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Barney S. Heath
Director

PUBLIC HEARING MEMORANDUM

DATE: January 17, 2024

MEETING DATES: January 24, 2024

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
Alyssa Sandoval, Deputy Chief Planner for Current Planning
Cat Kemmett, Senior Planner

COPIED: Mayor Ruthanne Fuller
City Council

In response to questions raised at the Zoning Board of Appeals public hearings on May 24, July 24, September 27, and November 8 in 2023, the Planning Department is providing the following information for the upcoming continued public hearing/working session. This information is supplemental to staff analysis provided at previous public hearings.

PETITION #04-23 **528 Boylston Street**

Toll Bros. Inc., requesting a Comprehensive Permit, pursuant to M.G.L. Chapter 40B, to construct a six-story all-residential development with 184 residential units on 5.82 acres of land located at 528 Boylston Street; 0, 502-504, 516 Boylston Street; 0 Hagan Road; and 24-26, 32-34 Hurley Place in the SR1, SR2 Zoning Districts. The proposal includes 50 affordable units and 227 parking stalls.

The Zoning Board of Appeals (Board) opened the public hearing on this petition on May 24, 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 applicant, Toll Brothers, Inc., is seeking a Comprehensive Permit pursuant to Massachusetts General Laws Chapter 40B, Sections 20 through 23, to develop 528 Boylston Street, currently used as the Sam White and Son's landscape yard, into an all-residential multifamily development. The subject property comprises approximately 253,454 square feet (5.82 acres) on seven lots in the Single Residence 1 (SR-1) and Single Residence 2 (SR-2) zoning districts on the eastbound side of Boylston Street (Route 9) in the Chestnut Hill area of Newton.

To date four public hearings have been held for this item in 2023 on the following dates: May 24, July 24, September 27, and November 8. The applicant has made several revisions to the original plan based on feedback provided at those meetings. The current building design consists of a six-story building in an "H" shape facing out on Boylston Street. 184 units are proposed with forty-six (46) of the units (25%) designated as deed-restricted to remain permanently affordable. 227 parking stalls are proposed, with the majority in the garage which spans three levels and is partially exposed along the eastern edge of the building and several surface parking stalls at the front of the site at the main entrance on Boylston Street.

On December 22, 2023 the applicant submitted the following new materials:

- Revised civil plans
- Revised architectural plans
- Revised landscape plans
- Landscape renderings
- Revised shadow study
- Photometric plans
- Truck turn exhibits
- Response to transportation peer review
- Revised drainage report

Reflected in this memo are comments from consultants at NBBJ, Beta, and Horsley Witten, who have been engaged by the City to review and analyze aspects of the proposed development. The project materials submitted for review can be found on the City's website here. The most recent plans were uploaded on December 22, 2023.

I. Analysis of Revised Design

On December 22, 2023, the applicant submitted revised plans which reflect a number of changes to the proposed building and site. Planning staff note the following highlights shown in these new plans:

Massing: The new design shows that a bay of units has been removed from the back of the building, resulting in a smaller footprint. This leaves a larger buffer between the back side of the building and residential abutters to the south.

Boylston Street improvements: The current design has a 30-foot front setback from Boylston Street, and the sidewalk has been pulled further from the road. The applicant has stated they will continue to work with MassDOT on this design, and intends to provide a minimum six-foot separation between the sidewalk and the street. Improvements planned along the street include a new sidewalk and a green buffer planned between the walkway and the road.

Total Units: The number of residential units has been reduced from 198 to 184. The unit mix for the building as a whole is as follows: 36 one-bedroom units, 90 two-bedroom units, and 58 three-bedroom units.

Affordable units: Under the current design, a total of 46 affordable units are proposed, a reduction from the previous design which had 50 affordable units. Nine units are proposed at 50% of the Area Median Income (AMI) and 37 units are proposed at 80% AMI.

Parking: Altogether 227 parking stalls are proposed on the site, down from the 273 stalls in the August 2023 plan and the 234 stalls in the October 2023 version. The proposed parking ratio is roughly 1.2 stalls per unit.

Impervious area: With the reduction in building size, the current impervious area proposed on the site is 97,584 square feet.

Side wall: The large wall previously proposed along the east side of the building next to the exposed ledge has been removed in favor of reconfiguring the design the allow the ledge to act as the wall instead. Horsley Witten states that stormwater flowing over the ledge or groundwater moving through the ledge will be collected in a stone swale and directed around the building to the wetland on the west side of the site.

Multiuse path: The proposed multiuse path connecting Boylston Street and Hagen Road has been modified to have reduced grading impacts on the left side, bringing the natural grade up to the pathway to create a softer transition. Guard rails and walls are still shown along several stretches of the path. NBBJ suggests a low stone wall which would serve the same function as a guard rail but would also offer people a place to sit. The applicant should ensure the materials used in the multiuse path also allow for adequate drainage, especially due to its downwards slope towards Hagen Road to the south.

Other street improvements: Additional improvements adjacent to the multiuse path are now proposed in the form of additional crosswalks and pedestrian curb ramps where the path connects to Hagen Road and Adeline Road.

II. Conservation Commission

At a regularly scheduled meeting of the Conservation Commission on January 11, 2024, the applicant gave an informal overview of the current iteration of the project with a focus on stormwater management and flooding. This meeting was preliminary in nature, as the applicant is opting to pursue the required approvals from the Commission once the project design and layout is finalized and if it is ultimately approved by the Zoning Board of Appeals.

At the meeting, Conservation staff stated that many outstanding questions from the ZBA process thus far regarding flooding and stormwater on the site have been addressed by the applicant. Roughly 240 cubic yards of new flood storage capacity (equivalent to about six full 40-yard dumpsters) will be added to the site, which currently has no stormwater management system.

Should the project be approved by the ZBA, it will be formally reviewed by the Conservation Commission. In that process, the Commission will closely examine the project for compliance with the Wetlands Protection Act and other relevant regulations. The project will need to exhibit an overall improvement ecologically and hydrologically for the Riverfront Area. The Commission will consider the potential for improvements to Paul Brook itself, review a detailed construction sequence plan for ongoing erosion and stormwater controls, and will require a Stormwater Pollution Prevention Plan. Calculations for the degraded areas will be required of the applicant, and the subsequent restoration and mitigation needed to offset that work. The Commission will also address invasive species control on the site, tree cutting and planting, trash and debris removal, and other related topics.

III. Design Peer Review

The City's design peer reviewer for this application, NBBJ, submitted a memorandum on January 11, 2024 **(Attachment A).** The following is a summary of the key points highlighted in NBBJ's analysis.

Footprint and size: NBBJ wrote that while the footprint of the building is larger than abutting residences, the size is consistent with other 40B projects in the city. They noted that over the course of the public process, the project has shrunk in size several times,

and has modified the massing to break up the scale and reduced the impact of the height through terracing. In the new design, the shadow impact is lessened by setting back the top level behind a flat roof rather than sloped roof.

Open space: NBBJ is very supportive of the proposed multi-use path, and the green buffer between the sidewalk and Boylston Street. They underscored the impact that several amenities not shown in the plans could provide for the multi-use path such as benches, a stone wall rather than a guard rail, and interpretive signage. They advocate for the preservation of large trees on the site where possible. They are in support of the reduced amount of excavation on the east side of the site reflected in the newest design and ask if the applicant can incorporate the rock outcropping into the recreational program of the site.

Lighting: A revised photometric study is suggested that is more user-friendly and includes specifics for the fixtures proposed.

Bike room: The bike room has been relocated to the southwest corner of the building as recommended by NBBJ. The new location offers easier access for people arriving from the west or south from Hagen Road, provides direct access to the elevator, and will minimize the potential for conflicts with vehicles.

Loading area: NBBJ is supportive of the revised design which illustrates that trucks will not back over pedestrian routes to the bike room. They suggest the City request a management plan for the noise and lighting from the loading areas, which could impact abutting residences.

Parking: NBBJ is supportive of the reduction in parking on the site to 227 stalls, which brings the parking ratio closer to estimated demand for similar projects.

IV. Stormwater Peer Review

The City's stormwater management peer reviewer for this application, Horsley Witten (HW), submitted a memorandum on January 12, 2024 **(Attachment B).** HW's analysis indicate that the revised materials the applicant has submitted have resolved many outstanding questions the peer review team had.

Flow rates: The applicant has provided Hydro CAD models showing that the system and pipes proposed can support the impact of a 25-year storm event. HW did note discrepancies between the calculations and the plans that should be resolved. HW

recommends further refining and clarifying data for the Flared End Section and Riprap Apron.

Ledge removal: Based on feedback previously provided by HW, the applicant has conducted further test pit and groundwater testing which resolved several questions they had regarding blasting at the eastern edge of the site.

Roof runoff: The applicant plans to provide final roof runoff amounts at each drain connection later in the application process in coordination with the project MEP. If the project is approved, HW recommends a condition requiring the applicant to resubmit a final drainage report once those have been finalized.

Rain garden: Further refining of the design and/or plans showing the rain garden are requested. HW listed several areas that require clarification, including whether the elevation of discharge outlets is adequate for the 100-year flood conditions.

Southern boundary drainage: The design along the southern lot line which previously featured a crushed stone trench has been revised. A series of area drains will capture runoff on the backside of the berm, which reduce runoff to abutters on Hagen Road.

Water quality units: HW requests that the applicant provide sizing calculations for the water quality units in the treatment section.

Construction related impacts: HW suggested that a condition of approval the ZBA consider adding for this permit be requiring receipt of the Stormwater Pollution Prevention Plan. They also note that the Limit of Work should be revised, as it currently includes proposed work outside of what the plan delineates, and does not reflect the new grading for the site. HW recommends clarifying the erosion control plan for tree removal on the site.

Flood storage: HW noted some discrepancies in the Compensatory Flood Storage between the exhibits and the calculations. They suggest the applicant resolve this and confirm the cut/fill calculations for all elevations.

Utility & Grading: To better illustrate the impact of the proposed exposed ledge as wall at the east side of the site, HW recommends a cross section or rendering to better understand how the walkway between the building and ledge will look. Similarly, they recommend describing the lighting proposed along the multi-use path.

