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#425-18 & #426-18

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PUBLIC HEARING/WORKING SESSION VIII MEMORANDUM

DATE: August 2, 2019
MEETING DATE: August 6, 2019
TO: Land Use Committee of the City Council
FROM: Barney Heath, Director of Planning and Development
Jennifer Caira, Chief Planner for Current Planning
Michael Gleba, Senior Planner
CC: Petitioner

In response to questions raised at the City Council public hearing, the Planning Department is providing the following information for the upcoming public hearing/working session. This information is supplemental to staff analysis previously provided at the Land Use Committee public hearing.

PETITIONS #425-18 & #426-18 156 Oak St., 275-281 Needham St. & 55 Tower Rd.

Petition #425-18- for a change of zone to BUSINESS USE 4 for land located at 156 Oak Street (Section 51 Block 28 Lot 5A), 275-281 Needham Street (Section 51, Block 28, Lot 6) and 55 Tower Road (Section 51 Block 28 Lot 5), currently zoned MU1

Petition #426-18- for SPECIAL PERMIT/SITE PLAN APPROVAL to allow a mixed-use development greater than 20,000 sq. ft. with building heights of up to 96' consisting of 822 residential units, with ground floor residential units, with restaurants with more than 50 seats, for-profit schools and educational uses, stand-alone ATMs drive-in businesses, open air businesses, hotels, accessory multi-level parking facilities, non-accessory single-level parking facilities, non-accessory multi-level parking facilities, places of amusement, radio or TV broadcasting studios, and lab and research facilities, to allow a waiver of 1,600 parking stalls, to allow a reduction in the overall parking requirement to not less than 1900 stalls, to waive dimensional requirements for parking stalls, to waive end stall maneuvering requirements, to allow driveway entrances and exits in excess of 25', to waive perimeter landscaping requirements, to waive interior landscaping requirements, to waive lighting requirements for parking lots, to waive general lighting, surfacing and maintenance requirements, to waive off-street loading facilities requirements, to waive sign requirements relative to number, size, location or design, to waive the number of signs allowed.

The Land Use Committee (the “Committee”) held a public hearing on September 25, 2018 and working sessions on November 13, 2018, December 11, 2018, January 15, 2019, March 12, 2019, April 3, 2019, April 30, 2019, May 14, 2019 and June 16, 2019 on these petitions. This memo reflects additional information received by the Planning Department as of **July 26, 2019**. The next meeting on these petitions is currently scheduled for **September**.

EXECUTIVE SUMMARY

The Land Use Committee has previously discussed the transportation related aspects of the proposed project on January 15th, April 9th, April 30th and June 16th. The project has undergone numerous revisions in this time to the size of the project, design of buildings, number of units, number of parking stalls, and commitment to reducing vehicular trips. This memo intends to provide a summary of the current proposal and the associated vehicular trip generation, the parking proposal, and the transportation demand management (TDM) plan. Planning Department staff have continued to work with the petitioner to clarify the predicted vehicular trips and to create a successful TDM framework that allows for flexibility in determining the best tools to reduce driving while committing to aggressive goals to reduce the number of vehicular trips taken by residents and employees.

While some of the details have evolved (particularly related to counting trips and the repercussions if the trip maximum is exceeded) Planning’s recommendation for the TDM framework has stayed consistent. The TDM plan must be a priority for the development and will be central to how the development is ultimately marketed and operated. The key component of the TDM plan is to focus on the reduction in vehicular trips and allow flexibility in how that standard is met. Equally important is how the number of vehicular trips will be measured, monitored and enforced and what happens if that goal is not met. This commitment to promoting alternative forms of transportation and reducing vehicular trips should also continue for the life of the project.

The TDM plan submitted by the petitioner on July 26, 2019 (**Attachment A**) represents numerous working sessions with Planning and Transportation staff and peer reviewers from BETA. Staff are generally supportive of the proposal with a few exceptions. The proposal maintains the free, electric shuttle to the Newton Highlands Green Line previously proposed and increases the commitment to MBTA subsidies for residents and office workers. The proposal commits to a 37% reduction in residential and office trips in the morning and a 58% reduction in the evening. This goal is similar to that of previous proposals while acknowledging the difficulty in reducing retail trips. The TDM commitment will be in perpetuity, however reporting would cease after four consecutive years meeting the target (with the need to submit any TDM program changes to Planning). The petitioner has committed to an initial plan with an estimated cost of \$1.25 million and would agree to spend that amount plus an additional percentage equivalent to the increase in trips if the goal is not met, with a cap of an additional 20%. The Planning Department agrees with the structure but recommends the base commitment increase to \$1.5 million, the reporting be more frequent after full occupancy and cease after five consecutive years, and the cap on additional spending be set at 30%.

