

TOWN OF WELLESLEY
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DEPARTMENT OF
PUBLIC WORKS ENGINEERING
DIVISION

May 29, 2018

Lenore Mahoney, Executive Secretary
Wellesley Zoning Board of Appeals
525 Washington Street
Wellesley, Ma 02482

RE: ZBA 2018-25

Dear Lenore,

In response to the application for a 40B residential development at 135 Great Plain Avenue, by Northland Residential, the Department of Public Works (DPW) is providing these initial comments. These comments are offered as preliminary as the development plans have varying levels of detail and full detailed engineering review is not appropriate at this time.

The project consists of 44 housing units on a 12-acre site, addressed as 135 Great Plain Avenue. The applicant is proposing a mix of townhouses and duplexes. We understand that units will be for private sale and maintenance of the facility including all public spaces and infrastructure will be completed by a homeowners association. Great Plain Avenue in this area is a 28' wide paved road within a variable width right of way, generally over 40 feet wide at the subject lot. The road pavement is in fair condition and there is a sidewalk one side of the street. No improvements to the public right of way are proposed as part of the application.

The DPW's primary concerns are as follows:

Traffic, Transportation and Circulation

The project is located between the Great Plain Avenue, Wellesley Avenue and Seaver Street intersection and the Recycling and Disposal Facility (RDF). The Town has a safety concern due to elevated vehicle accidents at the Wellesley Avenue, Seaver Street, and Great Plain Avenue intersection and is working on an improvement project for the intersection. There has also been consideration of a traffic light at the intersection of the RDF driveway to assist with peak period congestion. We note that the sidewalks are inconsistent along the corridor, particularly between Brook Street and the site, which we feel will be an issue with a development of this magnitude.

The Project's traffic consultant, VAI, will address these and all other peer review comments and concerns.

Within the project site we noted that the entrance drive is proposed to be 11' wide lanes in each direction with 8' wide parallel parking on one side. This seems marginal given the anticipated 314 vehicle trips

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expected daily, particularly in the entrance area, and considering that there does not seem to be any accommodations for snow storage.

11-ft travel lanes provide an adequate width for a residential development, regardless of average daily vehicle trips.

Snow will be cleared and stored along the sides of roadways similarly as managed throughout the Town, except that the roads will all be privately owned and maintained.

The project narrative indicates that there are 64 garage parking spaces and 24 driveway spaces for the 44 units or 2 spaces per housing unit, but many of the buildings are proposed to be 3 bedrooms. We also note that there are 22 guest parking spaces, but there are no facilities for dumpsters or truck deliveries.

The parking count provided with the unit summary table does not include 44 additional parking spaces that are located in front of the garages of the three bedroom units.

Trash will be managed through a contract with a private hauler. Each unit will have their own roll-out receptacles for trash and recyclables.

The roads have been designed to accommodate large box trucks; and the main loop can accommodate WB-50 semi-trailer maneuvers.

Sewer

The design is similar to the previously approved subdivision, proposing a collection system with a sewer pump station and force main, only the use is more intense. This is not the DPW's preferred plan as we believe a gravity system could potentially be installed by extending the sewer collection on Great Plain Ave to the site.

VHB evaluated the feasibility of connecting to the gravity sewer in Great Plain Avenue and determined that the townhouses on Tier I can be connected to an existing sewer manhole approximately 125' downhill of the Project Site boundaries. However, connecting the duplex units at Tiers II and III is not practical because of the drop in site grades and the depth of sewer installation required in Great Plain Avenue. The entire project cannot be feasibly serviced by gravity sewer; therefore, pumping will be required.

There are two options for pumping: a single on-site pump station servicing all or some of the homes, or a low-pressure system where each home is serviced by its own pump. Both are proven, common and reliable technologies.

Northland initially proposed the single pump station option, but is now evaluating all options to determine which combination of gravity service and pumping makes the most sense in consideration of phasing, costs, and other factors.

The sewer flow is conservatively estimated to be 13,500 gallons per day, with peak flows that could approach 30 gallons per minute and the operation of a small sewer pump station might be problematic for homeowners associations.

As noted earlier, pumping is unavoidable. The pump station or individual pumps will be privately owned and maintained by the homeowner's association. O&M will not be the responsibility of the DPW.

Stormwater

The overall stormwater management proposal is, once again based on the previously approved subdivision plan, relying on a collection system that discharges to large subsurface infiltration systems.

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The collection system consists of 8 catch basins and 15 manholes, 1,200 feet of drain line. Details of the infiltration system are missing, but it appears that concerns related to poor soils and separation from the seasonal high ground water are lesser factors in the analysis submitted. The current design maximizes infiltration into the ground. We are continuing to review the hydrology, and recommend that a system profile as well as a map of the groundwater contours together with all geotechnical data that supports the infiltration assumptions be submitted.

All soil information is included in Appendix C of the Project's stormwater management report. VHB will prepare a profile through the stormwater infiltration system and send to DPW.

We would note, as we did with the subdivision design, that buried infiltration system designs seem inconsistent with Wellesley's commitment to doing more to improve water quality. The better "Best Management Practices" (BMP's), which would maximize biological treatment, have been not been incorporated. We feel this is unfortunate given the commitment the community has made, particularly in the Fuller Brook watershed.