Sustainability: A sustainability plan was submitted by the applicant in April of 2023 which indicated that the project will incorporate passive house design principles and complete a passive house feasibility study during the schematic design phase. HW recommends the applicant clarify if the features in that plan still apply to the current design, including the percentage of EV and electric-vehicle ready parking stalls. Staff request that the applicant clarify which sustainability standard (LEED, Passive House, or Enterprise Green Communities) the building will be designed to meet.

V. Transportation Peer Review

The City's transportation peer reviewer for this application, Beta submitted a memorandum on January 10, 2024 **(Attachment C).** In this memo Beta noted several outstanding questions, but overall was satisfied that the majority of outstanding questions related to transportation had been addressed in the updated materials.

The final few items raised by Beta in the memo are the following: Beta asked how large trucks would be restricted from the site, and details about the operation of the proposed emergency access gate.

The applicant has since responded with answers that satisfied Beta's questions. Staff from MDM, the applicant's transportation team, stated that an emergency gate was requested by the fire department as a way to access to the rear of the building. The applicant will continue to work with the fire department on the design and access of that gate. The fire department has signed off on having an emergency access only gate.

According to MDM, the bollards at the Hagen Road trail entrance are not removable and are intended to prevent any vehicular travel on the mixed-use path.

II. Next Steps

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

ATTACHMENTS

Attachment A: NBBJ review

Attachment B: Horsley Witten review

Attachment C: Beta review

nbbj

www.nbbj.com

January 11, 2024

Ms. Katie Whewell
Chief Planner for Current Planning
1000 Commonwealth Ave.
Newton, MA 02459

Subject: 528 Boylston Street 40B Design Review (Memo #3)

Dear Ms. Whewell,

NBBJ is pleased to submit the following updated memo #3 on the design review for Toll Brothers, Inc. at 528 Boylston Street in Newton, MA. NBBJ was engaged to provide peer design review and signed a work order in May of 2023. The following design review comments are based on a review of materials supplied by the City of Newton along with site visits, historical research, zoning analysis, and a review of recent local planning documents.

On June 15, 2023, our team provided an informal review of the initial submission (dated April 26, 2023) and supplemental material presented during a virtual meeting with the applicant on June 7, 2023.

On July 14, 2023, we submitted a design review memo to your office and then made a presentation to the Board of Appeals on July 24, 2023.

On September 15, 2023, we submitted Memo #2 based on the revised submission dated August 21, 2023, and a detailed series of 3d model views that we received on September 5, 2023. Additionally, we participated in a virtual

meeting with the applicant on September 7, 2023, and presented to the Zoning Board of Appeals on September 27th, 2023.

This Memo #3 is based on revised drawings submitted to the City during December of 2023 and a virtual meeting with the applicant on January 3rd, 2024.

Project understanding

The 5.82-acre project site is between the Newton Highlands and Thompsonville neighborhoods along Boylston Street (Route 9). It is proximate to the Chestnut Hill shopping area to the east, Newton South High School to the southeast, and abutting single-family homes. Current uses on the site include a landscape yard and two residential buildings. The site is heavily wooded and includes significant topography ranging from 118′ at the western edge rising to 190′ to the east. Paul Book travels along the western edge of the property, presenting a potential resource for the project and the surrounding neighborhood.

The current proposal proposes to demolish the existing structures on the property and construct a six-story building with 184 residential units with 227 parking spaces and 68.0% open space. Most of the parking will be in a partially below-grade garage that includes residential uses lining the edges that abut residential properties. The building includes an "H" shape with three courtyards – two facing Boylston Street (Route 9) to the north and one facing south.

The building is located along Boylston Street (Route 9) with a setback of approximately 30′ (based on latest site plan) from the property line. It is bordered by conservation land to the west, steep topography to the east and low-scale single-family properties to the south. The project includes a service drive and parking entry on the west side of the building and a separate vehicular and pedestrian entry in the middle of the building facing Boylston Street that includes a total of 9 surface parking spaces and drop off area.

Urban Design Considerations

Current residential single-family zoning on the site does not provide guidance on massing or density and the surrounding area does not have a small area plan or other planning studies that outline urban design considerations. Despite the lack of regulatory guidance, NBBJ has identified the following design considerations for

our site review that build upon public and City input received during the review process:

Respect and protect adjacent residential neighborhood: Keep buildings as far as possible from abutting neighbors and reduce heights near residential neighborhoods. While the project may not conform to height restrictions of the surrounding zoning, setbacks and max site coverages should be respected.

Borrow standards from VC3 District Zoning: Consider the newly approved Village Center 3 Mixed-use Commercial and Residential zoning that proposes maximum heights of buildings at 4.5 stories as a model for appropriate development scale along Boylston Street to avoid setting a precedent for taller buildings.

Enhance environmental conditions: The location along Paul Brook is an opportunity to enhance environmental conditions and provide more public access to the brook. The Brook is currently constrained within a concrete channel that could be removed to provide better conditions for wildlife and enhanced flood storage to protect downstream neighborhoods.

Provide connectivity: The site lies between Hagen Road and Route 9 which currently has no public access. Allowing the public through the site may provide convenience for Newton residents to travel to the nearby Newton South High School or to nearby crossings of Route 9 on Parker Street.

Improve pedestrian accommodations on Route 9: The current pedestrian accommodations on Route 9 are neither pleasant nor accessible for persons with disabilities. At a minimum, the site plan should improve those conditions along the site frontage, but additionally off-site improvement would be desirable to connect to any nearby transit locations.

Recommendations:

Building Footprint Size

The proposed building has been reduced in size to approximately 419′ long and 218′ deep. This represents an almost 50-foot reduction in depth from prior submittals, leaving more buffer from adjacent residential structures to the south. Although this building footprint is significantly larger than abutting residential

single-family buildings and exceed maximums allowed in Village Center 3 zoning, it is consistent with other recently approved 40B developments in Newton, including the Dunstan East project in West Newton and the 40B project at 15 Riverview Avenue along the Charles River.

Building Massing and Scale

The applicant has repeatedly reduced the size of the building from prior submittals to 184 Units by shrinking building footprint and reducing units at upper levels. This has allowed the applicant to include a range of building heights between 4 and 7 stories, including terracing at the west side and south side of the building adjacent to single family residential properties. The latest plan includes two courtyards facing Boylston Street that helps break up the scale of the building, giving the impression that there are multiple buildings rather than one large building. The most recent massing proposal reduces height directly along Boylston Street to approximately 4 stories by setting back the fifth level behind a flat roof rather than sloping roofs facing Boylston. This results in less shadow impact on Boylston Street and neighbors to the North of the site.

Open Space

The project includes two courtyards along Boylston Street, one south-facing elevated courtyard, a small pocket park at the northwestern corner of the property, and conservation land along the western edge of the site adjacent to Paul Brook. The applicant has been responsive to our initial recommendations, including the replacement of a dog park on Boylston Street with a new rain garden and conservation area.

We are pleased that the applicant has successfully negotiated with MassDOT to provide a green buffer between the sidewalk and Boylston Street. While we understand that trees may not be planted in this zone, we feel that a ten-foot-wide buffer, combined with a guard rail, will greatly enhance pedestrian safety and more environmental benefits. We continue to advocate that a minimal width of sidewalk (4-5 feet) here would be adequate and reduce overall impervious surface area.

We are pleased that the applicant continues to include a buffered multi-use path along the conservation land near Paul Brook that provides an important connection between Boylston Street and Hagen Road. We are pleased that they have

reduced the amount of retaining wall needed along this path but continue to recommend that the applicant design a low stone wall, rather than a guard rail, that would provide both a safe barrier and seating areas while blending in with the natural environment. Additional amenities such as seating, pedestrian scaled lighting, and gateway / interpretive signage could also be included to improve the experience for bicyclists and pedestrians.

We continue to advocate for the preservation of large trees on the site, particularly those that have a caliper of 24" or greater and the replanting of native species found already on the site and in similar environments, such as Ash, Red Oak, White Oak, Hickory and Eastern White Pine.

We are pleased that the current project proposes less excavation of rock outcrops on the east side of the site. Could the proponent provide more access to the existing rock outcroppings for recreational uses to augment the current playground?

Promote Low Impact Development

While not specifically the responsibility of the proponent, we recommend a concurrent study of how Paul Brook and the adjacent protected floodway could be improved to reduce downstream flood impacts. Given the increase in precipitation anticipated with climate change, could this site enhance downstream protection with selective removal of invasive species, removal of channels to slow flows and increase storm storage within the 100-year flood zone?

Site Lighting and Overhead Utilities

We advise that the proponent supply the city with proposed site lighting strategy, including a revised photometric study that is more legible and user-friendly. We would also like the applicant to provide detailed specifications for all proposed fixtures.

Bike Room

We are pleased to see the relocation of the bike room to the south-west corner of the building, as this will provide more convenience for most riders who will be arriving from the west or conversely from the south on Hagen Road. We are also

pleased that the bike room has been relocated so as to avoid crossing the vehicular driveway. This access point will offer more convenient access that will avoid any potential vehicular conflicts and provide direct access to an elevator.

Location and Design of Loading Area

The revised design submission supplies truck turning movement study that illustrates how the truck dock will operate. We are pleased that the truck turning movements indicate that trucks will not back over the pedestrian route to the bike room. We would advise the city to ask for a management plan to mitigate any negative impacts from noise and lighting on abutting single-family homes.

The second curb cut is proposed east and is intended for drop-off with an additional access to the garage and guest parking. The proponent has supplied truck turning studies that indicate delivery vehicles can operate with the drop off area.

Parking

We are pleased that the new parking ratio has been reduced to 1.23 (227 spaces for 184 units). This new ratio brings this project closer to findings by MAPC in 2019, that estimated the overall parking demand in similar locations is closer to 1.2 per unit. The proposed offsite improvements to sidewalks along Boylston Street to Parker Street will improve safety for those using public transport with local bus accessible on Parker Street (.2 miles) and the nearby Newton Centre green line station (1 mile).

We truly appreciate the opportunity to offer design review service to the City of Newton.

