RESPONSES TO BETA GROUP, INC. TRAFFIC IMPACT ANALYSIS PEER REVIEW COMMENTS DATED JULY 16, 2021

TRAFFIC VOLUMES

1. **COMMENT:** BETA concurs with the adjustment of the March 2021 traffic volumes based on the comparison of the March 2020 and March 2021 data along I-90, though conservative, to take into account the lower than typical daily traffic conditions due to the pandemic.

   RESPONSE: Noted.

2. **COMMENT:** A conservative annual growth rate of 0.5% per year was used for the future 2028 traffic conditions based on an average population decrease of approximately -0.01% per year from 2000 to 2010 for the City of Newton. Please verify the population annual growth rate in the past 10 years between 2010 to 2020 in the City of Newton as the past decade would be more applicable in depicting the recent population trend of the area.

   RESPONSE: The 2020 census data results are still not available for comparison. However, based on population estimates (88,414 in 2019), the inflation would still be less than 0.5% per year.

SAFETY ANALYSIS

3. **COMMENT:** Please clarify the limits of the crash data obtained along Boylston Street (Route 9).

   RESPONSE: Crash data was reviewed for Boylston Street (Route 9) from Woodward Street/Elliott Street to Hartford Street.

SITE ACCESS AND CIRCULATION

4. **COMMENT:** Please verify the location of the proposed drive-thru pickup window to show the accurate vehicle queue.

   RESPONSE: The proposed pick-up window is located at the east side of the building as depicted on C1.0 and represents an accurate vehicle queue.

5. **COMMENT:** Please provide information on the number of customers expected to use the drive-thru window versus walk-ins.

   RESPONSE: Matching the drive-thru percent provided for the Wellesley site for the morning commuter peak, 75% of sales were assumed to be drive-thru transactions. We note

RESPONSES TO BETA GROUP, INC. TRAFFIC IMPACT ANALYSIS PEER REVIEW COMMENTS DATED JULY 16, 2021

that this percent was up from Q1 2020 (pre-covid) presumably because of the hesitation of some to go inside retail establishments during the pandemic. We believe again that this provides a conservative analysis.

Rt 9 East	
Q1-2021	DT %
5:00	87.57%
6:00	73.56%
7:00	73.46%
8:00	75.18%
9:00	78.71%
10:00	80.29%
11:00	81.09%
12:00	80.68%
13:00	80.42%
14:00	83.42%
15:00	84.51%
16:00	80.12%
17:00	81.65%
18:00	77.06%

Rt 9 East	
Q1-2020	DT %
5:00	75.82%
6:00	66.84%
7:00	66.41%
8:00	71.03%
9:00	73.93%
10:00	71.95%
11:00	70.48%
12:00	68.88%
13:00	74.84%
14:00	73.28%
15:00	75.88%
16:00	77.89%
17:00	76.26%
18:00	70.42%

6. **COMMENT:** Please define mitigation measures or operational adjustments available if the drive-through queue spills onto Route 9 (i.e., signage, pavement markings, staffing, etc.).

RESPONSE: Do not block striping could be placed on Route 9 at the entrance driveway. This would need to be approved by MassDOT as part of the permitting process.

7. **COMMENT:** Please explain why a 10-foot-wide drive-thru lane is provided rather than the 12-foot minimum set forth in the City's Zoning Ordinance.

RESPONSE: Due to the 12.3' distance between the rear property line and the building, the ~2.5' drop in elevation across this pinch point, and unfeasibility of relocating the existing cooler inside the building which creates this pinch point, the drive thru lane was narrowed to 10' wide along the rear portion of the building. The drive thru lane is shown at 12' wide outside of this pinch point and a vehicle turning assessment was completed via AutoCAD to confirm that the drive thru lane is navigable by passenger vehicles.

8. **COMMENT:** A loading zone/area is not shown on the plans. Please define the loading area and times during the day when deliveries would occur on a typical day.

RESPONSES TO BETA GROUP, INC. TRAFFIC IMPACT ANALYSIS PEER REVIEW COMMENTS DATED JULY 16, 2021

RESPONSE: Delivery activities will happen along Ramsdell Street as they do today. These typically occur between 4:00 and 5:00 am, outside of peak commuter hours.

SITE - GENERATED TRAFFIC

9. **COMMENT:** Figure 5 seems to depict pass by trips including incorrect distribution of traffic at the intersection of Route 9 with Woodward Street/Elliot Street though it is referenced as site generated traffic volumes. Please clarify Figure 5 in the TIA of its depiction/intent.

RESPONSE: Figure 5 depicts the trips being added to the roadway network due to the reconstruction of the site. The volumes at the Woodward Street/Elliott Street intersection are correct. The through movement at the Dunkin' driveway should be -15 (-3) to reflect the portion of trips that will now turn into the site that are already in the Route 9 network.

10. **COMMENT:** The site generated trips are based on sales data at the Dunkin' restaurant on 951 Worcester Street in Wellesley, MA. As such, please verify the morning and afternoon peak hour traffic volumes are comparable between Route 9 eastbound along the site frontage (940 Boylston Street in Newton, MA) and Route 9 westbound along the Dunkin' restaurant at 951 Worcester Street in Wellesley, MA to support the trip estimate methodology.

RESPONSE: Reviewing count data available through the MassDOT Transportation Data Management System, the ADT along Route 9 west of I-95 (where the Wellesley stores are) is reported to be 45,643 and the ADT along Route 9 east of I-95 (where the Newton store is) is reported to be 45,509. These are nearly identical.

RESPONSES TO BETA GROUP, INC. TRAFFIC IMPACT ANALYSIS PEER REVIEW COMMENTS DATED JULY 16, 2021

PROPOSED PARKING AND PARKING REQUIREMENTS

11. **COMMENT:** Please clarify why an 18-foot-deep stall is proposed rather the minimum required of 19'.

RESPONSE: The existing site has 18-foot long parking stalls. The plan has been updated to reflect the City requirement of 19'.

CAPACITY ANALYSIS

12. **COMMENT:** Please clarify how the LOS improved between the future no-build and future build conditions during the afternoon peak hour at the Route 9 intersection with the site driveway, though the site driveway has higher traffic volumes based on the additional trips generated by the proposed development under the future build condition.

RESPONSE: Per MassDOT standards, the future PHF was adjusted to .92 for all approaches in the build condition. This adjustment should also be applied to the no-build.

/dp

RESPONSES TO BETA GROUP, INC. TRAFFIC IMPACT ANALYSIS PEER REVIEW COMMENTS DATED AUGUST 30, 2021

TRAFFIC VOLUMES

1. **COMMENT:** BETA concurs with the adjustment of the March 2021 traffic volumes based on the comparison of the March 2020 and March 2021 data along I-90, though conservative, to take into account the lower than typical daily traffic conditions due to the pandemic.

   RESPONSE: Noted.

   BETA2: No further comment.

2. **COMMENT:** A conservative annual growth rate of 0.5% per year was used for the future 2028 traffic conditions based on an average population decrease of approximately -0.01% per year from 2000 to 2010 for the City of Newton. Please verify the population annual growth rate in the past 10 years between 2010 to 2020 in the City of Newton as the past decade would be more applicable in depicting the recent population trend of the area.

   RESPONSE: The 2020 census data results are still not available for comparison. However, based on population estimates (88,414 in 2019), the inflation would still be less than 0.5% per year.

   BETA2: Information provided. Comment resolved.

SAFETY ANALYSIS

3. **COMMENT:** Please clarify the limits of the crash data obtained along Boylston Street (Route 9).

   RESPONSE: Crash data was reviewed for Boylston Street (Route 9) from Woodward Street/Elliott Street to Hartford Street.

   BETA2: Crash data limits are acceptable. Comment resolved.

SITE ACCESS AND CIRCULATION

4. **COMMENT:** Please verify the location of the proposed drive-thru pickup window to show the accurate vehicle queue.

RESPONSES TO BETA GROUP, INC. TRAFFIC IMPACT ANALYSIS PEER REVIEW COMMENTS DATED AUGUST 30, 2021

RESPONSE: The proposed pick-up window is located at the east side of the building as depicted on C1.0 and represents an accurate vehicle queue.

BETA2: Please provide the latest site plan.

PARE2: Latest site plan is provided.

5. **COMMENT:** Please provide information on the number of customers expected to use the drive-thru window versus walk-ins.

RESPONSE: Matching the drive-thru percent provided for the Wellesley site for the morning commuter peak, 75% of sales were assumed to be drive-thru transactions. We note that this percent was up from Q1 2020 (pre-covid) presumably because of the hesitation of some to go inside retail establishments during the pandemic. We believe again that this provides a conservative analysis.

Rt 9 East	
Q1-2021	DT %
5:00	87.57%
6:00	73.56%
7:00	73.46%
8:00	75.18%
9:00	78.71%
10:00	80.29%
11:00	81.09%
12:00	80.68%
13:00	80.42%
14:00	83.42%
15:00	84.51%
16:00	80.12%
17:00	81.65%
18:00	77.06%

Rt 9 East	
Q1-2020	DT %
5:00	75.82%
6:00	66.84%
7:00	66.41%
8:00	71.03%
9:00	73.93%
10:00	71.95%
11:00	70.48%
12:00	68.88%
13:00	74.84%
14:00	73.28%
15:00	75.88%
16:00	77.89%
17:00	76.26%
18:00	70.42%

BETA2: Based on the estimated site trips for the proposed development, where it is anticipated that 75% would be drive-thru transactions, in combination with typical drive-thru transaction times (2 to 2 ½ minutes), it is highly likely that drive-thru queue spill over onto Route 9 will occur consistently during the morning peak hour. Please see comment 6 relating to mitigation measures if drive-thru queue spill over occurs along Route 9. Note that typical drive-thru transaction times of 2 to 2 ½ minutes was stated by the applicant during the Land Use Committee meeting held on July 27, 2021.