TRAFFIC

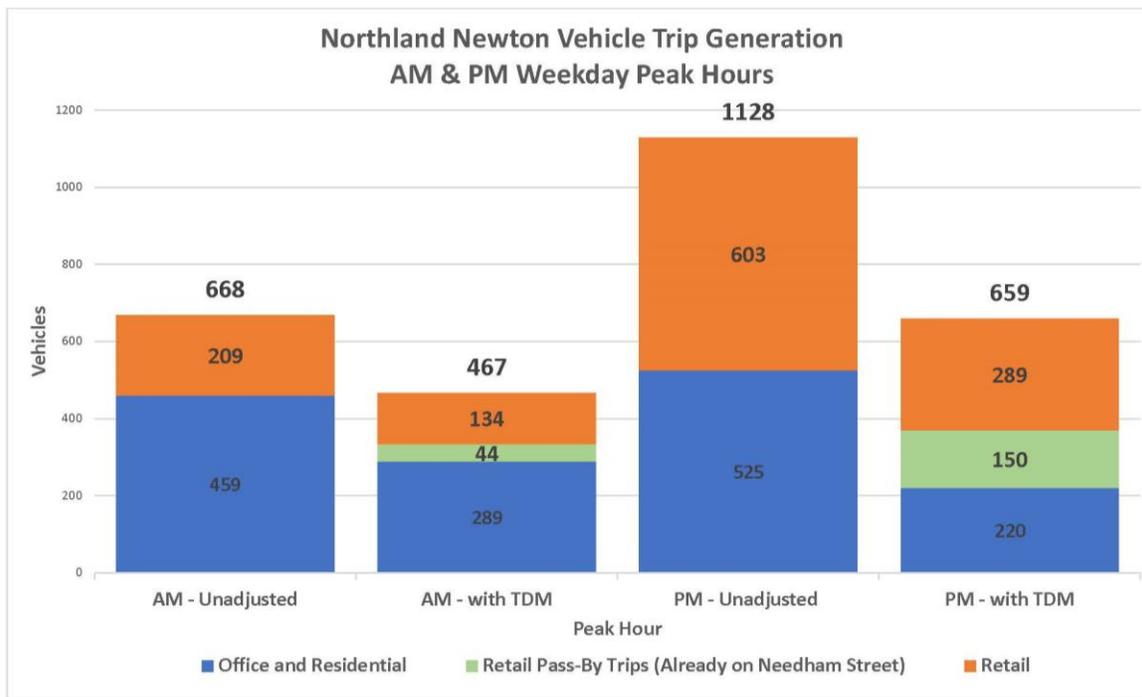
The predicted number of vehicle trips for the proposed development is based on trip generation rates by land use published by the Institute of Transportation Engineers (ITE). These trip generation rates are the industry standard and are based on decades of data for stand-alone uses. The rates are applied to the number of units and the total area for each commercial use to arrive at the projected total number of vehicle trips generated by the development during weekday morning, evening and Saturday midday peak hours. As the projections represent the unadjusted total, they do not account for shared trips within a mixed-use development, pass-by trips (retail trips from drivers who are already on the road anyway and choose to stop), and/or reductions in trips due to an increase in the utilization of alternative forms of transportation. The mixed-use nature of the development will likely result in a reduction of vehicle trips that would otherwise occur because they could be accomplished within the site, such as residents who also work onsite and residents and employees who shop, eat, or utilize other amenities within the site rather than driving elsewhere. Additionally, traffic on Needham Street includes many drivers who would be driving down Needham Street anyway but now might stop at the development while on their way to or from their primary destinations, meaning they will be entering and exiting the site. As such, they wouldn't be considered to represent traffic generated by the development. Lastly, given the proposed TDM measures, the expected vehicular trips resulting from the project will be further reduced due to the ability of people to use transit, walk or bike, rather than drive, to and from the site.

The total projected unadjusted ITE volume for weekday mornings is 668 trips; for weekday evenings it is 1,128 trips. The projected unadjusted ITE volumes for only the office and residential uses are 459 trips for weekday mornings and 525 trips for weekday evenings. The TDM plan is focused on weekday morning and evening peak hour trips as they can most readily be reduced by TDM measures. While the retail customer trips would represent a significant portion of evening trips, the petitioner has little control and few tools for shifting those trips to other modes; for those trips, the expectation is that some retail employees and customers and visitors to the public amenities will be able to walk, bike, or take the shuttle to the site.

The projected unadjusted office and residential traffic volumes were then further reduced to reflect the mixed-use nature of the site and account for the resulting internal trips that would be captured onsite rather than forced to drive elsewhere. This number was further reduced to assume 88% of total office trips will be vehicular trips and 79% of total residential trips will be vehicular trips (based on the Citywide average). The result is what would be expected from the site without significant TDM investment- 361 weekday morning vehicle trips and 275 weekday evening vehicle trips.

The petitioner has committed to a further reduction of 20% from this adjusted number, which represents a reduction of 37% from the unadjusted weekday morning trips and 58% from the unadjusted weekday evening trips. The result is 289 office and residential trips in the morning and 220 office and residential trips in the evening. This is the basis for the TDM framework and represents the maximum number of trips the project would be permitted for office and residential uses (see further discussion of the TDM proposal below). The City's peer reviewer, BETA, has reviewed the trip generation numbers and methodology and is in agreement with the petitioner.

The chart below represents an illustration of the predicted trip generation with and without TDM measures:



Source: Northland Needham Street Trip Reduction Metrics, 6/26/2019, VHB; Expanded Revised Building Project Memo, 3/28/2019, VHB; Response to Transportation Peer Review Memo, 4/16/2019, VHB.



PARKING

The petitioner has proposed 1,450 striped parking stalls and a “valet pad” with space to valet an additional 200 cars, for a total of 1,650 spaces during peak periods. As stated in the June 11th letter, the petitioner has not agreed to a further reduction as they believe this is the right level of parking to both ensure the project is successful and to obtain financing from lenders who tend to be conservative. Planning Department staff agree that the petitioner’s proposal represents a significant reduction for a suburban area while still allowing for some flexibility to meet peak demand during holiday seasons. Significantly further reducing parking runs the risk of sacrificing the success of the project and ability to retain tenants and residents and may push people to rely on Transportation Network Companies (TNCs, i.e. Uber and Lyft), which has the potential to increase the number of trips to and from the site. Planning staff expect the project will attract tenants and residents who are either car-free or car-lite and that the TDM measures will provide attractive alternatives to driving. Residents in particular are likely to still require parking stalls as their vehicles must always be stored onsite; however, the goal is for the residents to be able to commute and accomplish other trips much of the time without driving solo. Planning Department staff find the proposed number of parking stalls to be in the right ballpark based on its location. By limiting the project to a maximum number of trips there is assurance that traffic produced by the project would not exceed that level and the focus should be on disincentivizing driving and incentivizing other modes of travel, particularly during peak periods, while allowing enough parking to provide flexibility for residents and tenants. Additional small reductions may be feasible with consideration for the potential for spillover parking and/or increased TNC usage.