Sincerely

Alan Mountjoy, Principal, NBBJ

ONE CENTER PLAZA SUITE 800 BOSTON MA 02108 T) 617 378 4800 F) 917 378 48996

Attachment B

Horsley Witten Group
Sustainable Environmental Solutions
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January 12, 2024

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

Re: Second Peer Review Regarding Site Plan Design
Toll Brothers, Inc. Proposed Residential Development
528 Boylston Street, Newton, Massachusetts

Dear Ms. Whewell:

The Horsley Witten Group, Inc. (HW) is pleased to submit this second peer review regarding the stormwater management and site design features for the Toll Brothers, Inc. Proposed Residential Development located at 528 Boylston Street in Newton, MA. We understand that the Comprehensive Permit Application, pursuant to M.G.L. Chapter 40B, includes the demolition of existing buildings and construction of a 6-story apartment building, 3 levels of underground parking, and surface parking on 3 existing lots totaling 5.82 acres.

The site is bound by Boylston Street to the north, residential homes to the east and south on Dudley Road and Hagen Road, respectively, and Paul Brook, a perennial stream, to the west. It is currently occupied by an office building, a landscape supply yard, and two houses. Outside of these uses, the site is predominantly wooded. The site has a significant grade change of approximately 65 feet from the northeast to Paul Brook and Hagen Road in the southwest. The western portion of the site is located within the FEMA Floodplain Zone AE (elevation 127.5), 100-foot Inner Riparian Zone, 200-foot riverfront area, and a bordering vegetated wetland (BVW). The proposed development is within the jurisdiction of the Newton Conservation Commission and will require an Order of Conditions issued by the Commission.

In addition to the proposed apartment building, the project features a paved drive, pocket park, play area, walking paths, and landscaping. The stormwater runoff will be managed using a closed drainage system consisting of area drains, deep sump catch basins, and water quality units which direct stormwater to a rain garden, two subsurface infiltration systems, and a subsurface detention system. These systems are equipped with overflows and discharge runoff via two outfalls to the western BVW.

HW received the following additional documents in response to our October 4, 2023 review letter:

- Response to Comments Memorandum, Proposed Residential Development, 528 Boylston Street, Newton, MA, prepared by MDM Transportation Consultants, Inc., dated December 20, 2023 (24 pages);
- Response to Comments letter, Proposed Residential Development, 528 Boylston Street, Newton, MA, prepared by Bohler Engineering, dated December 22, 2023 (19 pages);

- Agreement to Extend Public hearing, Application #04-23, Toll Bros. Inc., residential development at 528 Boylston Street, signed by Applicant and Newton Zoning Board of Appeals, dated December 5, 2023 (1 page);
- Shadow Studies, Toll Brothers Newton, prepared by The Architectural Team, Inc., dated December 20, 2023 (3 pages);
- Drainage Report for Toll Brothers, Inc., Proposed "Residential Development", 528 Boylston Street, Newton, MA, prepared by Bohler Engineering, revised through December 22, 2023 (190 pages);
- Attachments to Drainage Report for Toll Brothers, Inc., Proposed "Residential Development", 528 Boylston Street, Newton, MA, prepared by Bohler, dated December 21, 2023, which includes:
    - A - Compensatory Flood Storage Calculations
    - B – Site Layout Plan signed by Newton Fire Department
    - C – Sustainability Strategic Plan
    - D1 – Boring Logs
    - D2 – Test Pit Location Plan
- Fire Truck Turnaround exhibit, Toll Brothers, Inc., Proposed Residential Development, 528 Boylston Street, Newton, MA, prepared by Bohler Engineering, revised through December 21, 2023 (2 sheets);
- Site Plan Rendering, Toll Brothers, Inc., Proposed Residential Development, 528 Boylston Street, Newton, MA, prepared by Bohler Engineering, revised through December 21, 2023 (1 sheet);
- Landscape Plan Set, Toll Brothers, Inc., Proposed Residential Development, 528 Boylston Street, Newton, MA, prepared by Bohler Engineering, revised through December 21, 2023 (6 sheets);
- Photometric Plan, Toll Brothers, Inc., Proposed Residential Development, 528 Boylston Street, Newton, MA, prepared by Bohler, revised through December 21, 2023 (1 sheet);
- Architectural Plan Set, 528 Boylston Street, prepared by The Architectural Team, Inc., revised through December 15, 2023 (15 sheets); and
- Zoning Board of Appeals Comprehensive Permit Application, Toll Brothers, Inc., Proposed Residential Development, 528 Boylston Street, Newton, MA, prepared by Bohler Engineering, revised through December 21, 2023, which includes:

o General Notes Sheet	C-102
o Site Layout Plan	C-301
o Grading Plan	C-401
o Drainage Plan	C-402
o Utility Plan	C-501
o Soil Erosion & Sedimentation Control Plan	C-601
o Soil Erosion & Sedimentation Control Notes & Details	C-602
o Detail Sheet	C-701
o Detail Sheet	C-702

o	Detail Sheet	C-703
o	Detail Sheet	C-704
o	Detail Sheet	C-705

HW participated in a virtual meeting with City Staff and representatives of the Applicant's design team to review the revisions on January 3, 2024.

Stormwater Management Review

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.

The following comments correlate to our initial peer review letter dated October 4, 2023. Follow up comments are provided in **bold font**:

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.*

   The Applicant has evaluated two design points (DP) under existing and proposed conditions.

   a. DP1 is the resource area adjacent to Paul Brook. Under proposed conditions the outlet control structure DMH-7 has a 12-inch outlet set at a slope of 3.27%. DMH-7 outlets approximately 25 feet from the edge of the BVW. It appears that this outlet pipe could be pulled further from the edge of the wetland and the slope could be reduced to minimize the velocity at the outfall and to reduce flood water from backing into the pipe. HW notes that the Applicant has provided a riprap apron as an energy dissipator.

      January 12, 2024: The Applicant has regraded this outfall area including revising the pipe slope to 2% and moving the outfall further away from the edge of the BVW. HW has no further comment.

   b. The Applicant has provided riprap sizing calculations for the riprap aprons in Appendix F of the Drainage Report. HW was not able to confirm the flow rates (Q) or the velocities (V) used in the sizing calculation spreadsheet. HW recommends that the Applicant revisit this spreadsheet and document how the flow rates and velocities were calculated and confirm that the riprap aprons are adequately sized.

      January 12, 2024: The Applicant has provided the Proposed HydroCAD modeling and Rational Pipe Sizing Calculations showing proposed flow rates

and velocities for the 25-year storm event. It appears that the riprap aprons have been adequately sized. However, the labeling of the structures is not consistent between the calculations and the plans. HW recommends that the Applicant revise the Rational Pipe Sizing Calculations table to include all drainage structures and adjust the labeling as needed between the plan's calculations and the HydroCAD model for consistency.

c. HW recommends that the Applicant include details of a Flared End Section and a Riprap Apron.

   January 12, 2024: The Applicant has provided a Flared End Section and Riprap Apron Detail on Sheet C-702. The Applicant has also provided calculations for Riprap Apron Sizing in the Drainage Report. It is unclear on the plans what the D50 and D0 sizes are for each apron. HW recommends adding the Apron Calculation dimension information from the Drainage Report to the Flared End Section with Riprap detail. HW suggests a schedule table for this information. Furthermore, HW recommends revising Outfall 2 on the plans to reflect the details. The current outfall is shown with half of the riprap apron behind the FES outfall.

d. DP2 is the closed drainage system in Boylston Street (Route 9). The Applicant has slightly reduced the peak flow to the drainage system in Route 9. The proposed drainage area PR5 appears to sheet flow onto the state highway in a similar manner as the existing drainage area EX-4. HW has no further comment.

   January 12, 2024: No further comment.

e. HW notes that the Applicant is proposing a significant amount of ledge removal. HW recommends that the Applicant evaluate whether groundwater may be encountered during the ledge removal and how this may impact the proposed stormwater design.

   January 12, 2024: The Applicant has conducted further test pits and groundwater testing of the site. Based on the information collected from test pits on December 7, 2023, it appears that the stormwater management practices proposed will be outside of the ledge and above the estimated seasonal high groundwater level. HW further notes that the Applicant has eliminated the wall on the east side that was adjacent to the ledge face. Stormwater flowing over the ledge or groundwater moving through the ledge will be collected in a stone swale and directed around the building to the wetland on the west side of the site. HW has no further comment.

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. In proposed conditions there appears to be a large catchment area coming onto the site from the east (PR6). It is not clear how this runoff will be managed. The Applicant illustrates a 4-foot-wide riprap swale with a 12-inch perforated wall underdrain adjacent to a wall along the eastern side of the proposed building. It is not obvious if this riprap swale can manage the runoff. Near the playground the swale is

at elevation 145 adjacent to the top of the wall. To the south of this area, and presumably downgradient, the wall and the swale are at elevation 151.3. HW recommends that the Applicant revisit the riprap swale and the wall and confirm that it can be built and will function as intended.

January 12, 2024: The Applicant has provided a revised design of the riprap swale along the east side of the building. The proposed design includes a 4-foot-wide stone swale with 6-inch area drains and cleanouts throughout the drain line. The stone channel detail includes a 12-inch perforated pipe within a 2-foot-wide stone trench below the stone swale. HW recommends providing the minimum depth of stone and the slope of the stone within the swale on the detail as well as the size of stones. It appears that the depth of stone from the rim of the area drain to the invert of the pipe ranges from 2.5 feet to 10 feet. HW recommends that the Applicant provide a profile of this drain line between AD-1 and CB-3.

b. The Applicant has included a proposed catch basin, CB-6, within the 4-foot-wide riprap swale. It appears that this catch basin is collecting stormwater from the underdrain system beneath the playground. The surface of the playground is at elevation 133. It appears that the catch basin rim is at elevation 151.3, adjacent to the top of the 18-foot-high wall and the inlet is at elevation 134. HW recommends that the Applicant revisit this configuration and confirm it is constructable and maintainable.

   January 12, 2024: The Applicant has removed CB-6 from the design. The Applicant has revised the underdrain system of the playground to connect into WQI-4 and into the proposed subsurface infiltration system (2P). HW has no further comment.

c. HW recommends that the Applicant list the total impervious area of the proposed site on the plan set per Stormwater Regulations § 6.C.2.c.3.