RESPONSES TO BETA GROUP, INC. TRAFFIC IMPACT ANALYSIS PEER REVIEW COMMENTS DATED AUGUST 30, 2021

PARE2: The 2-2.5 minutes noted was for a day average. Dunkin' stores generally see higher turnover rates in the morning, with a majority of orders being coffee and quick grab items, while afternoon/dinner-time orders see more meal-type items included. As shown in Table 1 below, the average total process time for local stores is between 120 and 150 seconds. However, with the distance between the order board and the pick-up window, the store is able to be serving more than one customer simultaneously. As shown in Table 2 below, morning peak customers spend no more than 36 seconds at the order board and 41 seconds at the pick-up window in the morning timeframe. This allows a new car to move up every 41 seconds. This is how stores, like the sample in Wellesley, are able to turnover over 80 customers in their morning peak hour.

The presence of the adjacent signal also allows this site to process vehicle turnover in a timely manner. The operating phase length for Route 9 is no more than 95 seconds, which means vehicles exiting the site would not have to wait any longer than that for a distinct break in traffic flow.

Table 1: Order Process Time (Goal and Actual) - Daily (in seconds)

Top 3 Stores			Current Day		
Rank	Number	Goal	Cars	Avg	Goal%
1	332403	150	328	123	75
2	338459	150	360	127	71
3	347207	150	181	134	67

RESPONSES TO BETA GROUP, INC. TRAFFIC IMPACT ANALYSIS PEER REVIEW COMMENTS DATED AUGUST 30, 2021

Table 2: Order Process Time (Actual) Breakdown

Date	Time			Menu Board - incl. Greet (sec)	Window (sec)
10-Oct	5:00AM	-	9:59AM	36	40
10-Oct	10:00AM	-	1:59PM	37	43
10-Oct	2:00PM	-	4:59PM	41	52
10-Oct	5:00PM	-	8:59PM	31	52
11-Oct	5:00AM	-	9:59AM	30	38
11-Oct	10:00AM	-	1:59PM	39	41
11-Oct	2:00PM	-	4:59PM	34	53
11-Oct	5:00PM	-	8:59PM	33	52
12-Oct	5:00AM	-	9:59AM	26	33
12-Oct	10:00AM	-	1:59PM	27	39
12-Oct	2:00PM	-	4:59PM	33	54
12-Oct	5:00PM	-	8:59PM	31	60
13-Oct	5:00AM	-	9:59AM	26	34
13-Oct	10:00AM	-	1:59PM	27	42
13-Oct	2:00PM	-	4:59PM	35	48
13-Oct	5:00PM	-	8:59PM	36	55
14-Oct	5:00AM	-	9:59AM	30	33
14-Oct	10:00AM	-	1:59PM	30	39
14-Oct	2:00PM	-	4:59PM	35	48
14-Oct	5:00PM	-	8:59PM	32	69
15-Oct	5:00AM	-	9:59AM	29	33
15-Oct	10:00AM	-	1:59PM	28	39
15-Oct	2:00PM	-	4:59PM	38	51
15-Oct	5:00PM	-	8:59PM	44	56
16-Oct	5:00AM	-	9:59AM	34	41
16-Oct	10:00AM	-	1:59PM	38	45
16-Oct	2:00PM	-	4:59PM	34	56
16-Oct	5:00PM	-	8:59PM	40	57

RESPONSES TO BETA GROUP, INC. TRAFFIC IMPACT ANALYSIS PEER REVIEW COMMENTS DATED AUGUST 30, 2021

Table 2 (Cont.): Order Process Time (Actual) Summary

Time	Menu Board - incl. Greet (sec)	Window (sec)	
Average - Morning	30	36	DT Vehicles per Hour
Max - Morning	36	41	88
Average - Non-Morning	34	50	DT Vehicles per Hour
Max - Non-Morning	44	69	52

6. **COMMENT:** Please define mitigation measures or operational adjustments available if the drive-through queue spills onto Route 9 (i.e., signage, pavement markings, staffing, etc.).

RESPONSE: Do not block striping could be placed on Route 9 at the entrance driveway. This would need to be approved by MassDOT as part of the permitting process.

BETA2: Do not block striping on Route 9 may not be realistic. Please define a more feasible queue mitigation measure(s).

PARE2: Improvements within the State Right-of-Way will need to be reviewed and approved by MassDOT as part of the access permit process. The design team cannot commit to off-site improvements on behalf of MassDOT prior to their review.

7. **COMMENT:** Please explain why a 10-foot-wide drive-thru lane is provided rather than the 12-foot minimum set forth in the City's Zoning Ordinance.

RESPONSE: Due to the 12.3' distance between the rear property line and the building, the ~2.5' drop in elevation across this pinch point, and unfeasibility of relocating the existing cooler inside the building which creates this pinch point, the drive thru lane was narrowed to 10' wide along the rear portion of the building. The drive thru lane is shown at 12' wide outside of this pinch point and a vehicle turning assessment was completed via AutoCAD to confirm that the drive thru lane is navigable by passenger vehicles.

BETA2: After further coordination with the City, the drive-thru lane width is not subject to the City's Zoning Ordinance driveway entrance/exit width, though the applicant should coordinate with the City's Fire Department to ensure the 10' drive-thru lane width is acceptable to the department.

Relating to the turning assessment completed, please define how the applicant will restrict vehicles larger than a passenger vehicle from the drive-thru lane. In addition, a light pole is shown in the site plan within the drive-thru lane that will further constrain vehicles. Is the proposed light pole

RESPONSES TO BETA GROUP, INC. TRAFFIC IMPACT ANALYSIS PEER REVIEW COMMENTS DATED AUGUST 30, 2021

in question at the correct location and who's maintaining the light poles on site?

PARE2: The proposed drive-thru lane does not change the Fire Department's current access to the site and the development is acceptable to the department. A fire truck has the ability to enter and exit using Boylston Street, as well as enter from Boylston Street and exit via Ramsdell Street.

Signage and a revised light pole location has been incorporated on the plan. Maintenance of the light poles will have to be agreed upon between the Property Owner and Applicant.

8. **COMMENT:** A loading zone/area is not shown on the plans. Please define the loading area and times during the day when deliveries would occur on a typical day.

RESPONSE: Delivery activities will happen along Ramsdell Street as they do today. These typically occur between 4:00 and 5:00 am, outside of peak commuter hours.

BETA2: Though deliveries are proposed outside the peak commuter hours, Ramsdell Street is a dead-end street with no secondary outlet, which is a concern for larger vehicles particularly large trucks (semi-trailer). What is the typical size of a delivery truck for this site? Please provide a turning template of the delivery truck including the dumpster truck that will access Ramsdell Street. It is important to note that we observed a tractor trailer making a delivery at the Wellesley Dunkin' site within the Route 9 westbound shoulder during the morning peak period.

PARE2: A turning assessment for a WB-40 semi-trailer and a SU-30 dumpster truck was performed and is provided. The semi-trailer has adequate space to enter from Boylston Street and exit to either Boylston Street or Ramsdell Street. The dumpster truck appears to be side-loaded and accesses the dumpster in a similar manner as it does today.

SITE – GENERATED TRAFFIC

9. **COMMENT:** Figure 5 seems to depict pass by trips including incorrect distribution of traffic at the intersection of Route 9 with Woodward Street/Elliot Street though it is referenced as site generated traffic volumes. Please clarify Figure 5 in the TIA of its depiction/intent.

RESPONSE: Figure 5 depicts the trips being added to the roadway network due to the reconstruction of the site. The volumes at the Woodward Street/Elliott Street intersection are correct. The through movement at the Dunkin' driveway should be

RESPONSES TO BETA GROUP, INC. TRAFFIC IMPACT ANALYSIS PEER REVIEW COMMENTS DATED AUGUST 30, 2021

-15 (-3) to reflect the portion of trips that will now turn into the site that are already in the Route 9 network.

BETA2: No further comment.

10. **COMMENT:** The site generated trips are based on sales data at the Dunkin' restaurant on 951 Worcester Street in Wellesley, MA. As such, please verify the morning and afternoon peak hour traffic volumes are comparable between Route 9 eastbound along the site frontage (940 Boylston Street in Newton, MA) and Route 9 westbound along the Dunkin' restaurant at 951 Worcester Street in Wellesley, MA to support the trip estimate methodology.

RESPONSE: Reviewing count data available through the MassDOT Transportation Data Management System, the ADT along Route 9 west of I-95 (where the Wellesley stores are) is reported to be 45,643 and the ADT along Route 9 east of I-95 (where the Newton store is) is reported to be 45,509. These are nearly identical.

BETA2: Though the ADT along Route 9 are nearly identical east and west of I-95, directional distribution of commuter traffic along Route 9 varies based on origin/destination in relation to the I-95 corridor. As such, please provide hourly directional volumes along Route 9 in the vicinity of the subject site and the Wellesley store to verify trip generation methodology.

PARE2: The count data for the ATR west of I-95 is not broken down by direction. However, as detailed in response 5 above, the subject store will be able to handle a high turnover rate, accommodating at least 80 vehicles in the peak hour at the drive-thru alone. As noted previously, the subject store would need to see appreciable increase in business to come close to matching that of the current Wellesley store along eastbound Route 9, but should that growth come to fruition, the site is capable of accommodating.

PROPOSED PARKING AND PARKING REQUIREMENTS

11. **COMMENT:** Please clarify why an 18-foot-deep stall is proposed rather the minimum required of 19'.

RESPONSE: The existing site has 18-foot long parking stalls. The plan has been updated to reflect the City requirement of 19'.

BETA2: Please provide an updated site plan showing 19' long stalls.

PARE2: The latest site plan is provided.

