as possible at right angles, and not less than 60 degrees. The proposed roadway appears to intersect Forest Road at about 65 degrees. There would appear to be ample space and opportunity to align the proposed roadway at a right angle, or much closer to it.

*Response: In order to align the proposed roadway close to or at 90 degrees, that would require the road to shift closer to the intersection with Schoolhouse Lane as well as reduce the sight distance in that direction. Although this is not a subdivision, the proposed roadway meets the regulations and will not be reconfigured.*



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5. A walking path is proposed from Forest Road, through the site, to town-owned land at the rear. The path appears to be an integral part of the expressed benefits of the project. The plans show 250 s.f. of wetland filling associated with the path, but this is likely based on wetland delineations that have not yet been reviewed/approved by the conservation commission. Should the wetland delineations be revised during the conservation review process, the wetland impact could easily be ten-fold, and make the path unfeasible. This is another reason why I would recommend that the wetland delineations be reviewed and approved prior to the submission of plans.

*Response: As mentioned above, the wetland lines have been updated per Mary Rimmer's review and approved by the Conservation Commission.*

6. Two proposed community gardens are depicted within the project, but proposed water services and meter locations are not shown to the gardens. It would appear that water service would be required to make these gardens feasible. The engineer should address this.

*Response: The plan has been revised to show one community garden at the rear of the site and a water service has been added to the plan.*

7. The plans depict double-wide (20') driveways in front of each unit to park two cars side-by-side. The schematic floor plans, however, depict a single-width (10') driveway in front of each unit, due to proposed porches at the front of each unit, which are not depicted on the grading plans. The engineer should depict the proposed porches on the plans, and adjust the driveways accordingly.

*Response: The patios/porches have been added to the front of the units and the driveways have been revised accordingly.*

8. Typical residential parking space size requirements are 10' wide by 20' long. The bylaws do allow for spaces that are 9' by 18' in some overlay districts. The plans appear to use a variety of sizes. For instance, the driveways are 20' wide, allowing for 2 ten foot spaces, but the visitor parking spaces appear to be only 9' wide by 18' long. The parking spaces on the first unit, however, at station 1+50 are only about 15' long, which does not meet either standard. Other spaces, such as at the unit at station 13+00, measure only 12 feet long to the back of the sidewalk. The engineer should provide the required parking space lengths without infringing upon the sidewalk, as such would force pedestrians to walk in the roadway. All these parking issues should be addressed by the engineer.

*Response: The parking spaces have been revised accordingly. All visitor spaces are now 10' x 20'. The driveways have all been revised to allow for the required lengths so as to not encroach on the sidewalk or traveled lane.*

9. The proposed visitor parking spaces at stations 15+00 and 19+00 are located on tight curves that do not meet subdivision standards. Combine that with snow storage and landscaping, and the potential exists for a hazardous situation. The engineer should relocate these spaces to safer locations.

*Response: The applicant's traffic engineer, the Town's traffic consultant and the Salisbury Fire Department have reviewed the plans and have not raised any concerns with the parking spaces.*

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10. The two proposed constructed wetlands are required to have access for maintenance, with a minimum width of 15 feet and a maximum slope of 15% through public or private rights-of-way. Neither constructed wetland appears to satisfy this requirement. The engineer should revise the designs accordingly.

*Response: Constructed wetland #1 can be accessed through the driveway of unit 53. Constructed wetland #2 can be accessed through the driveways at the end of the cul-de-sac and in between units 44 and 45.*

11. The layout/geometry of the proposed roadway does not come close to meeting subdivision requirements, and I would be inclined to recommend that it not be approved in its current form. Subdivision regulations require minimum 150-200 foot centerline radius and a 150 foot tangent between reverse curves. The plans appear to have centerline radii (they are not labelled) as small as 75 feet, and reverse curves with no tangents, resulting in likely unsafe travel at design speeds. The guidelines for reviewing 40B projects state that “parking and circulation should be designed to provide for the maximum pedestrian safety, ease in traffic flow, and access/egress on the property, while minimizing the need for impervious surfaces which increases stormwater runoff”. The project, as designed, does none of that in my professional opinion.

There is a relationship between design speed and geometric design criteria. AASHTO (American Association of State Highway and Transportation Officials) 2011 has a radius of curvature equation which is:

$$R_{min} = V^2 / (15(0.01e_{max} + f_{max}))$$

where:  $R_{min}$  = minimum radius of curvature (ft)

$V$  = design speed (mph)

$e_{max}$  = maximum rate of roadway superelevation (percent)

$f_{max}$  = maximum side friction factor

The town's 150-200 foot minimum centerline radius requirement corresponds to a design speed of about 25 mph. The radii provided on the plans would correspond to a design speed below 20 mph which, in my professional opinion, is impractical and unenforceable. At the very least, I would recommend that this issue be reviewed by the applicant's traffic engineer and the town's traffic consultant.