   January 12, 2024: The Applicant has listed the total impervious area of the proposed site on the plan set. HW has no further comment.

d. The Applicant has included roof runoff into the various stormwater practices. HW recommends that the Applicant clarify how the roof will be divided.

   January 12, 2024: The Applicant has provided an estimation of the roof area to each stormwater practice on the site plans. The Applicant has stated final roof runoff amounts at each roof drain connection will be coordinated with the project MEP during the building design process. HW recommends that the ZBA include a condition requiring a resubmittal of the Drainage Report once the roof runoff areas are finalized to confirm that each stormwater practice is appropriately sized for the runoff area directed to it.

e. HW recommends that the Applicant confirm that the two-foot-tall mound in the center of the rain garden was incorporated in the storage calculation.

January 12, 2024: The Applicant has confirmed that the two-foot-tall mound has been incorporated into the storage calculations. HW has reviewed the areas. It appears that the bottom contour on the sides of the pond is elevation 130. The mound has a bottom elevation of 131. The design shown on the plans does not appear to match the HydroCAD model. HW recommends that the Applicant revising the 131 contour around the mound to elevation 130 to clarify the intent of a flat bottom pond OR revising the HydroCAD areas to match the current design.

f. HW recommends that the Applicant provides a detail of the rain garden. The HydroCAD model for the Prop. Rain Garden (Pond 1P) included a 20-foot long by 6-foot-wide broad crested weir. The Drainage Plan does not illustrate this weir. Furthermore, the outlet device includes a 4-inch orifice which is not labeled on the drainage plan.

January 12, 2024: The Applicant has revised the design of the Proposed Rain Garden. The Proposed Rain Garden (Pond 1P) has been designed with 1 foot of freeboard and the emergency overflow is the grate on top of Outlet Control Structure 1 (OCS-1) which is located above the 100-year flood elevation. However, it appears that OCS-1 connects to Outfall 3. The proposed Subsurface Infiltration System Pond 3P located to the east of the access driveway also connects to Outfall 3. The current design has Outfall 3's outlet elevation at 125.00 in the 100-year floodplain. The 100-year Zone AE floodplain elevation is 127.50. Ponds 1P and 3P are modeled as free discharge in the Proposed HydroCAD. Outfall 3 would not act under free discharge during the 100-year storm event. Additionally, it is unclear if the proposed outfall elevation would be affected by tailwater conditions in smaller storm events. HW questions why the Applicant is dropping the outlet in Prop DMH-3 by almost 2 feet and discharging to Outfall 3 in a pipe set at a 2% slope. It is not evident that these design elements are necessary.

g. HW recommends that the Applicant provide all invert in and out elevations for the subsurface systems. There appear to be several pipe inlets that are not labeled.

January 12, 2024: The Applicant has provided invert in and out elevations on the plans as requested. HW has no further comment.

h. The Stormtrap Singletrap Infiltration System detail on Sheet C-702 appears to be used for the proposed Stormwater Infiltration System (Pond 2P) located on the south side of the proposed building. HW recommends that the Applicant clearly label the drainage plans with the proposed structure. The top of stone and the top of system elevations for Pond 2P are not consistent with the HydroCAD model.

January 12, 2024: The Applicant has revised the plans to include information for all below-ground infiltration systems. HW recommends also labeling the DMH structures above Pond 2P on the plan set.

i. The Applicant has provided a generic detail for an Outlet Control Structure (OCS) on Sheet C-702. However, it appears that some of the OCS proposed on the drainage plan and in the HydroCAD model include various orifices. HW recommends that the Applicant provide a separate detail for each OCS that is consistent with the HydroCAD model for clarity.

January 12, 2024: The Applicant has provided a detail for each OCS on sheet C-702. HW has no further comment.

j. The Applicant has modeled the outlet device for Infiltration System Pond 2P with the weir as the primary device. HW notes that the weir should be routed through the outlet pipe set at elevation 128.57. The size of this outlet pipe should be included on the drainage plan.

January 12, 2024: The Applicant has revised the HydroCAD model and the weir elevation. HW has no further comment.

k. The Applicant has modeled the outlet device for Infiltration System Pond 3P with the weir and the orifices as the primary device. HW notes that the weir and orifices should also be routed through the 12-inch outlet pipe set at elevation 130.0.

January 12, 2024: The Applicant has revised the HydroCAD routing to the 12” outlet pipe. HW has no further comment.

l. The detail for the Stormtech MC-4500 Chamber System, on Sheet C-703, indicates that a minimum of two feet of coverage above the top of the chambers is required. It appears that the proposed Infiltration System (Pond 3P) located on the northwest corner of the building may not have enough coverage over the entire system. HW recommends that the Applicant revisit this system to confirm there is adequate coverage above the chambers. Furthermore, for clarity, HW recommends that the Applicant label the drainage plans with the proposed structure type.

January 12, 2024: The Applicant has revised the grading plan to include a minimum of 24-inch of cover above the top of the chambers. HW has no further comment.

m. The detail for the Stormtrap Singletrap Infiltration System on Sheet C-702 appears to also be used for the Prop. Stormwater Detention System, (Pond 4P), located in the Proposed AutoCourt. HW recommends that the Applicant clearly label the drainage plans with the proposed structure. Furthermore, the Drainage Plan, Sheet C-402, notes that the Top of Stone for Pond 4P is at elevation 150.5, while the HydroCAD model appears to include stone up to elevation 149.5. HW recommends that the Applicant confirm the elevations are consistent between the plans, details, and HydroCAD model.

January 12, 2024: The Applicant has modified the detention system (Pond 4P) and included elevations that are consistent with the HydroCAD model. HW has no further comment.

n. HW recommends that the Applicant provide a detail for the detention system with the applicable inverts and Stormtrap configuration included. HW further recommends that the Applicant clarify if the detention system is lined and clarify why it is modeled as detention only and is not infiltrating.

January 12, 2024: The Applicant has provided a detail for the detention system, which has been modified to include Cultec R-902HD chambers. The Applicant has clarified the system is lined due to its proximity to the building and foundation wall. HW has no further comment.

o. It appears that the Applicant is proposing a crushed stone infiltration trench between AD16 and AD17 which is symbolized by a dashed line on either side of the pipe connecting the two structures. This line type also appears between AD17 and DMH-6, AD14 and AD15, and AD15 and DMH-4. HW recommends that the Applicant verify if a crushed stone infiltration trench is also proposed in these locations. HW notes that the crushed stone infiltration trenches include 6-inch HDPE pipes. HW believes that these pipes should be perforated, HW recommends that the Applicant provide a detail for the crushed stone infiltration trench including depth, width, and size of stones, and clarify the proposed pipe type.

January 12, 2024: The Applicant has revised the design along the southern boundary of the property. The revised design includes a series of area drains and HDPE pipe to capture runoff on the backside of the berm to ensure reduced runoff to abutting neighbors along Hagen Road. HW has no further comment.

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

a. The Applicant uses a proposed impervious area of 2.474 in the recharge calculation. HW was not able to confirm this value and recommended that the Applicant clarify how it was determined.

January 12, 2024: The Applicant has provided recharge calculations for the proposed impervious area onsite. It appears that the Applicant has provided adequate recharge volume per the City of Newton's requirements. However, HW recommends revising Pond 3P stage storage amount to reflect the storage at the lowest orifice elevation (el. 134).

b. The soil in the western portion of the site is classified as Udorthents with an unspecified Hydrologic Soil Group (HSG). The Applicant has modeled this area as HSG A. HW notes that many of the test pits within this area document thick layers of fill which may need to be removed during construction in accordance with the geotechnical report. The Applicant has used an exfiltration rate of 2.41 inches per hour, considering the data provided HW recommends that the Applicant use a more conservative exfiltration value or justify this rate with additional test pits in the footprints of the stormwater practices. The geotechnical report does not appear to address exfiltration rates for stormwater.

   January 12, 2024: The Applicant has provided additional test pits in the locations of the stormwater management practices. The Applicant has noted that there may be areas beneath stormwater practice 2P that will need to be excavated and replaced with suitable soils. HW recommends providing a note on the plans for this over-excavation at the time of construction. HW agrees that the exfiltration rate of 2.41 inches per hour is reasonable.

c. The Exploration Location Plan, prepared by Sanborn Head, is provided in the geotechnical report to illustrate where the test pits and borings were located on the site. SH-TP-11 appears to be within the footprint of Stormwater Infiltration System (Pond 3P), and SH-TP-13 appears to be within the footprint of the Stormwater Detention System (Pond 4P). HW further notes that the material documented in test pits SH-TP-11 and SH-TP-13 is fill which will need to be removed and replaced prior to infiltrating stormwater.

   January 12, 2024: The Applicant has acknowledged that fill beneath all infiltration systems will be removed and replaced with suitable soils matching the quality of the natural soils located below the fill layers. HW recommends that the Applicant provide a note on the plans indicating this.

d. It appears that no test pits were conducted within the footprint of Stormwater Infiltration System (Pond 2P) and the Rain Garden (Pond 1P). HW recommends that the Applicant conduct test pits within the footprints of Pond 1P and Pond 2P to determine the separation from the bottom of the systems to estimated seasonal high ground water (ESHGW) and the applicable infiltration rates.

   January 12, 2024: The Applicant has provided additional test pits in the locations of the stormwater management practices. The Applicant has provided adequate separation from the ESHGW. HW has no further comment.

e. The results for Test Pit SH-TP-11 indicate that the test pit was terminated at an elevation of approximately 129, which is within one foot of the bottom of the stone in Stormwater Infiltration System (Pond 3P). The ESHGW elevation must be verified to determine that adequate separation of at least 2 feet is being provided from the bottom of the infiltration practice.

January 12, 2024: The Applicant has conducted additional test pits at Pond 3P extending approximately 7.5 feet below grade (approximately 4 feet below the bottom of the system) which did not encounter groundwater. HW has no further comment.

f. 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.

January 12, 2024: The Applicant has located all below ground systems a minimum of 10 feet from any occupiable building space. Additional dimensions have been provided on the drainage plan. Additional test pits at Pond 1P and 3P indicated no groundwater was observed. Two tests pit at Pond 2P encountered groundwater approximately 5.33 feet below existing grade at elevation 123.8 and approximately 3.1 feet below existing grade at elevation 123.1. All systems are designed with a minimum of 4 feet of separation between the bottom of the system and the ESHGW. HW has no further comment.

g. HW recommends that the Applicant determine if a mounding analysis is required for any of the infiltration practices per Volume 3, Chapter 1, page 28 of the MSH, and provide as applicable.