RESPONSES TO BETA GROUP, INC. TRAFFIC IMPACT ANALYSIS PEER REVIEW COMMENTS DATED AUGUST 30, 2021

CAPACITY ANALYSIS

12. **COMMENT:** Please clarify how the LOS improved between the future no-build and future build conditions during the afternoon peak hour at the Route 9 intersection with the site driveway, though the site driveway has higher traffic volumes based on the additional trips generated by the proposed development under the future build condition.

RESPONSE: Per MassDOT standards, the future PHF was adjusted to .92 for all approaches in the build condition. This adjustment should also be applied to the no-build.

BETA2: The use of MassDOT standards relating to the PHF for the commercial driveway is acceptable. Comment resolved.

Additional Comments:

13. **COMMENT:** Based on the site plan, no improvements are being proposed within the state right of way including the sidewalk along the property frontage and the existing curb cuts on Route 9. Although both site driveways within the property are proposed to be 24 feet in width and is defined by pavement markings only with no physical barrier, the existing curb cuts along Route 9 at the eastern site driveway (approx. 46 feet wide) and western site driveway (approx. 38 feet wide) are much wider and may lead to uncontrolled entry/exit between the new parking layout and Route 9.

Please clarify: 1.) how the applicant will restrict vehicles from driving and/or parking over the painted median between the site driveways to mitigate conflicts with pedestrians along the sidewalk and/or parking lot; and 2.) if there are any pedestrian accommodation improvements along the site property.

RESPONSE: Both site driveways are proposed to be 20’ wide and one-way, with the entry to the west and exit to the east defined by entry signage. Sufficient on-site parking is provided for non-drive thru users and enforcement of patron parking will be handled by the building management.

A crosswalk is proposed between the building entry and existing ROW sidewalk.

14. **COMMENT:** Based on the proposed site access and circulation, there’s a possibility that if the drive-thru queue reaches the western site driveway limit, vehicles that want to avoid stacking on Route 9 may enter the eastern site driveway and introduce stacking along the northerly side of the property. This potential on-site stacking will restrict vehicles parked along the front of the building from backing out and exiting the property leading to congestion in the parking lot.

RESPONSES TO BETA GROUP, INC. TRAFFIC IMPACT ANALYSIS PEER REVIEW COMMENTS DATED AUGUST 30, 2021

Please define on-site queue management to mitigate parking lot congestion.

RESPONSE: As seen in the updated plan, the western driveway will be an entrance only and the eastern driveway will be an exit only. Vehicles will not be permitted to operate in the manner described. Additionally, with turnover rates at the drive-thru of approximately 45 seconds, the site can accommodate even the hopeful demand/queue that has been analyzed for this location. Finally, with on-site queueing of up to 14 vehicles (including queue to exit after picking up from the window), a person trying to enter the queue after it has extended to Route 9 would likely be accepting over a 10-minute wait. As speed is part of the convenience and therefore the nature of the business, it is reasonable to assume people would bypass this store and head to the next down the road in that event.

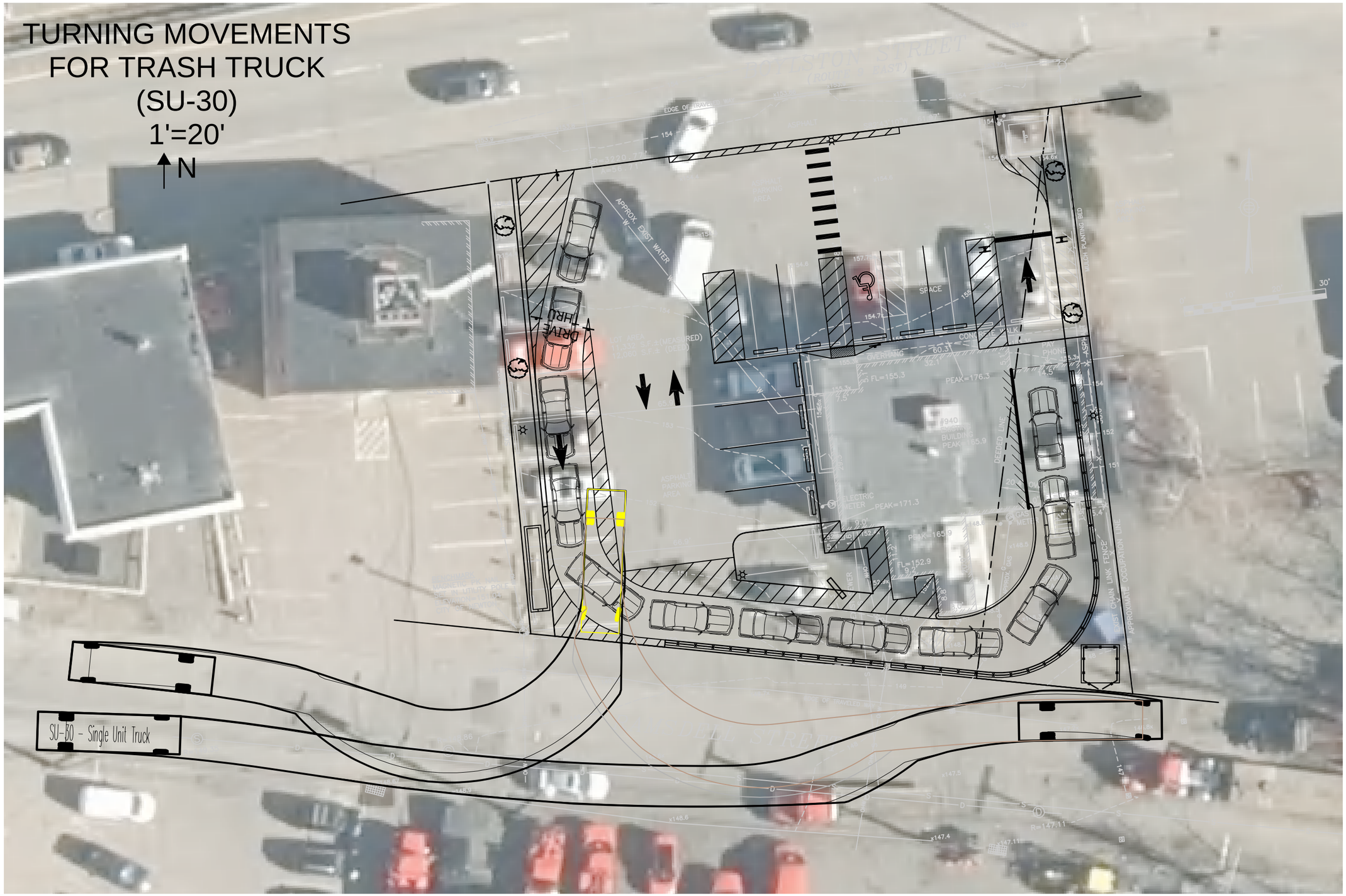
15. **COMMENT:** Based on the future building analysis at the eastern site driveway during the morning peak hour, it is estimated that the maximum queue for right turning exiting traffic is 8 vehicles with a delay of more than 400 seconds. Although the Applicant's traffic engineer states the analysis tool utilized has limitations that does not properly reflect the reality of the driveway's operations, the short distance between the driveway and drive-thru window, which allows a maximum queue of 3 vehicles, in combination of the heavy traffic along Route 9 eastbound during the morning peak hour may exacerbate the drive-thru queue, thus increasing the potential of queue spill over onto Route 9.

Please clarify how queue spill over onto Route 9 will not occur on a consistent basis during the morning peak hour as a result of the effects of the queuing at the eastern site driveway coupled with the estimated drive-thru transaction percentage as stated in comment no. 5.

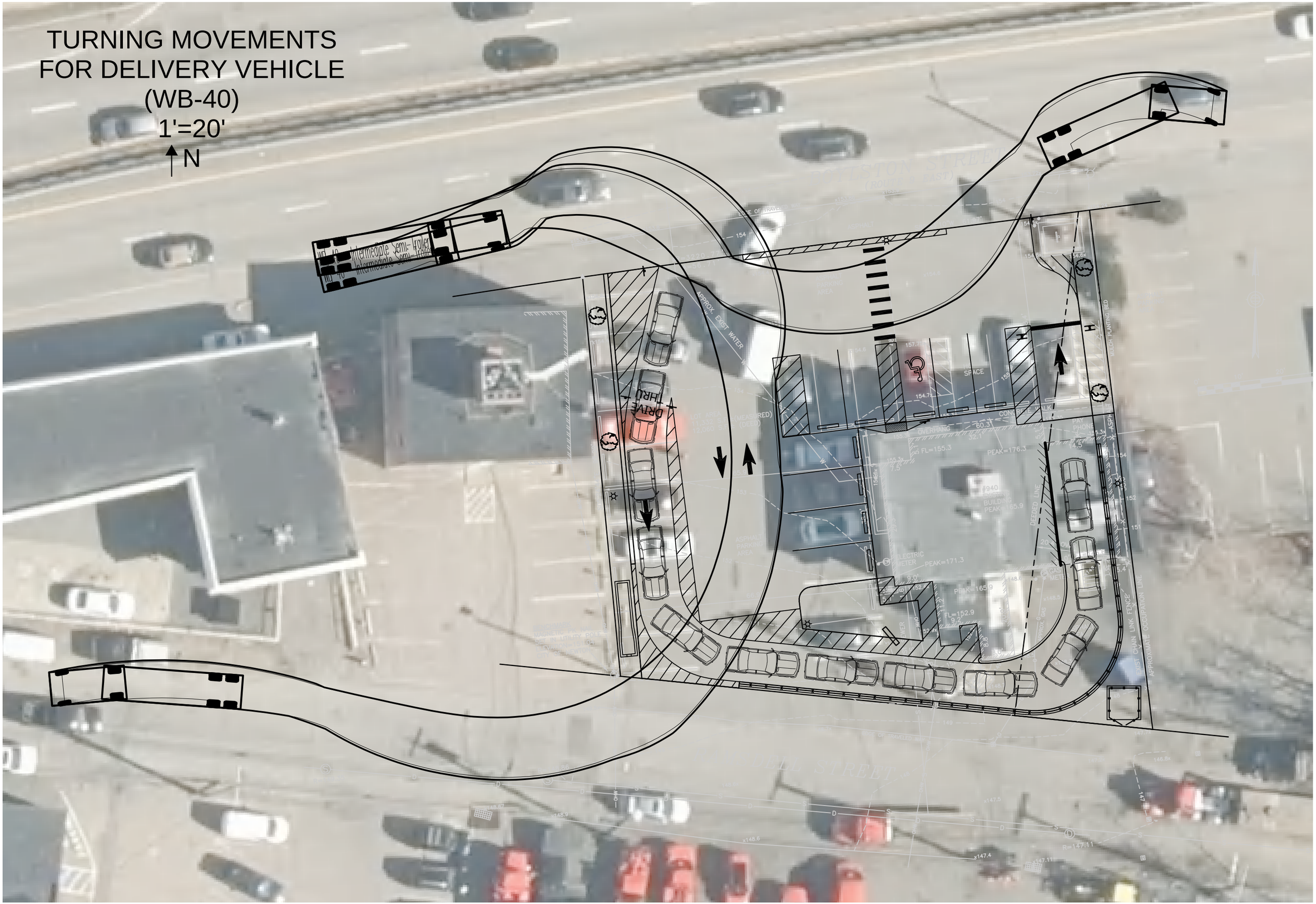
RESPONSE: See response No. 5 above.

