Lynnfield Planning Board
55 Summer St.
Lynnfield, MA

August 19, 2021
Re: 109 Lowell Street - Vallis Way Subdivision

Dear Members,

A. I am requesting the Planning Board consider designating the large cluster of 23 trees abutting Lowell Street for developing a new street, Vallis Way, as 'Significant' under Planning Board Rules and Regulations § 375-7.5 Protection of natural features.

This grouping of trees is an integral part of the streetscape along Lowell that includes the adjoining three properties on that side of the street. All of the trees in that area are an identification marker of the immediate neighborhood, a major factor in easing stormwater runoff, and noted for their aesthetic value on one of Lynnfield's designated Scenic Roads. These specific trees would best be thought of as a single enormous tree. The canopy and the interlocking root system, which is particularly important, stabilizes this cluster and functions as one. This section of trees meets the criteria of Significant and should be protected as a natural feature to the character of Lynnfield.

It would not be an infringement on the development of this property when combining the existing driveway with the new street creating a single entrance from Lowell Street. This would be less confusing to traffic not having the driveway and road located close together, only the end trees would be removed to allow for sightline, and the street canopy would be maintained.

B. The Existing Conditions Plan of July 26, 2021 does not indicate the complete number of trees affected by this development, as trees within the defined woodland have not been included. On this plan there are 168 trees over 12"; 133 of those are pine trees; 21 trees are over 24" (seventeen pine and four oak) including two pines over 36". This is a notable number of large and old trees with the 36" trees qualifying as the 'Kings Pines.' None of these have been designated as Significant? Will none of them be replaced? The only new trees on the proposed plan are the required 15 street trees. The number of trees removed will easily double for the residences and septic, plus the impact on wildlife dependent on these trees for their existence are part of an ecosystem that will never be replaced.

C. The state has issued actions for the Commonwealth to act upon for reaching a goal of Net Zero emissions by 2050 and 50% by 2030 presented as the *Massachusetts Clean Energy and Climate Plan for 2030*. Our emissions will be reduced through a number of different processes, but there are few options to offset emission; the best method is to sequester carbon through plants and soil - the carbon sink. There is research in developing a more detailed plan for all of us to follow included in the *Interim Clean Energy Climate Report for 2030*:

> Strategy L2: Manage for Ecosystem Health and Enhanced Carbon Sequestration
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> Given the large volume of carbon stored in Massachusetts soil, and the potential for its release when soil is degraded, the **protection, restoration, and better management of soil** could be a valuable component of the Commonwealth's effort to achieve Net Zero by 2050. EEA is currently developing a Healthy Soils Action Plan, which assesses forests, wetlands, agriculture, recreational/ornamental (i.e., lawn), and impervious/urbanized lands and provides recommendations for limiting conversion of land, restoring the functional capacity of soils, expanding support for land managers, incorporating soil-based criteria and performance standards, and enhancing the measurement and monitoring of soil health in Massachusetts. Upon its release in 2021, EEA will work to implement and incentivize best management practices identified in the HSAP.

Disturbing soil at the level needed to build roads and homes in a subdivision releases carbon by eliminating both parts of the equation, plants and soil. Keeping carbon in the soil is the most efficient way to fight climate change. From the Yale School of the Environment:

> Scientists say that more carbon resides in soil than in the atmosphere and all plant life combined; there are 2,500 billion tons of carbon in soil, compared with 800 billion tons in the atmosphere and 560 billion tons in plant and animal life. And compared to many proposed geoengineering fixes, storing carbon in soil is simple: It's a matter of returning carbon where it belongs.
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> Through photosynthesis, a plant draws carbon out of the air to form carbon compounds. What the plant doesn't need for growth is exuded through the roots to feed soil organisms, whereby the carbon is humified, or rendered stable. Carbon is the main component of soil organic matter and helps give soil its water-retention capacity, its structure, and its fertility. According to Lal, some pools of carbon housed in soil aggregates are so stable that they can last thousands of years. This is in contrast to "active" soil carbon, which resides in topsoil and is in continual flux between microbial hosts and the atmosphere.
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> "If we treat soil carbon as a renewable resource, we can change the dynamics," says Goreau. "When we have erosion, we lose soil, which carries with it organic carbon, into waterways. When soil is exposed, it oxidizes, essentially burning the soil carbon. We can take an alternate trajectory."
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> https://e360.yale.edu/features/soil_as_carbon_storehouse_new_weapon_in_climate_fight

Due to the environmental impact of this subdivision, I request the Lynnfield Planning Board deny the waiver of extending Vallis Way past 500 feet. In addition, the Board could not require sidewalks on both

sides of the street. This allows for less impervious material and creates a wider border for planting street trees with a greater affect on stormwater management.

As a responsible society we cannot wait any longer to recognize the negative and positive influences we have to our surroundings. By minimizing the construction area, we can, at the very least, diminish the consequences to the Natural world. There is no doubt left from all scientific sources that we need to change our practices of the past. This is not sustainable.

Sincerely,

Jane Bandini