January 12, 2024: The Applicant has provided additional test pits which indicate all systems have been designed to provide greater than or equal to four feet of separation from ESHGW, as depicted on the revised drainage plan. Therefore, a mounding analysis is not required. HW has no further comment.

h. The Applicant has provided a stage storage table to confirm the storage provided below the lowest outlet of the stormwater practices. The Proposed Stormwater Outlet Control Structure 1 for the Rain Garden lists an elevation of 131.0 with a grate at elevation 132.50. The elevation of 131.0 correlates to the 4-inch orifice listed in the HydroCAD model. As noted previously HW recommends that the Applicant clarify where the 4-inch orifice is located and then determine if this orifice is the lowest outlet elevation used for the provided recharge volume calculation.

January 12, 2024: The Applicant has confirmed that the 4-inch orifice is the lowest outlet elevation. The Applicant has provided a detail of the Outlet Control Structure in the plan set. HW has no further comment.

i. HW concurs with the provided recharge volumes for Ponds 2P and 3P, no further action required.

January 12, 2024: No further action required.

j. The Applicant has used an exfiltration rate of loamy sand to calculate the drawdown times. As noted previously HW recommends that the Applicant justify this rate.

January 12, 2024: The Applicant has provided additional test pits to justify the exfiltration rate. As stated previously, HW recommends providing a note on the plans stating any unsuitable soil layers within the stormwater management practice areas be removed and replaced with suitable soils matching the quality of the natural soils located below the fill layers.

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. HW was not able to confirm the post development impervious area listed in the water quality calculations as 124,408 sf and recommend that the Applicant confirm it.

January 12, 2024: The Applicant has provided a breakdown of impervious areas in the beginning of Appendix F. The current impervious area proposed on site is 97,584 sf (2.24 acres). HW has no further comment.

b. HW recommends that the Applicant provide sizing calculations for the water quality units.

January 12, 2024: The Applicant has stated that it provided the requested calculations. However, HW was not able to locate them in the material provided to us. Our previous comment stands.

c. HW recommends that the Applicant provide phosphorus removal calculations.

January 12, 2024: The Applicant has provided phosphorus removal calculations. The Applicant has stated a removal rate of 100% for PR2, PR3, PR4a, and PR4b through the proposed treatment trains. The Applicant has provided a recharge volume for the first 2 inches of rainfall within the receiving ponds of these treatment trains. HW has no further comment.

d. The Applicant has provided a generic detail for a water quality inlet (WQI). The Stormcepter is mentioned in Note 3 of the detail. However, several different water quality units are mentioned in the O&M Plan. HW recommends that the Applicant confirm which water quality units will be used at the various locations around the site and label them appropriately on the plan set. Details for each type of water quality unit proposed should be provided in the details.

January 12, 2024: The Applicant has provided details for each type of water quality inlet proposed and labeled them on the plans. The Applicant has stated that the O&M plan has been updated to include the specific water quality inlets that pertain to the project. It does not appear that the O&M plan includes the manufacturer's information for the specific water quality inlet information referenced in the O&M Plan. HW recommends that the Applicant provide the additional information requested.

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

    a. The proposed use as a residential development is not considered a LUHPPL. Therefore Standard 5 is not applicable.

    January 12, 2024: No further action necessary.

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 or discharges to a critical area, Zone II, or Interim Wellhead Protection Area. Therefore, Standard 6 is not applicable.

    January 12, 2024: No further action necessary.

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

    a. The project is considered a new development therefore the standards for redevelopment are not applicable.

    January 12, 2024: No further action necessary.

8. *Standard 8 requires a plan to control construction related impacts including erosion, sedimentation, or other pollutant sources.*

    a. The Applicant has provided a Soil Erosion & Sediment Control Plan along with details, erosion and sediment control notes, and a construction sequence on sheets C-601 and C-602 of the plan set.

    January 12, 2024: No further action required.

    b. The proposed development will be disturbing more than 1 acre of land and therefore is required to develop a Stormwater Pollution Prevention Plan (SWPPP) in accordance with the Environmental Protection Agency (EPA) National Pollutant Discharge Elimination System (NPDES) Stormwater Program. HW recommends that the Applicant provide a SWPPP to the City of Newton a minimum of 14 days prior to land disturbance. Included in the SWPPP should be proposed locations and sizes of temporary sediment basins to be used to control stormwater during construction.

    January 12, 2024: The Applicant has confirmed a NPDES CGP will be filed with the EPA and a SWPPP will be provided to the City of Newton a minimum of 14 days prior to land disturbance. The ZBA may consider requiring receipt of the SWPPP as a Condition of Approval for the Permit.

c. The Applicant has included a bold dashed line that is adjacent to the silt fence barrier. The line is labeled Limit of Work on the Soil Erosion & Sediment Control Plan, Sheet C-601. It appears that there is additional grading and proposed work that has not been included within the Limit of Work. HW recommends that the Applicant review the Limit of Work and revise accordingly.

   January 12, 2024: The Applicant has updated the limit of work. It appears a wall on the Northwest portion of the site is called out to be removed that is still outside the limit of work. It also appears that the area to the south of the rain garden will be graded to provide compensatory flood storage. The limit of work line should include the new grading. Our previous comment stands.

d. On the northeast corner of the site there is a thick solid line that is called out on Sheet C-601 as “Fence Supported with Concrete Barriers and Conc Block Retaining Wall.” HW recommends that the Applicant determine whether this wall will be protected or removed as part of the project and label accordingly.

   January 12, 2024: The Applicant has stated the existing concrete block retaining wall and fence will be removed and has added a note to the revised site plan. HW has no further comment.

e. HW recommends that the Applicant note the total area to be disturbed per Stormwater Regulations § 6.C.4.a.

   January 12, 2024: The Applicant has added a total area to be disturbed on the Soil Erosion & Sediment Control Plan. HW suggests also updating Note 3 for the General Erosion and Sediment Control Notes.

f. The Applicant has indicated trees to be protected and removed during construction on Sheet L-301 of the Landscape Plan. Per Stormwater Regulations § 5.A.4, any trees proposed for removal must be indicated on the Erosion Control Plan. HW recommends that the Applicant list the trees to be removed on the Erosion Control Plan or include a note to refer to Sheet L-301 of the Landscape Plan for tree removal.

   January 12, 2024: The Applicant has stated a note has been added to the erosion control plan to refer to Sheet L-301 in the Landscape Plans for the tree removal plan. It is unclear where this note is on Sheet C-601. Our previous comment stands.

g. Because of the significant grading changes on site, HW recommends that the erosion control barrier be more robust. A super-silt fence may be appropriate for this site.

   January 12, 2024: The Applicant has incorporated a double row of silt fence and compost filter tube into the erosion control plans. HW has no further comment.

h. The project site has significant grading constraints and ledge has been documented in the geotechnical report. HW recommends that a clear construction sequence that includes ledge removal be provided to minimize sedimentation migrating into the resource areas or stormwater being diverted onto abutting properties.

January 12, 2024: The Applicant has stated a more robust construction sequence will be provided prior to construction. The ZBA may choose to make receipt of the construction sequence a Condition of Approval.

i. 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.

January 12, 2024: The Applicant has provided a Note on Sheet C-102 of the plans that states, "Notify, at a minimum, the municipal engineer, design engineer, and local soil conservation jurisdiction, at least 72 business hours prior to the commencement of work." HW has no further comment.

9. *Standard 9 requires a Long-Term Operation and Maintenance (O & M) Plan to be provided.*

The Applicant has provided an O&M Report in Appendix G of the Drainage report. HW has the following comments:

a. The manufacturer O&M guide for the Stormtech Isolator Row has been provided. HW recommends that the Applicant show in the plans where the isolator row is proposed.

January 12, 2024: The Applicant has stated an isolator row is not part of the proposed design and the corresponding maintenance guide has been removed from the O&M plan attachments. HW has no further comment.

b. HW recommends that the Applicant provide the manufacturer O&M documentation for the Stormtech chambers.

January 12, 2024: The Applicant has stated the manufacturer's maintenance guide for the Stormtech chambers has been included in Appendix G of the Drainage Report. It does not appear this has been included in Appendix G of the Drainage Report. Our previous comment stands.

c. The manufacturer O&M guides are provided for the Stormtech Isolator Row, Stormcepter, ADS Barracuda, Hydro International Downstream Defender, and Contech CDS, Vortechs, and VortSentry. However, it is unclear where each of these practices is being used. HW recommends that the Applicant specify which product is being used and the locations, and clearly mention them in the Post Development Controls section of the O&M Plan.

January 12, 2024: The Applicant has removed the manufacturer O&M guides from the O&M Plan. HW recommends incorporating the appropriate guides that pertain to the project in the O&M Plan.

d. A budget has been provided for each item listed in the Post Development Controls section. HW recommends that the Applicant provide the total O&M budget.

January 12, 2024: The Applicant has provided a total O&M budget. HW has no further comment.

e. Oil/grit separators are mentioned in the Post Development Controls section. HW recommends that the Applicant clarify where this practice is being used.

January 12, 2024: The Applicant has stated that an oil/gas separator is proposed within the building to treat discharges from the garage and is covered under the plumbing code/plumbing engineer. HW has no further comment.

f. HW recommends that the Applicant include the maintenance of the detention system in the O&M Plan.

January 12, 2024: The Applicant has added the maintenance for the detention system to the Stormwater Operation and Maintenance Plan. HW has no further comment.

g. The Applicant has provided a fillable post-construction maintenance report. HW recommends that the Applicant include the rain garden and detention system as inspection items.

January 12, 2024: The Applicant has included the rain garden and detention system as inspection items in the fillable post-construction maintenance report. HW has no further comment.

h. HW recommends that the Applicant provide a simple plan, drawn to scale clearly noting all stormwater practices requiring long term maintenance within the site.

January 12, 2024: The Applicant has provide a simple plan, drawn to scale clearly noting all stormwater practices requiring long term maintenance within the site. HW has no further comment.

i. HW recommends that the Applicant include multiple inspection ports for the subsurface chamber systems. The inspection ports should be included on the drainage plan.