/dp

TURNING MOVEMENTS
FOR TRASH TRUCK
(SU-30)
1'=20'
N



TURNING MOVEMENTS
FOR DELIVERY VEHICLE
(WB-40)
1'=20'
N



RESPONSES TO BETA GROUP, INC. TRAFFIC IMPACT ANALYSIS PEER REVIEW – PARE'S RESPONSE TO COMMENTS NO. 2 DATED NOVEMBER 2, 2021

TRAFFIC VOLUMES

1. **COMMENT:** BETA concurs with the adjustment of the March 2021 traffic volumes based on the comparison of the March 2020 and March 2021 data along I-90, though conservative, to take into account the lower than typical daily traffic conditions due to the pandemic.

Pare: Noted

BETA2: No further comment.

2. **COMMENT:** A conservative annual growth rate of 0.5% per year was used for the future 2028 traffic conditions based on an average population decrease of approximately -0.01% per year from 2000 to 2010 for the City of Newton. Please verify the population annual growth rate in the past 10 years between 2010 to 2020 in the City of Newton as the past decade would be more applicable in depicting the recent population trend of the area.

Pare: The 2020 census data results are still not available for comparison. However, based on the population estimates (88,414 in 2019), the inflation would still be less than 0.5% per year.

BETA2: Information provided. Comment resolved.

SAFETY ANALYSIS

3. **COMMENT:** Please clarify the limits of the crash data obtained along Boylston Street (Route 9).

Pare: Crash data was reviewed for Boylston Street (Route 9) from Woodward Street/Elliott Street to Hartford Avenue.

BETA2: Crash data limits are acceptable. Comment resolved.

SITE ACCESS AND CIRCULATION

4. **COMMENT:** Please verify the location of the proposed drive-thru pickup window to show the accurate vehicle queue.

Pare: The proposed pick-up window is located at the east side of the building as depicted on C1.0 and represents an accurate vehicle queue.

BETA2: Please provide the latest site plan.

Pare2: Latest site plan is provided.

BETA3: Please provide the latest site plan.

RESPONSES TO BETA GROUP, INC. TRAFFIC IMPACT ANALYSIS PEER REVIEW – PARE'S RESPONSE TO COMMENTS NO. 2 DATED NOVEMBER 2, 2021

RESPONSE: Latest site plan is provided, see attached.

5. **COMMENT:** Please provide information on the number of customers expected to use the drive-thru window versus walk-ins.

Pare: Matching the drive-thru percent provided for the Wellesley site for the morning commuter peak, 75% of sales were assumed to be drive-thru transactions. We note that this percent was up from Q1 2021 (pre-covid) presumably because of the hesitation of some to go inside retail establishments during the pandemic. We believe again that this provides a conservative analysis (Data Table provided as part of the response).

BETA2: Based on the estimated site trips for the proposed development, where it is anticipated that 75% would be drive-thru transactions, in combination with typical drive-thru transaction times (2 to 2 ½ minutes), it is highly likely that drive-thru queue spill over onto Route 9 will occur consistently during the morning peak hour. Please see comment 6 relating to mitigation measures if drive-thru queue spill over occurs along Route 9. Note that typical drive-thru transaction times of 2 to 2 ½ minutes was stated by the applicant during the Land Use Committee meeting held on July 27, 2021.

Pare2: The 2-2.5 minutes noted was for a day average. Dunkin' stores generally see higher turnover rates in the morning, with a majority of orders being coffee and quick grab items, while afternoon/dinner-time orders see more meal-type items included. As shown in Table 1 below, the average total process time for local stores is between 120 and 150 seconds. However, with the distance between the order board and the pick-up window, the store is able to be serving more than one customer simultaneously. As shown in Table 2 below, morning peak customers spend no more than 36 seconds at the order board and 41 seconds at the pick-up window in the morning timeframe. This allows a new car to move up every 41 seconds. This is how stores, like the sample in Wellesley, are able to turnover over 80 customers in their morning peak hour.

The presence of the adjacent signal also allows this site to process vehicle turnover in a timely manner. The operating phase length for Route 9 is no more than 95 seconds, which means vehicles exiting the site would not have to wait any longer than that for a distinct break in traffic flow.

BETA3: It seems that the actual Order Process Time data (Table 2) only indicates how much time a vehicle spends at the order board (max. 36 seconds) and at the pickup window (max. 41 seconds) but does not necessarily measure the total amount of time a vehicle spends waiting between the time a vehicle arrives at the drive thru order board and from the time the same vehicle leaves the pickup window if there is a queue in front of said vehicle.

RESPONSES TO BETA GROUP, INC. TRAFFIC IMPACT ANALYSIS PEER REVIEW – PARE'S RESPONSE TO COMMENTS NO. 2 DATED NOVEMBER 2, 2021

Actual data of drive thru wait times throughout the day should be provided if it is less than the industry goal of 150 seconds to verify drive-through turnover rates.

BETA concurs with the adjacent signal creating breaks in Route 9 traffic flow.

RESPONSE: See attached for additional data pertaining to full order times associated with Dunkin' operations. As seen on the site plan, there are four vehicle spaces between the order board and the pick-up window. With up to 45 seconds assumed per vehicle (allowing a few second turnover delay), orders can take up to 270 seconds total without any additional delay in turnover. The Dunkin' data shows average morning order times of 131 seconds, and average order times for the remainder of the day of 140 seconds, similar to the store standard goal. Further, the ability to take orders in the same interval allows the Dunkin' staff to work more than one order at a time.

6. **COMMENT:** Please define mitigation measures or operational adjustments available if the drive-through queue spills onto Route 9 (i.e., signage, pavement markings, staffing, etc.).

Pare: Do not block striping could be placed on Route 9 at the entrance driveway. This would need to be approved by MassDOT as part of the permitting process.

BETA2: Do not block striping on Route 9 may not be realistic. Please define a more feasible queue mitigation measure(s).

Pare2: Improvements within the State Right-of-Way will need to be reviewed and approved by MassDOT as part of the access permit process. The design team cannot commit to off-site improvements on behalf of MassDOT prior to their review.

BETA3: On site queue management should be defined rather than off-site within the state right of way. In addition, relating to the MassDOT access permit, is the project currently being reviewed by MassDOT?

RESPONSE: Neither the City of Newton nor MassDOT have requirements for providing an on-site queue. Nearby coffee shops have a queue length of 10 vehicles from the pick-up window, which matches the requirement of adjacent states. The provided design has a 12 vehicle queue from the pick-up window.

There is no way to physically prevent a queue from extending to Route 9. However, a queue extending through to site to Route 9 represents a nearly 10-minute wait, which is not a practical wait time for a fast-food service. These individuals could alternatively park and go inside to order or bypass this store and seek an alternate.

The team has discussed the project preliminarily with MassDOT. An access permit and formal review by MassDOT has not been initiated yet as it is prudent for the

RESPONSES TO BETA GROUP, INC. TRAFFIC IMPACT ANALYSIS PEER REVIEW – PARE'S RESPONSE TO COMMENTS NO. 2 DATED NOVEMBER 2, 2021

permit submission to reflect feedback from both the City and members of the public.

7. **COMMENT:** Please explain why a 10-foot-wide drive-thru lane is provided rather than the 12-foot minimum set forth in the City's Zoning Ordinance.

Pare: Due to the 12.3' distance between the rear property line and the building, the ~2.5' drop in elevation across this pinch point, and unfeasibility of relocating the existing cooler inside the building which creates this pinch point, the drive thru lane was narrowed to 10' wide along the rear portion of the building. The drive thru lane is shown at 12' wide outside of this pinch point and a vehicle turning assessment was completed via AutoCAD to confirm that the drive thru lane is navigable by passenger vehicles.

BETA2: After further coordination with the City, the drive-thru lane width is not subject to the City's Zoning Ordinance driveway entrance/exit width, though the applicant should coordinate with the City's Fire Department to ensure the 10' drive-thru lane width is acceptable to the department.

Relating to the turning assessment completed, please define how the applicant will restrict vehicles larger than a passenger vehicle from the drive-thru lane. In addition, a light pole is shown in the site plan within the drive-thru lane that will further constrain vehicles. Is the proposed light pole in question at the correct location and who's maintaining the light poles on site?