TRANSPORTATION DEMAND MANAGEMENT

Given the proposed project's location along Needham Street, in order to rezone and develop the project at the proposed scale and density Planning Department staff has continually, and strongly, advocated for the adoption and implementation of aggressive transportation demand management (TDM) strategies. The goal is to reduce vehicular trips to at least partially mitigate the project's expected traffic impacts and to align with Citywide goals for climate change, while allowing the petitioner some flexibility in how those goals are to be met. The Planning Department believes that in order to support the rezoning request and the associated required zoning relief, this project should be held to a high standard and that the project should be doing everything possible to further the City's transportation goals to reduce reliance on single-occupancy vehicles. The Planning Department has recommend conditioning any approval of the project to a maximum number of trips based on ITE estimates for trip generation of the proposed onsite uses and requiring compliance with this maximum in perpetuity with additional TDM investment required when/if that maximum is exceeded. This approach is supported by the work being done in Cambridge and other communities. A recent publication from the Urban Land Institute, "Building a Multimodal Future: Connecting Real Estate Development and Transportation Demand Management to Ease Gridlock" (2019) studied TDM practices in ten communities: Arlington, Virginia; Bloomington, Minnesota; Cambridge, Massachusetts; Contra Costa, California; Eden Prairie, Minnesota; Fairfax County, Virginia, Lexington, Massachusetts; Mountain View, California; Seattle, Washington; and Snohomish County, Washington. The authors identified the following six best practices:

- Focus on outcome rather than tactics,
- Establish quantifiable performance goals,
- Verify quantifiable performance goals with monitoring and evaluation,
- Leverage annual reporting to help TDM programs evolve over time,
- Invest time up front to establish effective TDM policy administration, and
- Ensure predictability with TDM in the development process.

While the specific details have evolved throughout the process, Planning's recommendations for establishing a TDM framework have been consistent with these best practices. Below is a summary of the changes from both the petitioner's proposals and Planning's recommendations since the first transportation hearing in January. Following is a discussion of the Petitioner's current proposal and Planning's recommendations.

Summary of Changes

The timeline below summarizes the changes to the petitioner's TDM proposals since the first hearing on transportation in January 2019.

January

- The project included 822 units, 180,000 sf of office space, and 237,000 sf of retail space. 1,953 parking spaces were proposed onsite.
- The TDM plan focused on four shuttle routes. The Newton Circulator would run every 30-45 minutes to the Newton Highlands Green Line, Newton Center, and the Newtonville commuter

rail. The Needham Commuter would run every 30-45 minutes to the Needham commuter rail station. The Cambridge Express would run every hour to Kendall and Central Squares. The Boston Express would run every hour to the Seaport and South Station.

- The petitioner stated the shuttle system would reduce vehicular trips by 40% from what would otherwise be predicted.
- Planning staff raised concerns that the shuttles ran too infrequently to be effective, would compete with existing transit options, and would have difficulty competing with transportation network companies (TNS, e.g. Uber, Lyft, etc.). Additionally, more information on fare structures, examples of similar systems, and the data driving the selection of the routes was needed for further analysis. Planning suggested that rather than committing to specific routes and times, the petitioner be required to meet a goal of reducing vehicular trips by a certain amount.

April

- The project was reduced to 800 residential units and 115,000 sf of retail. The 180,000 sf of office space remained the same. The number of parking stalls was reduced to 1,550.
- The trip generation also decreased with a significant reduction particularly in the weekday midday and Saturday midday peaks, due to the reduction in retail space.
- The TDM plan largely stayed the same with four shuttle routes, except the Needham Connector was replaced with a Newton Highlands shuttle running every 20 minutes to the Green Line station.
- The petitioner stated the actual reduction in trips would be somewhere between what could be expected with no mitigation and the 40% reduction in trips previously proposed.
- Planning staff still lacked necessary information to analyze shuttle proposal and recommended that the petitioner focus on filling in the first/last mile gap with existing transit while providing significant financial incentives for taking transit and disincentives for driving. Planning recommended TDM measures be implemented from day one and that the commitments continue in perpetuity. The petitioner initially proposed a sunset on requirements after seven years but ultimately agreed to continue in perpetuity. Planning staff also continued to recommend that the TDM plan focus on setting a goal of a 40% reduction in trips and that this goal be regularly monitored by measuring trip counts and submitting reports. Planning recommended that if the petitioner was unable to meet the goal two years in a row, they be required to amend the Special Permit to discuss alternative mitigations.

June

- The project size and design remained the same, except the petitioner further reduced the number of striped parking stalls to 1,450 and created a “valet pad” to allow for an additional 200 cars to be valet parked during peak periods.
- The TDM plan was significantly changed to just focus on a free, electric shuttle to the Newton Highlands Green Line station that would run every 10 minutes, 16 hours a day, 7 days a week. The petitioner did not offer any monitoring or enforcement or adherence to a reduction in

vehicular trips and proposed a condition only requiring they provide the shuttle service as proposed.

- Planning staff supported the frequent, free service to the Green Line station but noted additional service to the commuter rail would also be beneficial. Planning also continued to strongly advocate for a TDM framework that would hold the petitioner accountable for meeting a reduction in the number of trips and would allow for regular monitoring and enforcement. The most significant change in the structure of the TDM framework proposed by Planning was that instead of amending the Special Permit if out of compliance, the petitioner would be required to pay into a mitigation fund at a rate of \$55 per trip above the maximum with an annual cap of \$2 million and a lifetime cap of \$10 million. The fund would be used by the City for transportation improvements in the area.

