

MILTON, MASSACHUSETTS

Route 28/Chickatawbut Road Intersection Improvements

Functional Design Report

Prepared for
Massachusetts Department of Transportation

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Introduction

The Randolph Avenue (Route 28)/Chickatawbut Road intersection has been selected as a location needing improvements to enhance safety and operations. This report will refer to Randolph Avenue in the vicinity of the study area as Route 28. Improvements to this intersection are a high priority for the Town of Milton and the Massachusetts Department of Transportation (MassDOT) District 6 due to the extensive safety and congestion issues that have been noted along the Route 28 corridor which reinforces the need for intersection improvements.

The intersection is listed as a high crash location and the Road Safety Audit (RSA) done at this intersection in November 2016 showed the intersection experiences heavy congestion during both a.m. and p.m. peak hours. *Howard Stein Hudson (HSH)* evaluated four different intersection design alternatives and worked with MassDOT to choose a preferred alternative. The preferred alternative seeks to improve safety at the intersection and address the concerns outlined in the RSA.

In 2018, an alternatives analysis memorandum was developed. Multiple concepts were developed to improve safety and operations at the intersection which included changes to the signalized intersection as well as concepts which converted the intersection to a roundabout. A safety analysis comparison was performed on the future alternatives and determined that the roundabout concept is shown to have the most significant reduction in fatal and injury crashes at the intersection. After coordination between the Project team, MassDOT, and the Town of Milton, the roundabout was chosen as the preferred design for the intersection of Route 28 at Chickatawbut Road.

The standards used for design and analysis conform to the *Manual on Uniform Traffic Control Devices, 2009 Edition* (MUTCD 2009) with Massachusetts Amendments; the *Highway Capacity Manual 6th Edition* (HCM); the American Association of State Highway and Transportation Officials' (AASHTO's) *A Policy on Geometric Design of Highways and Streets*, 7th Edition; and MassDOT's *Project Development and Design Guide* (2006), and the *Federal Highway Administration's Separated Bike Lane Planning and Design Guide* (2015).

Study Area

The study area for this report includes the intersection of Route 28 (Randolph Avenue) and Chickatawbut Road in Milton, Massachusetts. A regional map of the area is provided in **Figure 1** and a locus map is provided in **Figure 2**.



Figure 1. *Regional Map*





Figure 2. *Locus Map*





Existing Conditions

Existing study area roadway geometry, intersection conditions with existing traffic volumes and intersection geometry, average daily traffic levels, and peak hour vehicular volumes are discussed in the following section.

Existing Roadway Descriptions

Chickatawbut Road is classified by MassDOT as an urban minor arterial and is under the jurisdiction of the Department of Conservation and Recreation (DCR). Chickatawbut Road runs east-west between Granite Street in Braintree to the east and Unquity Road to the west. Chickatawbut Road generally has one travel lane in each direction. Sidewalks are not provided, and though shoulders are provided, they are typically too narrow to be considered dedicated bicycle accommodations. Chickatawbut Road has a posted speed limit of 30 miles per hour (mph).

Chickatawbut Road runs through the Blue Hills Reservation and has few cross streets or driveways aside from trail entrances, lookout points, and Reservation-related sites, such as the Norman Smith Environmental Education Center. Signage indicates that the segment of the roadway between Route 28 and Granite Street closes at night between 8:00 p.m. and 7:00 a.m.; however, RSA attendees stated that the roadway now stays open throughout the night. RSA attendees also stated that the same segment is closed on Sundays during the summer and closes for several days in late autumn for controlled deer hunts.

Randolph Avenue runs north-south between Adams Street to the north and the I-93 Interchange and the Blue Hill River in Randolph to the south, where it becomes North Main Street. It is also State Route 28 between Reedsdale Road to the north and the I-93 Interchange to the south. Randolph Avenue is classified by MassDOT as an urban principal arterial under the jurisdiction of MassDOT. It generally has two travel lanes in each direction north of Chickatawbut Road, and with one travel lane in each direction south of Chickatawbut Road. Sidewalks are provided along both sides of the roadway north of Chickatawbut Road but are not provided on either side of the roadway south of Chickatawbut Road. Dedicated bicycle accommodations are not provided north of Chickatawbut Road. An approximately seven-foot shoulder is provided on each side of Randolph Avenue south of Chickatawbut Road, which ends at the Milton Town Line about 500 feet south of the intersection. Randolph Avenue has a posted speed limit of 40 mph within the study area starting from the Milton-Quincy town line to approximately 400-500 feet north of the intersection. It is posted at 50 mph south of the intersection and 45 mph north of the intersection.



There is a Massachusetts Bay Transportation Authority (MBTA) bus route (Route 240) that runs north-south through the project area along Route 28 with nearside bus stops located along the north and south approaches to the intersection with Chickatawbut Road. There is also a Brockton Area Transit (BAT) route (Route #12) that runs north-south through the project area. The Route 240 bus connects Avon and Ashmont Station and the Route 12 bus connects the Brockton MBTA Commuter Rail station with Ashmont Station.

Intersection Description

The intersection of **Route 28/Chickatawbut Road** is a four-legged signalized intersection with four approaches. The Chickatawbut Road eastbound and westbound approaches each consists of a single travel lane. The Route 28 northbound and southbound approaches each consists of two travel lanes, which function as a shared left-turn/through lane and a shared through/right-turn lane. The Route 28 northbound approach receives a leading protected left-turn phase during the morning peak period, while the southbound approach receives a leading protected left-turn phase in the evening peak period.

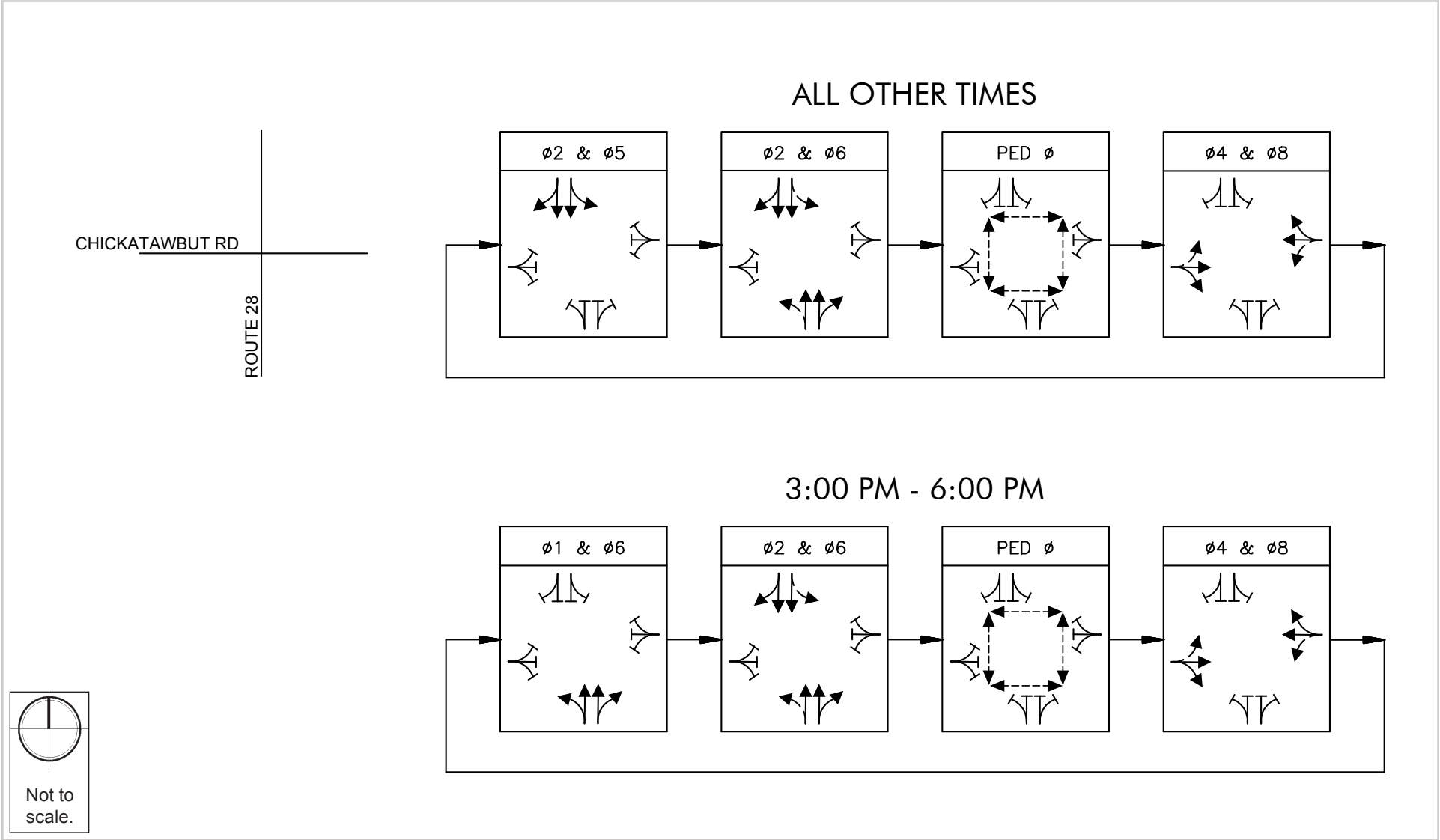
Crosswalks and pedestrian indications are provided across all legs of the intersection. Crosswalk pavement markings appear worn throughout the intersection. The pedestrian indications provided are all single-section indications lacking countdown displays apart from the countdown indication provided on the northeast corner of the intersection. Pedestrian ramps are provided at each corner of the intersection but do not appear to meet ADA-compliance. Concrete sidewalks are only provided along Route 28 north of the intersection and were observed to be in fair condition. The crosswalks are provided a push-button actuated exclusive pedestrian phase following the Route 28 northbound and southbound vehicle movements.

Traffic Signal Phasing

Existing traffic signal phasing for the study area intersection may be seen in **Figure 3**.



Figure 3. *Existing Phasing Diagram*





Traffic Volumes

DAILY TRAFFIC ESTIMATES

To estimate daily weekday traffic and hourly variations, Automatic Traffic Recorder (ATR) counts were taken for all legs of the intersection over a 72-hour period from Tuesday, December 12, 2017 to Thursday, December 14, 2017 as well as a 48-hour period from Saturday, May 12, 2018 to Sunday, May 13, 2018. Existing volumes were grown to the year 2020, using a growth rate of 0.25% per year for three years based on the rounded annual future growth provided by Central Transportation Planning Staff (CTPS).

Table 1 summarizes existing traffic data including Average Daily Traffic (ADT), peak-hour Percentage (K), and the 85th percentile speed. Average daily traffic variations are shown in **Figure 4** through **Figure 11**. Raw traffic count data may be found in **Appendix A**.

Table 1. Average Daily Traffic Summary

Location	Average Daily Weekday Traffic Volume	Average Daily Weekend Traffic Volume	% Truck	K Factor	Directional Distribution	85 th ile Speed (mph)
Route 28, North of Chickatawbut Rd						
Northbound	14,386	11,988	4.5%	10.4%	-	46
Southbound	11,399	12,992	3.4%	5.1%	-	43
Total	25,784	24,981	-	8.0%	55.8%	-
Route 28, South of Chickatawbut Rd						
Northbound	16,548	12,762	2.5%	6.7%	-	40
Southbound	12,755	11,743	6.7%	10.2%	-	41
Total	29,301	24,504	-	8.2%	56.5%	-
Chickatawbut Rd, East of Route 28						
Eastbound	2,440	2,608	0.8%	9.1%	-	35
Westbound	3,533	2,885	2.5%	12.0%	-	30
Total	5,968	5,493	-	10.8%	59.2%	-
Chickatawbut Rd, West of Route 28						
Eastbound	2,701	2,018	3.3%	14.0%	-	29
Westbound	2,353	1,824	0.8%	6.6%	-	34
Total	5,053	3,842	-	10.6%	53.4%	-



Figure 4. *Route 28, North of Chickatawbut Road – Average Daily Weekday Traffic Variation*

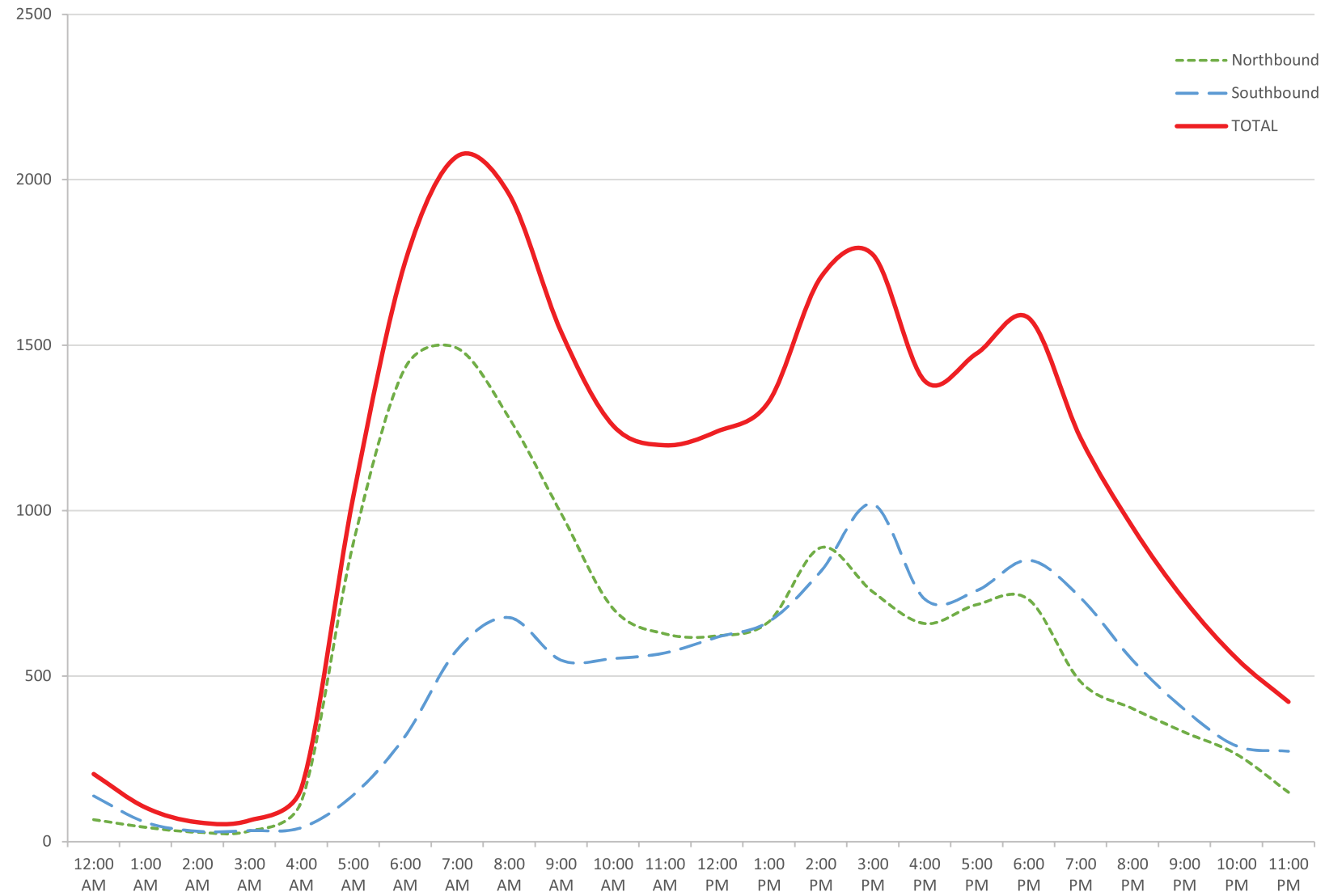




Figure 5. *Route 28, North of Chickatawbut Road – Average Daily Weekend Traffic Variation*

