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December 30, 2019

Reading Conservation Commission
16 Lowell Street
Reading, MA 01867

RE: 259 and 267 Main Street, Reading NOI – Tree Removal Impact Analysis and Summary of Plan Revisions (MassDEP File #270-0727)

Dear Members of the Commission,

On behalf of Stonegate Construction Corp (Applicant), Hancock Associates submitted a Notice of Intent (NOI) application in request to obtain an Order of Conditions permit to allow construction of a 24-unit 3-story apartment building at 259 and 267 Main Street in Reading, MA (MassDEP File #270-0727). The opening public hearing on this matter was held before the Reading Conservation Commission on November 13, 2019.

During the hearing, the Commission requested a quantitative inventory of trees proposed for removal within 100-feet of wetlands, and an impact analysis in assessment of whether the wetland mitigation would meet local performance standards for tree replacement at a ratio no less than 1:1 trees planted for each tree removed, or a 2:1 ratio of shrubs planted for each tree removed. The results of this tree removal impact analysis are provided herein.

During the opening public hearing, it was also recognized that the site plans would require additional comment and review through interdepartmental coordination with other Reading municipal boards and commissions. Since the prior hearing, there have been several coordination meetings and minor plan revisions in response to comments and requests for additional supporting information. This memorandum also provides detail of these plan revisions.

Tree Inventory and Replacement Performance Standards

Since the previous public hearing, a qualified Hancock Associates field technician inventoried all trees equal to or greater than 6-inches diameter at breast height (DBH) within the footprint of disturbance associated with the proposed development. A flag was tied to each tree, each assigned with individual numbers, and identified by species and size (DBH). The locations where tree removal is proposed were divided into four (4) separate classifications of impact area as follows:

Wetland Impact Area – within the direct temporary and permanent wetland impact area

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Wetland Replication Area – within the footprint of proposed wetland replication areas

35-foot No Disturb Zone – within a distance of 0 to 35 linear feet from the limits of wetland, coincident with the 35-foot No Disturb Zone under Reading Wetland Bylaw and Regulations

100-foot Buffer Zone – trees within a distance of 35 feet to 100 feet from the limits of wetlands

The result of the tree inventory quantified that **a total of 116 trees are proposed for removal**. The following tables provide an analysis of these trees by species, size, and distribution.

Table 1. Trees Proposed for Removal by Species

Tree Species	# of Trees Proposed for Removal
Norway maple (<i>Acer platanoides</i>)*	66
Red maple (<i>Acer rubrum</i>)	24
Slippery elm (<i>Ulmus rubra</i>)	18
Dead Snag	3
Yellow birch (<i>Betula alleghaniensis</i>)	2
Unkown	2
Red oak (<i>Quercus rubra</i>)	1

*denotes invasive species

Table 2. – Trees Proposed for Removal by Size

Tree Size (DBH)	# of Trees Proposed for Removal
Saplings (6 to 10-inch DBH)	63
Small Trees (11 to 15-inch DBH)	33
Mature Trees (\geq 16-inch DBH))	20

Table 3. – Trees Proposed for Removal by Impact Area

Impact Area	# of Trees Proposed for Removal
Wetland Impact Area	14
Wetland Replication Area	33
35-foot No Disturb Zone	21
100-foot Buffer Zone	48

Quantification of Native Trees and Shrubs Proposed for Restoration Planting

Details of the planting schedule proposed as compensatory mitigation through wetland replication and restoration can be found on Sheet C6 of the revised Site Plans as submitted

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herein. The following table summarizes the species and quantities of native trees and shrubs proposed as ecological mitigation under this plan.

Table 4. – Native Trees and Shrubs Proposed for Restoration Planting

Trees	Quantity
Box elder (<i>Acer negundo</i>)	65
Red maple (<i>Acer rubrum</i>)	50
American witch-hazel (<i>Hamamelis virginiana</i>)	45
Speckled alder (<i>Alnus incana</i>)	20
Total Trees =	180
Shrubs	Quantity
Sweet pepperbush (<i>Clethra alnifolia</i>)	65
Highbush Blueberry (<i>Vaccinium corymbosum</i>)	45
Common winterberry (<i>Ilex verticillata</i>)	35
Gray dogwood (<i>Swida racemosa</i>)	35
Mountain laurel (<i>Kalmia latifolia</i>)	30
Eastern shadbush (<i>Amelanchier canadensis</i>)	30
Northern spicebush (<i>Lindera benzoin</i>)	10
Total Shrubs =	250

In summary, as compensatory mitigation for the proposed removal of 116 trees within wetlands and the 100-foot buffer zone to wetlands, the applicant is proposing to plant 180 native trees and 250 native shrubs through ecological restoration. In addition, the Landscape Plan provided as Sheet C7 carries a separate ornamental planting plan in which additional trees and shrubs are proposed, many of which are subsequently native species with ecological benefit as well. This quantity of native trees and shrubs proposed is well in exceedance of the minimum local performance standard for replacement of trees removed. We therefore respectfully request that the Conservation Commission permit the tree removal as proposed.

