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Barney S. Heath
Director

PUBLIC HEARING II MEMORANDUM

DATE:	November 20, 2023
MEETING DATES:	November 29, 2023
TO:	Zoning Board of Appeals
FROM:	Barney Heath, Director of Planning and Development Jennifer Caira, Deputy Director of Planning and Development Katie Whewell, Chief Planner for Current Planning
COPIED:	Mayor Ruthanne Fuller City Council

In response to questions raised at the Zoning Board of Appeals public hearing on September 13th of this year, the Planning Department is providing the following information for the upcoming continued public hearing/working session. This information is supplemental to staff analysis previously provided at the public hearing.

PETITION #08-23 **41 Washington Street**

Application #08-23- 41 TusNua LLC, requesting a Comprehensive Permit, pursuant to M.G.L. Chapter 40B, to construct a 16-unit residential unit development on a 25,902 square foot lot located at **41 Washington Street** within a Single-Residence 3 (SR-3) zoning district. The proposed development would consist of reconfiguring the existing dwelling and constructing an addition. The proposal includes four affordable ownership units.

The Zoning Board of Appeals (Board) opened the public hearing on this petition on September 13, 2023. This item was held open at that meeting and subsequent meetings for the petitioner to respond to questions and concerns raised by members of the public, the Board, and the Planning Department.

EXECUTIVE SUMMARY

The subject site at 41 Washington Street is a 25,902 square foot parcel on the north side of Washington Street between Grasmere Street and Elmhurst Road in the Hunnewell Hill neighborhood of Newton Corner. Located in a Single Residence 3 (SR3) zoning district, the site is improved with an approximately 6,800 square foot residential structure. Built in 1891 as a single-family home, the dwelling was divided into two units in 1925 and it remains a two-family home today.

The applicant, 41 TusNUA LLC, proposes to reconfigure the existing two-family home into four units and construct a four-story addition with twelve units to the rear of the dwelling, resulting in a 16-unit multi-family dwelling. As proposed, 24 parking stalls would be provided on site. The public hearing was opened on September 13, 2023, and held open to allow for traffic, stormwater, and landscape analysis of the plans submitted. No changes have been proposed to the project since September 13, 2023. The Applicant also conducted a site visit on October 20, 2023 for the Board and neighbors to observe the site and for the Board to ask questions of the development team.

Since September 13, 2023, the following materials have been submitted by the City's peer reviewers:

- Stormwater Peer Review, submitted October 10, 2023, prepared by Horsley Witten
- Transportation Peer Review, submitted October 25, 2023, prepared by BSC Group
- Landscape Peer Review, submitted November 6, 2023 prepared by Horlsey Witten

On November 20, 2023 the applicant submitted the following:

- Shadow studies
- Revised landscape plan
- MDM response to the transportation peer review.

Planning and its consultants anticipate reviewing these materials prior to a future public hearing.

Staff from Horsley Witten and BSC Group will join Planning staff at the public hearing on November 29 to discuss the proposed stormwater and drainage plan, landscaping, and traffic. The project materials submitted for review can be found here.

I. ANALYSIS

A. Site and Building Design

The proposed site layout shows an addition to the existing historic two and a half story, Shingle Style, two-family dwelling constructed circa 1891. The existing building is referred to as the George H. Hastings House and the pavilions, gables, bay windows and corner tower are reminiscent of Queen Anne style architecture. There are many notable features outlined by the Massachusetts Historical Commission such as its Shingle style architecture with a fieldstone first story, corner tower, and porte cochère. Other details such as cropped shingle raking eaves, jambs in the gable window, and shingled parapet in the side bay are Shingle style in origin.

The proposed plans, inclusive of the addition, indicate a lot coverage of 27.3%, where 30% is the maximum and an open space of 31%, below the 50% minimum required. The height, eastern side setback (erroneously noted as north on the existing conditions plan) and building height of the existing structure are considered nonconforming and in certain cases the project exacerbates the nonconformities. The applicant creates new areas of noncompliance with the lot area per unit, number of stories, floor area ratio "FAR" and the open space calculation.

As the site slopes downwards towards the rear of the lot, a four-story addition is proposed to the rear of the existing two and half story dwelling. Due to the downward slope and grading of the lot, the addition is not taller than the existing dwelling. However, the measured height of the building is increasing from 42.8 feet to 47.9 feet (36 feet maximum allowed), due to the average grade being approximately six feet lower than the existing average grade. The roof peak is generally the same height between the existing and proposed building.

The proposed building will contain 27,205 square feet and represents an FAR of 1.05, which well exceeds the .36 allowed for the SR3 zone. The project will consist of sixteen dwelling units, four are proposed within the existing two-family dwelling and 12 will be housed within the proposed rear addition. Four floors within the addition will align with the existing building. The units range in size from 946 square feet to 1,535 square feet and consist of 8 two bedroom/two bathroom and 8 three bedroom/two bathroom units.

In the initial project eligibility feedback, the City encouraged the applicant to apply to the Urban Design Commission ("UDC") to provide more nuanced feedback and identify specific areas of improvement relative to site and building design. The applicant has yet to request feedback from the UDC on the proposed project. Planning continues to encourage the applicant to apply for UDC review.

B. Access and Parking

The site will have two points of access from Washington Street. The western driveway provides access to the rear of the site as well as 22 of the 24 parking stalls. There are six proposed parking stalls to the left of the existing dwelling and 16 to the rear. Ten of the stalls are along the rear property line and six are located underneath a cantilevered portion of the building. There is a second driveway along the eastern property line that provides access to two tandem stalls beneath the renovated porte cochère. The rear portion of the site is currently wooded, and the applicant is proposing around 9,178 square feet of paving for the driveway and associated parking areas. The lack of open space is concerning as approximately 70% of the site is to be covered by impervious area either for the proposed building or parking. The proposed 31% open space calculation, where 50% is required, represents a large gap in compliance with the open space standards.

Throughout the project's development, the Planning Department has expressed that the paving and number of parking stalls is excessive for the site and the applicant should consider reducing the amount of paving wherever possible, even if that requires a waiver from the required number of parking stalls. The applicant may want to consider removing the parking at the front of the site to preserve open space and the overall curb appeal from Washington Street.

C. City's Peer Review

Transportation

The City's on call consultant, BSC Group, conducted a review of the applicants' traffic study and materials (**Attachment A**). BSC Group identifies several items of clarification in their review. Trip generation, peak parking demand, and transportation demand management typically garner the most interest when evaluating development projects so they will be covered in this memorandum. For additional information please review the application's traffic materials on NewGov and the City's on call consultant's review of the materials, attached.