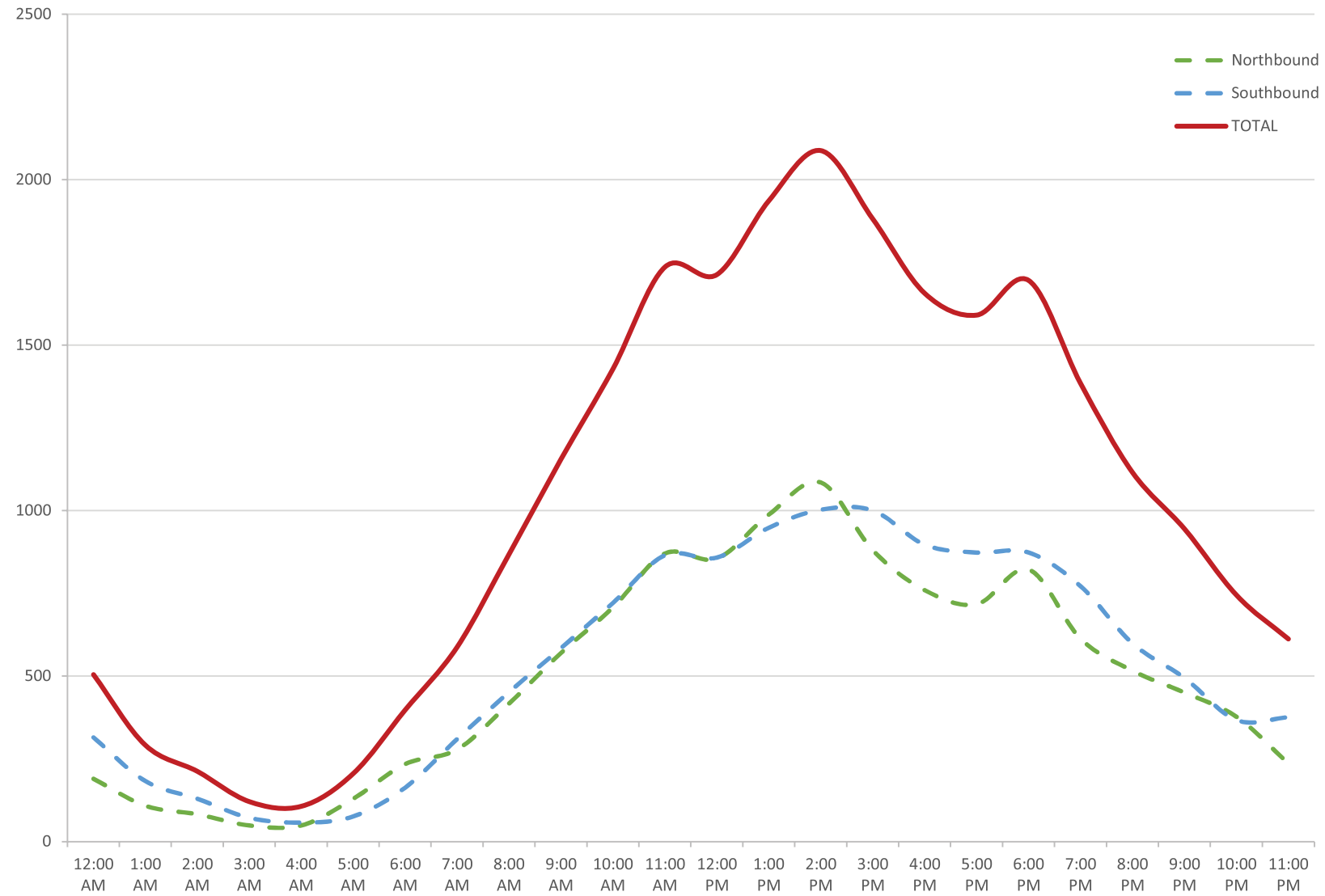




Figure 6. *Route 28, South of Chickatawbut Road – Average Daily Weekday Traffic Variation*

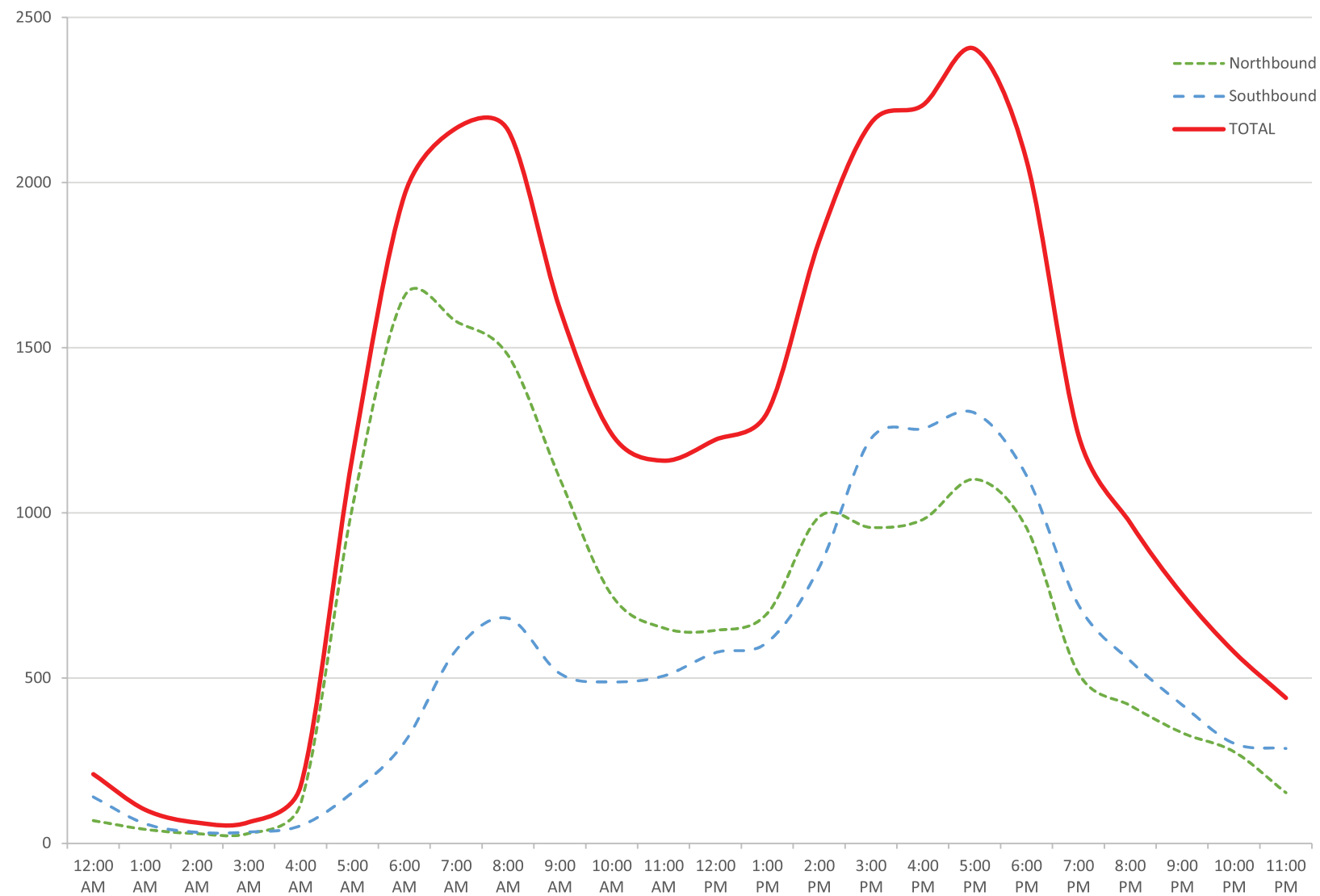




Figure 7. *Route 28, South of Chickatawbut Road – Average Daily Weekend Traffic Variation*

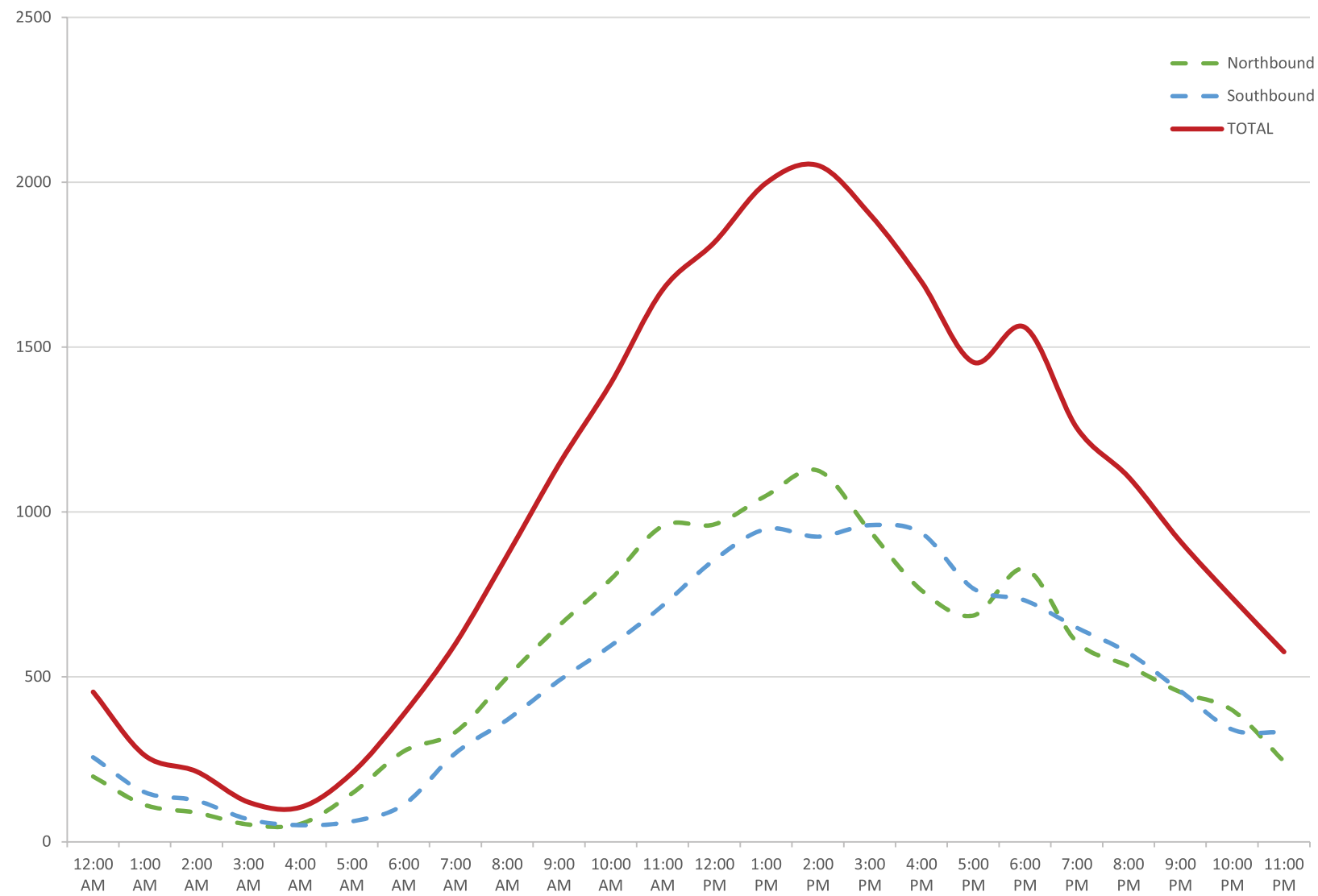




Figure 8. *Chickatawbut Road, East of Route 28 – Average Daily Weekday Traffic Variation*

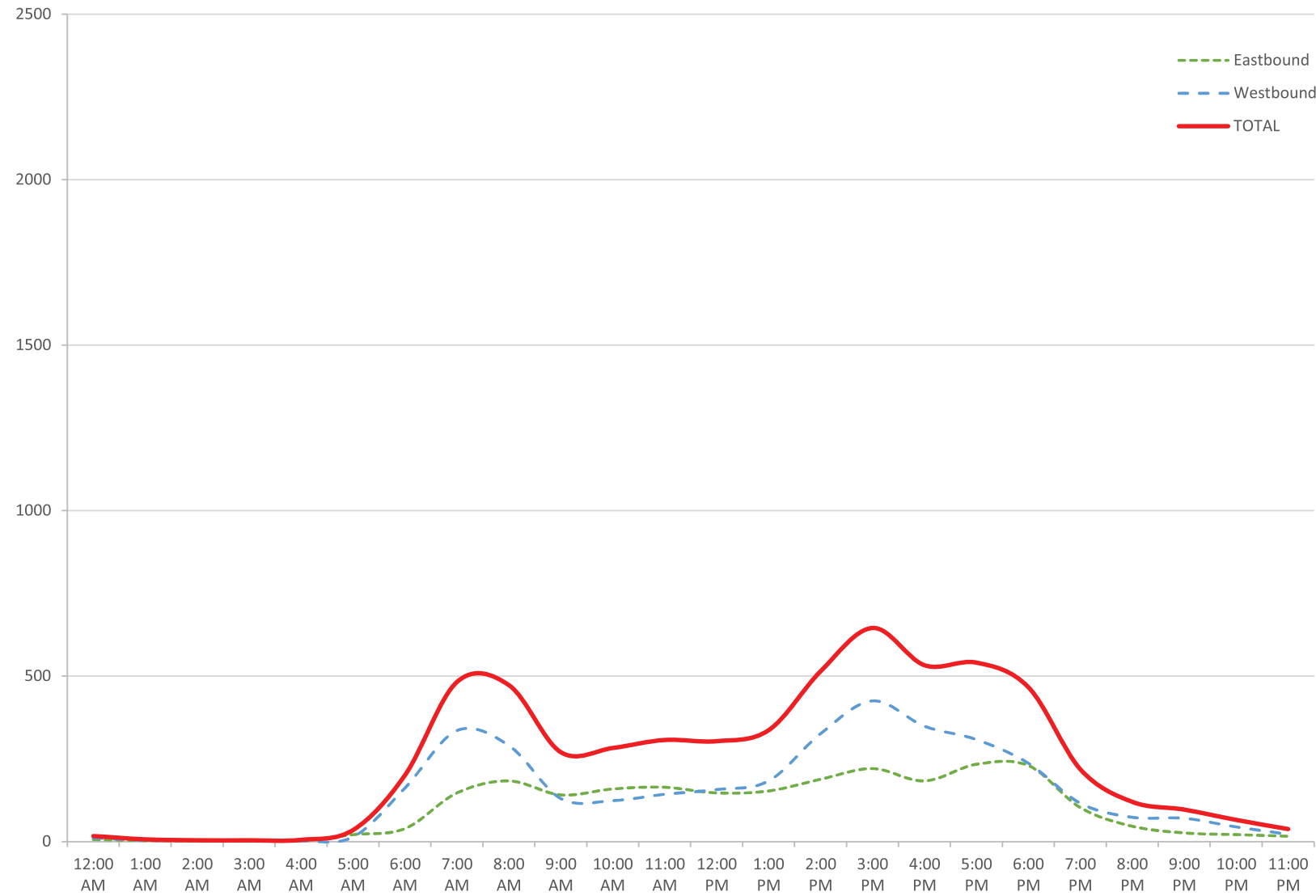




Figure 9. *Chickatawbut Road, East of Route 28 – Average Daily Weekend Traffic Variation*

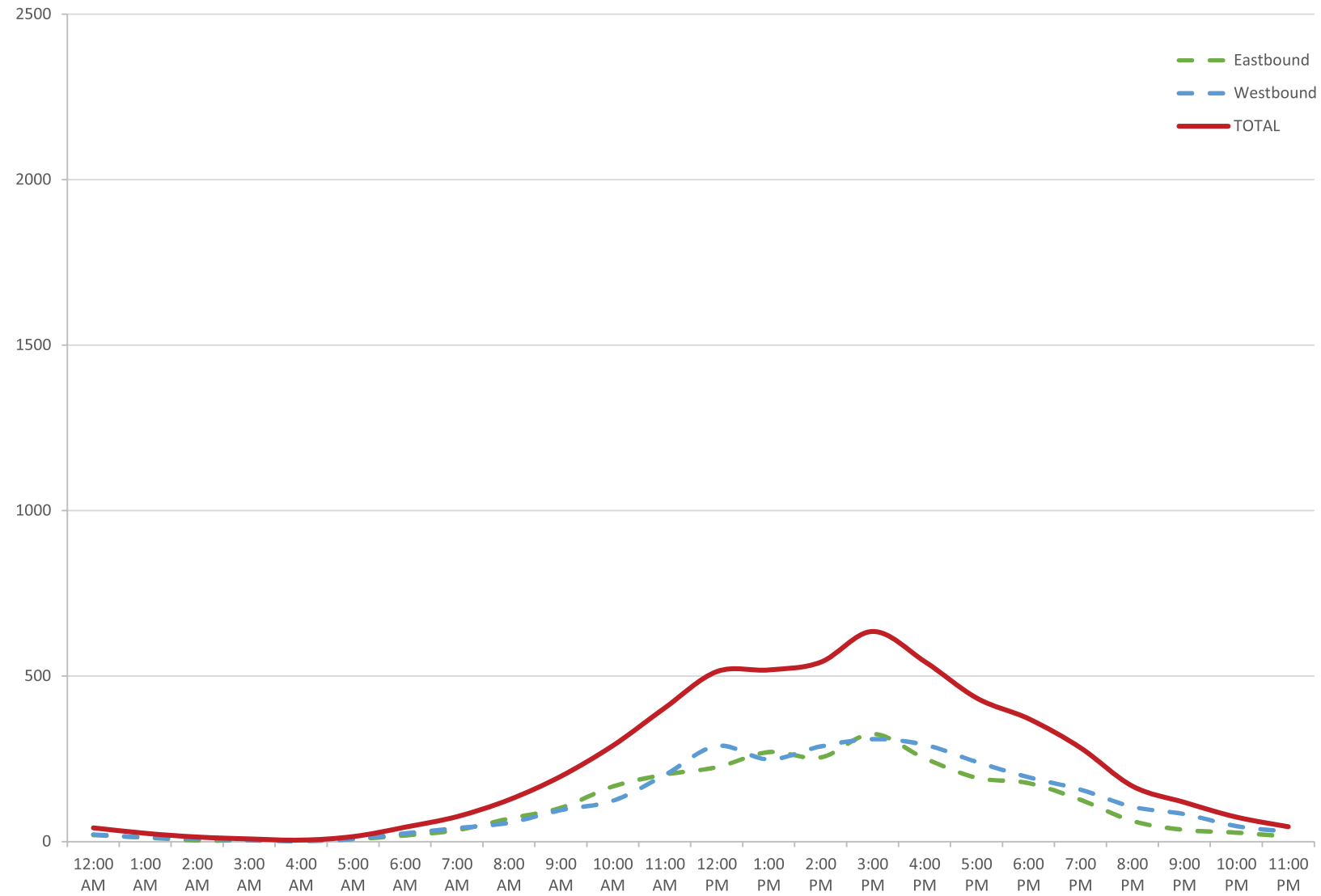




Figure 10. *Chickatawbut Road, West of Route 28 – Average Daily Weekday Traffic Variation*