Summary of Plan Revisions and Additional Information

The following section provides summary of significant revisions to the site plans and additional information provided under this submittal:

- In response to comments received from the Conservation Commission that the initial Site Plans proposed wetland replication at a minimum 1:1 ratio of wetland replicated per square foot of wetland lost, under these revised Site Plans, a second wetland replication area has been added to increase wetland replication area to a total of 5,500 square feet, or twice the area of the 2,750 square feet of proposed wetland lost to permanent impact. These details are found on Sheets C5 and C6.

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- In response to comments received from the Conservation Commission and the Reading Department of Public Works, the Applicant has agreed to additional ecological restoration through hand removal of woody debris and other surficial obstructions from within the perennial stream. The applicant has also agreed to apply some bank stabilization and restoration techniques through installation of biodegradable sediment retention fiber rolls, native herbaceous plantings, and application of native seed mix. These details are found on Sheets C5 and C6. The specifications for the fiber rolls and seed mix is provided herein as Attachment A.
- The site layout has been revised to provide paved emergency vehicle turnaround areas in response to comments by officials from the Reading Fire Department. The new layout will provide a cul-de-sac style turn around for ambulance access at the building entrance as well as a paved turnaround area at the curve in the driveway for larger apparatus to back in and pull forward to exit the site. These layout changes resulted in the relocation of some of the surface parking behind the building which encroaches into the 35-foot no-touch buffer (local bylaw) by approximately 7 feet with a total disturbance of approximately 90 square feet.
- To address the increased impervious area resultant from the layout changes, the drainage design has been revised accordingly. The proposed extended dry detention basin has been reduced in size to accommodate the layout changes and the subsurface infiltration system has been increased in size to provide additional runoff control and recharge volume. A revised Stormwater Report is provided as Attachment B.
- The gas and water utilities have been relocated per Fire Department and CPDC comments.
- The proposed grassed walking trail has been changed to stone dust per ongoing discussions with the Conservation Agent and DPW representatives. The Applicant will use stone dust to level surficial pit and mound topography to alleviate depressions in which puddles are forming.
- Per request of the Conservation Commission, the Phase I and Phase II Environmental Reports for the property are provided herein as Attachment C.
- The Conservation Commission asked for additional information on the regulatory context which permits the permanent fill of jurisdictional bordering vegetated wetlands in accordance with the Massachusetts Wetlands Protections Act and implementing regulations. Pursuant to 310 CMR 10.55(4)(b), *“the issuing authority may issue an Order of Conditions permitting work which results in the loss of up to 5,000 square feet of Bordering Vegetated Wetlands when said area is replaced in accordance with the following general conditions and any specific conditions the issuing authority deems necessary to ensure that the replacement area will function in a manner similar to the area that will be lost.”* This follows with a seven (7) point general conditions performance standard for which wetland replication must meet. These include:

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- 1. the surface of the replacement area to be created ("the replacement area") shall be equal to that of the area that will be lost ("the lost area");*
- 2. the ground water and surface elevation of the replacement area shall be approximately equal to that of the lost area;*
- 3. The overall horizontal configuration and location of the replacement area with respect to the bank shall be similar to that of the lost area;*
- 4. the replacement area shall have an unrestricted hydraulic connection to the same water body or waterway associated with the lost area;*
- 5. the replacement area shall be located within the same general area of the water body or reach of the waterway as the lost area;*
- 6. at least 75% of the surface of the replacement area shall be reestablished with indigenous wetland plant species within two growing seasons, and prior to said vegetative reestablishment any exposed soil in the replacement area shall be temporarily stabilized to prevent erosion in accordance with standard U.S. Soil Conservation Service methods; and*
- 7. the replacement area shall be provided in a manner which is consistent with all other General Performance Standards for each resource area in Part III of 310 CMR 10.00.*

The Wetland Replication Plan provided herein meets or exceeds each of these performance standards.

Conclusion

Enclosed as submittal, we provide two (2) full sized (24"x36" format) revised Site Plan with all associated Attachments. As handouts to Conservation Commission members, we provide herein seven (7) copies of the following:

- Narrative Cover Letter
- Reduced 11"x17" format revised Site Plans
- Seed mix and fiber roll specifications
- Executive Summary of Phase I and Phase II Environmental Reports

With submittal of these plan revisions and additional supplemental information, we respectfully request to continue our public hearing before the Conservation Commission at your hearing scheduled on Wednesday, January 8, 2020. Please feel free to contact me regarding any questions or requests for additional supporting information. Thank you for your consideration in this matter.

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Respectfully,
Hancock Associates on behalf of Stonegate Construction Corp



David Cowell, PWS, CWB, CERP
Senior Wetland Scientist

cc: MassDEP Northeast Regional Office

Attachments:

- A – Seed Mix and Fiber Roll Specifications
- B – Revised Stormwater Report
- C – Phase I and II Environmental Reports
- D – Site Plans revised December 30, 2019