Trip Generation

The applicant's traffic consultant, MDM, estimates a trip generation of 108 weekday daily trips. Six total trips (entering and exit) are estimated to take place during the morning peak hour and eight are projected to take place during the evening peak hour. MDM also notes that there will be approximately 1 vehicle every 9 minutes during the weekday peak hours at the site driveway intersection of Washington Street.

Peak Parking Demand

The Zoning Ordinance requires two parking stalls per unit which is widely believed to result in an oversupply of parking in a community with multiple modes of transit, rapid transit, express bus, and light rail. At 16 units and 24 parking stalls, the project presents a ratio of 1.5 stalls per unit. To provide justification of this ratio, MDM used both the Institute of Transportation Engineers (ITE) peak parking generation rates as well as empirical data from six multifamily developments across the Metro West region. Based on the empirical data taken during the overnight peak period from developments in Natick, Mansfield, Concord, Framingham and North Reading, the peak parking rate is 1.34 spaces per unit. Using the ITE 85th percentile demand the adjusted peak parking rate is 1.11. Planning notes that the developments used for the empirical data are more suburban in nature, as opposed to Newton's status as a "rapid transit community" per the MBTA Communities designation by the state. Five of the six municipalities are "commuter rail" communities, and one (North Reading) is an "adjacent community." This indicates that perhaps Newton could benefit from a lower parking ratio than the multifamily projects in the applicant's study.

The City of Newton was a participant in the "Perfect Fit Parking" study by MAPC. The study examined overnight residential parking data from nearly 200 multi-family buildings in Greater Boston between 2015 and 2019. The study captures parking supply (stalls per unit), parking demand per unit (occupied parking spaces divided by number of occupied housing units), and parking utilization (the number of occupied parking spaces divided by the total number of parking spaces). Across 10 sites in Newton, the parking supply was 1.52 stalls per unit, the demand was .83 stalls per unit and utilization was 50%. BSC notes that the peak demand is likely to be 18-22 parking spaces, which is slightly lower than the 24 proposed parking spaces. Due to the site's location being so close to the Boston boundary (Oak Square, Brighton) and the trend of .83 parking stall demand per unit in the Perfect Fit Parking study, Planning believes fewer parking spaces could be provided and still be adequate to accommodate the site's residents. This is also consistent with Planning's recommendations to reduce parking to lessen reliance on private automobiles and reduce impervious surfaces.

Transportation Demand Management

The applicant is proposing the following Transportation Demand Management measures:

- Unbundled parking - The Proponent will consider unbundling of residential parking to provide an option for residents to rent or purchase fewer or no parking spaces with their unit.

- Bicycle Facilities and Promotion - Provide bicycle parking, including weather protected racks for residents and visible accessible racks for visitors and employees proximate to the building entrances.

The applicant states they will consider unbundling the parking, the applicant should confirm and propose additional TDM measures for the project. The project is intended to be condominium (ownership) units, thus may lack the administrative capabilities to administer transit passes. A more impactful TDM measure would be to reduce the parking ratio to attract residents who are car-lite or car-free. The plans also do not show any electrical vehicle charging, the applicant should consider incorporating EV infrastructure to their TDM plan. Due to the size of the project, the project is not required to meet any sustainability requirements where the threshold is 20,000 square feet. In the second bullet of their TDM plan, the applicant alludes to employees of the building. They should clarify how many employees are contemplated for the project.

The floor plans indicate a bike storage room on the ground level. To exit the building, bicyclists would exit through the rear of the building to the rear parking facility and go left or right around the side of the building to get to Washington Street or take the elevator from the lobby. The applicant should consider a more user-friendly location for the bike parking that reduces the distance from Washington Street to the bike storage and avoids potential conflicts with vehicles in the surface parking facility and in the project's proposed western driveway. The applicant should also consider measures to delineate a path for pedestrians and bicyclists along the western driveway. This can be achieved through pavement markings, stamped concrete, etc.

The applicant should also clarify the type of vehicle that is likely to pick up the trash at the northwest corner of the site and how often trash will be picked up. Depending on the type of vehicle anticipated, turning templates may be requested. In a conversation with city staff, the city's peer reviewer, BSC, indicated front loading trash vehicles would adequately maneuver within the site.

Stormwater Peer Review

The applicant submitted a stormwater management report which states that since the project will disturb land that is currently in a natural vegetated state this project meets the "New development" definition of the City's stormwater regulations. Also, since the increase of impervious areas is more than 1,000 square feet the project was designed to comply with the "Major Permit" design standards. The existing impervious area totals approximately 3,516 square feet and the proposed impervious area is approximately 17,883 square feet of the site. The landscaped area of the site is being reduced from

19,452 square feet to 8,019 square feet. As noted earlier, approximately 70% of the lot is proposed to be covered in impervious surfaces (building and paving).

The City's engineering and stormwater peer reviewer for this application, Horsley Witten (HW), submitted a memorandum on October 6, 2023 **(Attachment B).** The following is a summary of the key points highlighted in HW's analysis. HW notes the Applicant proposes to install a new stormwater system including deep-sump catch basins, area drains, porous pavement, subsurface infiltration systems, a French drain system and a pump chamber. HW reviewed in accordance with the Massachusetts Stormwater Management Standards (MASWMS), and the City of Newton Stormwater Management and Erosion Control Rules & Regulations (Stormwater Regulations), dated April 15, 2022, as well as standard engineering practices.

There were several areas and standards where HW requested additional information and areas of the stormwater management where the applicant should revisit their calculations and methods. The discharge points under Standards 1 and 2 of the MSH (Massachusetts Stormwater Handbook) need further clarification and evaluation. Clarifications around plans, site area count, discrepancies between plans for modeling and HydroCAD, all need to be corrected in accordance with Standard 2. HW also noted under Standard 2 that the usage of pumps is concerning as pumping stormwater can be difficult, HW suggests that the applicant redirect some of the roof runoff to Infiltration System #1 and make this system as large as possible (instead of directing to crushed stone which will overflow into the pump chamber). Under Standard 4, the applicant's calculations show the retention of the volume of runoff equivalent to 1-inch times the total post-construction impervious surface area on the site, however, the Stormwater Regulations Section 5.C.4.a, require retention of the volume of runoff equivalent to 2 inches times the total post-construction impervious surface area on the site. The applicant should revise their calculations. Standards 8 and 9 are relatively straightforward and deal with construction management and long-term O&M plan. The applicant should respond to these points raised by HW so HW can confirm compliance with the MSH standards.