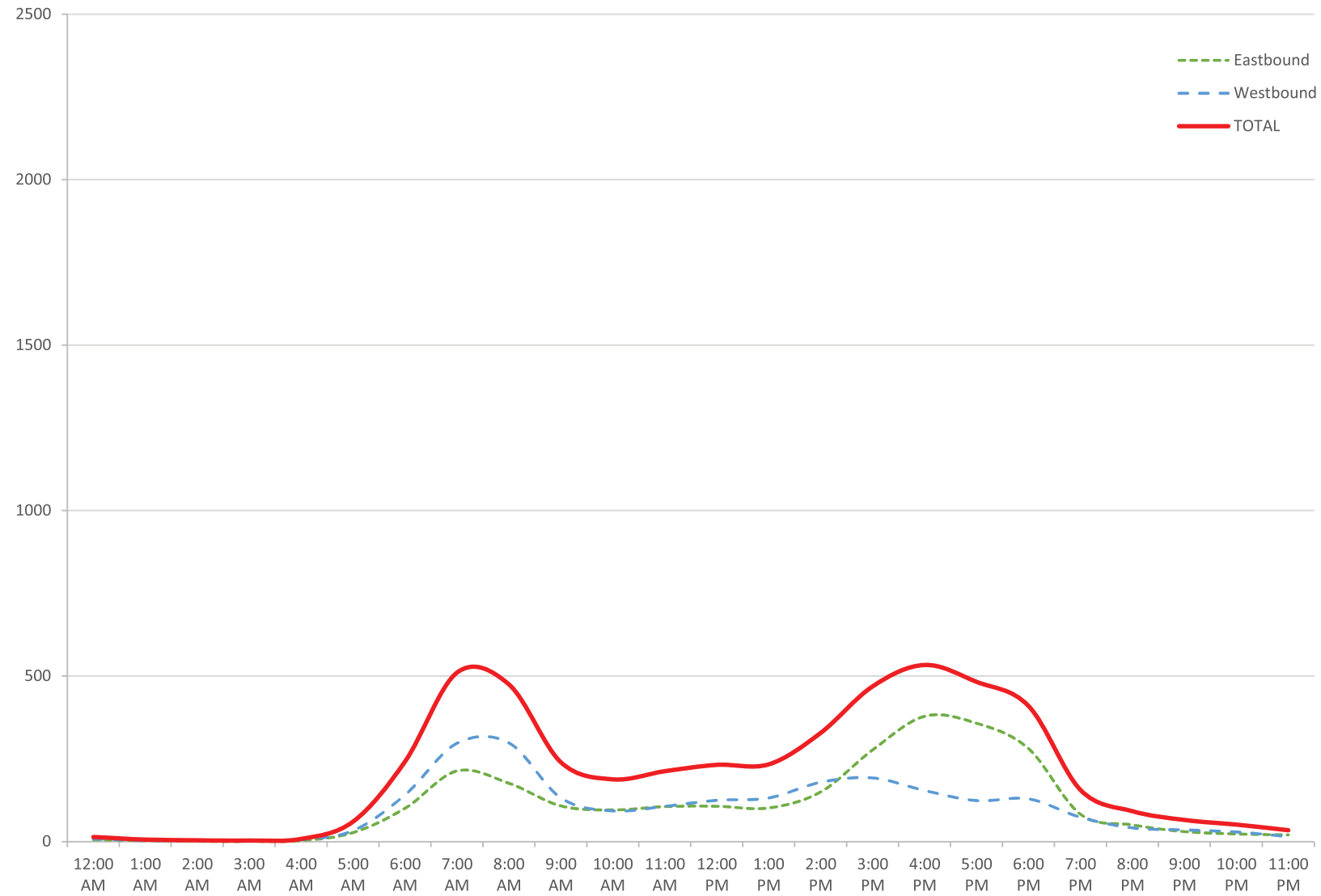
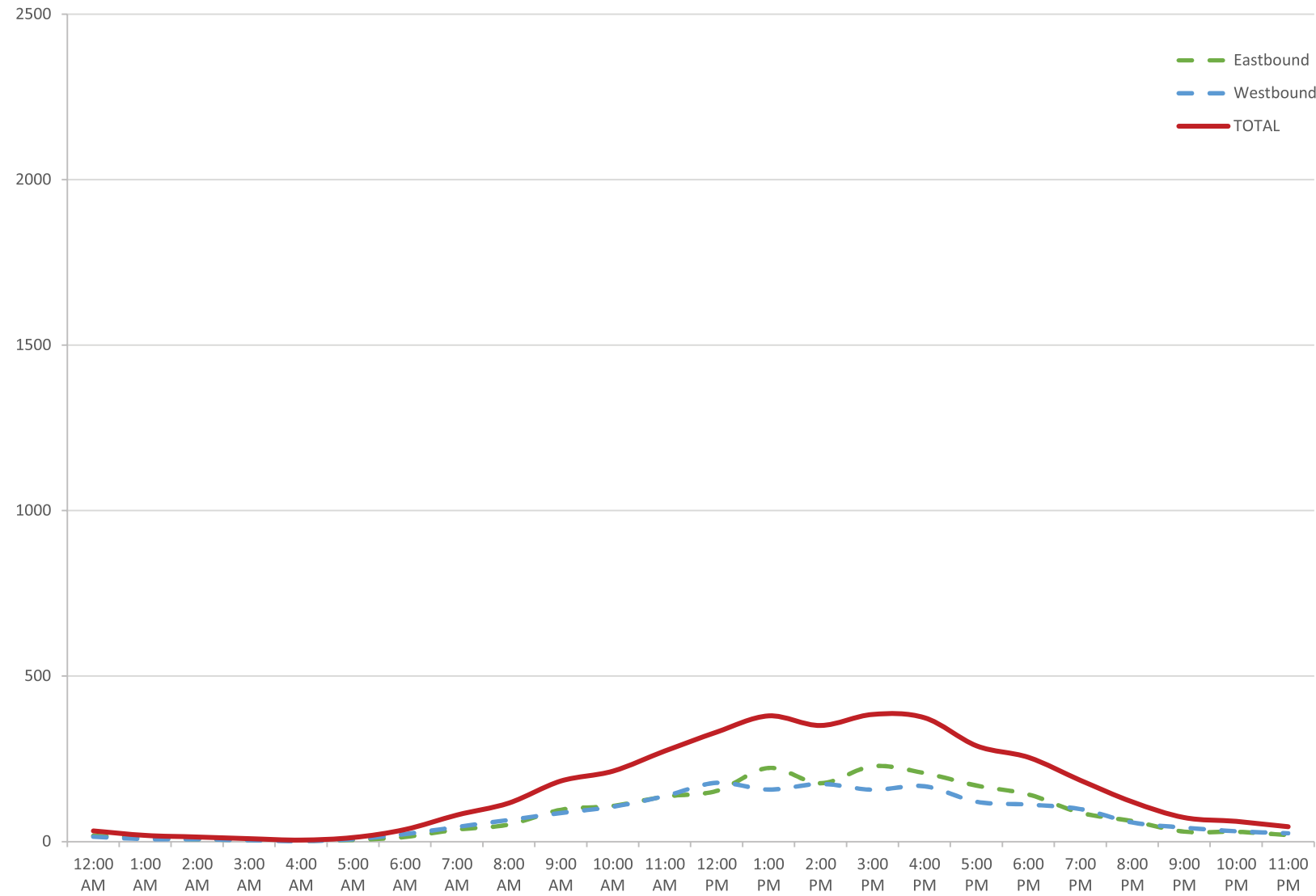




Figure 11. *Chickatawbut Road, West of Route 28 – Average Daily Weekend Traffic Variation*





PEAK-HOUR INTERSECTION TURNING MOVEMENTS

Manual Turning Movement Counts (TMCs) to determine weekday morning and evening peak hours were recorded on Thursday, December 14, 2017 from 7:00 – 9:00 a.m. and 4:00 – 6:00 p.m. TMCs to determine the Saturday peak hour were recorded on Saturday, December 16, 2017 from 10:00 a.m. – 2:00 p.m. Due to discrepancies in p.m. peak hour count data, revised TMCs were conducted for the p.m. peak hour on Thursday, January 31, 2019. The 2017 TMCs were grown by 0.25 percent per year to the base year of 2020.

The TMCs included vehicular, bicycle, and pedestrian counts at the study area intersections. The results of the counts indicate that the morning peak hour occurs from 7:30 – 8:30 a.m., the evening peak hour occurs from 4:15 – 5:15 p.m., and the Saturday peak hour occurs from 12:45 – 1:45 p.m. The existing traffic and pedestrian peak-hour volumes are shown in **Figure 12**.

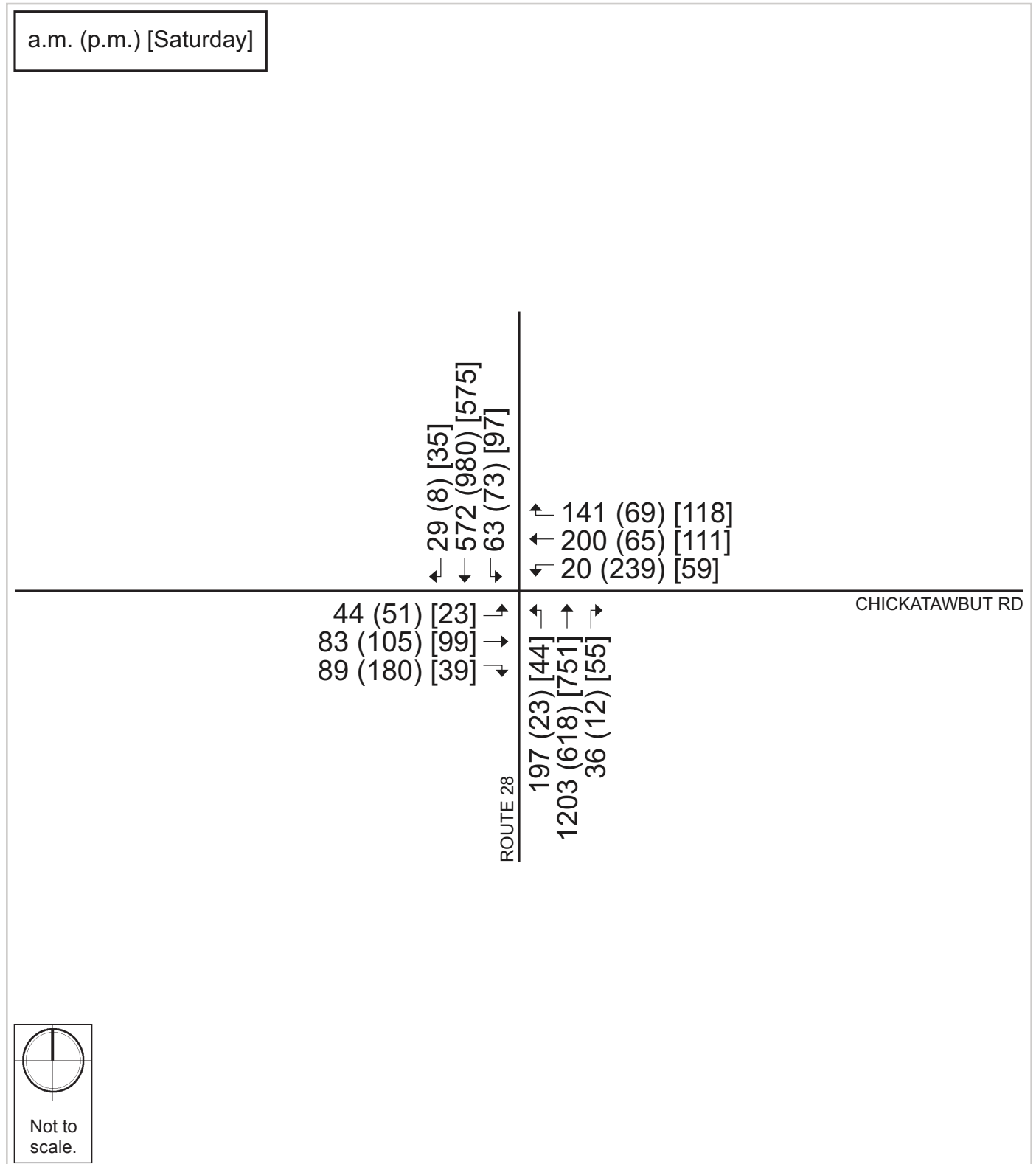
No bicycles were observed at the intersection during any of the peak hours; however, the counts were conducted in December. It is expected that with the nearby Blue Hills Reservation, there will be recreational seasonal bicycle demand through the area.

SEASONAL FACTOR ADJUSTMENTS

In accordance with MassDOT procedures, a nearby permanent count station along I-93 (Location ID H8487) in Quincy was used to compare monthly ADTS for 2017. Based on the data, it was determined that a seasonal factor was unnecessary as December was found to be higher than the annual average and was therefore not adjusted.



Figure 12. *Existing (2020) Condition Volumes, a.m., p.m., and Saturday Peak Hours*





Existing Operations Analysis

Traffic operations are determined through an analysis of intersection Level of Service (LOS) calculations. LOS at the intersection was calculated using Synchro 9.0, which is based on the traffic operational analysis methodology of the Transportation Research Board's 2000 Highway Capacity Manual (HCM). The LOS and delay (in seconds) are based on intersection geometry and traffic volumes. **Table 2** is an excerpt from the HCM and provides LOS criteria for signalized intersections. LOS A defines the most favorable condition, with minimum traffic delay. LOS F represents the worst condition, with significant traffic delay. LOS D is generally considered acceptable.

Table 2. *Level of Service Criteria, Signalized Intersections*

Level of Service	Average Stopped Delay (sec.)
A	0.0–10.0
B	10.1–20.0
C	20.1–35.0
D	35.1–55.0
E	55.1–80.0
F	>80.0

In accordance with MassDOT guidelines, the peak 15 minutes of data collected during the peak hour were isolated to calculate the peak-hour factors (PHFs) for each approach. The percentage of heavy vehicles was noted for each approach as well. All capacity analyses were checked against actual conditions in the field.

Field observations showed that during the evening peak hours, all approaches to the intersection were over capacity with extensive queuing and delay. The bottleneck located south of the intersection, which currently exists along Route 28, exacerbates delay along the corridor and at the study area intersection. As a result of the delay along the corridor, vehicles cannot be processed through the signal and there is significant green time wasted. During the evening peak hour, it was observed that from the back of the queue it would take vehicles approximately three cycles to make it through the intersection of Route 28 at Chickatawbut Road from the Chickatawbut Road westbound and Route 28 southbound approaches.

The saturated flow for all approaches was calibrated in the Synchro model to reflect the field observations of the intersection. Synchro reports are provided in **Appendix B**.



Table 3 summarizes the existing LOS, delay, volume to capacity ratio, and queue analysis for all signalized intersections during the morning, evening, and Saturday peak hours.