*Response: The applicant's traffic engineer, the Town's traffic consultant and the Salisbury Fire Department have reviewed the plans and have not raised any concerns with the roadway layout. The intent is to promote slower speeds and overall neighborhood safety.*

12. As mentioned above, the guidelines recommend “minimizing the need for impervious surfaces”. I believe that the roadway geometry issue could be addressed while also substantially reducing impervious surfaces by essentially straightening the roadway alignment between stations 6+00 and 17+00. This would eliminate approximately 500 feet of the proposed roadway, six horizontal curves that do not meet subdivision regulations, and two reverse curves without adequate tangents. The southern portion of the development, now occupied by the roadway between stations 8+00 and 13

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+00, could be redesigned with a small cul-de-sac, or a series of common driveways serving 4 units as is currently employed on the plan. The Board may want the engineer to present a plan showing this option for discussion.

*Response: As mentioned above, the Fire Department and the applicant's and Town's traffic engineers have not raised any issues with the roadway layout.*

13. Headlight intrusion could be an issue for the existing homes on Forest Road from vehicles on the proposed roadway. The engineer should consider whether there may be an issue, and how it may be addressed.

*Response: The only house on Forest Road that could be affected is #9, across from the proposed roadway entrance. The owner hasn't raised any issues but the applicant has shown in the past that he is always open to listening to neighbors' concerns and acting accordingly.*

**Utility Plan & Profile C-7 through C-10**

1. The plan shows the proposed 8" watermain connecting to an existing 6" section of watermain in Forest Road, which is not advisable. As noted previously, there is about a 200 foot section of 6" A.C. watermain left in Forest Road that was never replaced. The watermain that was replaced is 8" D.I. as is typical. I would recommend, and I believe that the DPW would concur, that the 200 foot section of remaining 6" A.C. watermain should be replaced with 8" D.I. watermain as part of the project. The engineer should show this work on the plan if required.

*Response: The section of 6" watermain will be replaced with 8" D.I. as recommended.*

2. The sewer system design has the first four units being serviced by a gravity 8" sewer main, but the remaining 72 units are each served by individual E-one sewer pump pits, each connecting to a common 2/3" sewer forcemain under the roadway. Based on discussions with the DPW and sewer department, it is my/our opinion that the 72 sewer pump pits and forcemain are the least desirable option for the development. The most viable design would include extending the 8" gravity sewer as far as possible into the site at minimum slope (0.004ft/ft) to serve as many homes as possible via gravity sewer. If the engineer were to redesign the roadway as mentioned above to eliminate tight horizontal curves, it would appear that gravity sewer could extend some 1000 feet into the site. The remainder of the site would typically be serviced by a gravity sewer system to a low point at the rear of the site where a single pump station would pump sewage to the front sewer system. This single pump station could also have a backup generator in the event of a power outage. A single, shallow forcemain would be installed, rather than a forcemain at depths approaching 10 feet as shown on the current plans.

*Response: We appreciate the Town's concerns and feedback, but this will be a privately maintained sewer system and the E-one pumps will remain. There is no way the sewer can be extended 1,000 feet into the site. The sewer is designed at the minimum slope and can only make it far enough into the site to service the first 2 units.*





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3. Based on discussions with the DPW, it is preferable to have a hydrant at the end of the watermain for flushing, rather than the blowoff as shown.

*Response: The watermain has been updated to show a hydrant at the end for flushing.*

**Erosion Control Details C-14**

1. The General Erosion Control Notes appear to be generic and likely will not work with such a large site. Note 13 states “no more than 3 acres shall be disturbed at one time”, and “all area shall be stabilized within 45 days of initial disturbance”. With an upland area of almost 18 acres, this would appear to limit the site contractor to clearing, grubbing and stripping topsoil from no more than 3 acres at one time, meaning the site would have to be constructed in phases. Also, stabilizing areas within 45 days is impractical in my professional opinion, especially considering that it appears some 20,000 cubic yards of fill are need to raise site grades. The engineer should address these issues.

*Response: This note has been removed from the plans. It is a note typically associated with plans that get reviewed by the NHDES and was left on inadvertently.*

2. The Construction Sequence appears to imply that the entire site will be worked at one time, rather than 3 acres at a time as noted above. It also does not address the thousands of yards of fill that will be required to accomplish site grading, and whether this will be phased.

*Response: The project will not be phased. While it is difficult to specify exact locations where stockpile areas may occur, note #4 in the construction sequence specifies that any stockpile areas shall be surrounded by erosion control.*

**Schematic Floor Plans A1**

1. It would be helpful if the plan could depict a mechanical room or other area in each unit where the water meter would be located. Otherwise, the engineer should address whether outside meter pits will be used.