Grading and Utilities: The applicant is proposing a seven-foot-high retaining wall between the rear parking lot and the proposed playground. The grades through the proposed playground will need to be reconfigured to protect the trees in this area including a 38-inch Norway Maple and a 22-inch Sugar Maple. The existing grades within the 8-foot-wide strip between the proposed 3-foot-tall wall on the north side of the parking area and the rear property boundary will need to be retained to protect the trees in this area as noted on the landscape plan. Plans are missing compasses and accurate contours.

Review of Lighting and Photometric: The Applicant has not provided a lighting, a photometric plan, or shadow studies in the package reviewed by HW. The Planning Departments recommends the applicant provide at least a lighting and photometric plan, unless otherwise specified by the Board.

Utilities: The existing water service will be cut and capped at the main in Washington Street. The existing sanitary sewer line will be cut and capped and a new 8-inch PVC sewer service will be installed in the same area, connecting into Washington Street. The existing gas line will be cut and capped at the main. It does not appear that the Applicant will reconnect to the gas main in Washington Street.

Landscaping Review

The applicant submitted a landscape plan which was reviewed by HW (**Attachment C**). HW notes that the applicant is proposing to remove 17 of the existing trees and maintain 11 of the existing trees. 50 new trees are proposed. The landscape plan uploaded to the permitting portal notes that 208.5 caliper inches are proposed to be removed and 242.5 caliper inches to be replaced. However, HW identified discrepancies amongst the caliper inches between the plans. Due to the footprint of the building and paved areas, the landscaping is concentrated toward the front of the site and around the perimeter. There is also a 6-foot-tall wood fence proposed around the perimeter of the site, except the frontage, which will help shield the abutting properties from any headlights or any other externalities of the parking area.

One of the species of tree proposed, the "Autumn Brilliance" is placed around the foundation of the building but could grow to a height and spread of 15-25 feet. HW suggests relocation of this species as the tree may outgrow the space provided in the proposed plans.

HW also noted that the plans are inconsistent amongst the tree mitigation plan and sheet L2 of the plan set. The applicant should clarify and upload a new plan. HW also recommends the drip line be included within the plans as construction activities are prohibited within the drip line, unless a tree permit is obtained.

D. Consistency with the Comprehensive Plan and Climate Action Plan

Newton's Comprehensive Plan ("The Plan") was adopted by the City Council in 2011 and sets goals and objectives for the City in several areas, the housing and land use section are most applicable to this project. The Climate Action Plan ("Action Plan") contemplates a plan for 2020-2025 and sets forth goals for a carbon-neutral Newton by 2050.

The Comprehensive Plan notes that the Comprehensive Permit is an important tool to create new housing units within the City due to limitations of the City's zoning code and limited land resources. The Comprehensive Plan laments the loss of housing affordability and outlines ways to increase housing stock and affordability in the City. Incorporating additional units within and added onto a historic dwelling is consistent with the Comprehensive Plan and the need for affordability is present in all the forms of housing being created in the City, not just in relatively large multi-family developments. Adding housing near transit and proximity to Brighton's Oak square is also an aspect of the project that is consistent with the goals of the Comprehensive Plan.

The Plan also emphasizes design that shows careful respect for neighborhood context by avoiding potentially disruptive impacts, can make such development a more welcome addition to the vicinity, thus serving both design and housing objectives. Planning Staff believe that the project could make further revisions to the project to better align with the neighborhood context. To bring the open space calculation closer to compliance, the applicant could reduce the footprint of the building and reduce the amount of impervious surface. At 1.05, the FAR is almost three times the maximum allowed in the SR-3 district, to better align with the single-family neighborhood, the applicant may also consider reducing the overall bulk of the building to bring the FAR closer to compliance. The paved areas of the site and amount of paving do not align with the character of the neighborhood and single-family residential zoning district. The amount of paving seems commercial in nature and Planning strongly recommends reducing the amount of paving and impervious area on site to preserve the site's open space and vegetated areas.

In June 2015, the Planning Department and Mayor Warren developed a City-wide housing strategy. In the report by RKG and Sasaki, it is noted that Newton's housing diversity is limited, with 55.1% of the housing stock as single family residential, 21.3% as duplex/triplex units and 15.3% as condominium. The remainder of the housing stock is traditional multifamily rental and mixed use (8.2%). The report notes that given the limited amount of available vacant land, a mix of moderate density (multi-unit) development will need to be considered to accommodate additional households and allow for greater housing choice. Planning finds that the proposed project at 16 units of condominium (ownership) provides a housing type which is greatly needed in the city.

The Climate Action Plan encourages low-carbon housing near transit and encourages adoption of Zoning Ordinances that allows this. Projects can be low carbon due to the way it is designed or its level of energy efficiency. The proposed project is not subject to the sustainable section of Zoning Ordinance, thus no sustainability materials were submitted. The applicant should clarify any sustainable measures the project is

adopting as well as areas of compliance with applicable building codes which have more rigorous requirements for energy efficiency. The electrification ordinance may also be in effect at any future permitting phases if this project is approved. The Climate Action Plan also identifies improving existing buildings as a tool to meet its goal. The Climate Action Plan points out that the current housing stock is old and inefficient. At the time of the report, approximately 77% of residential buildings were built before 1960 and over 90% heated by fossil fuels. The Action Plan identifies new roofs, heating systems, and appliances are opportunities for improvement. The Action Plan also prioritizes reducing the heat island effect, the impervious cover proposed for this site takes the site's existing conditions towards the opposite direction. The proposed project adds a significant amount of paving where there is existing open space and vegetation, eliminating the natural stormwater absorption and retention of the site.

E. Mitigation

The Engineering Division of Public Works reviewed the project in accordance with the Infiltration and Inflow Ordinance (I&I). The total mitigation cost is $239,962 with 75% that may be abated. The abatement amount of $179,971 may be used towards other mitigation measures, if approved.

II. Next Steps

The Planning Department will continue to review the proposal and provide updated and expanded memoranda in advance of future ZBA hearings.

Planning recommends the applicant upload a revised plan set with any changes to the project and to correct previously identified issues of inconsistencies amongst the plan and lack of a compass.