Table 3. Summary of Intersection Operations, Existing Conditions

Intersection/Movement	LOS	Delay (Seconds)	V/C Ratio	50% Queue Length (ft)	95% Queue Length (ft)
a.m. Peak Hour					
Rt 28/Chickatawbut Rd	F	98.5	-	-	-
Chickatawbut EB left/thru/right	D	46.1	0.78	149	#302
Chickatawbut WB left/thru/right	D	43.4	0.79	219	#478
Rt 28 NB left/thru | thru/right	F	155.4	1.28	~626	#1030
Rt 28 SB left*	E	79.4	0.87	30	#150
Rt 28 SB thru/right	B	16.8	0.64	228	536
p.m. Peak Hour					
Rt 28/Chickatawbut Rd	F	266.7	-	-	-
Chickatawbut EB left/thru/right	F	95.8	1.04	239	#520
Chickatawbut WB left/thru/right	F	409.2	1.78	~350	#668
Rt 28 NB left/thru | thru/right	C	33.8	0.85	179	#407
Rt 28 SB left*	B	12.2	0.19	18	58
Rt 28 SB thru/right	F	449.7	1.93	~943	#1515
Saturday Peak Hour					
Rt 28/Chickatawbut Rd	B	17.2	-	-	-
Chickatawbut EB left/thru/right	B	16.6	0.29	37	153
Chickatawbut WB left/thru/right	B	19.1	0.58	75	285
Rt 28 NB left/thru | thru/right	B	15.6	0.67	98	313
Rt 28 SB left/thru | thru/right	B	18.4	0.76	87	292

~ = Volume exceeds capacity, queue is theoretically infinite.

= 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

* = Due to high traffic volumes and difficulty finding gaps to turn left, Route 28 southbound left/thru lane was operating as a de facto left turn lane during a.m. and p.m. peak hours.

With existing volumes and existing geometry, the study area intersection operates at an overall LOS F during a.m. and p.m. peak hours, and at an overall LOS B during Saturday peak hour. During the a.m. peak hour, the Route 28 northbound approach operates at a LOS F due to the high volume of vehicles as well as difficulties for left-turning vehicles to find gaps in opposing traffic. The Route 28



southbound de facto left-turn lane operates at a LOS E during a.m. peak hour also due to difficulties finding a gap in opposing traffic. During the p.m. peak hour, all movements except for Route 28 northbound through and southbound left operate at a LOS F due to the high volume of vehicles attempting to travel through the intersection. During the Saturday peak hour, all movements operate at an acceptable LOS B.

Pedestrian and Bicycle Accommodations

Pedestrians are provided wheelchair ramps at all four corners of the intersection. Crosswalks are provided across each leg. However, there is only sidewalk connectivity to the north of the intersection on both sides of Route 28. Pedestrian demand is generated by the commercial and residential area to the north of the intersection as well as an access point to Blue Hills Reservation hiking trails located directly east of the intersection on Chickatawbut Road.

Within the study area, there are no on-road bicycle facilities provided. Shoulders are approximately one-foot wide and do not accommodate bicycle traffic.

Concrete sidewalks are located along both sides of the Route 28 northbound approach and are in fair condition. Crosswalks and handicapped ramps are generally in acceptable condition, but many appear non-ADA compliant. There are sidewalks at each of the pedestrian crossing at the intersection, but sidewalks do not continue down either approach on Chickatawbut Road, or the southbound approach of Route 28.

The area south and east of the intersection consists of trails that are used actively as part of the Blue Hills Reservation. While pedestrian accommodations, including crosswalks, pedestrian signals, and curb ramps are provided at the intersection, sidewalks do not connect trail entrances to the parking lot, forcing trail users to walk on the roadway. There is also insufficient time for pedestrians to cross during the exclusive pedestrian phase, particularly larger groups of hikers. Potential improvements identified at the RSA call for a safe sidewalk connection between the trail entrance and destinations on the west side of the intersection, and more time allotted to the “Walk” and “Flashing Don’t Walk” phases of the traffic signal.

Blue Hills Reservation

The intersection of Route 28 at Chickatawbut Road is located adjacent to the Blue Hills Reservation. Access points to Blue Hills Reservation Trails are located to the east, west, and south of the intersection. There is a parking lot located at the southeast corner of the intersection that also acts as a trailhead for the Braintree Pass Path. The Headquarters Path is located to the east with the



Pipe Line and can be accessed to the south. A Blue Hills Reservation trail map can be found in **Appendix C**.

Public Transportation

MBTA bus 240 and BAT bus 12 stop at the intersection of Route 28 and Chickatawbut Road. BAT Bus Route 12 runs from the BAT Centre in Brockton to the Ashmont MBTA station. BAT Bus 12 stops at the intersection approximately every half hour before 8:00 p.m. on weekdays. The inbound bus services Randolph Square from 6:03 a.m. – 11:59 p.m. on weekdays, 6:41 a.m. – 11:08 p.m. on Saturdays, and 11:42 a.m. – 7:02pm on Sundays. The outbound bus services Randolph Square from 5:16 a.m. – 11:01 p.m. on weekdays, 5:38 a.m. – 10:21 p.m. on Saturdays, and 10:38 a.m. – 5:58 p.m. on Sundays.

MBTA Bus Route 240 runs service between the Ashmont MBTA station and Avon Square or Randolph Commuter Rail Station. The MBTA Bus Route 240 stops at the intersection approximately every 15 minutes during peak hours and generally arrives around every half hour at other times. The inbound bus services Randolph Square from 5:10 a.m. – 12:25 a.m. on weekdays, 6 a.m. – 12:29 a.m. on Saturdays, and 7:10 a.m. – 12:23 a.m. on Sundays. The outbound bus services the intersection from 6:00 a.m. – 1:00 a.m. on weekdays, 6:40 a.m. – 1:00 a.m. on Saturdays, and 7:40 a.m. – 12:55 a.m. on Sundays.

Bus route maps and schedules are provided in **Appendix D**.

Safety Analysis

The intersection of Route 28/Chickatawbut Road is a high crash location, with an Equivalent Property Damage Only (EPDO) score of 157 from 2012-2014, including 25 injury crashes and one fatal crash. The intersection was also listed at #31 on the list of the 2012-2014 Statewide Top 200 Crash Locations. As a result, an RSA was conducted on Monday, November 14, 2016. Using the same MassDOT method, the EPDO score is 205 from 2012-2015. Since the RSA, the data has been updated to incorporate crashes from 2016-2019, totaling 96 additional crashes.

Crash rates are determined based on the number of crashes per million entering vehicles (MEV) at the intersection. The average crash rate of 1.85 crashes per MEV at this intersection is above the MassDOT District 6 average for signalized intersections of 0.70 crashes per MEV.

From 2012 to 2019, 156 crashes occurred at the intersection, including 76 crashes (or 49%) that resulted in personal injury and one fatal crash. Of the 156 crashes, 90 (or 58%) were angle crashes; 30 (or 19%) were rear-end crashes, 14 (or 9%) were sideswipe crashes, 12 (or 8%) were head-on



crashes, and eight (5%) were single-vehicle crashes. Most crashes occurred during the morning or evening peak periods. One crash involved a bicyclist. No crashes involving pedestrians were reported.

Of the 156 crashes that occurred at the intersection from 2012-2019, 84 (or 54%) of the crashes involved left-turning northbound and southbound vehicles colliding with vehicles traveling through the intersection in the opposite direction. 62 crashes involved southbound left-turning vehicles and northbound through vehicles, while 22 crashes involved northbound left-turning vehicles and southbound through vehicles. 75 of the crashes resulted in personal injury. One single-vehicle crash in 2014 involved a vehicle running off the road and hitting a traffic signal pole and resulted in a fatality.

Left-turning vehicles on Route 28 must turn against two lanes of traffic. A leading left-turn phase is given in the northbound direction at all times except in the evening peak hours of 3:00 – 6:00 p.m., when the southbound direction is given the leading left-turn phase. As the corridor is congested at peak hours, left-turning vehicles have difficulty finding gaps in opposing traffic for permissive left turns, which leads to driver frustration and dangerous maneuvers.

The crash rate worksheet and the RSA for Route 28 at Chickatawbut Road complete with the crash data and collision diagram are provided in **Appendix E. Table 4** shows the type and severity of each of the crashes recorded from 2012-2019.

Table 4. *MassDOT Crash Data Summary*

Scenario	Route 28/Chickatawbut Road
Year	
2012	17
2013	13
2014	17
2015	13
2016	29
2017	24
2018	25
2019	18
Total	156
Type	#
Angle#	90
Rear-end#	30



Scenario	Route 28/Chickatawbut Road
Sideswipe	14
Head-on#	12
Single Vehicle	8
Unknown/Other	2
Total	156
Severity	#
Property Damage	79
Personal injury	75
Fatality	1
Unknown	1
Total	156
Crash Rate²	1.21#
District Average Rate	0.70#

1. Source: Milton Police Department and Massachusetts State Police, crash data from 2012 through 2019.

2. Crash rate per million vehicles entering the intersection.

During the RSA, several safety concerns were noted in detail and are briefly summarized below:

- Safety concerns for permissive left-turning movements:
 - High vehicle speeds observed;
 - Stopping short for left-turning vehicles waiting for gaps; and
 - No pavement marking showing drivers you can turn left from inside lane.
- Solar glare obscuring visibility of signals.
- Emergency preemption either blocked by mast-arm signage or malfunctioning.
- Congestion and driver frustration.
 - Red light running; and
 - Traffic volume and queuing increased significantly over past 10 years.
- Existing sidewalk at intersection does not connect to exiting Blue Hills Reservation Trail parking.
- Pedestrian crossing times insufficient.
- No lane use signs on Route 28 approaching intersection.
- Can't easily see street name signs when approaching intersection.

The following enhancements were proposed for future consideration to help resolve the above safety concerns:

- Consider designating the left lanes on both Route 28 northbound and southbound as left-turn-only lanes and limiting left turns at the intersection to protected left turns only.



- Consider converting one Route 28 southbound receiving lane into a Route 28 northbound left-turn pocket, while designating the left travel lane on Route 28 southbound as a left-turn lane.
- Consider the safety benefits of widening the Route 28 northbound and southbound approaches to the intersection to include exclusive left-turn lanes while maintaining two through lanes.
- If left-turn lanes are implemented on the Route 28 northbound and/or southbound approaches, consider installing a flashing left arrow indication for vehicles in the left-turn lane(s).
- Consider implementing lead-lag left-turn phasing at the intersection to allow both Route 28 northbound and southbound to receive protected left turn phases.
- Replace the missing lights in the (Red) Signal Ahead sign on Route 28 northbound and consider replacing the sign with an upgraded sign with LED lights for added visibility and durability. Consider providing a (Red) Signal Ahead sign on Route 28 southbound.
- Ensure that emergency vehicle preemption is functional at the intersection. If necessary, relocate the “Left Turn Yield on Green” sign to elsewhere on the mast arm so that it does not inhibit the preemption receiver. Ensure that future signage on the mast arm does not inhibit the receiver.
- Consider equipping traffic signal indications with retroreflective backplates.
- Consider restricting left turns onto Chickatawbut Road, either entirely or during peak hours only, to reduce cut-through traffic and the number of crashes involving left turns onto Chickatawbut Road.
- Check yellow and all-red clearance intervals at the intersection to ensure that motorists have sufficient time to clear the intersection.
- Consider placing speed feedback signs on Route 28 northbound and southbound to reduce speeding along the roadway.
- Consider providing a sidewalk connecting the southwest corner of the intersection to the existing parking area and trail entrance.
- Consider allotting more time to the “Walk” and “Flashing Don’t Walk” phases of the traffic. Consider a “Flashing Don’t Walk” phase of at least 19 seconds, which accommodates pedestrians walking at 3.0 feet per second.
- Consider striping high-visibility continental crosswalks.
- Consider providing countdown pedestrian indications at the intersection.
- Consider adding video detection sensors to dynamically increase the length of the “Walk” phase when needed for larger groups.



- Consider placing lane use signage in advance of the intersection on Route 28 northbound and southbound and on the mast arms at the intersection. Consider supplementing with pavement markings approaching the intersection.
- Consider placing street name signage for Randolph Avenue and Chickatawbut Road on the mast arms.

Future Conditions

Future traffic volumes were estimated and analyzed to determine the number of travel lanes and lane usage required for the intersection Route 28 at Chickatawbut Road. Using these estimated volumes, two conditions were analyzed:

- No-build – Future traffic volumes with the existing geometry; and
- Build – Future traffic volumes under proposed intersection improvements.

These future conditions are discussed in more detail in the sections below.

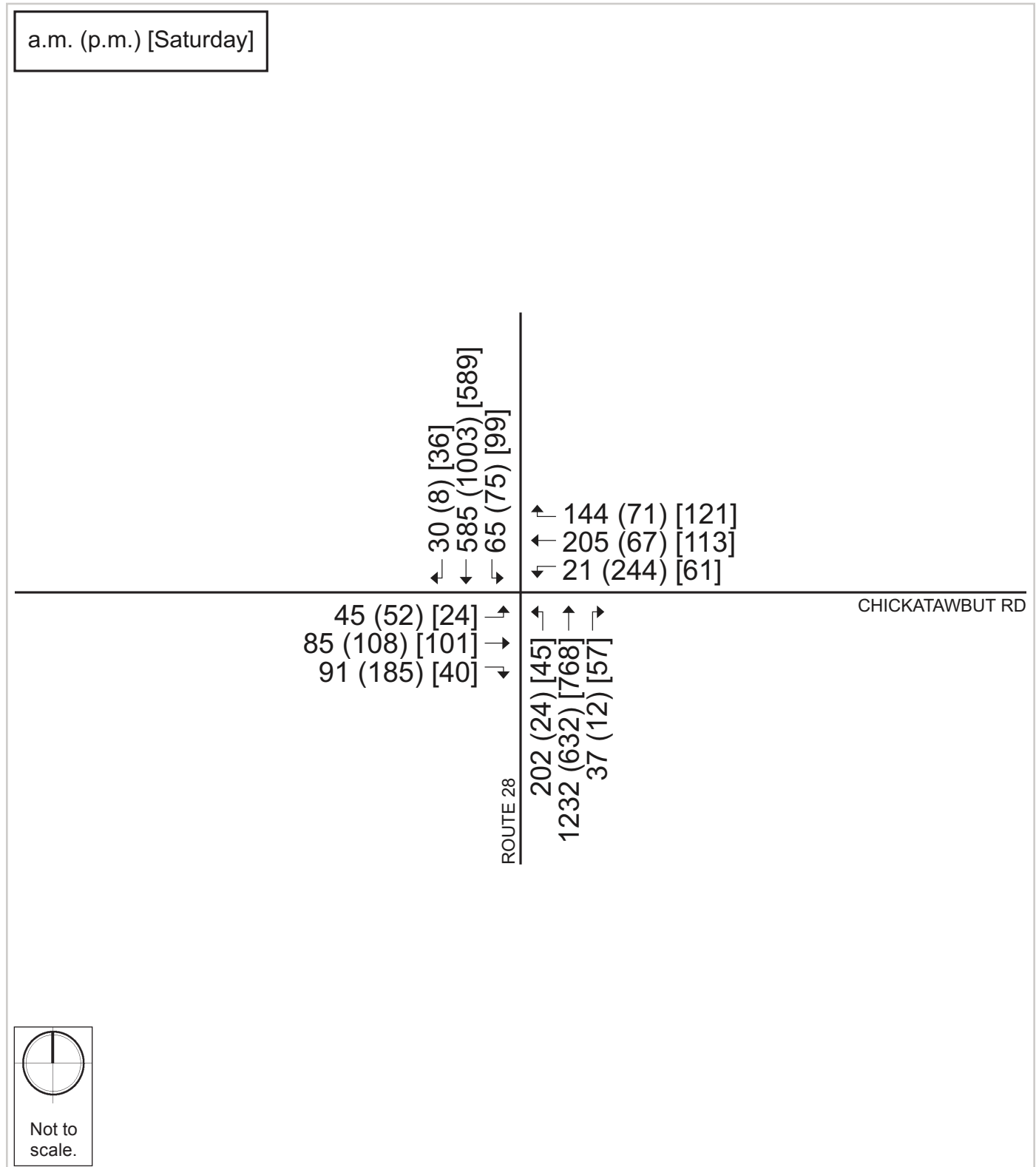
No-build Analysis

ESTIMATION OF FUTURE VOLUMES

The future (2030) traffic volumes are based on a 10-year design horizon, as per MassDOT guidance. Future volumes for the 2030 design year were established by increasing the Existing (2020) Condition traffic volumes by a background growth rate of 2.3%. The growth rate was supplied by CTPS based on their future traffic demand model for the area. The future peak-hour traffic volumes are shown in **Figure 13**.