Pare2: The proposed drive-thru lane does not change the Fire Department's current access to the site and the development is acceptable to the department. A fire truck has the ability to enter and exit using Boylston Street, as well as enter from Boylston Street and exit via Ramsdell Street. Signage and a revised light pole location has been incorporated on the plan. Maintenance of the light poles will have to be agreed upon between the Property Owner and Applicant.

BETA3: An agreement between the Property Owner and Applicant on maintenance of the light poles should be resolved prior to final approval. In addition, please confirm if the landscape areas are raised with curbing to protect the light poles.

RESPONSE: An agreement will be prepared.

Not all landscaped areas are raised. Bollards are provided to protect light poles in areas that do not have separation to vehicles by either berm, curb, or wall.

8. **COMMENT:** A loading zone/area is not shown on the plans. Please define the loading area and times during the day when deliveries would occur on a typical day.

Pare: Delivery activities will happen along Ramsdell Street as they do today. These

RESPONSES TO BETA GROUP, INC. TRAFFIC IMPACT ANALYSIS PEER REVIEW – PARE'S RESPONSE TO COMMENTS NO. 2 DATED NOVEMBER 2, 2021

typically occur between 4:00 and 5:00 am, outside of peak commuter hours.

BETA2: Though deliveries are proposed outside the peak commuter hours, Ramsdell Street is a dead-end street with no secondary outlet, which is a concern for larger vehicles particularly large trucks (semi-trailer). What is the typical size of a delivery truck for this site? Please provide a turning template of the delivery truck including the dumpster truck that will access Ramsdell Street. It is important to note that we observed a tractor trailer making a delivery at the Wellesley Dunkin' site within the Route 9 westbound shoulder during the morning peak period.

Pare2: A turning assessment for a WB-40 semi-trailer and a SU-30 dumpster truck was performed and is provided. The semi-trailer has adequate space to enter from Boylston Street and exit to either Boylston Street or Ramsdell Street. The dumpster truck appears to be side-loaded and accesses the dumpster in a similar manner as it does today.

BETA3: Please verify if the WB-40 semi-trailer is the current and future maximum size delivery truck the applicant expects at the subject store. Again, a truck with a 53-foot trailer was observed making a delivery at the Wellesley Dunkin' site and it's reasonable to assume that the same truck delivers to other Dunkin's stores in the area including to the subject store.

RESPONSE: Attached is a turning template showing the largest delivery vehicle traversing through the site. Please note that this is the largest vehicle that could be expected to make deliveries and the distributor has smaller delivery vehicles available as needed.

SITE – GENERATED TRAFFIC

9. **COMMENT:** Figure 5 seems to depict pass by trips including incorrect distribution of traffic at the intersection of Route 9 with Woodward Street/Elliot Street though it is referenced as site generated traffic volumes. Please clarify Figure 5 in the TIA of its depiction/intent.

Pare: Figure 5 depicts the trips being added to the roadway network due to the reconstruction of the site. The volumes at the Woodward Street/Elliott Street intersection are correct. The through movement at the Dunkin' driveway should be -15 (-3) to reflect the portion of trips that will now turn into the site that are already in the Route 9 network.

BETA2: No further comment.

10. **COMMENT:** The site generated trips are based on sales data at the Dunkin' restaurant on 951 Worcester Street in Wellesley, MA. As such, please verify the morning and afternoon peak hour traffic volumes are comparable between Route 9 eastbound

RESPONSES TO BETA GROUP, INC. TRAFFIC IMPACT ANALYSIS PEER REVIEW – PARE'S RESPONSE TO COMMENTS NO. 2 DATED NOVEMBER 2, 2021

along the site frontage (940 Boylston Street in Newton, MA) and Route 9 westbound along the Dunkin' restaurant at 951 Worcester Street in Wellesley, MA to support the trip estimate methodology.

Pare: Reviewing count data available through the MassDOT Transportation Data Management System, the ADT along Route 9 west of I-95 (where the Wellesley stores are) is reported to be 45,643 and the ADT along Route 9 east of I-95 (where the Newton store is) is reported to be 45,509. These are nearly identical.

BETA2: Though the ADT along Route 9 are nearly identical east and west of I-95, directional distribution of commuter traffic along Route 9 varies based on origin/destination in relation to the I-95 corridor. As such, please provide hourly directional volumes along Route 9 in the vicinity of the subject site and the Wellesley store to verify trip generation methodology.

Pare2: The count data for the ATR west of I-95 is not broken down by direction. However, as detailed in response 5 above, the subject store will be able to handle a high turnover rate, accommodating at least 80 vehicles in the peak hour at the drive-thru alone. As noted previously, the subject store would need to see appreciable increase in business to come close to matching that of the current Wellesley store along eastbound Route 9, but should that growth come to fruition, the site is capable of accommodating.

BETA3: Business sales for this type of service-oriented use is highly dependent on the amount of traffic serviced on the adjacent roadway. As stated in the previous comment, directional distribution of traffic along Route 9 varies widely during the morning and afternoon peak periods where commuter peak traffic is higher along the eastbound direction during the morning peak period compared to the westbound direction. This is evident in Figure 3 (Existing Peak Hour Traffic Volumes) provided in the TIA where motorists are heading east towards the City of Boston and/or the Boston metro area during the morning peak hour and heading out during the afternoon peak hour. In addition, the redevelopment project not only adds a drivethru but also eliminates indoor seating. As such, it is anticipated that the subject store will not only match the Wellesley store drive thru transactions, but far exceed it.

It is recommended that the applicant collect a minimum 7-day automatic traffic recorder count on Route 9 in the eastbound direction along the subject store frontage and on Route 9 in the westbound direction along the Dunkin' frontage in Wellesley.

In addition, upon further review of the trip methodology, please clarify why ITE Trip Generation Land Use Code (LUC) 938 Coffee/Donut Shop with Drive-Through Window and No Indoor Seating was not used for comparison when this land use is more appropriate for the proposed Dunkin'

RESPONSES TO BETA GROUP, INC. TRAFFIC IMPACT ANALYSIS PEER REVIEW – PARE'S RESPONSE TO COMMENTS NO. 2 DATED NOVEMBER 2, 2021

redevelopment.

RESPONSE: As noted previously, the subject store was compared to the store in Wellesley along the EB side of Route 9. For the reasons noted by BETA regarding directional split, we also found this to be the more comparable of the two nearby drive-thru locations.

The volumes used for the traffic study were intended to provide conservative analysis of the LOS at the site exit as well as the adjacent signal. However, it is acknowledged that the 48% inflation applied to the count data, using a comparison to the nearest MassDOT continuous count station, is unrealistic. MassDOT has recently noted that similar roadways should be reviewed, not necessarily the nearest count location. Looking at count data along Route 9 east of the project site, the volumes captured for this study are actually higher than those captured previously along Route 9 eastbound pre-COVID.

LUC 938 was reviewed and deemed not applicable to the characteristics of the proposed drive-thru addition to the existing Dunkin'. This LUC is defined as a coffee shop with a drive-thru only, where patrons cannot go inside to order. The trip generation is based on the number of drive-thru lanes only, there is a small sample size, and if used would project a lower number of customers than the LUC used. Additional information regarding the description and trip generation for LUC 938 is attached.

PROPOSED PARKING AND PARKING REQUIREMENTS

11. **COMMENT:** Please clarify why an 18-foot-deep stall is proposed rather the minimum required of 19'.

Pare: The existing site has 18-foot long parking stalls. The plan has been updated to reflect the City requirement of 19'.

BETA2: Please provide an updated site plan showing 19' long stalls.

Pare2: The latest site plan is provided.

BETA3: Information provided. Comment resolved.

CAPACITY ANALYSIS

12. **COMMENT:** Please clarify how the LOS improved between the future no-build and future build conditions during the afternoon peak hour at the Route 9 intersection with the site driveway, though the site driveway has higher traffic volumes based on the additional trips generated by the proposed development under the future build condition.

Pare: Per MassDOT standards, the future PHF was adjusted to .92 for all

RESPONSES TO BETA GROUP, INC. TRAFFIC IMPACT ANALYSIS PEER REVIEW – PARE'S RESPONSE TO COMMENTS NO. 2 DATED NOVEMBER 2, 2021

approaches in the build condition. This adjustment should also be applied to the no-build.

BETA2: The use of MassDOT standards relating to the PHF for the commercial driveway is acceptable. Comment resolved.

Additional Comments:

13. **COMMENT:** Based on the site plan, no improvements are being proposed within the state right of way including the sidewalk along the property frontage and the existing curb cuts on Route 9. Although both site driveways within the property are proposed to be 24 feet in width and is defined by pavement markings only with no physical barrier, the existing curb cuts along Route 9 at the eastern site driveway (approx. 46 feet wide) and western site driveway (approx. 38 feet wide) are much wider and may lead to uncontrolled entry/exit between the new parking layout and Route 9.

Please clarify: 1.) how the applicant will restrict vehicles from driving and/or parking over the painted median between the site driveways to mitigate conflicts with pedestrians along the sidewalk and/or parking lot; and 2.) if there are any pedestrian accommodation improvements along the site property.

Pare: Both site driveways are proposed to be 20' wide in accordance with NFPA1, with the entry to the west and exit to the east defined by entry signage. Sufficient on-site parking is provided for non-drive thru users and enforcement of patron parking will be handled by the building management.

A crosswalk is proposed between the building entry and existing ROW sidewalk.

BETA2: The width of both one-way site driveways should be reduced (min. of 12') to mitigate two-way traffic. In addition, the site driveway curb cuts along Route 9 should be reduced during the MassDOT access permit process to control access to the site.

RESPONSE: The site driveways are a minimum of 20' wide in accordance with NFPA 1.

Changes within the State ROW will be reviewed with MassDOT during the access permit process.