ATTACHMENTS

Attachment A: BSC review (Transportation)

Attachment B: Horsley Witten review (Stormwater)

Attachment C: Horsley Witten review (Landscaping)

Attachment A

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OCTOBER 24, 2023

Katie Whewell
Chief Planner
City of Newton
Planning and Development Department
1000 Commonwealth Avenue
Newton, MA 02459

RE: Transportation Peer Review – 41 Washington Street

Dear Ms. Whewell,

As requested, BSC Group, Inc. (BSC) has conducted a peer review of the Traffic Impact Assessment prepared by MDM Transportation Consultants, Inc. (the Applicant) dated August 4, 2023 for the proposed 16-unit housing development located at 41 Washington Street in Newton, Massachusetts.

The key findings of our review of the Traffic Impact Assessment are presented in the following sections. BSC's comments and recommendations are presented in **bold**.

Traffic Study Methodology/Adequacy of Study Area

The Applicant identified the study area along Washington Street graphically, illustrating its proximity to Interstate-90 and the Boston city line. The Applicant did not identify any study area intersections in the TIA report. The Applicant specified that the existing single-family home on the Project site will be expanded to include 16 residential units with 24 on-site parking spaces.

1. **BSC agrees with the Applicant's methodology for the Traffic Impact Assessment.**

Data Collection and Existing Traffic Conditions

The Applicant collected existing traffic volume data using an automatic traffic recorder (ATR) along Washington Street in April 2023. A seasonal adjustment factor increase of one percent was applied to the traffic volumes based on a review of MassDOT permanent count station data. Vehicle speed data along Washington Street was collected using a radar recorder device.

A qualitative description of the study area roadway, Washington Street, was provided. The Applicant notes that land use in the study area is primarily residential.

2. **The existing traffic volumes were collected in April 2023, however the TIA report states that a seasonal adjustment factor based on MassDOT count station data from the month of June was employed. BSC requests the Applicant verify that the correct seasonal adjustment factor was used.**
3. **BSC recommends the Applicant specify the dates and days of the week that the ATR data was collected.**
4. **BSC agrees with the Applicant's collection and analysis of vehicle speed data.**
5. **BSC agrees with the qualitative description of Washington Street.**

Sight Line Evaluation

The Applicant conducted an evaluation of sight lines at the proposed site driveway following AASHTO standards. An evaluation of stopping sight distance (SSD) was conducted for vehicles traveling in both directions along Washington Street towards the site driveway, and intersection sight distance (ISD) was assessed for vehicles

making left and right turns out of the site driveway onto Washington Street. The Applicant concluded that SSD and ISD for all movements exceeded the AASHTO minimum values. The Applicant recommends that vegetation and landscape features should be maintained at a height of two feet or less to ensure unobstructed site lines.

6. **BSC agrees with the Applicant's methodology for assessing SSD and ISD for the proposed site driveway's intersection with Washington Street.**

7. **Given the on-street parking west of the site, BSC recommends the Applicant explain if the ISD was measured with or without parked vehicles along the roadway. If ISD was measured without the presence of parked vehicles, BSC recommends the Applicant conduct the analysis with on-street parked vehicles.**

Alternative Transportation Facilities

The Applicant provided a qualitative description of the public transit facilities available in the vicinity of the proposed site. The nearest MBTA bus stops are provided along Tremont Street, which runs parallel to Washington Street, and are approximately 0.25 miles away. The Applicant notes that to provide a conservative analysis, no public transit trip reduction was applied to the trip generation results.

8. **BSC agrees with the assessment of the public transit facilities in the vicinity of the proposed site.**

Roadway Segment Crash History

The Applicant obtained crash data from MassDOT for the most recent five-year period (2018 – 2022) for the segment of Washington Street between Copley Street and Burton Street. One crash was reported within the five-year study period. The Applicant notes that there are no Highway Safety Improvement Project (HSIP) eligible locations within the study area.

9. **BSC agrees with the crash data collection methodology and supporting analysis.**

Trip Generation

The Applicant employed ITE Trip Generation data for Land Use Code 220 – Multifamily Housing (Low-Rise) to estimate trips generated by the proposed 16-unit housing development. Based on the trip generation results, the Applicant concluded that the increase in traffic along Washington Street added by the proposed development will be inconsequential to traffic operations along Washington Street.

10. **BSC notes that the Applicant refers to the Project as a mixed-use development in this section of the TIA report. BSC recommends clarification as to whether this development will include other uses not identified in the report.**

11. **BSC agrees with the methodology to use ITE Land Use Code 220 for this trip generation analysis. However, BSC recommends employing the ITE best-fit equations instead of the average rates. For each analysis period (weekday daily, weekday AM peak hour, and weekday PM peak hour), the R^2 values for the best-fit equations all exceed 0.75, which is the minimum threshold for which the ITE *Trip Generation Handbook* recommends using best-fit equations.**

12. **BSC notes that the Applicant could subtract the trips generated by the existing single-family home from the proposed trip generation to produce the net overall increase in trips. However, BSC agrees with the methodology to exclude these trips, providing a more conservative trip generation estimate.**

Statement of Impact

The Applicant provided a section in the TIA report comparing the expected increase in trips along Washington Street to the existing traffic volumes as measured by the ATR. The project impact is expressed as a percentage increase in total volume during the weekday AM and PM peak hour periods. Based on the existing traffic volumes and trip generation results, the Applicant estimates a percentage increase in traffic of 0.8% and 1.4% during the AM and PM peak hours, respectively.

13. **BSC recommends replacing the word "Qualitative" with "Quantitative" in the heading of this section of the TIA report.**

Projected Peak Parking Demand

The Applicant provided two methodologies for estimating peak parking demand for the parking spaces proposed to be provided on-site. First, parking rates provided in the ITE Parking Generation Manual were employed for LUC 220 – Multifamily Housing (Low-Rise). The Applicant used a 27% reduction to the ITE rates for transit use based on Newton census data. Using the 85th percentile parking demand rate of 1.52 spaces per unit, with the 27% transit reduction, the development would be expected to have a peak demand of 18 parking spaces, which is fewer than the proposed 24 parking spaces.

In addition to the ITE parking rate analysis, the Applicant provided an empirical comparison of the proposed development to six similar multi-family housing developments in Massachusetts. Overnight parking observations were conducted at the six locations. The average peak parking rate between the six locations was found to be 1.34 spaces per unit. Employing the empirical rate with no transit reduction, the peak parking demand for the 16-unit development would be 22 spaces, and fewer than the proposed 24 parking spaces.

The Applicant also conducted a parking accumulation survey to identify on-street parking trends along Washington Street in the vicinity of the Project site. The results indicated a peak weekday on-street parking demand of 47% and peak weekend demand of 40% among the available on-street parking spaces near the site.