Figure 13. *Future (2027) Condition Traffic Volumes, a.m., p.m., and Saturday Peak Hours*





INTERSECTION OPERATIONS ANALYSIS

An analysis was performed to evaluate the effect of accommodating estimated 2030 future traffic volumes with the existing intersection geometry, as shown in **Table 5**. The future traffic growth is expected to increase the delay, v/c ratio, and queue lengths of the No-build Condition due to the higher demand on the intersection with no proposed improvements. With future volumes and existing geometry, the overall intersection operates at an overall LOS F during a.m. and p.m. peak hours, and at an overall LOS B during Saturday peak hour.

During the a.m. peak hour, the Route 28 northbound approach continues to operate at a LOS F due to the high volume of vehicles as well as difficulties for left-turning vehicles to find gaps in opposing traffic, although the delays increase. The Route 28 southbound de facto left-turn lane worsens from LOS E to LOS F during a.m. peak hour due to difficulties finding a gap in the even higher volume of opposing traffic, adding 36 seconds to the delay.

During the p.m. peak hour, all movements except for Route 28 northbound through and southbound left continue to operate at a LOS F due to the high volume of vehicles attempting to travel through the intersection. While the delay increases for all approaches, the Chickatawbut westbound approach delay notably increases by 39 seconds.

During the Saturday peak hour, all movements continue to operate at an acceptable LOS B with approximately the same delays as existing conditions.

Table 5. Summary of Intersection Operations, No-build Conditions

Intersection/Movement	LOS	Delay (Seconds)	V/C Ratio	50% Queue Length (feet)	95% Queue Length (feet)
a.m. Peak Hour					
Route 28/Chickatawbut Rd	F	110.6	-	-	-
Chickatawbut EB left/thru/right	D	42.9	0.74	144	#313
Chickatawbut WB left/thru/right	D	44.9	0.80	225	#494
Route 28 NB left/thru | thru/right	F	175.8	1.33	~658	#1068
Route 28 SB left*	F	118.7	0.97	35	#114
Route 28 SB thru/right	B	17.2	0.65	235	555
p.m. Peak Hour					
Route 28/Chickatawbut Rd	F	275.4	-	-	-
Chickatawbut EB left/thru/right	F	94.5	1.03	229	#544



Intersection/Movement	LOS	Delay (Seconds)	V/C Ratio	50% Queue Length (feet)	95% Queue Length (feet)
Chickatawbut WB left/thru/right	F	459.6	1.90	~371	#694
Route 28 NB left/thru | thru/right	C	34.4	0.86	183	#434
Route 28 SB left*	B	11.7	0.20	18	58
Route 28 SB thru/right	F	447.3	1.93	~974	#1554
Saturday Peak Hour					
Route 28/Chickatawbut Rd	B	16.9	-	-	-
Chickatawbut EB left/thru/right	B	16.7	0.30	40	157
Chickatawbut WB left/thru/right	B	19.4	0.58	81	292
Route 28 NB left/thru | thru/right	B	15.2	0.67	106	317
Route 28 SB left/thru | thru/right	B	18.0	0.75	95	298

~ = Volume exceeds capacity, queue is theoretically infinite.

= 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

* = Due to high traffic volumes and difficulty finding gaps to turn left, Route 28 southbound left/thru lane was operating as a de facto left turn lane during a.m. and p.m. peak hours.

Build Conditions

This section discusses proposed geometric changes and alternative designs considered for Route 28 at Chickatawbut Road. Benefits and considerations of each and the methodology for determining a preferred alternative are discussed.

The proposed intersection improvements for Route 28 at Chickatawbut Road aim to address the safety concerns discussed under the Existing Conditions section of this memorandum.

Improvements are also proposed to help reduce congestion experienced at the intersection; however, it should be noted that the corridor-wide bottleneck and congestion experienced will not be resolved through intersection improvements at Route 28 and Chickatawbut Road and will still impact the operations of the intersection if traffic flow along Route 28 is impeded from upstream or downstream impacts.

Four different design alternatives were considered during the project development stage. The first three alternatives analyzed updates to the existing signalized intersection and the fourth alternative analyzed a modern multi-lane roundabout.



Signalized Intersection: Alternative 1

Alternative 1 proposed exclusive left-turn lanes on the Route 28 northbound and southbound approaches by merging the two southbound through lanes into one lane before the intersection (instead of shortly after the intersection). Merging the two Route 28 southbound through lanes into one lane along the intersection approach allows there to be only one receiving lane. The extra space from the second receiving lane may now be used for a northbound left-turn pocket with approximately 230 feet of storage. The Route 28 southbound left-turn lane will have approximately 100 feet of storage.

Providing exclusive left turn lanes increases the capacity for left-turning vehicles on Route 28 and allows them to receive protected-only phasing. While this formally decreases the capacity for the southbound through movement to one travel lane, as noted in the summaries of intersection operations, the southbound shared left-turn/through lane was already operating as a de facto left turn lane during weekday a.m. and p.m. peak hours. This is because under the existing phasing and lane configuration, the vehicles waiting to turn left have difficulties finding gaps in the fast-moving, on-coming traffic and block the through vehicles from proceeding through the intersection.

Providing exclusive left-turn lanes on Route 28 increases the capacity of the northbound through movement by allowing protect-eliminating delay from left-turning vehicles blocking through vehicles as they wait to make a permitted turn across opposing traffic.

Additionally, providing exclusive left-turn lanes along the northbound and southbound approaches allows for protected-only phasing of the left-turns. This phasing will increase safety for left-turning and through vehicles and eliminate the potential for angle collisions along these approaches. Crashes involving left-turning vehicles along Route 28 currently account for 68% of the overall intersection crashes recorded from 2012 to 2015.

While traffic operations are expected to improve above No-build Conditions, the Route 28 northbound and southbound queue are still expected to be long and will most likely block vehicles access to enter the left-turn storage lane until they are closer to the intersection.

Signalized Intersection: Alternative 2

Alternative 2 provides the same design along Route 28 as in Alternative 1 but the Route 28 northbound left-turn lane is proposed to have approximately 275 feet of storage and a left-turn lane with approximately 175 feet of storage is proposed to be added along the Chickatawbut Road westbound approach, which experiences high left-turn demand during the evening peak hours.



The Chickatawbut Road approach will no longer fit within the existing roadway footprint. The roadway and adjacent parkland are all property of DCR. The new left-turn lane will require a change in land-use as it is expected to take approximately 3,400 square feet of DCR parkland.

While traffic operations are expected to improve above No-build Conditions, the Route 28 northbound and southbound queue are still expected to be long and will most likely block vehicles access to enter the left-turn storage lane until they are closer to the intersection.

Signalized Intersection: Alternative 3

Alternative 3 maintains two through lanes along the Route 28 northbound and southbound approaches and proposes to widen the roadway to add exclusive left-turn lanes on both approaches. The Route 28 northbound left-turn lane will have approximately 275 feet of storage and the southbound left-turn lane will have 100 feet of storage. As in Alternative 2, a left-turn lane with approximately 175 feet of storage will be provided on the Chickatawbut Road westbound approach.

The addition of exclusive left-turn lanes, while maintaining two through lanes on Route 28, will help increase the capacity for these approaches. The exclusive left-turn lanes will eliminate the delay on the through lanes creating by left-turning vehicles waiting for gaps and will allow for protected-only phasing.

As noted in Alternative 2, the exclusive left turn lane on the Chickatawbut Road westbound approach is expected to increase capacity and safety by providing a protected left-turn phase and to help reduce the delay from left-turning vehicles blocking the through traffic on that approach.

In addition, the two through lanes along Route 28 are expected to have improved through operations over Alternatives 1 and 2 which will help driver frustration and congestion. The shorter queue lengths along Route 28 southbound will help vehicles better enter the left-turn storage lane, which is more likely to be blocking by queuing vehicles under Alternatives 1 and 2.

The proposed roadway widening along Route 28 will have private property Right of Way (ROW) impacts of approximately 1,700 square feet and approximately 2,400 square feet of ROW impacts to DCR parkland. The proposed changes to Chickatawbut Road will require land-use change for approximately 5,100 square feet of DCR parkland.

Alternative 4: Roundabout

In addition to the three signalized intersection alternatives, a roundabout was also analyzed to determine feasibility. For this design, the roundabout would require two circulating lanes to



accommodate the two travel lanes along Route 28. Both Chickatawbut Road approaches would remain one-lane in each direction. A shared-use path would be provided along both sides of the roundabout to provide bicycle and pedestrian connections.

Alternative Comparison

The traffic operations comparison performed in 2018 for the alternatives considered may be found in **Appendix F**. A predictive safety analysis was performed in September 2018 and summarized in a technical memorandum *Complete Streets Task 1 – Highway Safety Manual Predictive Methodology – Route 28 and Chickatawbut Intersection in Milton*.

The safety analysis of the alternatives considered showed that the roundabout had the highest amount of reduction in crashes when compared to No-build Conditions. In addition, the roundabout was shown to have a significantly higher reduction (73% reduction for the roundabout versus 44% reduction for the signal) in fatal and injury crashes. As the main goal and priority of the improvements project is safety, MassDOT selected the roundabout as the preferred alternative due to the predicted safety benefits.

In 2018 and 2019, meetings were held with the Town of Milton, MassDOT, and HSH to coordinate the proposed design and the Town was in favor of the roundabout as well. In 2019, a public meeting was held to introduce the considered alternatives to the public and announce the preferred roundabout alternative. In 2019, the Project team presented to the Milton Select Board and received agreement to move forward with the roundabout as the selected alternative.

Preferred Alternative

MassDOT's top priority at this intersection is to improve safety and lessen the potential for severe crashes. As discussed in the sections above, the two-lane roundabout was selected as the preferred alternative by MassDOT as it provides the safest operation through intersection while improving traffic operations. This section discusses the proposed roundabout design, as shown in **Figure 14**.

The proposed roundabout design maintains two lanes in each direction along Route 28. The proposed roundabout will maintain the two approach lanes along Route 28 and single lane approaches along Chickatawbut Road, as under the existing conditions. The proposed roundabout will have an inscribed diameter of 141' and circulating lanes that are 15 feet wide. Approach lanes to the roundabout are proposed to 12 feet wide. The proposed roundabout will be designed to a 25-mph design speed and will eliminate the potential for head on and angled collisions.



A new, 10-foot-wide shared use path will be provided will both sides of Route 28 and Chickatawbut Road to provide safety pedestrian and bicycle connections through the intersection. The additional of the shared-use path along the proposed roundabout geometry will require ROW and parkland impacts. Rectangular rapid flashing beacons (RRFBs) are proposed at crossings across Route 28 to reinforce driver yielding behavior. To achieve acceptable grades approaching the roundabout, significant cut/fill will be required along Route 28.

BUILD TRAFFIC OPERATIONS

Future traffic operations were analyzed in SIDRA for the morning, evening, and Saturday peak hour and are summarized in **Table 6**.



Figure 14. *Proposed Alternative*

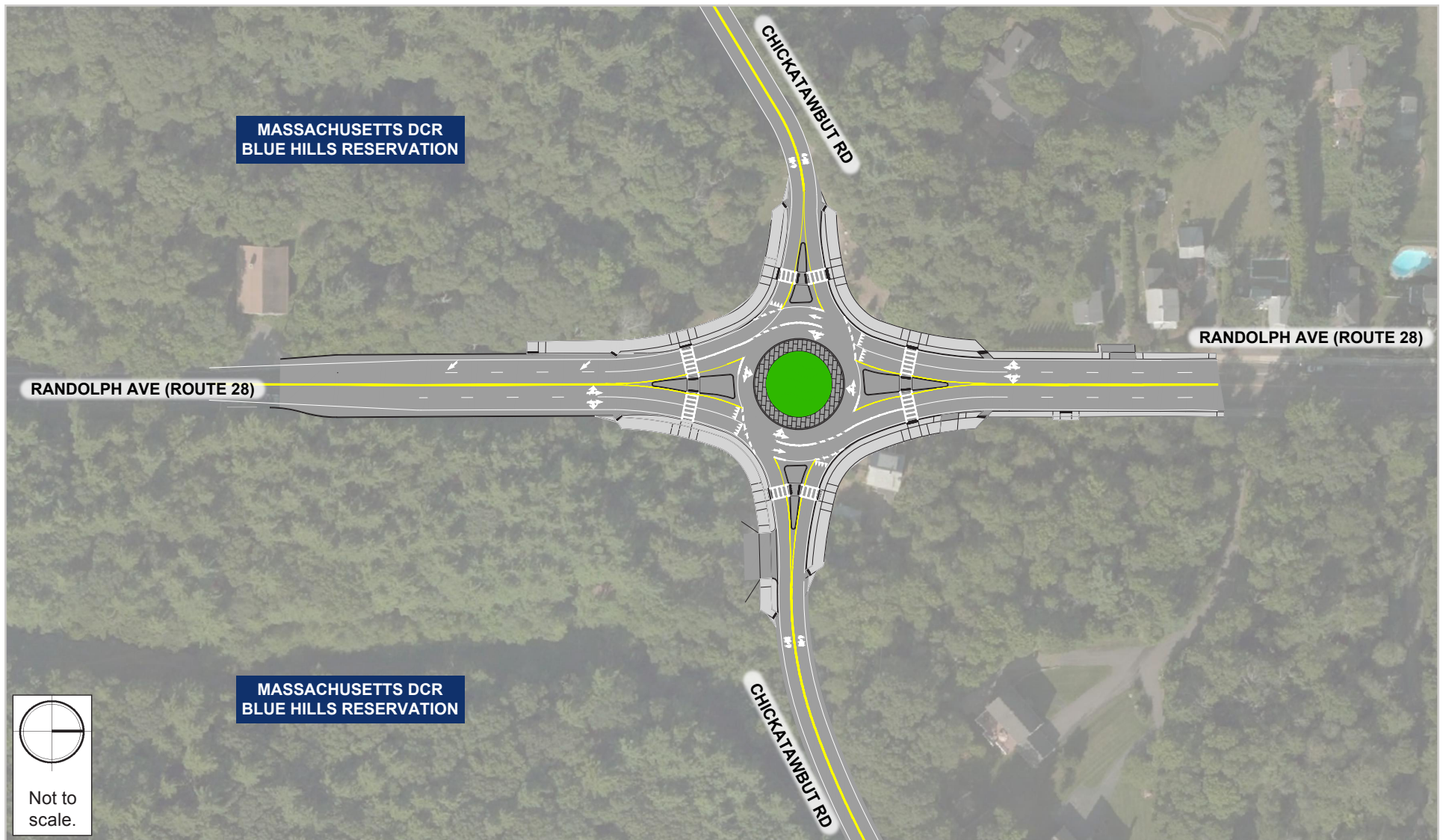




Table 6. Build (2030) Condition, Traffic Operations Summary

Intersection/Movement	LOS	Delay (Seconds)	V/C Ratio	50% Queue (ft)	95% Queue (ft)
a.m. Peak Hour					
Route 28/Chickatawbut Rd	F	58.0	-	-	-
Chickatawbut EB approach	A	9.7	0.35	17	42
Chickatawbut WB approach	F	353.9	1.67	587	1460
Route 28 NB approach	B	14.0	0.71	117	292
Route 28 SB approach	A	8.5	0.47	32	80
p.m. Peak Hour					
Route 28/Chickatawbut Rd	D	30.0	-	-	-
Chickatawbut EB approach	F	137.1	1.16	266	662
Chickatawbut WB approach	B	14.3	0.56	41	103
Route 28 NB approach	A	6.3	0.31	18	44
Route 28 SB approach	B	13.8	0.73	122	304
Saturday Peak Hour					
Route 28/Chickatawbut Rd	A	8.1	-	-	-
Chickatawbut EB approach	A	8.3	0.25	11	26
Chickatawbut WB approach	B	13.8	0.50	30	75
Route 28 NB approach	A	7.2	0.39	23	58
Route 28 SB approach	A	6.8	0.42	27	67

Build Conditions are shown to improve traffic operations on Route 28 from the No-build Conditions. During the a.m. peak hour under No-build Conditions, both the Route 28 northbound and southbound approaches had a LOS F. Under Build conditions, the LOS of the approaches improved to B and A, respectively. Operations also improved from No-build to Build Conditions during the p.m. peak hour, the Route 28 northbound approach improved from LOS C to A and the southbound approach from LOS F to B. During the Saturday peak hour, both Route 28 northbound and southbound approaches improved from LOS B to A. The Chickatawbut Road eastbound approach improved traffic operations during the a.m. peak hour from LOS D under No-build Conditions to LOS A for Build Conditions. The LOS for the eastbound approach remained the same under each condition for p.m. and Saturday peak hours. The Chickatawbut Road westbound approach traffic operations improved from LOS F to LOS B for p.m. peak hour and from LOS B to LOS A for Saturday peak hour. The westbound approach traffic operations worsened for the a.m. peak hour from LOS D to LOS F.