July

- Following the June meeting, the petitioner submitted a new TDM proposal that follows a similar framework to that which has been previously proposed by Planning. The initial draft set a goal for the office and residential uses of a 37% reduction in the weekday morning peak trips and 58% in the weekday evening from the unadjusted ITE volumes. This is also equivalent to a 20% reduction in the adjusted trips that account for internal capture and typical transit usage in Newton. The initial proposal included measuring trip counts entirely by a one-day intercept survey at all entry/exit points for office and residential buildings. It also established a remedy fund with up to \$294,000 that would be added to if trip generation targets were not met. The petitioner proposed additional funding of \$50,000 - \$100,000 based on the percent above the goal. The fund would be used for additional mitigation by the petitioner. The petitioner proposed a monitoring phase of seven years and if they did not meet the goal for three consecutive years during that period any money remaining in the fund would be released to the City and the petitioner would no longer be obligated to meet the TDM goals.
- The draft TDM Plan still included the shuttle to the Newton Highlands Green Line with 10-minute service 16 hours a day, 7 days a week. The petitioner also proposed MBTA subsidies for residents without vehicles.
- Planning staff were comfortable with the targets but had concerns with relying entirely on a one-day in-person survey to determine compliance. Staff also felt the contributions were too low and the remedy for non-compliance was not enough. While Planning strongly recommended the petitioner be given flexibility in determining the best tools for meeting the target reduction in trips, there were concerns the significant investment represented by the shuttle proposal could be lost with future changes to the TDM plan if the shuttle did not work as well as hoped. Additionally, Planning staff had concerns with any sunset on TDM requirements.
- Planning also recommended MBTA subsidies be given to all residents and employees, regardless of vehicle ownership
- Planning and Transportation staff as well as the peer reviewers have worked closely with the petitioner and their consultants with the result being the revised TDM plan submitted by the petitioner and circulated to the Council on July 26th (**Attachment A**) and discussed in further

detail below. The revised plan includes measuring the number of office and residential trips through both surveys and counting the cars coming and going from parking structures (through the use of stickers for residents and employees), a minimum investment in the TDM program based on the budget for the proposed plan (including the shuttle), and additional investment of 1% for every 1% exceedance of the trip maximum (starting at 5%), with a cap of 20%. Reporting requirements would cease after four consecutive years of compliance, but the petitioner would be required to continue with the TDM plan, and any changes would require review and potentially new monitoring periods.

- The revised plan also includes a full monthly MBTA LinkPass reimbursement for each unit without a vehicle and a 50% reimbursement for any resident or office employee participating.

Petitioner's Proposal

The July 26th TDM Plan submitted by the petitioner reflects the culmination of many months of proposals and subsequent recommendations by the Planning Department. The petitioner and their consultants have worked closely with City staff to create a plan that represents best practices and City staff input. While staff still have some concerns with some of the details (recommendations can be found below), the plan is comprehensive in its approach while allowing the flexibility needed for the petitioner to optimize the approach and adapt over time as conditions and technology change.

As the petitioner is seeking to build at TOD level densities in the absence of existing transit, and to do so with reduced parking on-site, the petitioner will need to take significant steps to make alternate transportation options such as taking transit, walking and biking an attractive option to driving or relying on TNCs such as Uber or Lyft to minimize the risk of the project having significant negative impacts on the area's already difficult traffic conditions.

The petitioner's TDM plan consists of the following:

- Trip Reduction Goal
- TDM Program
- Monitoring
- Reporting
- Enforcement

Trip Reduction Goal

The petitioner now proposes to partially mitigate the project's traffic impact by reducing weekday morning and afternoon peak hour residential and office trip generation by 20% below the projected number of residential and office trips (per ITE 10th edition) based on full stabilized occupancy as adjusted for on-site internal trip capture (given the project's mixed-use program and existing Newton mode shares. This is equivalent to a 37% reduction during weekday mornings from the unadjusted ITE volumes for office and residential vehicular trips and a 58% reduction during weekday evenings. The morning goal is comparable to the initial proposal to reduce trips by 40% while the evening goal exceeds this previous commitment.

TDM Program

The petitioner's proposed Plan Implementation is comprised of the following components:

Shuttle System:

The core component of the petitioner's TDM Program has been the provision of a shuttle system. The petitioner has abandoned its original multi-route shuttle system and proposed instead an electric shuttle, with service between the proposed Mobility Hub and the MBTA's Newton Highlands Green Line Station every 10 minutes, which would operate 16 hours a day, every day.

The Planning Department believes that such a shuttle service, which would be free to the development's residents, office employees, retail customers and employees as well as the public, is a step in the right direction as it focuses on filling in the gaps with existing MBTA service and addresses the first/last mile problem of getting people to and from existing transit. The frequency of service and free fares ensure it will be attractive and easy to use for both residents and tenants of the site as well as nearby neighbors.

Other TDM Measures:

The shuttle notwithstanding, research has shown that the most effective TDM measures are charging for parking, paying people not to drive and substantially subsidizing transit.

Consistent with that approach, the Planning Department has urged that the petitioner separately charge market rates for residential and office parking and by the day for employee parking. While the petitioner has not agreed to do so for office and employee parking, it has adopted the idea of "unbundling" parking charges for market rate residential leases (parking for affordable residential units would be included in the rent).

Public Transit Incentives

Regarding subsidizing transit use, the petitioner has adopted the Planning Department's recommendation that no fare be charged for the shuttle service. The petitioner is also offering, per its draft TDM Plan, to incentivize public transit use by residents by providing a free MBTA LinkPass pass for every residential unit leased without a parking space and a 50% reimbursement on a monthly MBTA LinkPass for every resident who chooses to take advantage of the program. The petitioner will also offer 50% reimbursements on monthly MBTA LinkPasses to all on-site full-time office employees and "work with" office tenants incentivize their employees to use alternate commuting modes.

Car-Free Living

The petitioner would also provide a minimum of four car share spaces onsite for common use and increase this number to meet demand as per car share operators. The petitioner has also offered to provide on-site access to shared bikes and scooters or alternative shared non-vehicular transportation (such as LimeBike) subject to the City approval.