14. **BSC recommends the Applicant provide a calculation of the required number of on-site parking spaces per City of Newton zoning to compare to the proposed number of on-site parking spaces.**
15. **BSC agrees with the methodology to employ ITE parking rates to estimate peak parking demand of the proposed development. BSC agrees with the Applicant's use of census data to reduce the ITE rates based on public transit usage of Newton residents.**
16. **BSC agrees with the Applicant's use of empirical data from other multi-family complexes and the MAPC *Parking Utilization Study* to support their conclusion that the number of proposed on-site parking spaces will likely be sufficient to meet peak demand.**
17. **BSC agrees with the Applicant's methodology to conduct an analysis of the on-street parking provided near the Project site. Although overnight parking is prohibited between December 1st and March 31st, BSC recommends the Applicant conduct an on-street parking analysis during the overnight hours, as this will be the peak period residents will be parking, as well as overnight visitors, from April 1st to November 30th.**

Transportation Demand Management

The Applicant provided several recommendations to include in a Transportation Demand Management (TDM) program. These measures include providing bicycle racks for tenants and unbundled parking, which would allow tenants to rent fewer or no parking spaces with their unit. Additionally, the site design provides sidewalks that will connect building entrances with the parking areas and to the existing sidewalk along Washington Street.

18. **BSC agrees with the proposed TDM measures proposed by the Applicant.**
19. **BSC notes that the Applicant mentions "tenants and customers" and "tenant employees" in this section of the TIA report. BSC recommends the Applicant clarify if other non-residential land uses will be provided in the building.**

Please do not hesitate to contact our office with any inquiries you may have.

Sincerely,
BSC Group, Inc.

Stephen Siragusa, M.S.
Transportation Designer

Attachment B

Horsley Witten Group
Sustainable Environmental Solutions
112 Water Street • 6th Floor • Boston, MA 02109
857-263-8193 • horsleywitten.com

October 6, 2023

Katie Whewell
Chief Planner for Current Planning
City of Newton
Planning and Development Department
1000 Commonwealth Avenue
Newton, MA 02459-1449

Re: Initial Stormwater Peer Review
Comprehensive Permit
41 Washington Street, Newton, MA

Dear Ms. Whewell:

The Horsley Witten Group, Inc. (HW) is pleased to submit this peer review regarding the stormwater management and utility design for the proposed residential development at 41 Washington Street, in Newton, MA. We understand that 41 TusNua LLC (Applicant) has submitted the Comprehensive Permit Application, pursuant to M.G.L. Chapter 40B. The proposed project includes the restoration and expansion of an existing dwelling into a 16-unit, 6,807 square foot (sf) multi-family building. The proposed development will also include a driveway, parking lot, landscaped areas, and utilities.

The existing 25,902 sf (0.59± acre) site is occupied by a two-family home with a paved driveway, gravel parking area, concrete walkway, and landscaped areas. The site is bounded by Washington Street in the front and by residential dwellings on the rear and sides. The property slopes gradually from the southwest corner to the northeast corner of the lot. The site currently does not include a stormwater management system. Site runoff flows over the ground surface to the surrounding residential sites and Washington Street. The site is not located within 100 feet of a resource area.

The Applicant proposes to increase site impervious area by over 14,000 sf. The Applicant proposes to install a new stormwater system including deep-sump catch basins, area drains, porous pavement, subsurface infiltration systems, a French drain system and a pump chamber.

As part of the design review process, HW received the following documents and plans:

- Narrative Description of Project (2 pages);
- MassHousing Project Eligibility letter, dated July 10, 2023 (8 pages);
- Summary of Relief and Waivers Requested (5 pages);
- Zoning Review Memorandum, 41 Washington Street, Newton, MA, prepared by Newton Department of Planning and Development, dated August 9, 2023 (7 pages);
- Stormwater Management Report, 41 Washington Street, Newton, MA, prepared by Spruhan Engineering, P.C., dated July 25, 2023 (155 pages);

- Existing Conditions, 41 Washington Street, Newton, MA, prepared by Everett M. Brooks Co., dated September 28, 2022 (1 page);
- Landscape Plan, 41 Washington Street, Newton, MA, prepared by Verdant Landscape Architecture, dated July 24, 2023 (5 pages);
- Architectural Plans, 41 Washington Street, Newton, MA, prepared by Guzman Architects, LLC, dated August 2, 2023 (10 Sheets); and
- Civil Plan, 41 Washington Street, Newton, MA, prepared by Spruhan Engineering, P.C., dated March 24, 2023, which includes:
    - Proposed Conditions Site Plan — Sheet 1 of 7
    - Layout and Topography — Sheet 2 of 7
    - Drainage and Utilities — Sheet 3 of 7
    - Detail Sheet 1 — Sheet 4 of 7
    - Detail Sheet 2 — Sheet 5 of 7
    - Detail Sheet 3 — Sheet 6 of 7
    - Watershed Maps — Sheet 7 of 7

Review of Stormwater Management

This review of the submitted materials is based on the Massachusetts Stormwater Management Standards (MASWMS), and the City of Newton Stormwater Management and Erosion Control Rules & Regulations (Stormwater Regulations), dated April 15, 2022, as well as standard engineering practices.

In accordance with Section 5.C.2 of the Stormwater Regulations, this project is required to comply at a minimum with the performance standards of the MSH. Therefore, we have used the MSH as the basis for organizing our comments as they pertain to stormwater. However, in instances where the additional criteria established in the Stormwater Regulations require further recommendations, we have referenced these as well. HW offers the following comments:

1. *Standard 1: No new stormwater conveyances (e.g., outfalls) may discharge untreated stormwater directly to or cause erosion in wetlands or waters of the Commonwealth.*
    a. The Applicant has evaluated three Discharge Points (DP) under existing and proposed conditions from the project site.
        - DP#1 is the closed drainage system within Washington Street. Washington Street appears to be sloped towards the west and a municipal catch basin is located just prior to the intersection with Grasmere Street. It appears that the boundary for Subcatchment #1 may not pass through the apparent high points in the driveways. HW recommends that the Applicant revisit the drainage divide in the vicinity of the carport.
        - DP#2 is located along the northwestern property boundary adjacent to the property at 47 Washington Street. HW was not able to confirm the purpose of subcatchment area #2 under existing conditions. There does

not appear to be a low point along the property boundary. If the purpose is to illustrate the stormwater runoff onto the adjacent property, then it would seem appropriate to use the northern property line of 47 Washington Street. HW recommends that the Applicant clarify the purpose of subcatchment area #2.