While the Chickatawbut Road westbound approach during the a.m. peak hour and the eastbound approach during the p.m. peak hour are shown to worsen from No-build Conditions, additional approach lanes are not proposed. Chickatawbut Road is a DCR-owned roadway which runs through the Blue Hills Conservation and serves multiple sensitive species and parkland. For these reasons, the proposed project goals are to avoid encouraging additional vehicular traffic along Chickatawbut Road, which providing additional approach lanes could do. In addition, while there is access from Forest Street, which serves a nearby neighborhood, along the eastbound approach, the majority of the traffic counted along Chickatawbut Road is believed to be cut-through traffic which has increased over recent years.

Traffic Management Plan

The reconstruction of the Route 28 (Randolph Avenue) and Chickatawbut Road intersection will involve the installation of a roundabout including with pedestrian improvements, bicycle improvements, and an upgraded closed drainage system. Staged construction is proposed to maintain travel through the project at all times during construction. Road closures and detours are not proposed. Lane closures will likely be necessary to maintain productivity and not extend the project duration. It is anticipated that whenever possible, work will be scheduled to occur outside of the peak traffic periods to minimize impacts. All temporary traffic control measures will conform to the 2009 MUTCD and Massachusetts Amendments as well as the MassDOT Traffic Management Plans and Detail Drawings.

Conclusion

The intersection of Route 28 at Chickatawbut Road is a top crash location within Massachusetts and experiences a high number of injury crashes from angle collisions. The intersection improvements project aims to reduce the likelihood of fatal and injury crashes at the intersection. An alternative analysis was explored for the study area intersection which evaluated different signalized and roundabout options. After coordination, MassDOT selected the roundabout alternative as the preferred design for the intersection as it is predicted to provide the greatest improvement to intersection and a significantly larger reduction in fatal and injury crash likelihood than the signalized alternatives. The proposed roundabout will maintain the two lanes of travel along Route 28 and the single approach lanes along Chickatawbut Road. A shared-use path will be provided along all sides of the roundabout which will have ROW impacts and parkland impacts.



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Appendix A

Traffic Count Data

Client: Jessica Lizza
 Project #: 150_045_HSH_Milton
 BTD #: Location 1
 Location: Milton, MA
 Street 1: Randolph Avenue (Route 28)
 Street 2: Chickatawbut Road
 Count Date: 12/14/2017
 Day of Week: Thursday
 Weather: Partly Cloudy w/Light Snow, 40°F

TOTAL (CARS & TRUCKS)

Randolph Avenue (Route 28)					Randolph Avenue (Route 28)				Chickatawbut Road				Chickatawbut Road			
Northbound					Southbound				Eastbound				Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
7:00 AM	0	30	330	2	0	7	97	5	0	19	12	10	0	2	22	43
7:15 AM	0	44	316	3	0	11	106	6	0	17	14	13	0	2	31	50
7:30 AM	0	49	331	6	0	13	129	8	0	16	23	27	0	4	47	46
7:45 AM	0	47	304	9	0	15	141	7	0	12	28	22	0	3	51	37
8:00 AM	0	58	281	10	0	17	151	8	0	7	21	16	0	7	55	33
8:15 AM	0	42	278	11	0	18	147	6	0	9	10	23	0	6	46	24
8:30 AM	0	39	315	7	0	17	126	7	0	10	14	27	0	5	37	23
8:45 AM	0	31	303	9	0	16	131	5	0	8	9	17	0	4	24	22

Randolph Avenue (Route 28) Northbound					Randolph Avenue (Route 28) Southbound				Chickatawbut Road Eastbound				Chickatawbut Road Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
4:00 PM	0	5	296	9	0	14	183	3	0	6	28	54	0	38	23	22
4:15 PM	0	8	320	18	0	15	175	4	0	8	34	57	0	40	27	24
4:30 PM	0	7	280	26	0	17	158	5	0	7	26	59	0	42	25	25
4:45 PM	0	5	340	29	0	16	167	4	0	8	28	67	0	41	24	23
5:00 PM	0	4	296	30	0	18	169	5	0	6	25	69	0	37	25	22
5:15 PM	0	3	297	18	0	15	165	3	0	7	19	65	0	32	22	21
5:30 PM	0	5	284	34	0	16	169	4	0	5	14	58	0	31	27	20
5:45 PM	0	3	268	31	0	14	174	3	0	6	12	67	0	29	21	19

AM PEAK HOUR 7:30 AM to 8:30 AM PHF HV %	Randolph Avenue (Route 28) Northbound				Randolph Avenue (Route 28) Southbound				Chickatawbut Road Eastbound				Chickatawbut Road Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	196	1194	36	0	63	568	29	0	44	82	88	0	20	199	140
	0.92				0.94				0.81				0.93			
	0.0%	0.0%	1.3%	0.0%	0.0%	0.0%	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%

PM PEAK HOUR 4:15 PM to 5:15 PM PHF HV %	Randolph Avenue (Route 28) Northbound				Randolph Avenue (Route 28) Southbound				Chickatawbut Road Eastbound				Chickatawbut Road Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	24	1236	103	0	66	669	18	0	29	113	252	0	160	101	94
	0.91				0.97				0.96				0.96			
	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%

Client: Jessica Lizza
 Project #: 150_045_HSH_Milton
 BTD #: Location 1
 Location: Milton, MA
 Street 1: Randolph Avenue (Route 28)
 Street 2: Chickatawbut Road
 Count Date: 12/14/2017
 Day of Week: Thursday
 Weather: Partly Cloudy w/Light Snow, 40°F

BOSTON

TRAFFIC DATA

PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

TRUCKS

Randolph Avenue (Route 28) Northbound					Randolph Avenue (Route 28) Southbound				Chickatawbut Road Eastbound				Chickatawbut Road Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
7:00 AM	0	0	4	0	0	0	2	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	6	0	0	0	2	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	4	0	0	0	5	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	6	0	0	0	2	0	0	0	0	0	0	0	1	0
8:00 AM	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	2	0	0	0	2	0	0	0	0	1	0	0	0	0
8:45 AM	0	0	3	0	0	0	1	0	0	0	0	0	0	0	0	0

Randolph Avenue (Route 28)					Randolph Avenue (Route 28)				Chickatawbut Road				Chickatawbut Road			
Northbound					Southbound				Eastbound				Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
4:00 PM	0	0	1	0	0	0	3	0	0	0	0	0	0	1	0	0
4:15 PM	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0
4:30 PM	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0

AM PEAK HOUR 7:00 AM to 8:00 AM <i>PHF</i>	Randolph Avenue (Route 28) Northbound				Randolph Avenue (Route 28) Southbound				Chickatawbut Road Eastbound				Chickatawbut Road Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	0	20	0	0	0	11	0	0	0	0	0	0	0	1	0
<i>PHF</i>	0.83				0.55				0.00				0.25			

PM PEAK HOUR 4:00 PM to 5:00 PM <i>PHF</i>	Randolph Avenue (Route 28) Northbound				Randolph Avenue (Route 28) Southbound				Chickatawbut Road Eastbound				Chickatawbut Road Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	0	3	0	0	0	7	0	0	0	0	1	0	1	0	0
<i>PHF</i>	0.75				0.58				0.25				0.25			

Client: Jessica Lizza
 Project #: 150_045_HSH_Milton
 BTM #: Location 1
 Location: Milton, MA
 Street 1: Randolph Avenue (Route 28)
 Street 2: Chickatawbut Road
 Count Date: 12/14/2017
 Day of Week: Thursday
 Weather: Partly Cloudy w/Light Snow, 40°F

PEDESTRIANS & BICYCLES

Randolph Avenue (Route 28) Northbound					Randolph Avenue (Route 28) Southbound					Chickatawbut Road Eastbound					Chickatawbut Road Westbound				
Start Time	Left	Thru	Right	PED		Left	Thru	Right	PED		Left	Thru	Right	PED		Left	Thru	Right	PED
7:00 AM	0	0	0	1		0	0	0	0		0	0	0	0		0	0	0	0
7:15 AM	0	0	0	0		0	0	0	1		0	0	0	0		0	0	0	0
7:30 AM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0
7:45 AM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0
8:00 AM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0
8:15 AM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	3
8:30 AM	0	0	0	0		0	0	0	2		0	0	0	0		0	0	0	0
8:45 AM	0	0	0	3		0	0	0	1		0	0	0	3		0	0	0	3

Randolph Avenue (Route 28) Northbound					Randolph Avenue (Route 28) Southbound					Chickatawbut Road Eastbound					Chickatawbut Road Westbound				
Start Time	Left	Thru	Right	PED		Left	Thru	Right	PED		Left	Thru	Right	PED		Left	Thru	Right	PED
4:00 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0
4:15 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0
4:30 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0
4:45 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0
5:00 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0
5:15 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0
5:30 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0
5:45 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0

AM PEAK HOUR ¹ 7:30 AM to 8:30 AM	Randolph Avenue (Route 28) Northbound					Randolph Avenue (Route 28) Southbound					Chickatawbut Road Eastbound					Chickatawbut Road Westbound				
	Left	Thru	Right	PED		Left	Thru	Right	PED		Left	Thru	Right	PED		Left	Thru	Right	PED	
	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	3	

PM PEAK HOUR ¹ 4:15 PM to 5:15 PM	Randolph Avenue (Route 28) Northbound					Randolph Avenue (Route 28) Southbound					Chickatawbut Road Eastbound					Chickatawbut Road Westbound				
	Left	Thru	Right	PED		Left	Thru	Right	PED		Left	Thru	Right	PED		Left	Thru	Right	PED	
	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	

¹ Peak hours corresponds to vehicular peak hours.

Client: Jessica Lizza
 Project #: 150_045_HSH_Milton
 BTD #: Location 1
 Location: Milton, MA
 Street 1: Randolph Avenue (Route 28)
 Street 2: Chickatawbut Road
 Count Date: 12/16/2017
 Day of Week: Saturday
 Weather: Sunny, 40°F

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TRAFFIC DATA
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TOTAL (CARS & TRUCKS)

Randolph Avenue (Route 28)					Randolph Avenue (Route 28)				Chickatawbut Road				Chickatawbut Road			
	Northbound				Southbound					Eastbound			Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
10:00 AM	0	7	154	3	0	19	126	6	0	5	8	7	0	4	10	16
10:15 AM	0	8	156	4	0	21	132	6	0	6	12	9	0	3	11	15
10:30 AM	0	6	151	4	0	24	134	8	0	5	16	11	0	6	12	18
10:45 AM	0	7	149	5	0	27	131	7	0	7	20	13	0	8	13	21
11:00 AM	0	5	146	4	0	30	132	9	0	5	24	14	0	10	15	23
11:15 AM	0	6	152	6	0	32	127	8	0	7	23	13	0	12	16	25
11:30 AM	0	7	153	7	0	31	131	9	0	6	21	12	0	13	19	26
11:45 AM	0	8	164	8	0	29	129	7	0	5	20	10	0	11	21	24
12:00 PM	0	9	169	8	0	31	130	8	0	6	19	8	0	12	24	27
12:15 PM	0	11	172	10	0	30	125	6	0	8	21	9	0	11	27	26
12:30 PM	0	10	175	11	0	29	134	7	0	5	22	10	0	12	28	29
12:45 PM	0	11	185	13	0	26	137	8	0	6	24	11	0	13	26	28
1:00 PM	0	12	187	15	0	25	144	9	0	5	26	9	0	15	29	30
1:15 AM	0	10	189	14	0	23	146	10	0	6	25	10	0	16	28	31
1:30 AM	0	11	184	13	0	22	144	8	0	6	23	9	0	15	27	28
1:45 AM	0	10	181	12	0	21	141	9	0	7	24	8	0	14	25	29

SAT PEAK HOUR 12:45 PM to 1:45 AM <i>PHF</i> <i>HV %</i>	Randolph Avenue (Route 28) Northbound				Randolph Avenue (Route 28) Southbound				Chickatawbut Road Eastbound				Chickatawbut Road Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	44	745	55	0	96	571	35	0	23	98	39	0	59	110	117
	0.99				0.98				0.98				0.95			
	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Client: Jessica Lizza
 Project #: 150_045_HSH_Milton
 BTD #: Location 1
 Location: Milton, MA
 Street 1: Randolph Avenue (Route 28)
 Street 2: Chickatawbut Road
 Count Date: 12/16/2017
 Day of Week: Saturday
 Weather: Sunny, 40°F

TRUCKS

Randolph Avenue (Route 28) Northbound				Randolph Avenue (Route 28) Southbound				Chickatawbut Road Eastbound				Chickatawbut Road Westbound				
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
10:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1
12:00 PM	0	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0
12:15 PM	0	1	0	0	0	0	3	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
1:30 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
1:45 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0

SAT PEAK HOUR 11:30 AM to 12:30 PM <i>PHF</i>	Randolph Avenue (Route 28) Northbound				Randolph Avenue (Route 28) Southbound				Chickatawbut Road Eastbound				Chickatawbut Road Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	2	3	0	0	0	7	0	0	0	0	0	0	0	0	1
	0.63				0.58				0.00				0.25			

Client: Jessica Lizza
 Project #: 150_045_HSH_Milton
 LTD #: Location 1
 Location: Milton, MA
 Street 1: Randolph Avenue (Route 28)
 Street 2: Chickatawbut Road
 Count Date: 12/16/2017
 Day of Week: Saturday
 Weather: Sunny, 40°F

PEDESTRIANS & BICYCLES

Randolph Avenue (Route 28)					Randolph Avenue (Route 28)					Chickatawbut Road					Chickatawbut Road					
Northbound					Southbound					Eastbound					Westbound					
Start Time	Left	Thru	Right	PED		Left	Thru	Right	PED		Left	Thru	Right	PED		Left	Thru	Right	PED	
10:00 AM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	
10:15 AM	0	0	0	0		0	0	0	0		0	1	0	0		0	0	0	0	
10:30 AM	0	0	0	0		0	0	0	0		0	0	0	0		0	1	0	0	
10:45 AM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	
11:00 AM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	
11:15 AM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	
11:30 AM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	
11:45 AM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	
12:00 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	
12:15 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	
12:30 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	
12:45 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	
1:00 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	
1:15 AM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	
1:30 AM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	
1:45 AM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	

SAT PEAK HOUR ¹ 12:45 PM to 1:45 AM	Randolph Avenue (Route 28) Northbound					Randolph Avenue (Route 28) Southbound					Chickatawbut Road Eastbound					Chickatawbut Road Westbound				
	Left	Thru	Right	PED		Left	Thru	Right	PED		Left	Thru	Right	PED		Left	Thru	Right	PED	
	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	

¹ Peak hours corresponds to vehicular peak hours.