January 12, 2024: The Applicant has included multiple inspection ports for the subsurface systems on the drainage plans. HW recommends also including these locations on the Operation and Maintenance Plan Exhibit in Appendix G.

10. Standard 10 requires an Illicit Discharge Compliance Statement be provided.

a. The Applicant has provided an Illicit Discharge Statement in the Operation and Maintenance Plan. HW recommends that receipt of a signed Illicit Discharge Statement be a condition of approval.

January 12, 2024: The Applicant has stated a signed Illicit Discharge Statement will be provided prior to commencing construction activities. The ZBA may choose to require receipt of the statement as a Condition of Approval.

Flood Storage Analyses and Environmental Concerns

11. The project site is located within the City of Newton Flood Plain/ Zone AE, Base Elevation 127.5. The Applicant has not included documentation regarding the amount of work occurring within the 100-year flood plain. There is a note on the Drainage Plan indicating Proposed Compensatory Storage at elevation 127.50. There is also a thick line type illustrating Floodplain Zone AE along elevation 127.5. HW recommends that the Applicant provide clear documentation illustrating that the volume of flood plain proposed to be filled and the compensatory flood storage proposed. HW reminds the Applicant that the City of Newton Conservation Commission has a policy requiring 110% of compensatory flood storage volume for all new fill in flood plain, on a foot-by-foot basis.

    January 12, 2024: The Applicant has provided Compensatory Flood Storage exhibits for each elevation and a summary table as part of its response to comments. It appears the summary table in the response to comments does not match the exhibits. Furthermore, it appears that some of the takeoffs do not match the summary table elevations. HW recommends that the Applicant review and confirm the cut/fill calculations for all elevations.

12. As noted previously, the proposed development is within the jurisdiction of the Newton Conservation Commission and will require an Order of Conditions issued by the Commission. The Applicant will be required to incorporate site improvements associated with 310 CMR 10.58 (5) for work within the Riverfront Area. The Applicant will also be required to comply with the other sections of the Massachusetts Wetlands Protection Act for work within Bordering Land Subject to Flooding (BLSF) and work within the 100-foot buffer zone of the bordering vegetated wetlands (BVW). HW recommends that the Applicant meet with the Director of Conservation and begin incorporating suggested site improvements.

    January 12, 2024: The Applicant has noted that discussions with the Conservation Commission is ongoing and the Project will be filing a Notice of Intent with the Newton Conservation Commission at the appropriate time. HW defers to the Conservation Commission to confirm if this comment has been adequately met.

Water and Sewer Flow

13. It appears that the existing site has a water line that crosses from Boylston Street to Hagen Road. The size of the existing line is not noted on the Existing Conditions Plan and it crosses through the existing BVW. The Applicant is proposing to tie into this existing water line for the domestic water service as well as the fire protection service. The Applicant is proposing two fire hydrants within the proposed development. HW recommends that the Applicant confirm the size of the existing water line and confirm there is adequate capacity to provide adequate water pressure to the proposed building.

    January 12, 2024: The Applicant has stated that the plan has been revised to identify the existing City water main as a 12-inch pipe to remain. Hydrant testing was completed in 2022 on hydrants along Hagen Road, the closest to the proposed Project connection point. This testing was observed by the City of Newton DPW. Initial studies show there is sufficient water to service the Project. HW has no further comment.

14. In accordance with Section 29-171 of the Newton Zoning Ordinance, wastewater flow for a multi-family dwelling is calculated by multiplying 110 gallons per day (GPD) per bedroom.

    The proposed development includes:

    - 38 1-bedroom units: 38 units * 1 bed/unit = 38 bedrooms
    - 100 2-bedroom units: 100 units * 2 bed/units = 200 bedrooms
    - 60 3-bedroom units: 60 units * 3 bed/units = 180 bedrooms
    - Total anticipated flow: 418 bedrooms * 110 GPD/bed = 45,980 GPD

    For purposes of encouraging the installation of water-efficient fixtures the city engineer may use a reduced flow based on low flow fixture usage.

    - Reduced sewer flow: 418 bedrooms * 65 GPD/bed = 27,170 GPD

    January 12, 2024: The Applicant has reduced the number of bedrooms to a total of 390 and provided a revised wastewater flow calculation as part of its response to comments. The total anticipated flow is now 25,350 GPD. HW defers final acceptance of the estimated flow rate to the City Engineer.

15. The City Engineer issued a memorandum dated July 24, 2023 regarding the Sewer Infiltration/Inflow Mitigation Fee, 528 Boylston St 40B Project, Ordinance No. B-45. The memorandum listed the total mitigation cost with the assumption of low flow fixtures throughout the project. The estimated wastewater flow for the proposed 244-unit development was 27,170 GPD minus the 481 GPD of existing flow from the existing properties. HW concurs with the City Engineer's assessment.

    January 12, 2024: No further action necessary.

16. The proposed sanitary service will discharge into the municipal sewer main in Boylston Street at the northwest corner of the property. The city's sewer system in Boylston Street connects with the MWRA interceptor line sewer along the Charles River. The City's sewer main and the MWRA interceptor appear to have capacity for the additional flow.

    January 12, 2024: No further action necessary.

Utility and Grading Review

17. The project site has a significant grade change on the eastern side of the site, within an area of approximately 57,000 sf. The grades along the eastern property boundary rise to elevation 190 and slope down to elevation 135 along the Right-of-Way on the southern property boundary approximately 240 feet away. The 23% slope includes several ledge outcrops. The test pits included in the geotechnical report documented refusal between 2.5 feet and 7.8 feet below surface in this area. The proposed design includes a large retaining wall along the eastern side of the proposed building approximately 90 feet from the eastern property boundary. The wall is approximately 430 feet long, is set within 7 feet of the building and is over 15 feet high in multiple areas. HW recommends that the Applicant provide a narrative prepared by a structural engineer explaining how the wall can be constructed.

    January 12th, 2024: The Applicant has eliminated the above referenced wall from the design and intends to use the exposed ledge as the wall. HW recommends that the Applicant provide a cross section or rendering to illustrate what the walkway between the building and the ledge will look like.

18. It appears that the basement/garage level of the building is set at elevation 133 with two egress doors and the garage door. Level 1 is set at elevation 145 with two egress doors. Level 2 appears to be the main level with the front door at the Autocourt set at elevation 156 and a swimming pool within an amenity courtyard located on the southern side of the building. Several units appear to have patios/balconies but there are very few means of egress. HW recommends that if the Applicant intends to allow residents to exit their units via a ground floor patio the proposed grading is reviewed and confirmed to be appropriate. HW recommends that the Applicant review the building layout with the Newton Fire Department for emergency response.

    January 12, 2024: The Applicant has stated further coordination of all egress points will be further developed with the Architect as the building design progresses. The Applicant has met with Newton Fire Department and included a reviewed and approved plan as part of Attachment B. Additional coordination with the Newton Fire Department to review the further reduced building layout is anticipated to occur as the building progresses. HW has no further comment at this time.

19. In the event of an emergency, it appears that the north side of the building can be accessed from Boylston Street, which is approximately 50 feet away. The west side of the building can be accessed from the site driveway and the south side of the building can be accessed by the multi-use path adjacent to the amenity courtyard. The eastern side of the building is not accessible and is contained by the wall noted above. HW recommends that the Applicant confirm that the Newton ladder truck can access the east side of the 6th floor.

    January 12, 2024: The Applicant has confirmed with the Newton Fire Department that it has sufficient ladder access to the building and requested that the Project provide the walkway on the east side for emergency responder walking access.

20. The Applicant is proposing to connect to the existing gas main, the existing telecom, and the existing electrical utilities in Boylston Street. The electric and telecom services are at utility poles located on the southern side of Boylston Street. The utility poles appear to be within the proposed sidewalks along Boylston Street in front of the proposed development.

    January 12, 2024: No further action required.

Lighting, Photometric and Shadow Study Review

21. The Applicant has provided a Photometric Plan of the proposed site. The Applicant has not included the specific light fixtures or pole heights used to create the plan. HW notes that the Photometric Plan does not indicate any light candles between the proposed building and the proposed wall on the eastern side. HW also notes that the entire playground and the sidewalk adjacent to the driveway may not be adequately lit. HW recommends that the Applicant provide additional details for the site lighting, an updated photometric plan and confirm that the proposed lights will be dark sky compliant.

    January 12, 2024: The Applicant has provided additional information and an updated photometric plan. It appears that some portions of the multi-use path may not be well lite. HW recommends that the Applicant describe the lighting along the multi-use path for the ZBA's consideration.

22. The Applicant has provided a shadow study. The study for June 21st and December 21st represents seasonal extremes (shortest and longest shadows), and March 21st and September 21st represent averages. The study indicates extensive shadows across Boylston Street in the spring, fall and winter. The studies also indicate that the house and yard at 51 Dudley Road will be impacted by the proposed building shadows.

    January 12, 2024: The Applicant has revised the size of the entire building and updated the shadow studies. It appears that 51 Dudley Road is no longer impacted by the shadows.

Sustainability

23. The Applicant has noted that it is investigating Passive House feasibility and contemplating achieving LEED certification. HW recommends that the Applicant present which sustainable design criteria it is intending to obtain and the applicable components. HW also recommend that the Applicant clarify if it intends to incorporate solar or geothermal practices.

    January 12, 2024: The Applicant has provided a Sustainability Strategic Plan by New Ecology detailing the sustainability features of the proposed project. The report was written in April 2023 and refers to the previous program of 241 units. HW recommends that the Applicant clarify if it intends to pursue each of the components of the plan as part of the design update.

24. HW understands that the proposed development will be fully electric. HW recommends that the Applicant clarify where it is providing Electric Vehicle (EV) parking spaces and the percentage of spaces that will be EV ready.

    January 12, 2024: The Applicant has provided a Sustainability Strategic Plan by New Ecology detailing the sustainability features of the proposed project, included as Attachment C. The report was written in April 2023 and refers to the previous design of 241 units. However, The Applicant notes that 10% of the EV parking spaces are in preferred locations and commits to including an additional 10% of parking spaces to be electric vehicle-ready in the future. HW recommends that the Applicant confirm these percentages as part of the design update.