Car-free living would also be encouraged with the provision of pedestrian and bicycle facilities such as 1,100 weather-protected, secure bicycle storage spaces (with bike repair accommodations) for residents and office and retail employees and outdoor bicycle storage for retail customers and visitors. The petitioner would also provide office employees with shower facilities.

The petitioner has indicated an intent to designate five TNC curbside drop-off and pick-up locations onsite, including three along “Main Street” in front Buildings 3, 5 and 6 and one each on Charlemont Street and Pettee Lane.

TDM Coordinator

As requested by the Planning Department, the petitioner would identify a full-time TDM Coordinator for the development responsible for the implementation of the TDM plan and collection of related data. The TDM Coordinator will be the petitioner’s “main point of contact” with the City for TDM monitoring and reporting purposes. The TDM Coordinator will be responsible for building awareness of all TDM aspects of the project through the development and deployment of marketing and public communication materials and information. The TDM Coordinator could also manage the petitioner’s relationship with any transportation management association (TMA), such as the 128 Business Council, that it joins.

TDM Plan “Phase In”:

The petitioner proposes that while its TDM activities begin prior to any residential or office occupancy, it would be phased in during the project’s development. The TDM Coordinator would begin work at or before either the earlier of 1) issuance of a building permit for more than 25,000 square feet of office space or 2) twelve (12) months after the first residential building permit is issued. At or about this time the required contracts would be entered with TDM program vendors (i.e., for car- and bike- sharing operations and the shuttle).

While shuttle service would commence with the issuance of the first residential or office certificate of occupancy, it would initially be limited to “on demand service with scheduled commuting hour runs.” Full shuttle service would begin only with the issuance of a certificate of occupancy for the 400th residential unit.

Budget

As the TDM Plan is intended to evolve over time, the program will be evaluated periodically for effectiveness in achieving the Trip Reduction Goal and modified as necessary. However, to get a sense of the costs and commitments implicated by the proposed TDM Plan, the Planning Department requested that the petitioner provide estimated costs of the program’s elements. As part of the July 26th TDM Plan, the petitioner has submitted information indicating a broad outline for the TDM plan’s initial cost, totaling \$1,250,000 annually (**Attachment A**).

The shuttle represents the majority of the cost at \$850,000 per year (it is unclear as to whether this is for just operating costs or is also inclusive of capital costs). The petitioner estimates the cost of the “Resident Car-Free Incentive” of a free annual MBTA pass (\$1,080) for each dwelling unit leased without a parking space would be \$103,000, based on passes being issued for approximately 100 leases. The “Resident Public Transit Incentive” which would provide a 50% reimbursement for of monthly MBTA LinkPass (\$90) for each lease would be \$54,000, based on use by approximately 100 leases. The cost of the “Office Employee Public Transit Incentive” would cost \$81,000 annually to provide a 50% reimbursement of monthly MBTA LinkPass (\$90); this estimate assumes 150 office employees would avail themselves of the subsidized passes. Miscellaneous activities and contingencies are budgeted for \$162,000 annually.

TDM Monitoring, Reporting and Enforcement

Since it is extremely difficult to predict how successful the proposed TDM Program, especially the shuttle, will ultimately be, the Planning Department strongly recommends focusing on holding the project to the proposed reduction in office and residential vehicular trips while allowing some flexibility for the petitioner in meeting this goal. By focusing on the outcome, rather than the method of achieving it we can assure the outcome is met and the tools to achieve this can be adjusted over time as necessary.

As detailed in its TDM Plan, the petitioner has proposed a "Site Traffic Monitoring" protocol that entails the petitioner conducting an annual "Trip Count" that would count resident and office vehicles (using parking stickers issued to registered parkers) entering and exiting at all garage entries during the weekday morning and evening peak hours on three consecutive fall days. This count would be supplemented by "intercept surveys" of persons entering and exiting the residential and office spaces to ascertain their arrival modes and other relevant information. The parking counts will capture the majority of trips but will not account for anyone being picked up or dropped off as well as guests and deliveries. The intercept surveys will include persons stationed at every residential and office exit and entrance with a tablet and counter for both counting people and collecting data regarding their mode of travel. Total trip counts will be done every two years at all driveways; however this will be for informational purposes and will not be used to determine compliance. This proposed methodology allows for the most accurate count of just office and residential trips.

The resulting information would be submitted to the City via an annual report by April 1 of the following year. The report would also include the status of then-current TDM measures; resident and office employee transit and schedule preferences; biennial data on weekday peak hour trips at each access point, shuttle ridership, Public Transit Incentives utilization and car and bike share utilization (if available); as well as any recommended TDM program modifications.

Regarding enforcement, as discussed above, the petitioner has indicated that it projects an annual budget of \$1.25 million for the TDM Plan program. This represents the petitioner's base commitment to TDM measures. In the event the project is found to not be in compliance with the TDM Reduction Goal the petitioner proposes that it be required to increase the annual TDM budget 1% for every percentage point residential and office peak hour trips exceed the Trip Reduction Goal, provided that no additional investment would be required where the excess is less than 5% and the maximum amount of additional "TDM Investment" be capped at 20%. For example, if the number of trips exceeded the goal by 10%, the petitioner would need to revise the TDM plan and would need to allocate an additional 10%, or a total of \$1.375 million towards TDM measures. The principle being if the goal is not being met, the current funds may need to be reallocated and additional funds are likely necessary to achieve compliance.

The petitioner proposes submitting annual reports starting at 80% occupancy of residential units. Their plan proposes that once the trip reduction goal has been met for four consecutive years, the monitoring and reporting requirements would end. The petitioner would still be required to continue to implement the TDM Plan, and any substantial modifications to it would need to be reviewed by the Director of Planning who could require a follow-up Trip Count report one-year following the implementation any such modification and require additional corrective measures agreed to by the petitioner, if the Trip Reduction Goal is subsequently violated.