*Response: The final architectural drawings will show an area for mechanical equipment or a closet where the water meter can be installed.*

**Comprehensive Permit Application**

1. Page 9 states that the applicant is proposing to construct a new public sidewalk from the entrance to the site, along the length of Forest Road and to connect it to the new sidewalk being built by the State of Massachusetts along Lafayette Road. The task would be much more involved than simply the installation of a sidewalk. Forest Road currently has “country drainage” meaning that roadway runoff sheds off the pavement into roadside ditches. Installing a curb and sidewalk would block this flow of runoff, likely making it necessary to install a series of catchbasins, manholes and piping to collect the runoff. Substantial excavation would be required for the work and, when done, the length of Forest



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Road from the project to Lafayette Road may have to be repaved. The Board may want the applicant to address whether they are committing to additional work necessary to install a new sidewalk.

*Response: The applicant has committed to any additional work necessary to install this new sidewalk.*

2. Section D on page 10 addresses wetland impacts. As noted above, the wetland delineation has not yet been reviewed/approved by the conservation commission, making any discussion on wetland impacts premature.

*Response: As mentioned above, the wetland lines have been updated and approved.*

3. Exhibit L, Traffic Report, appears to show that the stopping sight distance for vehicles travelling on Forest Road at 30 mph have 235 feet and 245 feet of sight distance, where 200 feet is required at the site driveway. It goes on to show that the available intersection sight distance for vehicles exiting the site driveway is 235 feet looking south, and 245 feet looking north, where the required minimum is 287-331 feet for right and left turn, respectively. The report appears to conclude that this apparent insufficiency is allowable as long as the vehicle on the major road (i.e. Forest Road) has adequate stopping sight distance to stop or slow to accommodate the maneuver by a minor road (i.e. Meadowview Lane) vehicle. The Board may want to have their third party traffic consultant review these conclusions, and the entire report.

*Response: Vanasse & Associates has provided a traffic review and those comments will be addressed under separate cover.*

4. The plans should contain adequate information to comply with section 7A.25.3 of the regulations "to allow sight distance evaluation" by the board's technical consultant.

*Response: As mentioned above, Vanasse & Associates has provided a traffic review and those comments will be addressed under separate cover. As part of their review, sight distance triangles will be added to the plan.*

### **Stormwater Management Report**

1. Page 2 of the maintenance plan states that the party responsible for operations and maintenance of the stormwater system is Steve Paquette, but page 5 lists the homeowner's association as the responsible party "post-construction". The term post-construction" should be more well-defined since, as we have seen, it can take many years between project completion (i.e 100% occupancy) and the resolution of outstanding construction items, as-built submittal, and certificates of compliance/completion.

*Response: The O&M manual has been updated to indicate Mr. Paquette will be responsible for maintenance during construction and the Homeowner's Association will be responsible post construction.*

2. The report should contain the calculations demonstrating the proper sizing (i.e surface area and volume) of the sediment forebays, as required.

*Response: The forebay detail on sheet C-13 shows the calculations for proper sizing.*

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3. The engineer is not proposing any runoff recharge as required by standard #3 stating that “the test pits indicated silt loam and silty clay loam soils, which will prevent any underground infiltration system from being properly designed”. The Policy requires that for sites comprised solely of C and D soils, proponents are required to infiltrate the required recharge volume only to the maximum extent practicable. For the purposes of standard 3, “to the maximum extent possible” means that:

- (1) The applicant has made all reasonable efforts to meet the Standard;
- (2) The applicant has made a complete evaluation of all possible applicable infiltration measures, including environmentally site design that minimizes land disturbance and impervious surfaces, low impact development techniques, and structural stormwater best management practices; and
- (3) If the post-development recharge does not at least approximate the annual recharge from pre-development conditions, the applicant has demonstrated that s/he is implementing the highest practicable method for infiltrating stormwater.

The required minimum infiltration rate is 0.17 inches per hour. The majority of site soils indicated in the test pits are silt loam, which has a Rawls infiltration rate of 0.27 inches per hour. This would appear to allow the engineer to design some amount of recharge volume. The board may want the engineer to address this.

*Response: Infiltration trenches have been added to the plan where feasible. Due to the poor soils and high groundwater tables, the only suitable location is the courtyard area behind units 23-30.*

4. Additional topography and spot grades should be provided on abutting lot 88 to verify that it does not, in fact, contribute runoff to the site, as delineated in the pre-development watershed map.

*Response: Additional topography has been added in this area. No runoff from these lots is being blocked by proposed site grading.*

5. The rear of the site appears to shed runoff onto abutting lot 73 in the pre-developed condition. The engineer should account for this and verify that runoff does not increase in the post-development condition.

*Response: Areas 100S & 300S incorporate any runoff flowing offsite to the east. The post-development flows show that runoff is being decreased in this direction.*

We trust the above information provides the necessary details required for the Board's review and ultimate approval. If you have any questions or comments on the above information, please feel free to contact our office.

Sincerely,

Millennium Engineering, Inc.

Christopher M. York, P.E.  
Project Manager

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