It must not be overlooked that the Project has been designed in full compliance with MassDEP's Stormwater Standards, including meeting or exceeding water quality and recharge requirements, while at the same time avoiding all work within wetland resources and buffer zones. This is not achievable in the absence of best management practices.

The Northland team will explore additional application of appropriate and suitable stormwater BMP options such as permeable pavers, rain barrels and rain gardens as the design progresses. Landscape maintenance contractors that embrace integrated pest management and organic fertilizer products will also be evaluated.

We also believe that the amount of impervious areas has increased significantly with this application and we are still reviewing the amount of added infiltration holding capacity associated with the "Storm Trap" system. We note that with this design, the discharge from the primary underground system will be about ten cubic feet per second (cfs) during 100-year design storms. This causes some concerns with the potential for impact along the bank area of Fuller Brook. The design includes a rip-rap area at the outlet and a level spreader, to mitigate this impact.

Stone protection at the outlet has been designed to prevent erosion from the 100-year, 10 cfs flow rate. The sizing calculation for this is provided in Appendix A of the Project's stormwater management report. Additionally, the stone protection will have a level spreader to reduce concentrated flows coming out of the flared end section to prevent erosion.

Other Concerns

Constructability and preservation of buffer zones are a concern in a few areas, namely the abutting properties at 117, 141 and 145 Great Plain Avenue where some of the buildings, walls, that are required for grading, the tree clearing, the building and parking lighting and landscaping will have the potential to impact adjoining properties. We also feel the tree clearing and grading along some of the wetland buffer zones is quite close to the jurisdictional buffer zone limit and has the potential for impact.

Buffer zones will be located by survey and marked prior to any construction activities within 100' of these areas. Erosion and sedimentation controls will be utilized; and abutters will be notified prior to nearby work activities.

The plan calls for somewhat narrow drives and has some robust planting areas which raise concerns for snow management.

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Snow management and landscape maintenance will not be the responsibility of the DPW.

It is likely that some combination of plowing and active removal will be required as part of the winter maintenance. We note that a few sections the proposed drives are sloped between 10-12% which may be problematic in slippery conditions.

Roadway grades of 10-12% are common throughout New England and other parts of the country that experience cold weather. The centerline grade of the west and east side of the duplex loop road are 9.3% and 4.75%, respectively. Residents have the option to use the flatter east side if road conditions are slippery.

A grass eyebrow is proposed along the outer drive loop, which breaks up one of the more intensely paved areas, and allows for the potential to plant trees, however the size (approximately 10' wide by 100') seems disproportionate to the amount of pavement and the mass of the buildings.

An Erosion and Sediment Control Plan has been included, which outlines that the amount of disturbed area is significant and will be subject to a NPDES permit. The notes on the plan make the contractor responsible for a wide variety of decisions including staging, fueling, stockpiling, temporary protection measures, preservation of infiltration beds and more. Given the size of the project and the proximity to environmental resources, we feel a more detailed construction management plan, particularly one that might consider staging, parking and materials deliveries is appropriate to consider as part of this application.

The NPDES permit is triggered by disturbances of 1-acre and greater; therefore, Northland and its site contractor will be required to file a Notice of Intent to EPA under that program, prepare a robust storm water pollution prevention plan (SWPPP), and administer the SWPPP until they file a Notice of Termination. Although it is premature to prepare a SWPPP, Northland is preparing a Draft Construction Management Plan that will be submitted to the Town. Additional information such as construction logistics and detailed construction sequencing within the site boundaries will be coordinated with the selected Site Contractor in due course.

Lastly, we want to note that this is considered a private development and that the applicant or the following homeowner's association will be responsible for all infrastructure, including any sewer pump stations or complicated storm water management systems, as well as all management and maintenance, including trash, recycling collection and winter maintenance. We also want to express our opinion that while the ZBA may be the single regulating body, it is our expectation that the Town's Street Permit Program, which will permit and condition any work in the public right of way, including utility connections and curb cuts will be administered by us. These permit are historically applied by the site contractor and also serve to assure that the work complies with State and Federal requirements such as Jackie's Law.

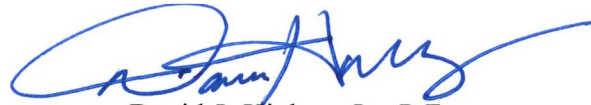
Northland and its contractors anticipate seeking and obtaining all applicable construction permits required by DPW (e.g., a street opening permit) in accordance with applicable law.

We hope this review useful and we are available to answer any questions or to follow up on any other issues raised here.

These comments help us understand DPW concerns, and Northland looks forward to continuing dialogue with DPW throughout the duration of the Project.

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Very truly yours,

A handwritten signature in blue ink, appearing to read "David Hickey, Jr.", with a large, sweeping flourish at the end.

David J. Hickey, Jr., P.E.
J. ickey, Jr., P.E.
Town Engineer

David

cc: Mike Pakstis
Doug Stewart
Michael Zehner
Meghan Jop
Tom Harrington