Recommendations

The petitioner's proposal represents a TDM framework that is consistent with best practices, though Planning still has some concerns with some of the details. Planning Department recommendations are primarily focused on ensuring the monitoring is happening frequently enough, particularly in the early stages of full occupancy as adjustments to the plan to optimize results will be likely, and ensuring the financial commitment is sufficient to meet the trip reduction goal. The following represents Planning staff's comments on the petitioner's proposal and recommendations to the City Council.

TDM Program

- While the frequent, free shuttle to the Green Line is important, it is likely that more may be required to reduce vehicular trips. For example, Planning Staff feels it is important a shuttle also serve a commuter rail station given the dispersed home and work addresses of potential users. It is also likely that 10-minute service may not be needed for the full 16 hours per day, every day. Toward that end, the petitioner has stated that it has as an "aspirational goal" to create a shuttle network that could serve destinations such as Founders Park, Wells Avenue, Boston, Cambridge, the Seaport, Longwood and the MBTA Newtonville Commuter Rail station. Planning recommends the petitioner carefully track shuttle utilization and work closely with City staff and a transportation management association (TMA) to best optimize shuttle service.
- Planning Staff also recommends that the petitioner identify several stops along the shuttle route, especially along Needham Street, to allow the shuttle to better serve the general public and consider ways to encourage public use while providing efficient service.
- Consider monitoring parking utilization and adjusting parking rates as needed for residents, employees, and visitors to discourage driving (particularly during peak periods)
- While not counted in the office and residential trips maximum, the petitioner should also commit to providing the same transit pass subsidies to retail employees.

Trip Reduction Goal

- Planning is comfortable with the goal for reducing office and residential trips. The goal is aggressive given the project location, but achievable. There are numerous levers that can be adjusted if the initial TDM program falls short (reallocating shuttle service hours to the commuter rail and/or exploring alternative routes, increasing MBTA pass subsidies, increasing the cost to park onsite, charging employees to park, etc.).

Measurement

- Previous recommendations from Planning have been to set a total maximum trip count for all uses (which included a reduction in the office and residential trips but not in the retail trips for the reasons discussed above). The petitioner expressed concern that setting a total maximum trip count for the entire site and measuring trips at driveways could unfairly penalize the petitioner for having successful retailers and public open spaces.
- The current proposal would count the number of vehicles entering and exiting garages with resident or employee parking stickers or passes. In order to account for residents or employees being picked up or dropped off there will also be intercept surveys done for a 3-day period during the middle of the week. The survey would count residents and employees at all entries

and exits to residential and office buildings and ask a few questions regarding how they arrived or are departing. City staff will need to approve the timing and methodology for the counts and surveys in advance. An alternative would be for the petitioner to be required to pay for the City to hire an outside consultant to perform the counts and surveys.

Monitoring and Reporting

- The petitioner has proposed initial measurements and reporting will begin once the project has reached 80% occupancy of residential units and will cease after four consecutive years of compliance with the trip reduction goal. As it is anticipated the TDM program will need to adjust in the beginning in order to determine which tools are most effective in reducing trips, Planning recommends the initial reporting period be six months in lieu of one year. If after two consecutive periods of meeting the goal, the petitioner may report annually. Once the project has met the goal for a total of five consecutive years, reporting requirements may cease as long as there are no significant changes to the TDM plan. Any future changes will need to be reviewed and approved by Planning and Transportation staff and may require additional reporting to determine effectiveness.
- The petitioner proposed measuring trip counts in the fall and submitting reports to the City by April 1. Trip counts should always be done in either the fall or spring, with dates and methodology approved by Planning, and reports should be due within a month of the counts.

Enforcement

- The petitioner has committed to an initial TDM plan with a budget of \$1.25 million. Planning staff have reviewed the proposed budget and noted the petitioner is assuming only 200 total residents and 150 employees taking advantage of MBTA subsidies. The budget also does not include the full time TDM coordinator and corresponding marketing budget. Planning recommends a base commitment of \$1.5 million to accommodate additional MBTA subsidies and a TDM coordinator. It is feasible that the petitioner may meet the trip reduction goal with a smaller budget. This is acceptable and the base commitment is only necessary if the trip count is exceeded. At that time the petitioner would need to commit to \$1.5 million plus the corresponding additional investment and would work with City staff to determine the best allocation of the funds (additional MBTA passes, additional shuttle routes, etc.).
- The petitioner has proposed a maximum additional investment of 20%, however Planning recommends 30%.
- Additionally, Planning recommends the base commitment increase each year in accordance with the Consumer Price Index.

Offsite Improvements

In addition to the TDM plan described above, Planning Staff have continued to recommend that the petitioner consider offering a one-time payment into a transportation mitigation fund for improvements in the area. The plan described above includes aggressive goals that go above and beyond the citywide average when it comes to reducing driving, however even if the TDM measures are successful there will continue to be increased delays at intersections in the area. Additionally, TDM measures are primarily successful at changing the behavior of residents and employees, so while visitors to the retailers at the site will hopefully take advantage of alternative methods of

transportation, it is unlikely there will be a significant reduction in vehicular use for this group. The petitioner has expressed support for many of the off-site improvements identified. It is expected that any commitments by the petitioner to off-site transportation improvements will be discussed at a future meeting in addition to other mitigations and public benefits proposed.

While Planning and Transportation staff have additional recommendations, particularly regarding the reporting periods, base investment and cap on additional investment, the petitioner's plan represents a significant improvement upon previous proposals and Planning is confident a framework can be created that is both feasible for the petitioner and provides the City with confidence that the project will be able to meet trip reduction goals.

ATTACHMENTS

Attachment A Petitioner's TDM Plan - July 26, 2019

**NORTHLAND NEWTON DEVELOPMENT
TRANSPORTATION DEMAND MANAGEMENT PLAN**

This document sets forth the programmatic elements of a transportation demand management plan (the “TDM Plan”) that will be implemented by Northland to encourage the use of alternate transit modes, including public transit (MBTA light rail and bus), shared transit, walking, biking, and teleworking, all in order to reduce single-occupancy automobile trips generated by the Residential Buildings and the Office Building constructed on the Property.