Client: Jessica Lizza
 Project #: 150_045_HSH
 BTD #: Location 1
 Location: Milton, MA
 Street 1: Randolph Avenue (Route 28)
 Street 2: Chickatawbut Road
 Count Date: 1/31/2019
 Day of Week: Thursday
 Weather: Mostly Sunny, 10°F



PASSENGER CARS & HEAVY VEHICLES COMBINED

Randolph Avenue (Route 28) Northbound					Randolph Avenue (Route 28) Southbound				Chickatawbut Road Eastbound				Chickatawbut Road Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
4:00 PM	0	4	139	3	0	18	242	2	0	6	24	34	0	62	18	12
4:15 PM	0	5	148	4	0	22	246	1	0	7	25	43	0	65	19	13
4:30 PM	0	8	154	3	0	19	249	2	0	5	24	50	0	61	17	15
4:45 PM	0	6	156	3	0	15	248	2	0	11	26	46	0	63	13	18
5:00 PM	0	4	158	2	0	17	235	3	0	28	30	41	0	49	16	23
5:15 PM	0	6	173	5	0	20	217	1	0	15	28	43	0	35	18	29
5:30 PM	0	9	184	6	0	14	219	2	0	10	25	42	0	33	20	27
5:45 PM	0	7	177	4	0	10	221	1	0	9	23	40	0	32	19	24

PM PEAK HOUR 4:15 PM to 5:15 PM	Randolph Avenue (Route 28) Northbound				Randolph Avenue (Route 28) Southbound				Chickatawbut Road Eastbound				Chickatawbut Road Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	23	616	12	0	73	978	8	0	51	105	180	0	238	65	69
PHF	0.99				0.98				0.85				0.96			
HV %	0.0%	0.0%	1.8%	0.0%	0.0%	0.0%	2.1%	0.0%	0.0%	0.0%	0.0%	2.2%	0.0%	0.4%	0.0%	0.0%

Client: Jessica Lizza
 Project #: 150_045_HSH
 BTM #: Location 1
 Location: Milton, MA
 Street 1: Randolph Avenue (Route 28)
 Street 2: Chickatawbut Road
 Count Date: 1/31/2019
 Day of Week: Thursday
 Weather: Mostly Sunny, 10°F

BOSTON

TRAFFIC DATA

PO BOX 1723, Framingham, MA 01701
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HEAVY VEHICLES

Randolph Avenue (Route 28) Northbound					Randolph Avenue (Route 28) Southbound				Chickatawbut Road Eastbound				Chickatawbut Road Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
4:00 PM	0	0	5	0	0	0	3	0	0	0	0	3	0	0	0	0
4:15 PM	0	0	4	0	0	0	5	0	0	0	0	2	0	1	0	0
4:30 PM	0	0	3	0	0	0	7	0	0	0	0	1	0	0	0	0
4:45 PM	0	0	2	0	0	0	5	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	2	0	0	0	4	0	0	0	0	1	0	0	0	0
5:15 PM	0	0	3	0	0	0	3	0	0	0	0	1	0	0	0	0
5:30 PM	0	1	2	0	0	0	4	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	2	0	0	0	3	0	0	0	0	1	0	0	0	0

PM PEAK HOUR 4:00 PM to 5:00 PM <i>PHF</i>	Randolph Avenue (Route 28) Northbound				Randolph Avenue (Route 28) Southbound				Chickatawbut Road Eastbound				Chickatawbut Road Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	0	14	0	0	0	20	0	0	0	0	6	0	1	0	0
	0.70				0.71				0.50				0.25			

Client: Jessica Lizza
 Project #: 150_045_HSH
 BTD #: Location 1
 Location: Milton, MA
 Street 1: Randolph Avenue (Route 28)
 Street 2: Chickatawbut Road
 Count Date: 1/31/2019
 Day of Week: Thursday
 Weather: Mostly Sunny, 10°F



PEDESTRIANS & BICYCLES

Randolph Avenue (Route 28) Northbound					Randolph Avenue (Route 28) Southbound					Chickatawbut Road Eastbound					Chickatawbut Road Westbound					
Start Time	Left	Thru	Right	PED		Left	Thru	Right	PED		Left	Thru	Right	PED		Left	Thru	Right	PED	
4:00 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	
4:15 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	
4:30 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	
4:45 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	
5:00 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	
5:15 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	
5:30 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	
5:45 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	

PM PEAK HOUR ¹ 4:15 PM to 5:15 PM	Randolph Avenue (Route 28) Northbound					Randolph Avenue (Route 28) Southbound					Chickatawbut Road Eastbound					Chickatawbut Road Westbound				
	Left	Thru	Right	PED		Left	Thru	Right	PED		Left	Thru	Right	PED		Left	Thru	Right	PED	
	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	

¹ Peak hours corresponds to vehicular peak hours.

Classification Report

Job # 150_045_HSH_Loc A
Area Milton, MA
Location Randolph Avenue (Route 28), north of Chickatawbut Road
Direction Northbound
Monday, December 11, 2017

BOSTON
TRAFFIC DATA
PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
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Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0400	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0500	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0600	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0700	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0900	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1200	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1300	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1400	592	4	499	42	11	3	14	12	3	2	0	0	0	2
1500	734	1	676	32	6	3	2	8	3	0	1	0	0	2
1600	597	1	579	12	0	1	0	0	1	0	0	0	0	3
1700	673	0	644	21	0	0	3	0	0	0	0	1	0	4
1800	552	1	520	19	4	4	0	3	1	0	0	0	0	0
1900	434	1	399	24	2	1	1	4	0	1	0	0	0	1
2000	377	0	345	22	3	2	2	1	1	0	0	0	0	1
2100	287	0	265	17	1	0	0	3	1	0	0	0	0	0
2200	233	1	217	13	2	0	0	0	0	0	0	0	0	0
2300	129	0	119	7	2	0	1	0	0	0	0	0	0	0
00-00	4608	9	4263	209	31	14	23	31	10	3	1	1	0	13
	100.00%	0.20%	92.51%	4.54%	0.67%	0.30%	0.50%	0.67%	0.22%	0.07%	0.02%	0.02%	0.00%	0.28%

Classification Report

Job # 150_045_HSH_Loc A
Area Milton, MA
Location Randolph Avenue (Route 28), north of Chickatawbut Road
Direction Northbound
Tuesday, December 12, 2017



Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	72	0	67	4	1	0	0	0	0	0	0	0	0	0
0100	49	0	45	2	1	1	0	0	0	0	0	0	0	0
0200	35	0	33	1	0	1	0	0	0	0	0	0	0	0
0300	26	0	20	3	0	2	1	0	0	0	0	0	0	0
0400	127	0	114	8	1	0	1	1	1	0	1	0	0	0
0500	961	1	780	125	10	11	11	13	4	3	0	0	0	3
0600	1434	0	1217	116	15	7	14	29	14	7	0	0	0	15
0700	1512	3	1331	112	8	3	8	24	11	3	2	0	0	7
0800	1272	0	1112	96	10	7	9	21	7	2	2	0	0	6
0900	990	1	861	84	3	4	3	20	8	1	0	0	0	5
1000	675	2	590	54	8	1	5	9	2	4	0	0	0	0
1100	589	0	509	46	2	5	17	8	0	1	1	0	0	0
1200	610	4	531	43	4	4	9	7	3	0	0	0	0	5
1300	614	0	540	45	10	2	6	9	0	1	0	0	0	1
1400	824	0	731	47	11	6	7	9	1	2	1	0	1	8
1500	708	0	640	36	7	2	4	6	2	3	0	2	0	6
1600	644	1	620	16	1	0	1	0	1	0	0	0	0	4
1700	679	0	655	13	0	1	3	2	1	0	0	0	0	4
1800	616	0	582	27	1	0	1	3	2	0	0	0	0	0
1900	421	2	378	23	3	0	4	10	0	0	0	0	0	1
2000	375	0	333	24	2	0	4	9	0	2	1	0	0	0
2100	317	0	291	12	2	0	10	2	0	0	0	0	0	0
2200	248	2	219	15	1	2	3	5	0	1	0	0	0	0
2300	134	0	124	3	2	0	4	1	0	0	0	0	0	0
00-00	13932	16	12323	955	103	59	125	188	57	30	8	2	1	65
	100.00%	0.11%	88.45%	6.85%	0.74%	0.42%	0.90%	1.35%	0.41%	0.22%	0.06%	0.01%	0.01%	0.47%

Classification Report

Job # 150_045_HSH_Loc A
Area Milton, MA
Location Randolph Avenue (Route 28), north of Chickatawbut Road
Direction Northbound
Wednesday, December 13, 2017

BOSTON
TRAFFIC DATA
PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataInquiries@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	68	0	62	5	1	0	0	0	0	0	0	0	0	0
0100	45	0	39	3	0	0	2	1	0	0	0	0	0	0
0200	22	0	20	1	0	0	0	1	0	0	0	0	0	0
0300	31	0	26	4	0	1	0	0	0	0	0	0	0	0
0400	131	1	112	15	1	0	1	1	0	0	0	0	0	0
0500	899	0	727	113	12	13	6	16	8	1	0	0	0	3
0600	1423	0	1219	118	16	10	14	23	9	1	2	0	0	11
0700	1485	1	1299	105	13	4	11	29	9	4	1	0	0	9
0800	1307	2	1136	107	13	7	9	16	3	0	2	0	0	12
0900	1031	8	880	96	7	9	6	11	3	2	1	0	1	7
1000	671	0	583	55	6	4	7	7	3	1	2	0	0	3
1100	614	1	531	42	6	4	11	12	1	2	0	0	0	4
1200	634	0	563	38	7	4	7	7	1	0	0	0	0	7
1300	648	0	579	42	5	3	7	6	0	1	2	0	0	3
1400	782	1	690	50	9	7	4	10	4	2	0	0	0	5
1500	628	0	600	19	2	0	3	2	0	0	0	0	0	2
1600	554	0	534	15	1	0	0	1	0	2	0	0	0	1
1700	684	0	656	13	2	0	2	7	2	0	0	1	0	1
1800	805	0	756	30	4	1	1	8	4	0	0	1	0	0
1900	487	2	432	35	4	3	2	6	1	2	0	0	0	0
2000	430	0	396	20	4	0	3	3	3	0	0	0	0	1
2100	306	0	267	27	0	0	5	6	0	0	0	0	0	1
2200	252	0	230	13	1	1	1	4	0	0	0	0	0	2
2300	152	0	143	4	2	0	0	2	1	0	0	0	0	0
00-00	14089	16	12480	970	116	71	102	179	52	18	10	2	1	72
	100.00%	0.11%	88.58%	6.88%	0.82%	0.50%	0.72%	1.27%	0.37%	0.13%	0.07%	0.01%	0.01%	0.51%

Classification Report

Job # 150_045_HSH_Loc A
Area Milton, MA
Location Randolph Avenue (Route 28), north of Chickatawbut Road
Direction Northbound
Thursday, December 14, 2017

BOSTON
TRAFFIC DATA
PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataInquiries@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	58	0	58	0	0	0	0	0	0	0	0	0	0	0
0100	36	0	35	1	0	0	0	0	0	0	0	0	0	0
0200	26	0	22	1	0	0	2	1	0	0	0	0	0	0
0300	38	0	34	3	0	1	0	0	0	0	0	0	0	0
0400	104	0	92	8	1	0	2	1	0	0	0	0	0	0
0500	827	0	681	98	8	7	10	11	6	4	1	0	0	1
0600	1410	2	1216	105	10	13	17	23	5	5	2	1	0	11
0700	1444	4	1261	99	12	5	13	19	13	3	1	0	0	14
0800	1230	7	1068	90	5	5	12	21	9	1	1	1	1	9
0900	930	0	810	74	7	6	11	13	1	2	1	0	0	5
1000	751	0	617	81	9	7	15	15	2	4	1	0	0	0
1100	666	1	572	63	12	4	5	4	1	0	0	0	0	4
1200	607	0	542	39	4	1	5	8	2	2	1	0	0	3
1300	719	1	613	56	12	6	10	10	5	2	1	0	0	3
1400	1040	0	927	58	11	8	8	19	4	2	0	0	0	3
1500	911	2	839	45	3	1	3	6	2	1	0	0	0	9
1600	763	0	742	10	2	0	3	1	0	0	0	0	0	5
1700	770	1	734	18	1	3	6	2	0	0	0	1	0	4
1800	756	2	712	33	4	0	0	2	2	1	0	0	0	0
1900	528	0	471	36	5	0	5	7	0	2	0	0	0	2
2000	393	0	357	26	2	0	4	2	1	0	0	0	0	1
2100	362	1	334	15	1	1	4	4	2	0	0	0	0	0
2200	286	0	262	13	1	1	3	6	0	0	0	0	0	0
2300	159	1	146	7	1	0	2	2	0	0	0	0	0	0
00-00	14814	22	13145	979	111	69	140	177	55	29	9	3	1	74
	100.00%	0.15%	88.73%	6.61%	0.75%	0.47%	0.95%	1.19%	0.37%	0.20%	0.06%	0.02%	0.01%	0.50%

Classification Report

Job # 150_045_HSH_Loc A
Area Milton, MA
Location Randolph Avenue (Route 28), north of Chickatawbut Road
Direction Northbound
Friday, December 15, 2017

BOSTON
TRAFFIC DATA
PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataInquiries@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	75	0	70	1	1	0	1	2	0	0	0	0	0	0
0100	68	0	65	1	0	0	1	1	0	0	0	0	0	0
0200	36	0	30	3	0	1	2	0	0	0	0	0	0	0
0300	33	0	31	0	0	0	1	1	0	0	0	0	0	0
0400	129	0	110	11	1	0	4	2	1	0	0	0	0	0
0500	852	0	690	115	10	7	10	14	2	3	0	0	0	1
0600	1407	0	1217	112	22	12	10	16	2	5	0	0	0	11
0700	1272	2	1118	94	11	2	10	19	9	3	2	0	0	2
0800	1031	2	902	71	3	4	11	15	7	6	3	0	0	7
0900	832	2	719	72	7	4	8	10	3	2	0	0	0	5
1000	681	0	600	57	4	2	6	7	2	0	1	0	0	2
1100	629	0	553	51	6	4	5	6	3	1	0	0	0	0
1200	888	0	784	66	1	6	10	8	3	1	2	1	0	6
1300	943	2	821	83	9	0	2	18	1	3	1	0	0	3
1400	1154	0	1047	62	7	6	4	12	7	2	0	1	0	6
1500	896	0	870	17	0	0	2	1	1	0	0	0	0	5
1600	850	3	809	19	2	1	3	5	1	0	0	0	0	7
1700	840	2	818	14	0	0	3	1	0	0	0	0	0	2
1800	844	0	781	38	4	1	8	3	3	1	0	2	1	2
1900	659	1	605	35	3	2	4	3	2	0	0	0	0	4
2000	413	0	383	22	2	0	1	3	2	0	0	0	0	0
2100	172	0	155	10	0	2	1	3	0	0	0	0	0	1
2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2300	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00-00	14704	14	13178	954	93	54	107	150	49	27	9	4	1	64
	100.00%	0.10%	89.62%	6.49%	0.63%	0.37%	0.73%	1.02%	0.33%	0.18%	0.06%	0.03%	0.01%	0.44%

Classification Report

Job # 150_045_HSH_Loc A
Area Milton, MA
Location Randolph Avenue (Route 28), north of Chickatawbut Road
Direction Southbound
Monday, December 11, 2017

BOSTON
TRAFFIC DATA
PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataInquiries@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0400	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0500	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0600	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0700	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0900	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1200	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1300	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1400	590	2	489	71	5	12	0	8	1	0	1	0	0	1
1500	1091	3	940	102	13	8	8	12	2	0	1	0	0	2
1600	760	13	694	15	3	1	14	12	2	2	2	0	0	2
1700	727	8	680	12	7	1	7	6	2	0	0	0	0	4
1800	839	2	767	38	10	4	5	8	3	0	1	0	0	1
1900	641	0	590	33	6	5	0	3	4	0	0	0	0	0
2000	487	0	441	35	6	1	0	3	1	0	0	0	0	0
2100	335	0	313	15	3	2	1	0	1	0	0	0	0	0
2200	268	0	248	15	4	0	0	1	0	0	0	0	0	0
2300	255	0	237	15	2	0	0	1	0	0	0	0	0	0
00-00	5993	28	5399	351	59	34	35	54	16	2	5	0	0	10
	100.00%	0.47%	90.09%	5.86%	0.98%	0.57%	0.58%	0.90%	0.27%	0.03%	0.08%	0.00%	0.00%	0.17%

Classification Report

Job # 150_045_HSH_Loc A
Area Milton, MA
Location Randolph Avenue (Route 28), north of Chickatawbut Road
Direction Southbound
Tuesday, December 12, 2017

BOSTON
TRAFFIC DATA
PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataInquiries@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	133	0	129	4	0	0	0	0	0	0	0	0	0	0
0100	58	0	50	3	3	1	0	0	0	1	0	0	0	0
0200	33	0	29	3	0	1	0	0	0	0	0	0	0	0
0300	31	0	25	5	0	1	0	0	0	0	0	0	0	0
0400	49	0	40	3	2	2	1	0	0	1	0	0	0	0
0500	140	0	122	10	3	2	0	1	0	1	1	0	0	0
0600	308	1	287	16	2	2	0	0	0	0	0	0	0	0
0700	586	0	543	28	6	5	1	1	2	0	0	0	0	0
0800	666	0	601	37	14	3	3	6	1	1	0	0	0	0
0900	535	0	481	40	6	2	1	2	2	1	0	0	0	0
1000	528	0	456	51	5	8	3	4	1	0	0	0	0	0
1100	517	1	449	44	7	5	4	1	1	3	0	1	0	1
1200	638	0	539	70	9	6	4	3	3	3	1	0	0	0
1300	631	1	546	63	6	5	5	1	2	1	1	0	0	0
1400	761	2	655	82	5	8	3	4	2	0	0	0	0	0
1500	1037	6	912	81	3	9	4	11	6	2	0	0	0	3
1600	734	10	692	8	6	1	6	6	1	1	2	0	0	1
1700	733	6	678	9	8	1	10	12	2	1	3	0	0	3
1800	889	2	813	38	8	3	7	13	5	0	0	0	0	0
1900	717	0	656	39	6	4	0	9	1	0	0	0	0	2
2000	547	0	508	31	4	2	0	0	1	1	0	0	0	0
2100	365	0	334	25	3	2	1	0	0	0	0	0	0	0
2200	248	1	224	16	4	1	0	1	0	1	0	0	0	0
2300	257	0	241	14	2	0	0	0	0	0	0	0	0	0
00-00	11141	30	10010	720	112	74	53	75	30	18	8	1	0	10
	100.00%	0.27%	89.85%	6.46%	1.01%	0.66%	0.48%	0.67%	0.27%	0.16%	0.07%	0.01%	0.00%	0.09%