14. **COMMENT:** Based on the proposed site access and circulation, there's a possibility that if the drive-thru queue reaches the western site driveway limit, vehicles that want to avoid stacking on Route 9 may enter the eastern site driveway and introduce stacking along the northerly side of the property. This potential on-site stacking will restrict vehicles parked along the front of the building from backing out and exiting the property leading to congestion in the parking lot.

Please define on-site queue management to mitigate parking lot congestion.

RESPONSES TO BETA GROUP, INC. TRAFFIC IMPACT ANALYSIS PEER REVIEW – PARE'S RESPONSE TO COMMENTS NO. 2 DATED NOVEMBER 2, 2021

Pare: As seen in the updated plan, the western driveway will be an entrance only and the eastern driveway will be an exit only. Vehicles will not be permitted to operate in the manner described. Additionally, with turnover rates at the drive-thru of approximately 45 seconds, the site can accommodate even the hopeful demand/queue that has been analyzed for this location. Finally, with on-site queueing of up to 14 vehicles (including queue to exit after picking up from the window), a person trying to enter the queue after it has extended to Route 9 would likely be accepting over a 10-minute wait. As speed is part of the convenience and therefore the nature of the business, it is reasonable to assume people would bypass this store and head to the next down the road in that event.

BETA2: Queue concern along the northerly side of the property is resolved, though additional signing and/or pavement markings should be provided for the one-way movement along the property frontage to restrict vehicles from entering/exiting the wrong driveway.

In addition, please provide actual backup data for the turnover drive thru rates of approximately 45 seconds. In addition, BETA agrees that it is reasonable that people would bypass this store and head to the next store down the road if the drive thru queue has extended to Route 9; however, please verify if there's another Dunkin's store with a drive thru east of the subject store along this divided section of Route 9.

RESPONSE: See question 5 above for additional information on turnover rate. There is not another drive-thru Dunkin' east of the proposed store along eastbound Route 9. As noted, additional signing and marking will be reviewed with MassDOT as part of the access permit application process.

15. **COMMENT:** Based on the future building analysis at the eastern site driveway during the morning peak hour, it is estimated that the maximum queue for right turning exiting traffic is 8 vehicles with a delay of more than 400 seconds. Although the Applicant's traffic engineer states the analysis tool utilized has limitations that does not properly reflect the reality of the driveway's operations, the short distance between the driveway and drive-thru window, which allows a maximum queue of 3 vehicles, in combination of the heavy traffic along Route 9 eastbound during the morning peak hour may exacerbate the drive-thru queue, thus increasing the potential of queue spill over onto Route 9.

Please clarify how queue spill over onto Route 9 will not occur on a consistent basis during the morning peak hour as a result of the effects of the queuing at the eastern site driveway coupled with the estimated drive-thru transaction percentage as stated in comment no. 5.

Pare: See response No. 5 above.

RESPONSES TO BETA GROUP, INC. TRAFFIC IMPACT ANALYSIS PEER REVIEW – PARE'S RESPONSE TO COMMENTS NO. 2 DATED NOVEMBER 2, 2021

BETA2: See comment No. 5 above.

/dp

Z:\JOBS\20 Jobs\20099.00 Dunkin Drive Thru Eval - MA\CORRESP\RTC\Beta-Pare Response to No. 3.doc

Dunkin' Order Process Data - Summary

Time	Menu Board - incl. Greet (sec)	Window (sec)	Order Total (sec)	
Average - Morning	30	36	131	DT Vehicles per Hour
Max - Morning	36	41	150	88
Average - Non-Morning	34	50	140	DT Vehicles per Hour
Max - Non-Morning	44	69	182	52

Dunkin' Order Process Data

Date	Time			Menu Board - incl. Greet (sec)	Window (sec)	Order Total (sec)
10-Oct	5:00AM	-	9:59AM	36	40	128
10-Oct	10:00AM	-	1:59PM	37	43	144
10-Oct	2:00PM	-	4:59PM	41	52	135
10-Oct	5:00PM	-	8:59PM	31	52	98
11-Oct	5:00AM	-	9:59AM	30	38	125
11-Oct	10:00AM	-	1:59PM	39	41	143
11-Oct	2:00PM	-	4:59PM	34	53	146
11-Oct	5:00PM	-	8:59PM	33	52	111
12-Oct	5:00AM	-	9:59AM	26	33	123
12-Oct	10:00AM	-	1:59PM	27	39	116
12-Oct	2:00PM	-	4:59PM	33	54	171
12-Oct	5:00PM	-	8:59PM	31	60	128
13-Oct	5:00AM	-	9:59AM	26	34	136
13-Oct	10:00AM	-	1:59PM	27	42	121
13-Oct	2:00PM	-	4:59PM	35	48	138
13-Oct	5:00PM	-	8:59PM	36	55	123
14-Oct	5:00AM	-	9:59AM	30	33	126
14-Oct	10:00AM	-	1:59PM	30	39	124
14-Oct	2:00PM	-	4:59PM	35	48	182
14-Oct	5:00PM	-	8:59PM	32	69	143
15-Oct	5:00AM	-	9:59AM	29	33	131
15-Oct	10:00AM	-	1:59PM	28	39	127
15-Oct	2:00PM	-	4:59PM	38	51	174
15-Oct	5:00PM	-	8:59PM	44	56	134
16-Oct	5:00AM	-	9:59AM	34	41	150
16-Oct	10:00AM	-	1:59PM	38	45	167
16-Oct	2:00PM	-	4:59PM	34	56	163
16-Oct	5:00PM	-	8:59PM	40	57	147

Land Use: 938
Coffee/Donut Shop with Drive-Through Window and No Indoor Seating

Description

This land use includes any coffee and donut restaurant that has only drive-through window service. A patron cannot walk into the shop and purchase items. The restaurant sells freshly brewed coffee (along with coffee-related accessories) and a variety of food/drink products such as donuts, bagels, breads, muffins, cakes, sandwiches, wraps, salads, and other hot and cold beverages. The restaurant marketing and sales may emphasize coffee beverages over food (or vice versa).

Query | Filter

DATA SOURCE: Trip Generation Manual, 11th Ed

SEARCH BY LAND USE CODE: 938

LAND USE GROUP: (900-999) Services

LAND USE : 938 - Coffee/Donut Shop with Drive-Through \

LAND USE SUBCATEGORY: All Sites

SETTING/LOCATION: General Urban/Suburban

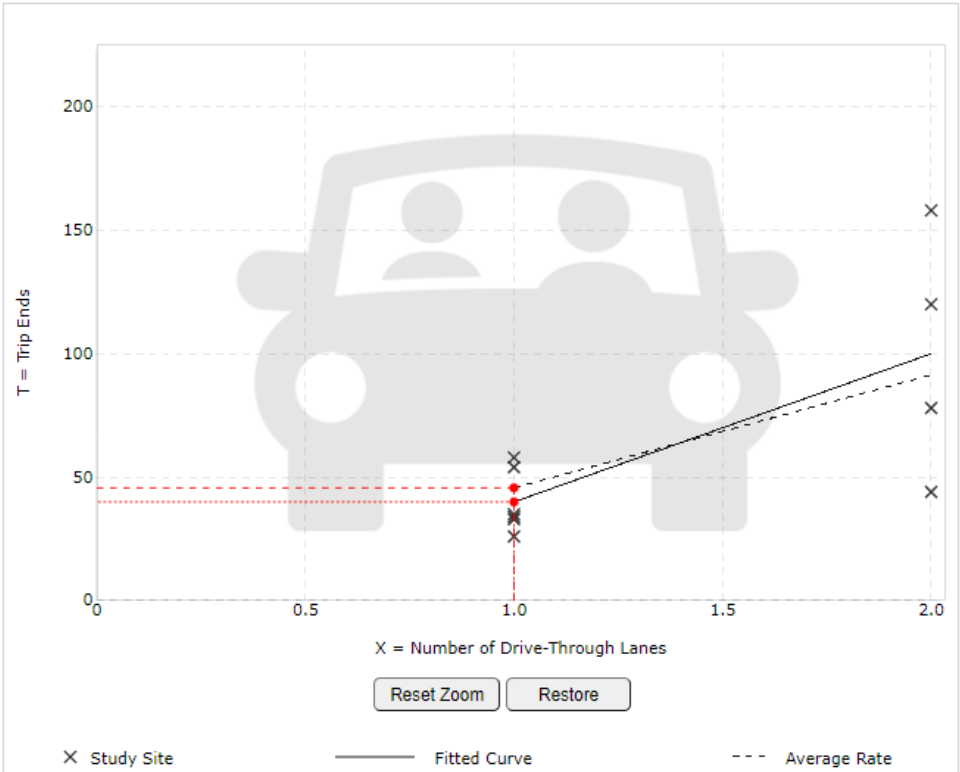
INDEPENDENT VARIABLE (IV): Drive-Through Lanes

TIME PERIOD: Weekday, AM Peak Hour of Generator

TRIP TYPE: Vehicle

ENTER IV VALUE TO CALCULATE TRIPS: 1 Calculate

Data Plot and Equation



DATA STATISTICS

Land Use:
Coffee/Donut Shop with Drive-Through Window and No Indoor Seating (938) Click for Description and Data Plots

Independent Variable:
Drive-Through Lanes

Time Period:
Weekday
AM Peak Hour of Generator

Setting/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
10

Avg. Num. of Drive-Through Lanes:
1

Average Rate:
45.71

Range of Rates:
22.00 - 79.00

Standard Deviation:
19.64

Fitted Curve Equation:
T = 60.00(X) - 20.00

R^2:
0.51

Directional Distribution:
50% entering, 50% exiting

Calculated Trip Ends:
Average Rate: 46 (Total), 23 (Entry), 23 (Exit)
Fitted Curve: 40 (Total), 20 (Entry), 20 (Exit)