- DP#3 is the rear northwest corner of the project site, at the site low point, elevation 105. This low point is adjacent to the properties at 128 Grasmere Street and 20 Merton Street.

b. The Applicant proposes to manage the stormwater on the site using a closed drainage system, porous pavement and two subsurface infiltration practices that overflow into the municipal drainage system on Washington Street. The proposed design does not appear to discharge into a wetland.

c. It appears that the north arrow provided on the Existing Conditions Plan is not accurately depicted. Furthermore, the Applicant has not included north arrows on the proposed site plans. HW recommends that the Applicant correct or include the north arrow on all site plans.

2. *Standard 2: Stormwater management systems shall be designed so that post-development peak discharge rates do not exceed pre-development peak discharge rates.*

a. The Applicant has modeled the site and added together the existing discharge points DP#1, DP#2, and DP#3 as one final node (3L) to compare under existing and proposed conditions. Standard engineering practice is to compare the locations where stormwater flows offsite under existing and proposed conditions, unless there is a specific means, such as a berm, a swale, or a pipe that connects the discharge points in some manner. HW recommends that the Applicant clarify how the three existing discharge points connect or keep them separated in the HydroCAD model.

b. HW recommends that the Applicant clarify how it determined the drainage divide for the existing house. HW notes that the architectural view does not appear to match the site plans.

c. The Applicant has used the property boundaries as the upgradient drainage divide. HW recommends that the Applicant confirm if any stormwater is flowing from the east onto the property that may be collected in the proposed stormwater management system.

d. The proposed watershed map does not appear to correlate with the proposed HydroCAD model. HW recommends that the Applicant adjust the map and clearly illustrate the seven proposed subcatchment areas.

e. The Applicant has used a surface description of fair and poor for the grass and woods in the existing conditions model. HW recommends that the Applicant justify these descriptions.

f. The Applicant has provided a Natural Resources Conservation Service (NRCS) map in the Stormwater Management Report. The soils have been identified as Hydrologic

Soil Group (HSG) D. The Applicant has used HSG A and B under existing conditions and HSG A under proposed conditions. HW recommends that the Applicant justify the various soil groups used in the HydroCAD model. HW notes that surface conditions are typically associated with the NRCS soil maps and infiltration properties are associated with on-site test pits.

g. HW recommends that the Applicant confirm the connection of the downspout located in the southern corner of the existing dwelling, near the carport, to the closed drainage system.

h. The total existing area modeled is listed as 25,752 sf. The total proposed area is 25,908 sf. These areas are typically identical. HW recommends that the Applicant clarify the difference in total area.

i. Under proposed conditions the Applicant has modeled the porous pavement with a curve number of 65 and a time of concentration (Tc) value of 15 minutes. HW recommends that the Applicant justify these input values.

j. HW recommends that the Applicant provide a detail for the porous pavement. With specific depths and materials listed.

k. HW notes that the slope of the proposed driveway is at approximately 9%. The Applicant may choose to include check dams beneath the surface within the porous pavement to minimize the potential of the stormwater rapidly flowing towards the toe of the slope.

l. It is common practice to model the stone reservoir below the porous pavement as a pond. It appears that the Applicant has separated the porous pavement into four subcatchments 18S, 20S, 23S and 27S. HW recommends that the Applicant revisit the model and consider including ponds beneath the porous pavement that corresponds to a porous pavement detail and separated by check dams. The Applicant may want to include an underdrain beneath the reservoir that flows towards the Infiltration System #1 or the Crushed Stone System.

m. The elevations provided in the HydroCAD model for Infiltration System #1 are not consistent with the plan set. HW recommends that the Applicant revisit the model.

n. The elevations provided in the HydroCAD model for the Crushed Stone System differ slightly from the plan set. HW recommends that the Applicant revisit the model and the details for consistency.

o. It appears that the pipes from the northeastern area-drain and two downspouts connect to a cleanout which is piped to the Crushed Stone System. HW recommends that the Applicant confirm if this is supposed to be a drain manhole and provide a callout with elevations on the Drainage Plan.

p. The Applicant proposes to direct overflow from Infiltration System #1 to the municipal drainage system in Washington Street. The Applicant is reducing the runoff towards the abutting parcels. However, will be increasing the runoff to the municipal system.

HW recommends that the Applicant confirm that the municipal system has adequate capacity.

q. HW recommends that the Applicant provide the pump sizing calculations, include dual pumps and an alarm system in case the water rises too high in the pump chamber.

r. HW recommends that the Applicant call out the type of pipe connected to the pump system.

s. HW notes that pumping stormwater can be difficult. The Applicant is directing a large surface area, including most of the roof runoff into the Crushed Stone System which will overflow into the pump chamber. If feasible HW recommends that the Applicant redirect some of the roof runoff to Infiltration System #1 and make this system as large as possible.

t. The Applicant has used precipitation depths that differ from the Northeast Regional Climate Center (NRCC) data and from the NOAA Atlas 14 Precipitation Frequency Estimates. HW recommends that the Applicant consider revising its HydroCAD model to use the more conservative depths as listed in the Table below.

Recurrence Interval	Applicant (inches)	NOAA Atlas 14 (inches)	NRCC (inches)
2-year	3.25	3.25	3.22
10-year	4.70	5.14	4.87
25-year	5.50	6.31	6.17
100-year	8.78	8.13	8.85

3. *Standard 3: The annual recharge from post-development shall approximate annual recharge from pre-development conditions.*

a. The Applicant has included the test pit logs on Sheet 4 of 7 which indicate high groundwater. It appears that the porous pavement parking lot is below the Estimated Seasonal High Groundwater (ESHGW) in the vicinity of TP-6. It also appears that the ESHGW is within 2 feet of the bottom of the porous pavement in the western driveway. HW recommends that the Applicant revisit the bottom of the stormwater system and the depth to groundwater and either raise the bottom of the system or not take credit for this area of infiltration in the stormwater design.

b. HW recommends that the Applicant confirm that all proposed infiltration practices are located at least 10 feet from the proposed building per Stormwater Regulations Section 5.B.3 and 2 feet above ESHGW in accordance with Volume 2, Chapter 2 of the MSH.

c. The Applicant provided the sizing calculations to confirm that the proposed design will retain 1 inch of stormwater over the impervious area. HW recommends that the

Applicant provide the stage storage table printout from the HydroCAD model to confirm the storage within the infiltration systems below the invert of the outlet elevations.

d. The Applicant has provided drawdown calculations that indicate that the infiltration practices drain within 72 hours.

e. HW recommends that the Applicant provide a mounding analysis for infiltration practices located within 4 feet of the ESGHW per Volume 3, Chapter 1, page 28 of the MSH.