I. DEFINITIONS:

- a. Transportation Demand Management Plan – Concurrent with the issuance of a building permit for any new construction associated with the approved special permit for the Development, Northland will prepare and submit to the Director of Planning and Development a Transportation Demand Management Plan (the "TDM Plan"). The TDM Plan will adapt over time to respond to the changing transportation needs and circumstances of the Development, the surrounding community and the region, as well as to technological and/or other improvements, all with the objective of meeting the trip reduction goals as set forth in this document. To facilitate this flexibility, modifications, revisions, and supplements to the TDM Plan will be coordinated with the City of Newton Planning Department or its designee.
- b. Transportation Management Association – Northland will participate in or otherwise become associated with a Transportation Management Association designated by the City, such as the 128 Business Council (or other), should one be established for this area (N² Innovation District).
- c. Trip Reduction Goal – The objective of the TDM Plan will be to reduce the number of weekday AM and PM peak hour single occupancy vehicle trips generated by the residential and office uses located within the Property as described below.
- d. TDM Program - The strategies and measures to effectuate the reduction of single occupancy vehicles including, but not limited to, last-mile connections to mass transit, on-site support facilities and information, marketing and awareness programs, data collection, subsidies to support and encourage alternate modes of transportation, and the creation of enhanced pedestrian and bicycle connections facilitating access to adjoining neighborhoods, villages and alternate transit options.

II. TRIP REDUCTION GOAL:

- a. The TDM Program will be implemented to achieve a twenty percent (20%) reduction in weekday morning and afternoon peak hour residential and office trip generation from the projected number of residential and office trips (per ITE 10th edition) based on full stabilized occupancy and adjusted for internal capture and existing City of Newton mode share, as further shown on Exhibit A.

III. PLAN IMPLEMENTATION

The TDM Plan will be implemented as follows:

- a. TDM Coordinator – Northland will designate a TDM Coordinator for the development. The TDM Coordinator will be appointed no later than the earlier of: 1) issuance of a building permit for an office tenant in excess of 25,000 square feet, or 2) twelve (12) months following issuance of the first residential building permit (“TDM Plan Commencement”). The TDM Coordinator will be responsible for implementing all aspects of the TDM plan and collecting relevant data. The TDM Coordinator will be the main point of contact with the City of Newton relating to TDM plan monitoring and reporting.
- b. TDM Program – The TDM Program shall initially contain the following elements and be administered by the TDM Coordinator. As the TDM Plan is intended to evolve over time, the Program elements will be evaluated periodically for effectiveness in achieving the Trip Reduction Goal and modified as necessary.
 - i. Reduced parking availability on-site for residents and office tenants to promote the use of alternate transit options.
 - ii. Unbundled parking charges for market rate residential leases (parking for affordable residential leases is included in rent).
 - iii. Shuttle Service – Direct shuttle service to the MBTA mass transit system via Newton Highlands MBTA Station will be provided to residents, office employees, retail customers and employees and members of the public. Service will be offered with 10-minute frequency and will operate 16 hours per day / 7 days per week.
 - iv. Public Transit Incentives –
 - 1. Shuttle Use Incentives

- a. Free shuttle service to all riders.
- 2. Residential MBTA Use Incentives
 - a. Resident Car-Free Incentive - Free MBTA LinkPass pass for every residential unit leased without a parking space.
 - b. Resident Public Transit Incentive – 50% reimbursement on on a monthly MBTA LinkPass for every other new residential lease.
- 3. Office Employer Incentive Programs – Northland will work with office employers leasing space in the Office Building to offer incentives to employees for using alternate modes of transit to commute to work or to carpool, including:
 - a. Office Employee Public Transit Incentive - 50% reimbursement on a monthly MBTA LinkPass for each full-time employee participant.
- v. Mobility Hub – A central indoor lounge waiting area will be provided to all shuttle and MBTA bus passengers. The Mobility Hub will provide real-time transit information for the shuttle and MBTA bus service.
- vi. Car sharing – Northland will contract with a car-sharing service provider such as Zip Car or Enterprise to provide a minimum of 4 vehicles on site for common use. The number of vehicles may be increased as demand warrants.
- vii. Bicycle accommodations – Secure sheltered or indoor bicycle storage accommodation for 1,100 bicycles for residents and office employees and retail employees. Outdoor bicycle storage for retail customers and visitors. Shower facilities available to office employees. Bicycle repair stations with air pumps at sheltered and indoor storage facilities.
- viii. Bicycle and scooter sharing – Northland will work with the City’s designated service provider (currently Lime Bike) to provide on-site access to shared bikes and scooters or alternative shared non-vehicular transportation once approved by the City.
- ix. TNC Management – Designated TNC curbside drop-off and pick-up locations will be maintained initially in the following locations:
 - 1. Building 3, near the residential lobby entrance on Main Street.
 - 2. Building 6, near the residential lobby entrance on Main Street and near the residential lobby on Charlemont St.