Count Data Along Route 9 – East of Site

Transportation Data Managemen

https://mhd.public.ms2soft.com/tcds/tsearch.asp?loc=Mhd&mod=

Record 1 of 1 Goto Record go

Location ID	4131	MPO ID	
Type	SPOT	HPMS ID	207000403110
On NHS		On HPMS	Yes
LRS ID	SR9 EB	LRS Loc Pt.	129.9021
SF Group	U3	Route Type	SR
AF Group	U3	Route	9
GF Group	U3	Active	Yes
Class Dist Grp	U3	Category	HPMS
Seas Clss Grp	MHD Statewide		
WIM Group			
QC Group	Default		
Fnct'l Class	(3) Other Principal Arterial	Milepost	
Located On	BOYLSTON STREET		
Loc On Alias			
AT	BROOKLINE TOWN LINE		
More Detail			

STATION DATA

Directions: 2-WAY EB WB

AADT

	Year	AADT	DHV-30	K %	D %	PA	BC	Src
	2020	40,664[3]				38,344 (94%)	2,320 (6%)	Grown from 2019
	2019	49,350[3]				47,650 (97%)	1,700 (3%)	Grown from 2018
	2018	49,153[3]				46,695 (95%)	2,458 (5%)	Grown from 2017
	2017	48,474[3]				46,487 (96%)	1,987 (4%)	Grown from 2016
	2016	47,947[3]		7	51	45,980 (96%)	1,967 (4%)	Grown from 2015

|<< < > >>| 1-5 of 27

Travel Demand Model

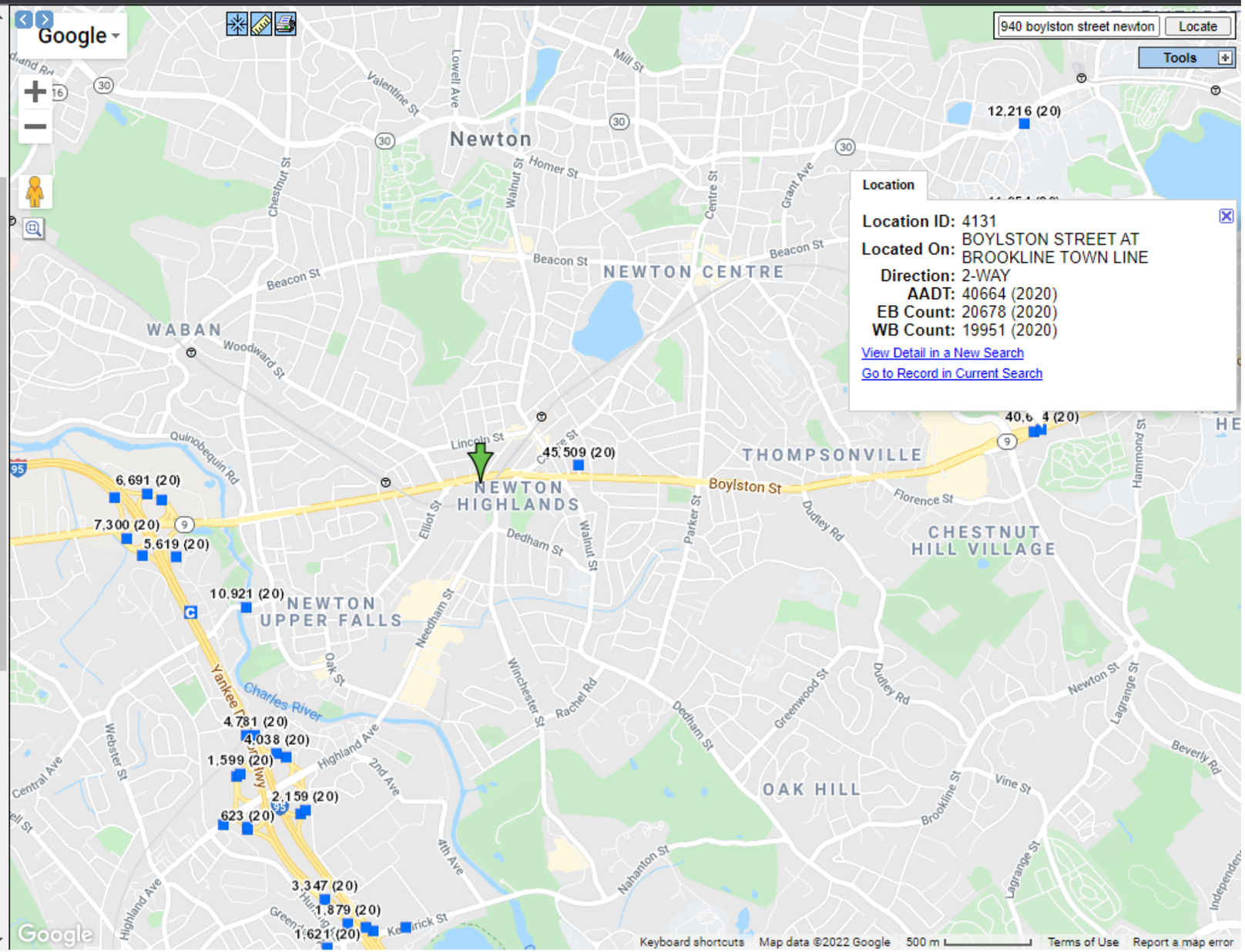
	Model Year	Model AADT	AM PHV	AM PPV	MD PHV	MD PPV	PM PHV	PM PPV	NT PHV	NT PPV

VOLUME COUNT

	Date	Int	Total
	Wed 3/30/2011	15	46,269
	Tue 3/29/2011	15	45,202
	Tue 8/19/2008	60	40,133
	Mon 8/18/2008	60	38,340
	Wed 3/11/1998	60	49,308
	Tue 3/10/1998	60	49,647

VOLUME TREND

Year	Annual Growth
2020	-18%
2019	0%
2018	1%
2017	1%
2016	1%
2015	1%



Two-Way Count

Volume Count Report

LOCATION INFO	
Location ID	4131
Type	SPOT
Fnct'l Class	3
Located On	BOYLSTON STREET
AT	BROOKLINE TOWN LINE
Direction	2-WAY
County	Middlesex
Community	Newton
MPO ID	
HPMS ID	207000403110
Agency	MHD

COUNT DATA INFO	
Count Status	Accepted
Start Date	Wed 3/30/2011
End Date	Thu 3/31/2011
Start Time	1:00:00 PM
End Time	1:00:00 PM
Direction	2-WAY
Notes	
Station	000000000402
Study	
Speed Limit	
Description	
Sensor Type	Axle/Tube
Source	
Latitude,Longitude	

INTERVAL:15-MIN

Time	15-min Interval 1st	2nd	3rd	4th	Hourly Count
0:00-1:00	102	62	45	36	245
1:00-2:00	30	30	19	20	99
2:00-3:00	13	21	18	23	75
3:00-4:00	17	15	16	19	67
4:00-5:00	30	28	42	50	150
5:00-6:00	67	96	174	259	596
6:00-7:00	264	412	567	611	1,854
7:00-8:00	657	762	759	773	2,951
8:00-9:00	806	862	783	762	3,213
9:00-10:00	781	740	749	744	3,014
10:00-11:00	691	691	683	672	2,737
11:00-12:00	700	595	746	678	2,719
12:00-13:00	758	713	758	678	2,907
13:00-14:00	625	738	677	742	2,782
14:00-15:00	709	734	757	730	2,930
15:00-16:00	771	789	773	773	3,106
16:00-17:00	816	774	791	790	3,171
17:00-18:00	822	835	800	809	3,266
18:00-19:00	812	789	763	807	3,171
19:00-20:00	590	601	621	564	2,376
20:00-21:00	500	481	459	410	1,850
21:00-22:00	444	428	327	325	1,524
22:00-23:00	271	233	190	203	897
23:00-24:00	161	163	123	122	569
Total					46,269
AM Peak	07:45-08:45 3,224				
PM Peak	17:00-18:00 3,266				

Count Navigation: |<< < > >>| Count Type: VOLUME

Directions: 2-WAY EB WB

Eastbound Count

Volume Count Report

LOCATION INFO	
Location ID	4131_EB
Type	SPOT
Fnct'l Class	3
Located On	BOYLSTON STREET
AT	BROOKLINE TOWN LINE
Direction	EB
County	Middlesex
Community	Newton
MPO ID	
HPMS ID	
Agency	MHD

COUNT DATA INFO	
Count Status	Accepted
Start Date	Wed 3/30/2011
End Date	Thu 3/31/2011
Start Time	1:00:00 PM
End Time	1:00:00 PM
Direction	
Notes	
Station	000000000402
Study	
Speed Limit	
Description	
Sensor Type	Axle/Tube
Source	
Latitude,Longitude	