4. *Standard 4: The stormwater system shall be designed to remove 80% Total Suspended Solids (TSS), to remove 50% of Total Phosphorus (TP), and to treat 2.0-inch of volume from the impervious area for water quality.*

    a. The Applicant has provided calculations that show that the stormwater management systems at the site retain the volume of runoff equivalent to 1-inch times the total post-construction impervious surface area on the site. Per Stormwater Regulations Section 5.C.4.a, the stormwater management systems at the site are required to retain the volume of runoff equivalent to 2 inches times the total post-construction impervious surface area on the site. HW recommends that the Applicant revise the calculations as suggested above and recalculate the volume of water infiltrated on site including the volume beneath the porous pavement.

    b. The Applicant has provided TSS removal Calculations that indicate an 85% TSS removal rate. The Applicant has provided deep sump catch basins for pretreatment of the parking lot area.

    c. The Applicant has provided total phosphorus removal calculations and appears to be removing greater than 60% total phosphorus by infiltrating the stormwater.

5. *Standard 5 is related to projects with a Land Use of Higher Potential Pollutant Loads (LUHPPL).*

    a. Residential land use is not considered a LUHPPL, therefore Standard 5 is not applicable.

6. *Standard 6 is related to projects with stormwater discharging into a critical area, a Zone II or an Interim Wellhead Protection Area of a public water supply.*

    a. The Project does not appear to be located within and will not discharge to a critical area, Zone II, or Interim Wellhead Protection Area. Therefore, Standard 6 is not applicable.

7. *Standard 7 is related to projects considered Redevelopment.*

    a. The Applicant is proposing to increase the impervious area by greater than 14,000 sf. Therefore, the project is considered a new development and the criteria under Standard 7 are not applicable.

8. *Standard 8 requires a plan to control construction related impacts including erosion, sedimentation, or other pollutant sources.*
    a. The Applicant has included a stabilized construction entrance and compost sock barrier around the perimeter of the site on Sheet 2 of the plans. HW recommends that the Applicant provide a separate Erosion Control and Site Preparation plan for clarity. HW recommends that the Applicant add a construction sequence to the plan.
    b. HW recommends that the Applicant provide a more robust erosion control barrier along the north and west property boundaries.
    c. The Applicant has provided erosion control notes for during construction in the Operation and Maintenance Plan. HW recommends that all notes be added to a separate Erosion Control and Site Preparation plan.
    d. The landscape plan shows which trees are to be protected. HW recommends that the Applicant reference the landscape plan on the Erosion Control and Site Preparation plan.
    e. HW recommends that the Applicant include a note on the plan set stating that "the Engineering Division Inspector shall be notified 48 hours prior to any site work in accordance with project permits," per Stormwater Regulations § 6.C.2.c.13.
9. *Standard 9 requires a Long-Term Operation and Maintenance (O&M) Plan to be provided.*
    a. The Applicant has provided an O&M Plan in the Stormwater Management Report. HW recommends that the Applicant include the following items:
        i. A simple sketch that is drawn to scale and shows the location of all stormwater practices requiring inspections and long-term maintenance.
        ii. An estimated operations and maintenance budget.
        iii. Signature of the property owner.
    b. "All drainage structures" is mentioned in the O&M twice with different inspection frequencies. HW recommends that the Applicant remove "All drainage structures" from the pipe inspection bullet point.
    c. HW recommends that the Applicant include the maintenance of area drains.
    d. Cleanouts are mentioned in the O&M twice with different inspection frequencies. HW recommends that the Applicant specify which cleanouts it is referring to.
    e. HW recommends that the pumps and the pump chamber be included as a maintenance item.
10. *Standard 10 requires an Illicit Discharge Compliance Statement be provided.*
    a. HW recommends that the Applicant provide an illicit discharge compliance statement signed by the property owner.

Review of Flood Storage

11. Flood Storage Analyses: HW notes that the project site is not located within a 100-year flood plain. Compensatory storage volumes are not required for this site.

Review of Sanitary Sewer Flow

12. Sewer Flow:
    - The existing house is a 6 bedroom 2-family home.
    - The existing sewer flow: 6 bedrooms * 110 GPD/bedroom = 660 GPD
    - The proposed multi-family dwelling will include 16 units. Eight units will have 2 bedrooms and eight units will have 3 bedrooms for a total of 40 bedrooms within the project site.
    - The City of Newton has used a sewer flow rate of 65 GPD/bedroom for other residential developments in the City.
    - The proposed sewer flow: 40 bedrooms * 65 GPD/bedroom = 2,600 GPD
    - HW recommends that the Applicant coordinate with the City Engineer to determine the Sewer Inflow and Infiltration Mitigation Fee for this project in accordance with Sewer Ordinance No. B-45.

Review of Grading and Utilities

13. The existing site is sloped from elevation 120 at Washington Street to elevation 105 at the rear of the site. The proposed grading includes a driveway set at a 9% slope. A portion of the rear parking lot is set at elevation 106 and the basement floor elevation is listed at elevation 105.79 which is below the ESHGW documented at 108.25 at test pit TP-6.
14. The Applicant is proposing a 7-foot wall between the rear parking lot and the proposed playground. The grades through the proposed playground will need to be reconfigured to protect the trees in this area including a 38-inch Norway Maple and a 22-inch Sugar Maple.
15. The existing grades within the 8-foot-wide strip between the proposed 3-foot-tall wall on the north side of the parking area and the rear property boundary will need to be retained to protect the trees in this area as noted on the landscape plan.
16. The existing contours on the Proposed Conditions Site Plan are not consistent with the Plan of Land Existing Conditions survey prepared by Everett M. Brooks, Co. Specifically along the northern property boundary.
17. It does not appear that the Applicant has addressed how solid waste will be managed.
18. HW understands that the parking lot on the north side of the building includes parking spaces beneath the building. HW recommends that the Applicant clearly document how the floor drains for these parking spaces within the structure will be managed. The floor drains should not be connected to the stormwater system. It also appears that the entire parking lot is sloped towards these covered parking spaces.
19. The Applicant is proposing a 6-inch water main with a fire hydrant along the west property boundary. The 6-inch line will be extended to the building to service the sprinklers. The

proposed water main and hydrant will require extensions and gate valves that are not currently shown on the plan set. The Applicant is also proposing a 2-inch type K domestic line located along the western property boundary.