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

Steve Stanish, P.E.
Senior Engineer

Attachment C

IMPROVING COMMUNITIES TOGETHER

January 10, 2023

Katie Whewell
Chief Planner for Current Planning
Department of Planning & Development
1000 Commonwealth Avenue
Newton Centre, Massachusetts 02459

Re: Response to Comments – MDM Transportation Consultants, Inc.
Proposed Multifamily Residential Development Transportation Peer Review
528 Boylston Steet, Newton, MA

Dear Ms. Whewell:

BETA Group, Inc. (BETA) has reviewed the responses in the MDM Transportation Consultants, Inc. (MDM) memorandum dated December 20, 2023, and have provided the following comments. For completeness, previous comments and responses are shown below with the latest responses and comments shown in **Bold type**.

Existing Conditions

BETA Comment 5: *"Due to high traffic volumes, intersecting driveways and roadways, and crashes along Boylston Street (Route 9), a roadway crash rate analysis should be provided for Route 9 within the study area vicinity."*

MDM Initial Response 5: A crash rate analysis has been conducted for the segment of Route 9 extending from the Parker Street ramps to the Hammond Pond Parkway ramps during the five-year study period, resulting in a crash rate of 1.53, which is below the State average of 3.05 for a Principle Arterial roadway. Four (4) pedestrian-related and three (3) bicycle-related crashes were reported during the study period; however, no fatalities were reported. Detailed crash data provided in the **Attachments.**

BETA Supplemental Comment 5: *"Please provide source of ADT volume. On the segment crash rate worksheet, the Functional Class, Comments, and Project Title & Date need to be revised."*

BETA GROUP, INC.
315 Norwood Park South, Norwood, MA 02062
P: 781.255.1982 |W: www.BETA-Inc.com

MDM Supplemental Response 5: The ADT volume used for the crash rate analysis is based on traffic volumes data collected on Route 9 to the east of Dudley Road on May 16, 2023. The ATR data and revised crash rate worksheet are provided in the **Attachments**.

BETA Supplemental Comment 5. Comment addressed.

Future Conditions

BETA Comment 7: "*A review of other developments in the area should be done as there are more developments in the area than what is currently in the traffic report. Two developments that may need to be included are the approved marijuana dispensary at 232 Boylston Street and proposed Sunrise of Newton Senior Living Facility at 11 Florence Street at Route 9.*"

MDM Initial Response 7: A review of these site-specific development projects indicates that these two projects have been sufficiently included in the background growth rate used for the area. Detailed calculations are provided in the **Attachments.**

BETA Supplemental Comment 7: "*The Trip generation comparison table in the attachments show volumes for the weekday morning and evening peak hours; however, the site generated trips for the 232 Boylston Street project show trips for the weekday evening and Saturday midday peak hours. Please revise.*"

MDM Supplemental Response 7: A revised trip generation comparison Table is included in the **Attachments.** As shown, the original findings remain valid, these two projects have been sufficiently included in the background growth rate used for the area.

BETA Supplemental Comment 7. Comment addressed.

BETA Comment 12: "*The proposed two site driveways on Route 9 will create a traffic weaving situation along Route 9 eastbound. If the driveways cannot be shown to operate under acceptable safe conditions, consideration should be given to reducing the potential impacts by 1) consolidating the driveways into one access/egress, or 2) making the main west driveway a one-way right-turn entrance only and making the east driveway a one-way right-turn exit only.*"

MDM Initial Response 12: As summarized in Response 12, under Build conditions, the merge and diverge junction areas with Route 9 eastbound will continue to operate below capacity at LOS C or better during the weekday morning and weekday evening peak hours. Initial consultation with MassDOT indicates support for the two driveways as shown. To enhance pedestrian safety and enhance operation MassDOT recommends designing the eastern visitor driveway with a driveway apron to promote slower travel speeds. For the primary (westerly) driveway, MassDOT recommended providing a standard driveway design similar to Sheldon Road and Olde Field Road without median island to promote slower travel speeds and provide

a more traditional pedestrian crossing.

BETA Supplemental Comment 12: "*Please provide any revised designs of the east (with apron) and west (without island) driveways.*"

MDM Supplemental Response 12: The revised building layout, driveway design, and conceptual improvement plan along the Route 9 frontage are shown in the updated conceptual access plan (see **Exhibit 1**). The eastern driveway has been updated to include a driveway apron design. The island on the western driveway has been retained to accommodate the location of a utility pole, to provide a buffer between entering and exiting vehicular movements, and to provide a pedestrian refuge area.

BETA Supplemental Comment 12. Comment addressed.

BETA Comment 18: "*The fire truck turning radius figures are acceptable. Please provide similar figures showing large moving truck maneuvers.*"

MDM Initial Response 18: Bohler Engineering has prepared the requested swept path exhibits for moving trucks/service vehicles; refer to attached exhibit in the **Attachments**.

BETA Supplemental Comment 18: "*The AutoTurn analysis provided in the attachments is for a 45-foot-long fire ladder truck and a 30-foot-long single-unit truck. AutoTurn analysis should be provided for a large moving tractor trailer truck (WB-67).*"

MDM Supplemental Response 18: The Proponent has indicated that large articulated tractor trailer trucks including the WB-67 vehicle (interstate semi-trailer) will be restricted from the Site. The management team company will work with existing and/or prospective tenants to limit the size of the moving vehicle to a 30-foot box truck or less. Updated AutoTurn analysis has been prepared by MDM for the ladder truck and 30-foot-long single unit truck and are included in the **Attachments**.

BETA Supplemental Comment 18. Comment addressed.

BETA Comment 21: "*There is a concern that small deliveries (food services such as Grubhub) would park on Hagen Road and walk to the project site instead of driving to the project access on Route 9. What measures can the Applicant implement to prevent this from happening?*"

MDM Initial Response 21: Short-term visitor parking accessible via the easterly Route 9 driveway is immediately proximate to the building entrance to facilitate transportation network company ("TNC") trips such as Uber and Lyft, package delivery services such as Amazon, UPS and Fed-X

and the leasing office operations. There is no reliance or likelihood of using Hagen Road for visitor activity as ample on-site parking is planned; delivery services such as Amazon, UPS or Fed-X will be directly and most efficiently served by building access at the Route 9 easterly driveway. Parking restrictions along Hagen Road if desired are at City discretion and the Proponent would support such restrictions if pursued by the City; however, such restrictions are not being driven by project parking demand.

BETA Supplemental Comment 21: "*It is suggested that traffic and parking operations be monitored on Hagen Road post-project construction and occupancy by the Applicant. The results of the monitoring should be summarized and discussed with the City for consideration of parking restrictions as needed. See Comment 36.*"

MDM Supplemental Response 21: Confirmed; the Proponent commits to post-occupancy monitoring of the parking operations on Hagen Road post project occupancy for discussion with the City for consideration of parking restriction as needed. The Proponent recommends that the post-occupancy monitoring should take place within 6 months of the one-year anniversary of initial occupancy.

BETA Supplemental Comment 21. Comment addressed.

BETA Comment 22: "*The site driveways are projected to operate with Level of Service D or better during both the AM and PM peak hours. Weave and merge capacity analysis should be provided. See Comment 11 above.*"

MDM Initial Response 22: See Response to Comment 11; operational analysis indicates minor delay with LOS B operation under future year design conditions. We further note that initial review of the proposed access plan has been conducted with MassDOT District 6 staff; MassDOT is in general agreement with the access locations given modest volumes at each driveway and subject to minor adjustment for sidewalk crossing design at the easterly driveway and possible reconfiguration/elimination of the small island features within state highway layout. Proposed driveways coincide with existing curb cuts with modest volumes that are not materially different than their continued use as residential and commercial driveways.

BETA Supplemental Comment 22: "*It is noted that Table 10 in the Traffic Impact Study Memorandum (July 28, 2023) shows the project site driveways will operate at LOS D in the morning peak hour and LOS C in the evening peak hour. Please provide any revised designs of the east (with apron) and west (without island) driveways. See Comment 12.*"

MDM Supplemental Response 22: See Response 12.
BETA Supplemental Comment22. Comment addressed.

BETA Comment 24: "*The project is located within walking/biking distance of the Newton South High School and Middle Schools. Potential impacts/conflicts of traffic with children walking and biking to school in the vicinity of the schools should be evaluated. See Comment 1.*"

MDM Initial Response 24: MDM visited the area between the Site and the Newton South High School and Middle Schools during the morning drop-off period on Thursday, October 5, 2023. The field inventory included a sidewalk inventory between the Site along Hagen Road and the Newton South High School and Middle Schools. The photo documentation of the pedestrian connections are included in the **Attachments; Exhibit 1** provides an overview of the inventoried routes. The surveyed route includes a direct system of sidewalks and pedestrian crossings along Hagen Road, Adeline Road and Brandeis Road. This route provides an ADA-compliant route excepting the Hagen Road connection at the planned multi-use path which will be improved by the Proponent as described below.

Students walking to the middle school and/or Newton South High school would use the multi-use path connection to Hagen Road, Adeline Road, Brandeis Road, and then cross at the existing crosswalk at Newton South High School. The primary route for students walking to the middle school from that point includes the sidewalk system on the High School property near the athletic fields which directly connect to the middle school. The bicycle route to these locations includes the multi-use path following the same roadways (Hagen Road, Adeline Road and Brandeis Road). The Proponent commits to pedestrian improvements at Hagen Road and Adeline Road to ensure an ADA-compliant connection from the multi-use path to Hagen Road and Adeline Road that includes a new sidewalk segment along Hagen Road and pedestrian crosswalks/ramps and sidewalk improvements as shown conceptually in **Exhibit 2**.

BETA Supplemental Comment 24: "*The current proposed alignment of the project's shared-use path shows it will terminate on the north side of Hagen Road approximately across from the midpoint of Adeline Road. Therefore, an additional crosswalk and ramps are suggested to cross the west leg of Hagen Road at Adeline Road. It is noted that there is a multi-use path that connects to Parker Terrace east of Brandeis Road that can be used by students walking and biking to the middle school by way of Wheeler Road or across the athletic fields.*"

MDM Supplemental Response 24: The Proponent commits to pedestrian improvements at Hagen Road and Adeline Road to ensure an ADA-compliant connection from the multi-use path to Hagen Road and Adeline Road that includes a new sidewalk segment along Hagen Road and pedestrian crosswalks/ramps and sidewalk improvements as shown in the updated conceptual plan (see **Exhibit 2**). As shown, an additional crosswalk and ADA compliant ramps have been added to the western leg of the intersection.