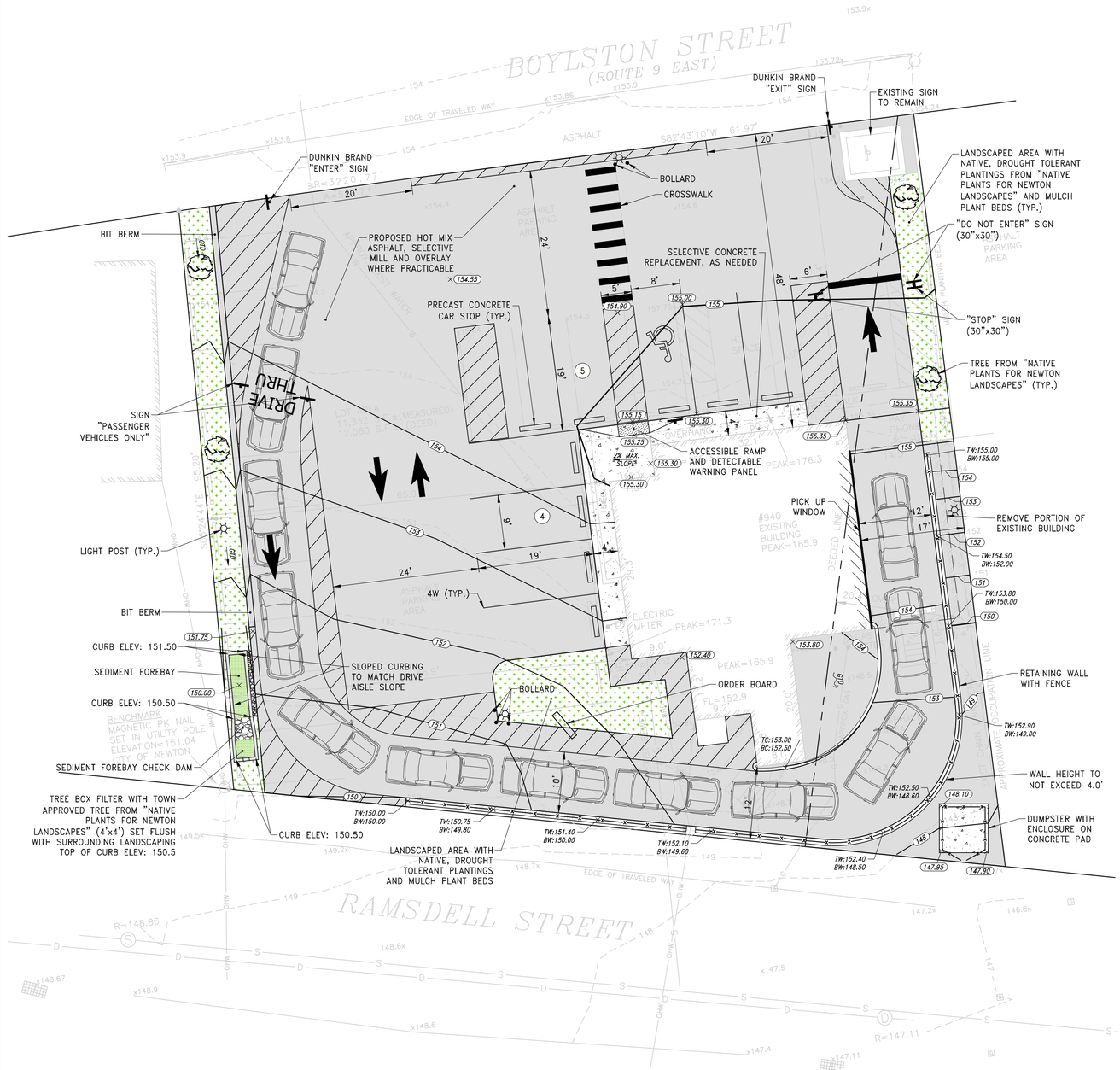
INTERVAL:15-MIN

Time	15-min Interval 1st	2nd	3rd	4th	Hourly Count
0:00-1:00	43	25	16	16	100
1:00-2:00	14	13	8	12	47
2:00-3:00	7	7	4	11	29
3:00-4:00	7	6	7	7	27
4:00-5:00	11	18	27	29	85
5:00-6:00	43	65	114	175	397
6:00-7:00	180	284	397	374	1,235
7:00-8:00	380	427	416	379	1,602
8:00-9:00	391	418	396	426	1,631
9:00-10:00	410	424	423	422	1,679
10:00-11:00	375	383	356	353	1,467
11:00-12:00	363	278	370	320	1,331
12:00-13:00	393	355	386	366	1,500
13:00-14:00	323	354	370	395	1,442
14:00-15:00	364	378	367	341	1,450
15:00-16:00	351	366	364	356	1,437
16:00-17:00	354	336	369	388	1,447
17:00-18:00	365	424	406	402	1,597
18:00-19:00	365	379	406	431	1,581
19:00-20:00	298	277	303	274	1,152
20:00-21:00	229	245	219	205	898
21:00-22:00	222	192	174	167	755
22:00-23:00	124	108	94	97	423
23:00-24:00	63	73	51	48	235
Total					23,547
AM Peak	08:45-09:45 1,683				
PM Peak	17:00-18:00 1,597				

Count Navigation: |<< < > >>| Count Type: VOLUME

Directions: 2-WAY EB WB


Dunkin Delivery Vehicle



ZONING TABLE			
EXISTING ZONE: BUISINESS – BU2			
TOTAL LOT AREA S/B/L 51026 0003 = 12,060 SF ± (0.28 ACRES)			
BUILDING AREA EXISTING: RESTAURANT 2,040 SF ± PROPOSED: RESTAURANT WITH DRIVE IN 1,625 SF ±			
	REQUIRED	EXISTING	PROVIDED
BUILDING SETBACK			
FRONT SETBACK	20 FT*	48 FT	48 FT
SIDE SETBACK	5 FT**	3 FT ±	17 FT ±
REAR SETBACK	0 FT	12 FT	12 FT
MAX. BUILDING HEIGHT	24 FT	21 FT	21 FT
MAX. FLOOR AREA RATIO	1.00	0.31	0.27
MIN. LOT AREA	10,000 SF	12,060 SF ±	12,060 SF ±
OPEN SPACE	0%	0%	8.3%

*FRONT SETBACK IS THE AVERAGE OF THE SETBACKS OF BUILDINGS ON THE ADJACENT PARCELS.
950 BOYLSTON = 0 FT ±
926 BOYLSTON = 40 FT ±

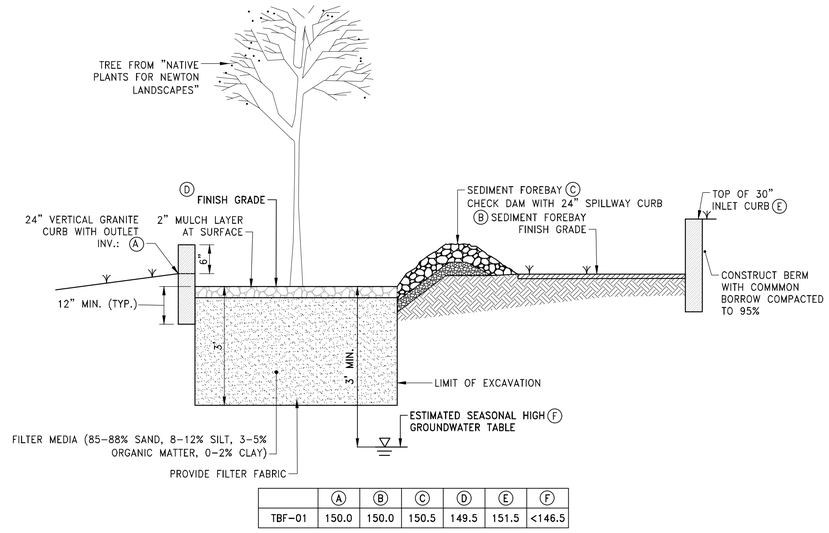
**SIDE SETBACK IS ½ BUILDING HEIGHT OR EQUAL TO ABUTTING SIDE YARD SETBACK. ABUTTING SIDE YARD SETBACK 950 BOYLSTON = 5 FT ±

***THERE ARE NO MAXIMUM LOT COVERAGE AND OPEN SPACE REQUIREMENTS FOR BU-2 ZONES

PARKING SUMMARY			
	REQUIRED	EXISTING	PROVIDED
STANDARD SPACES (9'x18')	1	21	8
ACCESSIBLE SPACES**	1	2	1
TOTAL SPACES	2	23	9

RESTAURANT: 1 SPACE PER 3 SEATS AND 1 SPACE PER 3 EMPLOYEES
1 SPACE/3 SEATS * 0 SEATS = 0 SPACES
1 SPACE/3 EMPLOYEES * 5 EMPLOYEES (MAX SHIFT) = 2 SPACES
TOTAL REQUIRED = 2 SPACES

+ ADA REQUIREMENT FOR PARKING LOT 1 TO 25 TOTAL SPACES = 1 SPACES



	A	B	C	D	E	F
TBF-01	150.0	150.0	150.5	149.5	151.5	<146.5

TREE BOX FILTER
NOT TO SCALE

NOTES:
1. ESHGWT WAS DETERMINED USING THE USDA WEB SOIL SURVEY.
2. INITIAL EXCAVATION SHALL BE CARRIED TO WITHIN 1 FOOT OF THE SUBGRADE ELEVATION. FINAL EXCAVATION TO THE BASIN SUBGRADE SHALL BE DEFERRED UNTIL ALL UPSTREAM DISTURBED AREAS HAVE BEEN STABILIZED OR PROTECTED.
3. CONTRACTOR SHALL CONTACT THE ENGINEER 48 HOURS PRIOR TO EXPOSING THE SUBGRADE TO COORDINATE ENGINEER'S OBSERVATION OF SUBGRADE.

Scale: 1"=10'
0 5' 10' 20'

PARE
PARE CORPORATION
ENGINEERS - SCIENTISTS - PLANNERS
8 BLACKSTONE VALLEY PLACE
LINCOLN, RI 02865
401-334-4100

SCALE ADJUSTMENT GUIDE
0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING

Dunkin Development
940 Boylston Street
Newton, Massachusetts

REVISIONS:		
1	7/27/21	CITY COMMENTS
2	8/10/21	CITY COMMENTS
3	10/22/21	CITY COMMENTS
4	1/06/22	CITY COMMENTS

PROJECT NO.:	
DATE:	MAY 25, 2021
SCALE:	1"=10'
DESIGNED BY:	EL
CHECKED BY:	DLP
DRAWN BY:	AKL
APPROVED BY:	VAH

DRAWING TITLE:
CONCEPT PLAN

DRAWING NO.:
C1.0

SHEET NO. ___ OF ___