3. Building 5, near the residential lobby entrance on Main Street and near the leasing office entry on Pettee Lane.
- x. TDM Marketing and Awareness Campaign – The TDM Coordinator shall build awareness of alternate transportation opportunities and incentives through ongoing marketing targeted at all residents, employees, and visitors to the development. The outreach shall include, but may not be limited to, the following:
 1. Posted transit opportunities and incentives in project marketing materials and website.
 2. TDM program information included in resident welcome kits and in residential common areas.
 3. Information sessions offered to residents and office and retail employees.
 4. Transit screens in the Mobility Hub and building lobbies offering real-time shuttle and MBTA schedule information and TNC availability information.
 5. Prominent outdoor signage identifying shuttle pick-up/drop-off location; Mobility Hub; bicycle and pedestrian pathways; bicycle accommodations; and TNC pick-up locations
- c. TDM Plan Phase-In – The TDM Plan will be phased in during the first sequence of construction for the development and prior to any residential or office occupancy. The phase-in will begin at the TDM Plan Commencement and include the following:
 - i. The TDM Coordinator will be in place, marketing materials will be created and TDM marketing and awareness programs will be initiated.
 - ii. Contractual arrangements will be made with outside vendors supporting the TDM program, including car-sharing, bike sharing, and shuttle service.
 - iii. Shuttle Service will be phased in as follows:
 1. On demand service with scheduled commuting hour runs will commence upon receipt of the first residential or Office Building tenant space certificate of occupancy. Service and capacity will scale up as necessary to accommodate demand during the construction completion/early occupancy stage. Temporary accommodations will be made for shuttle pick-up/drop-off based on construction sequencing.

2. Full scale shuttle service as described above will commence upon receipt of the Certificate of Occupancy that brings the total occupiable units over 400 for the Development.
 3. Permanent pick-up/drop-off accommodations will be established at the Mobility Hub upon completion of construction of the facility.
 - iv. Annual reporting to the City will commence upon receipt of the Certificate of Occupancy for the first residential building as described below.
- IV. Site Traffic Monitoring. Northland shall engage a qualified outside firm to perform a trip count (“Trip Count”) annually to assess performance of the TDM Program and measure the results against the TDM Reduction Goals. Residents and office tenants will be issued identifying parking stickers. The Trip Count shall include: 1) a count of resident and office vehicles entering and exiting at all garage entries during the weekday morning and evening peak hour; and 2) Intercept Surveys taken at every residential building and office building entry/exit point to capture residential and office visitors and TNC users. Trip Counts will be conducted over three (3) consecutive weekdays (Tuesday through Thursday) between September and November and the results shall be averaged. The initial Trip Count for the development (“Initial Trip Count”) will be taken once the development achieves 80% occupancy of the development’s residential units. The results will be compared against the TDM Reduction Goal, adjusted for occupancy, and if the TDM Reduction Goal is exceeded, then remedies will be applied as described below (“TDM Remedies”). The results of the Trip Counts will be provided to the City of Newton as part of the Annual Reporting.
- V. Annual Reporting. Northland will submit a report to the City of Newton and conduct an in-person review meeting with City Planning and Transportation staff annually on or before March 1st. The Annual Report shall include:
- a. A status of the TDM measures currently in place
 - b. The results of the Trip Count, beginning with the initial Trip Count
 - c. Biennial weekday peak hour counts of total trip counts entering and exiting the site at each access point.
 - d. Biennial personal survey and utilization data collected including:
 - i. Shuttle ridership
 - ii. Utilization of Public Transit Incentives
 - iii. Resident and office employee transit and schedule preferences

- iv. Car share utilization, if trackable
 - v. Bike share utilization, if trackable
 - e. Recommendations for TDM program modifications
 - f. Action Plan for TDM Remedies if the TDM Reduction Goal is exceeded

- VI. If the TDM Reduction goals are exceeded, concurrent with the delivery of the Annual Report, Northland shall schedule and in-person meeting with designees of the Director of Planning and Development to review the TDM Remedies Action Plan.

- VII. TDM Investment
 - a. TDM Investment – Northland intends to initially spend \$1.25 million annually on shuttle service and Public Transit Incentives (“TDM Investment”) in order to achieve the TDM Reduction Goal.
 - b. If the Trip Count exceeds the TDM Reduction Goal as indicated in the Annual Report, then Northland shall make an additional investment in TDM Program measures equal to 1% of the TDM Investment for every 1% of overage beyond the Trip Reduction Goal, provided that no additional investment is required if the overage is less than 5%. The maximum amount of additional investment shall not exceed 20% of the TDM Investment.
 - c. If the Trip Counts are at or below the Trip Reduction Goals for four (4) consecutive years, then Northland may discontinue submitting Trip Counts and Annual Reports, provided a TDM Plan remains in place. If Northland shall make any substantial modifications to its TDM Plan, the revised TDM Plan must be first submitted to the City Director of Planning and Development for review. The Director may require a follow-up Trip Count one-year following implementation and require additional mutually agreed upon corrective measures if the results exceed the Trip Reduction Goal.

**Northland Needham Street
Trip Reduction Metrics**

NND Office and Residential Trip Generation

Peak Hour	Unadjusted ITE Volumes ^a	Projected Trip Generation Volumes ^b	20% Total Trip Reduction ^c
Weekday Morning	459	361	289
Weekday Evening	525	275	220

a - Raw unadjusted trips for residential and office land uses independent from any external forces - from Table 2 in the 3/28/19 memo by VHB.

b - Adjusted for trip reduction credits for internal shared trips (mixed-use development) and existing mode share characteristics in the City of Newton (88% vehicle share for office, 79% vehicle share for residential) - from Table 6 in the 3/28/19 memo by VHB.

c - 20% trip reduction from the projected driveway volumes.

Newton Needham Development TDM Budget Estimate

Item	Description	Estimated Annual Cost
Shuttle	16-hour/day, 7-day/week; Free Service	\$850,000
Resident Car-Free Incentive	Free annual T pass (\$1,080) for each lease foregoing a parking space. Assumes 100 leases at 95% stabilized vacancy	\$103,000
Resident Public Transit Incentive	50% reimbursement of monthly MBTA LinkPass (\$90) for each lease. Assumes 100 leases at 95% stabilized occupancy	\$54,000
Office Employee Public Transit Incentive	50% reimbursement of monthly MBTA LinkPass (\$90) for each participant. Assumes 600 employees at 90% stabilized occupancy and 25% participation	\$81,000
Miscellaneous	Miscellaneous smaller programs and contingency for additional expense	\$162,000
		<hr/> <hr/>
		\$1,250,000