BETA Supplemental Comment 24. Comment addressed.

BETA Comment 26: "*There is currently an unimproved path through the wooded area between Hagen Road and Hurley Place. The current site plans show a 10-foot-wide multi-use path connecting the project site to Hagen Road. Without this connection, project residents would be limited to using sidewalks on Route 9 to access neighborhood streets such as Old Field Road. While the Applicant is proposing to improve sidewalks on the south side of Route 9 in the project vicinity, the pedestrian walking experience on Route 9 would continue to be uncomfortable due to the high volume, speed, and noise of traffic. Therefore, the multi-use path is needed to provide a more comfortable and convenient facility and connection for walkers and bikers.*"

MDM Initial Response 26: MDM concurs that the multi-use path through the Site represents a significant community benefit and connection to Route 9 sidewalks and will provide a comfortable, accessible and dedicated walking and bicycle connection to Hagen Road from Route 9. The Proponent will also continue to coordinate with the City and MassDOT to enhance the walking experience along Route 9 along the Site frontage through improved landscaped buffering, sidewalk setback from roadway shoulder, and guardrail elements that provide a positive barrier between pedestrians and motor vehicles, to the extent a guardrail is desired by the City.

MDM recently met with the MassDOT District 6 office to discuss the project. MassDOT indicated that it would be amenable to a green buffer and the applicant will continue to work with DOT with the intent to locate a minimum 6-foot buffer between the sidewalk and Boylston Street. DOT indicated that a guardrail may not be required for the project. Guardrails are typically required to address topographical changes in the travel way, and in this case those topographical changes will be rectified by the proposed design. Nevertheless, DOT supports using a guardrail along the curb line as an appropriate barrier for pedestrians if it is desired by the ZBA/Proponent. The Proponent will explore alternative design options for a guard rail with DOT under the future MassDOT Access Permit process.

BETA Supplemental Comment 26: "*It is recommended that a minimum 6-foot-wide buffer, preferably wider, and guardrail be provided between Route 9 and the sidewalk for pedestrian protection. The type of material for the buffer (grass, vegetation, pavement) and the type of guardrail (metal, wood) should be discussed with the City and MassDOT.*"

MDM Supplemental Response 26: The revised building layout, driveway design, and conceptual improvement plan along the Route 9 frontage are shown in the updated conceptual access plan (see **Exhibit 1**). As shown the preferred option is to provide a 10-foot landscape buffer between Route 9 and a 5-foot sidewalk. The Proponent will work with the City and MassDOT to provide a landscape buffer that is satisfactory to MassDOT and will provide a maintenance agreement if applicable. As an alternative buffer design, if desired by MassDOT a guardrail and 8-foot landscape buffer could also be accommodated; however, it appears that a guardrail is not required as the Site once constructed will be at grade with Route 9. Should a guardrail be

required the type of guardrail will satisfy all MassDOT requirements for type and location.

BETA Supplemental Comment 26. BETA agrees that the 10-foot-wide landscaped buffer area is an improvement for pedestrian safety and comfort. The Proponent should continue to discuss the need/desire for a guardrail for pedestrian safety with the City and MassDOT as the project progresses through environmental review.

BETA Comment 27: "*Explain how bicyclists are expected to access/egress the site via Route 9.*"

MDM Initial Response 27: The City of Newton Transportation Department is currently in the process of developing plans in coordination with MassDOT as part of a Safe Routes to School ("SRTS") program which provides the City with approximately $1.3 Million to design and implement improved sidewalk, bicycle and traffic controls at the Parker Street interchange at Route 9. This project is currently planned to include a multi-use path along the Parker Street eastbound ramp between Parker Street and Olde Field Road. The proposed Site plan includes the installation of a multi-use path through the Site connection to Hagan Road that will complement that extend that path connection. As part of the proposed mitigation improvements along Route 9, the Proponent is currently reviewing design options for connecting the planned multi-use path segment identified in the initial SRTS design that terminates at Olde Field Road to the multi-use path at the Site; at a minimum this will include repair/upgrade of the existing sidewalk, curbing and drainage features between these locations, potentially to include a guardrail segment that buffers the sidewalk from the Route 9 shoulder. These improvements will be subject to design review and approval by MassDOT under the future Access Permit process.

BETA Supplemental Comment 27: "*Design options for connecting the SRTS multi-use path with the project's planned multi-use path should be provided to the City for review.*"

MDM Supplemental Response 27: As shown in the updated conceptual access plan (see **Exhibit 1**), the plan has been revised to repair, reconstruct, and to modify the curbing and drainage between Olde Field Road and the Site to provide an extension of the SRTS multi-use path.

BETA Supplemental Comment 27. Comment addressed.

BETA Comment 30: "*The existing sidewalk on the south side of Route 9 fronting the project has a deteriorated asphalt sidewalk and a two-foot-wide grass strip in places between the sidewalk and roadway. Will a buffer strip be provided as part of the proposed new sidewalk? A buffer area between Route 9 and the sidewalk would provide more separation between pedestrians and traffic and reduce pedestrian stress.*"

MDM Initial Response 30: MDM recently met with the MassDOT District 6 office to discuss the project. MassDOT indicated that it would be amenable to a green buffer and the applicant will continue to work with DOT with the intent to locate a minimum 6-foot buffer between the

sidewalk and Boylston Street. DOT indicated that a guardrail may not be required for the project. Guardrails are typically required to address topographical changes in the travel way, and in this case those topographical changes will be rectified by the proposed design. Nevertheless, DOT supports using a guardrail along the curb line as an appropriate barrier for pedestrians if it is desired by the ZBA/Proponent.

BETA Supplemental Comment 30: "*It is recommended that a minimum 6-foot-wide buffer and guardrail be provided between Route 9 and the sidewalk for pedestrian protection. A buffer wider than 6 feet is preferred if feasible. The type of material for the buffer (grass, vegetation, pavement) and the type of guardrail (metal, wood) should be discussed with the City and MassDOT.*"

MDM Supplemental Response 30: See MDM Supplemental Response 26.

BETA Supplemental Comment 30. Comment addressed see Comment 26.

BETA Comment 32: "*The site plans show a proposed crosswalk across the main project driveway connecting a walking path between the proposed Sitting Grove west of the driveway and the residential buildings east of the main driveway. There is a concern that motorists entering the site from Route 9 eastbound will be traveling at relatively high speeds and may not expect pedestrians in this location and may not have time to react. Consideration should be given to providing safety enhancements at the crosswalk and/or relocating the crosswalk further south away from Route 9.*"

MDM Initial Response 32: The crosswalk has been placed at a location that is approximately 120 feet south of the entry point from Route 9. Right-turns into the driveway are estimated at travel speed of 15 mph which following AASHTO and MassDOT design criteria requires a stopping sight distance (SSD) of approximately 80 feet; the placement at 120 feet satisfies sight line requirements for up to speeds of approximately 20 mph and is sufficiently distant from Route 9 to safely accommodate pedestrians. To further enhance safety, the Proponent will incorporate highly visible/reflective MUTCD-compliant markings and signs for the crossing and illumination/lighting of the crossing.

BETA Supplemental Comment 32: "*We are still concerned that the driveway travel speed may exceed 20 mph at which the 120-foot distance would not be adequate. Can other additional measures be considered that would enhance pedestrian safety at this location including providing advance crosswalk signage and a posted speed limit sign?*"

MDM Supplemental Response 32: As shown in the updated site plan prepared by Bohler Engineering and the updated conceptual access plan (see **Exhibit 1**), the internal crosswalk in question has been removed.

BETA Supplemental Comment 32. Comment addressed.

BETA Comment 36: *"What measures will the Applicant provide to prevent visitors from parking on Hagen Road?"*

MDM Initial Response 36: Adequate parking will be provided on-site to accommodate the parking demands of the proposed development as described in Response 33 and Response 34; proposed supply provides the Proponent a reasonable but not excessive surplus in parking. This surplus will accommodate occasionally higher levels of visitor activity within the garage during holiday periods for instance or in cases where longer duration stays by visitors are needed on a pre-arranged basis. Short-term visitor parking accessible via the easterly Route 9 driveway is immediately proximate to the building entrance to facilitate transportation network company ("TNC") trips such as Uber and Lyft, package delivery services such as Amazon, UPS and Fed-X and the leasing office operations. There is no reliance or likelihood of using Hagen Road for visitor activity as ample on-site parking is planned; delivery services such as Amazon, UPS or Fed-X will be directly and most efficiently served by building access at the Route 9 easterly driveway. Parking restrictions along Hagen Road if desired are at City discretion and the Proponent would support such restrictions if pursued by the City; however, such restrictions are not being driven by project parking demand.

BETA Supplemental Comment 36: *"It is suggested that traffic and parking operations be monitored on Hagen Road post-project construction and occupancy by the Applicant. The results of the monitoring should be summarized and discussed with the City for consideration of parking restrictions as needed. See Comment 21."*

MDM Supplemental Response 36: See MDM Supplemental Response 21.

BETA Supplemental Comment 36. Comment addressed see Comment 21.

<u>Additional Comments</u>

BETA Comment A1: The Site Layout Plan dated 12/21/2023 shows a proposed emergency access gate. Please provide details on which way the gate would swing, if it will be locked and accessible by Newton Emergency Services, and if the Newton Fire Department has reviewed and approved.

BETA Comment A2: The Site Layout Plan dated 12/21/2023 shows two proposed bollards at the multi-use path terminus at Hagen Road. Will these bollards be removable to allow emergency vehicle access? The Bollard detail shown on Sheet C-701 does not appear to show removable bollards. Has the Newton Fire Department reviewed and approved this design?

If we can be of any further assistance regarding this matter, please contact us at our office.

Very truly yours,
BETA Group, Inc.

Jeffrey Maxtutis
Senior Associate

Project No: 10337.02