20. The existing water service will be cut and capped at the main in Washington Street.
21. The existing sanitary sewer line will be cut and capped and a new 8-inch PVC sewer service will be installed in the same area, connecting into Washington Street.
22. The existing gas line will be cut and capped at the main. It does not appear that the Applicant will reconnect to the gas main in Washington Street.
23. The electrical and telcom services appear to be overhead wires.

Review of Lighting and Photometric

24. The Applicant has not provided a lighting, a photometric plan, or shadow studies in the package reviewed by HW.

Review of Open Space Connections

25. HW did not locate any information discussing connections to nearby open space resources in the package reviewed.

Please contact Janet Bernardo at 857-263-8193 or at jbernardo@horsleywitten.com if you have any questions regarding these comments.

Sincerely,

Horsley Witten Group, Inc.

Janet Carter Bernardo, P.E.
Associate Principal

Veronica Seward-Aponte, E.I.T.
Environmental Engineer

Attachment C

Horsley Witten Group
Sustainable Environmental Solutions
112 Water Street • 6th Floor • Boston, MA 02109
857-263-8193 • horsleywitten.com

November 6, 2023

Katie Whewell
Chief Planner for Current Planning
City of Newton
Planning and Development Department
1000 Commonwealth Avenue
Newton, MA 02459-1449

Re: Initial Peer Review of Landscape Design
Comprehensive Permit
41 Washington Street, Newton, MA

Dear Ms. Whewell:

The Horsley Witten Group, Inc. (HW) is pleased to submit this peer review regarding the landscape design for the proposed residential development at 41 Washington Street, in Newton, MA. The proposed project includes the restoration and expansion of an existing dwelling into a 16-unit, 6,807 square foot (sf) multi-family building. The proposed development will also include a driveway, parking lot, landscaped areas, and utilities.

The existing 25,902 sf (0.59± acre) site is occupied by a two-family home with a paved driveway, gravel parking area, concrete walkway, and landscaped areas. The site is bounded by Washington Street in the front and by residential dwellings on the rear and sides. The site has several large existing trees within the property lines and several immediately adjacent to the property edge.

The Applicant proposes to maintain 11 of the existing trees and remove 17. New landscaping is proposed around the restored and new building along with a small play area in the northeast corner of the site, a hedge or fence surrounds the perimeter, and 50 new trees are proposed.

As part of the landscape design review process, HW reviewed the following documents and plans:

- Narrative Description of Project (2 pages);
- Existing Conditions, 41 Washington Street, Newton, MA, prepared by Everett M. Brooks Co., dated September 28, 2022 (1 page);
- Landscape Plan, 41 Washington Street, Newton, MA, prepared by Verdant Landscape Architecture, dated July 24, 2023 (5 pages); and
- Civil Plan, 41 Washington Street, Newton, MA, prepared by Spruhan Engineering, P.C., dated March 24, 2023, which includes:
    - Proposed Conditions Site Plan — Sheet 1 of 7
    - Layout and Topography — Sheet 2 of 7
    - Drainage and Utilities — Sheet 3 of 7
    - Detail Sheet 1 — Sheet 4 of 7

- Detail Sheet 2 — Sheet 5 of 7
- Detail Sheet 3 — Sheet 6 of 7
- Watershed Maps — Sheet 7 of 7

Review of Landscape Plan

This review of the submitted materials is based on the Newton City Ordinance, Volume II, Chapter 30: Zoning Ordinance 2017 (updated 05-01-23), and the City of Newton Tree Manual including Ordinance Chapter 21: Parks, Recreation and Public Grounds Article IV. Tree Preservation, as well as standard landscape practices. In accordance with these guidelines HW offers the following comments:

1. Trees shown on Sheet L2 – Tree Protection and Removals Plan are inconsistent with trees indicated on Sheet L1 – Preliminary Planting Plan. The species, caliper sizes, and locations are not the same between both drawings. The surveyed locations should be shown on the design plans to see how they align with the proposed improvements.
2. The Trees listed on the Tree Mitigation Plan are not all the same as those indicated on Sheet L2 – Tree Protection and Removals Plan. HW recommends that the Applicant review the inconstancies noted below and adjust the Design Plan or the list accordingly:
    - Tree #10 is listed as 14” Catalpa on Sheet L2 and Yellowwood on the Tree Mitigation list.
    - Tree #6 is included on the proposed to be removed list, but indicated to remain on Sheet L2.
    - One tree, a 7” Catalpa next to Tree #7 on Sheet L2 is missing from the proposed to be removed list.
    - Tree #13 is listed as 13.5” caliper Norway Spruce on Sheet L2, and a 13” caliper on the Tree Mitigation Plan.
3. Chapter 21, Section 83(e) states: “except as provided in a tree permit, construction activities under the drip line of a protected tree are prohibited.”
    - HW recommends that the extents of the drip line be included on the design plans for all trees to be protected, including trees that have trunks on adjacent properties but canopies that overhang into the site.
    - The Tree Mitigation Plan indicates that a chain link fence for tree protection is shown on Sheet L2, however a fence is not called out on the plans.
4. HW has the following comments regarding Sheet L1 the Proposed Planting List:
    - The total proposed caliper listed on Sheet L1 is 247.5”. The total caliper on the Tree Mitigation Plan is 242.5”. HW recommends that the Applicant clarify the total proposed caliper.

- Several of the trees that are specified at a height of 8-10’ are noted as having a 5” caliper. This caliper size is large for this height of tree. HW recommends that the Applicant justify the 5” caliper value.

5. The Amelanchier grandiflora ‘Autumn Brilliance’ is placed around the foundation of the proposed building in many locations, likely in front of windows, with a canopy spread between 8-10’. This species can grow to a height and spread between 15-25’. HW recommends that the proposed species are placed where the trees will not quickly outgrow their space and need to be removed.
6. One of the proposed Acer rubrum and one Liquidambar appear to be directly over the proposed sewer line. Additionally, all the proposed Thuja appear to be directly over the proposed water line. HW recommends that the Applicant show all the utilities on the design plans to avoid major conflicts.

Please contact Janet Bernardo at 857-263-8193 or at jbernardo@horsleywitten.com or Ellen Biegert at ebiegert@horsleywitten.com if you have any questions regarding these landscape design comments.

Sincerely,

Horsley Witten Group, Inc.

Janet Carter Bernardo, P.E.
Associate Principal

Ellen Biegert RLA
Landscape Architect