Classification Report

Job # 150_045_HSH_Loc A
Area Milton, MA
Location Randolph Avenue (Route 28), north of Chickatawbut Road
Direction Southbound
Wednesday, December 13, 2017



Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	134	0	125	8	0	0	0	0	1	0	0	0	0	0
0100	49	0	45	2	1	1	0	0	0	0	0	0	0	0
0200	38	0	32	5	1	0	0	0	0	0	0	0	0	0
0300	35	0	28	3	0	3	0	0	0	1	0	0	0	0
0400	38	0	30	5	1	1	1	0	0	0	0	0	0	0
0500	131	0	110	14	3	1	1	1	0	1	0	0	0	0
0600	322	0	288	26	4	1	1	0	1	0	1	0	0	0
0700	586	1	540	35	3	1	0	2	2	0	1	0	0	1
0800	700	3	622	52	8	5	4	2	1	0	0	0	0	3
0900	583	1	517	47	8	6	1	2	1	0	0	0	0	0
1000	562	0	472	60	8	6	9	5	1	1	0	0	0	0
1100	603	0	527	60	10	2	1	1	2	0	0	0	0	0
1200	605	0	525	59	9	6	2	3	1	0	0	0	0	0
1300	667	5	569	67	6	7	4	2	1	1	2	0	0	3
1400	880	2	767	83	4	13	1	8	1	0	0	0	0	1
1500	908	6	810	54	8	10	4	8	3	1	1	0	0	3
1600	663	9	613	13	3	3	12	5	3	0	0	0	0	2
1700	752	8	700	11	9	3	10	6	1	1	0	0	0	3
1800	851	1	777	38	8	2	5	10	4	3	2	0	0	1
1900	736	0	660	48	6	8	2	7	5	0	0	0	0	0
2000	516	1	477	31	2	1	0	1	3	0	0	0	0	0
2100	384	0	358	19	3	1	0	1	1	1	0	0	0	0
2200	281	0	256	21	2	2	0	0	0	0	0	0	0	0
2300	262	0	247	12	2	0	1	0	0	0	0	0	0	0
00-00	11286	37	10095	773	109	83	59	64	32	10	7	0	0	17
	100.00%	0.33%	89.45%	6.85%	0.97%	0.74%	0.52%	0.57%	0.28%	0.09%	0.06%	0.00%	0.00%	0.15%

Classification Report

Job # 150_045_HSH_Loc A
Area Milton, MA
Location Randolph Avenue (Route 28), north of Chickatawbut Road
Direction Southbound
Thursday, December 14, 2017

BOSTON
TRAFFIC DATA
PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataInquiries@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	143	0	138	5	0	0	0	0	0	0	0	0	0	0
0100	68	0	59	6	1	1	1	0	0	0	0	0	0	0
0200	21	0	18	1	2	0	0	0	0	0	0	0	0	0
0300	32	0	29	1	0	2	0	0	0	0	0	0	0	0
0400	38	0	33	4	0	1	0	0	0	0	0	0	0	0
0500	149	0	129	17	2	1	0	0	0	0	0	0	0	0
0600	322	1	289	25	4	0	0	1	1	1	0	0	0	0
0700	555	1	503	34	5	5	1	6	0	0	0	0	0	0
0800	649	2	591	35	8	5	2	3	0	1	1	0	0	1
0900	515	0	453	41	7	5	2	4	0	1	1	1	0	0
1000	558	1	477	54	6	9	4	3	3	1	0	0	0	0
1100	579	1	501	58	8	7	0	1	3	0	0	0	0	0
1200	596	1	495	70	10	8	2	5	2	2	0	0	0	1
1300	683	1	581	67	8	16	4	4	0	1	0	0	0	1
1400	791	5	685	71	2	5	9	7	1	1	2	0	0	3
1500	1090	4	969	66	6	7	7	19	4	2	0	0	0	6
1600	785	4	729	17	5	2	7	14	2	2	1	0	0	2
1700	775	11	725	14	5	1	6	7	1	2	1	0	0	2
1800	792	0	738	25	3	2	4	7	4	2	1	0	0	6
1900	740	1	679	37	4	3	1	11	3	0	0	0	0	1
2000	568	0	521	33	6	1	0	5	1	0	0	0	0	1
2100	439	0	411	25	1	0	1	1	0	0	0	0	0	0
2200	332	0	307	19	3	1	0	2	0	0	0	0	0	0
2300	294	0	272	16	2	0	1	2	1	0	0	0	0	0
00-00	11514	33	10332	741	98	82	52	102	26	16	7	1	0	24
	100.00%	0.29%	89.73%	6.44%	0.85%	0.71%	0.45%	0.89%	0.23%	0.14%	0.06%	0.01%	0.00%	0.21%

Classification Report

Job # 150_045_HSH_Loc A
Area Milton, MA
Location Randolph Avenue (Route 28), north of Chickatawbut Road
Direction Southbound
Friday, December 15, 2017



Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	168	0	158	9	1	0	0	0	0	0	0	0	0	0
0100	90	0	81	6	2	0	1	0	0	0	0	0	0	0
0200	43	0	42	1	0	0	0	0	0	0	0	0	0	0
0300	35	0	33	2	0	0	0	0	0	0	0	0	0	0
0400	39	0	35	2	1	0	0	0	0	1	0	0	0	0
0500	129	0	110	15	1	1	1	1	0	0	0	0	0	0
0600	317	1	290	20	3	1	2	0	0	0	0	0	0	0
0700	573	1	520	36	7	4	1	2	2	0	0	0	0	0
0800	734	0	666	38	13	5	3	5	1	2	1	0	0	0
0900	589	2	531	42	4	4	1	1	2	0	0	0	0	2
1000	621	2	556	42	6	8	4	3	0	0	0	0	0	0
1100	678	0	590	64	8	10	2	1	2	0	0	0	0	1
1200	743	2	660	60	5	3	1	5	3	2	0	0	0	2
1300	826	2	728	67	11	7	0	6	2	1	0	1	0	1
1400	829	1	752	53	3	2	3	8	1	1	1	0	0	4
1500	968	12	899	23	3	2	4	7	2	4	2	0	0	10
1600	797	9	747	11	4	3	8	11	1	2	0	0	0	1
1700	840	8	803	4	3	3	7	5	2	2	0	0	0	3
1800	776	2	729	20	4	1	7	9	1	2	0	0	1	0
1900	714	0	656	37	6	3	0	7	3	2	0	0	0	0
2000	588	0	551	27	3	2	1	1	3	0	0	0	0	0
2100	226	0	204	15	2	1	0	3	1	0	0	0	0	0
2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2300	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00-00	11323	42	10341	594	90	60	46	75	26	19	4	1	1	24
	100.00%	0.37%	91.33%	5.25%	0.79%	0.53%	0.41%	0.66%	0.23%	0.17%	0.04%	0.01%	0.01%	0.21%

Classification Report

Job # 150_045_HSH_Loc_B
Area Milton, MA
Location Randolph Avenue (Route 28), south of Chickatawbut Road
Direction Northbound
Monday, December 11, 2017



Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0400	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0500	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0600	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0700	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0900	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1200	611	0	544	53	3	3	1	6	0	0	0	0	0	1
1300	697	0	604	73	7	3	5	2	0	1	1	0	0	1
1400	854	1	762	56	18	4	5	8	0	0	0	0	0	0
1500	836	0	804	22	5	2	1	2	0	0	0	0	0	0
1600	753	0	740	13	0	0	0	0	0	0	0	0	0	0
1700	886	0	873	11	0	1	1	0	0	0	0	0	0	0
1800	614	0	588	17	3	2	1	2	0	0	0	0	0	1
1900	418	0	390	22	3	2	0	1	0	0	0	0	0	0
2000	356	0	314	24	3	3	2	10	0	0	0	0	0	0
2100	282	2	248	14	2	1	1	14	0	0	0	0	0	0
2200	219	0	187	11	1	0	2	18	0	0	0	0	0	0
2300	118	0	106	3	2	0	0	7	0	0	0	0	0	0
00-00	6644	3	6160	319	47	21	19	70	0	1	1	0	0	3
	100.00%	0.05%	92.72%	4.80%	0.71%	0.32%	0.29%	1.05%	0.00%	0.02%	0.02%	0.00%	0.00%	0.05%

Classification Report

Job # 150_045_HSH_Loc_B
Area Milton, MA
Location Randolph Avenue (Route 28), south of Chickatawbut Road
Direction Northbound
Tuesday, December 12, 2017



Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	68	0	54	2	0	0	0	12	0	0	0	0	0	0
0100	49	0	43	3	0	0	2	1	0	0	0	0	0	0
0200	33	0	25	1	0	1	0	6	0	0	0	0	0	0
0300	24	0	17	3	0	0	0	4	0	0	0	0	0	0
0400	107	0	76	8	1	0	2	19	0	0	0	0	0	1
0500	1082	2	910	122	10	13	6	17	0	1	0	0	0	1
0600	1631	2	1418	156	23	19	5	5	0	0	1	0	0	2
0700	1623	1	1483	115	6	7	4	4	0	1	1	0	0	1
0800	1474	1	1325	112	13	14	3	4	0	1	0	0	0	1
0900	1089	4	953	97	8	11	6	7	0	2	0	0	0	1
1000	718	0	631	68	8	7	3	1	0	0	0	0	0	0
1100	618	2	528	66	3	6	4	7	0	2	0	0	0	0
1200	632	4	548	52	2	5	5	12	1	1	0	0	0	2
1300	615	2	533	53	10	2	2	10	0	2	0	0	0	1
1400	882	1	790	60	18	5	1	6	0	0	0	0	0	1
1500	805	0	748	45	9	0	1	1	0	1	0	0	0	0
1600	852	0	839	10	3	0	0	0	0	0	0	0	0	0
1700	995	0	982	10	1	0	2	0	0	0	0	0	0	0
1800	650	0	627	19	3	0	0	1	0	0	0	0	0	0
1900	424	0	396	23	2	2	1	0	0	0	0	0	0	0
2000	382	0	355	23	2	0	0	1	0	0	0	0	0	1
2100	315	0	294	16	3	0	2	0	0	0	0	0	0	0
2200	249	0	225	17	1	1	1	4	0	0	0	0	0	0
2300	134	0	121	4	1	1	2	5	0	0	0	0	0	0
00-00	15451	19	13921	1085	127	94	52	127	1	11	2	0	0	12
	100.00%	0.12%	90.10%	7.02%	0.82%	0.61%	0.34%	0.82%	0.01%	0.07%	0.01%	0.00%	0.00%	0.08%

Classification Report

Job # 150_045_HSH_Loc_B
Area Milton, MA
Location Randolph Avenue (Route 28), south of Chickatawbut Road
Direction Northbound
Wednesday, December 13, 2017



Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	65	0	54	4	1	0	1	5	0	0	0	0	0	0
0100	43	0	38	3	0	0	1	1	0	0	0	0	0	0
0200	23	0	22	1	0	0	0	0	0	0	0	0	0	0
0300	29	0	19	2	0	0	1	7	0	0	0	0	0	0
0400	140	0	115	12	0	1	2	8	0	1	0	0	0	1
0500	1002	0	840	116	14	17	10	3	0	2	0	0	0	0
0600	1664	0	1456	161	26	15	3	1	0	1	0	0	0	1
0700	1589	2	1420	137	8	10	4	5	1	2	0	0	0	0
0800	1540	0	1407	103	13	11	0	4	1	0	0	0	0	1
0900	1145	2	992	116	9	13	7	3	0	3	0	0	0	0
1000	723	0	630	74	7	5	6	0	0	1	0	0	0	0
1100	651	1	576	56	5	8	2	2	0	0	0	0	0	1
1200	661	0	592	45	9	4	3	8	0	0	0	0	0	0
1300	685	1	602	59	6	4	3	8	0	2	0	0	0	0
1400	872	2	775	68	15	6	2	1	0	1	0	0	0	2
1500	735	0	711	20	1	2	0	0	0	0	1	0	0	0
1600	723	0	710	11	2	0	0	0	0	0	0	0	0	0
1700	1015	0	998	14	1	1	0	0	0	0	0	0	0	1
1800	1027	1	982	36	4	1	2	1	0	0	0	0	0	0
1900	539	0	497	32	5	2	2	1	0	0	0	0	0	0
2000	436	0	408	15	4	1	7	1	0	0	0	0	0	0
2100	314	0	289	24	1	0	0	0	0	0	0	0	0	0
2200	263	0	244	11	2	1	4	1	0	0	0	0	0	0
2300	150	0	139	5	1	0	1	4	0	0	0	0	0	0
00-00	16034	9	14516	1125	134	102	61	64	2	13	1	0	0	7
	100.00%	0.06%	90.53%	7.02%	0.84%	0.64%	0.38%	0.40%	0.01%	0.08%	0.01%	0.00%	0.00%	0.04%

Classification Report

Job # 150_045_HSH_Loc_B
Area Milton, MA
Location Randolph Avenue (Route 28), south of Chickatawbut Road
Direction Northbound
Thursday, December 14, 2017



Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	72	0	69	1	1	0	0	1	0	0	0	0	0	0
0100	34	0	32	1	0	0	0	1	0	0	0	0	0	0
0200	30	0	26	3	0	0	0	1	0	0	0	0	0	0
0300	37	0	33	1	0	1	1	1	0	0	0	0	0	0
0400	110	0	97	7	1	0	1	4	0	0	0	0	0	0
0500	953	1	796	117	15	12	7	4	0	0	0	0	0	1
0600	1638	1	1444	138	29	16	2	7	0	1	0	0	0	0
0700	1491	1	1321	125	18	10	4	8	1	1	0	0	0	2
0800	1384	1	1258	102	11	9	1	2	0	0	0	0	0	0
0900	1050	0	919	96	9	12	8	6	0	0	0	0	0	0
1000	793	1	666	94	10	11	2	6	0	3	0	0	0	0
1100	672	2	582	62	7	5	2	10	0	1	0	0	0	1
1200	626	0	552	51	6	3	4	9	0	1	0	0	0	0
1300	773	0	672	70	14	5	1	9	0	1	0	0	0	1
1400	1189	0	1085	66	14	9	5	7	0	2	0	0	0	1
1500	1308	2	1256	38	4	3	4	0	0	0	0	0	0	1
1600	1343	3	1313	25	2	0	0	0	0	0	0	0	0	0
1700	1273	1	1258	10	1	0	2	0	0	0	1	0	0	0
1800	1164	0	1122	37	1	1	2	1	0	0	0	0	0	0
1900	571	0	526	39	3	1	1	0	0	1	0	0	0	0
2000	425	0	400	17	3	0	4	0	0	0	1	0	0	0
2100	368	0	347	16	0	0	4	0	0	0	0	0	0	1
2200	313	0	294	13	2	2	2	0	0	0	0	0	0	0
2300	173	0	163	8	1	0	1	0	0	0	0	0	0	0
00-00	17790	13	16231	1137	152	100	58	77	1	11	2	0	0	8
	100.00%	0.07%	91.24%	6.39%	0.85%	0.56%	0.33%	0.43%	0.01%	0.06%	0.01%	0.00%	0.00%	0.04%

Classification Report

Job # 150_045_HSH_Loc_B
Area Milton, MA
Location Randolph Avenue (Route 28), south of Chickatawbut Road
Direction Northbound
Friday, December 15, 2017

BOSTON
TRAFFIC DATA
PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataInquiries@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	79	0	73	0	2	1	2	1	0	0	0	0	0	0
0100	68	0	64	2	0	0	2	0	0	0	0	0	0	0
0200	41	0	36	3	0	1	1	0	0	0	0	0	0	0
0300	34	0	30	1	0	0	2	1	0	0	0	0	0	0
0400	136	0	123	8	1	0	3	1	0	0	0	0	0	0
0500	940	0	790	112	15	10	11	1	0	1	0	0	0	0
0600	1600	0	1388	150	35	17	2	7	0	0	1	0	0	0
0700	1413	0	1277	112	11	6	3	4	0	0	0	0	0	0
0800	1228	3	1111	87	9	10	2	4	0	1	0	0	0	1
0900	934	2	819	84	8	11	3	4	1	2	0	0	0	0
1000	729	0	647	59	7	6	3	7	0	0	0	0	0	0
1100	696	0	621	59	5	4	2	3	0	2	0	0	0	0
1200	1067	0	959	89	7	7	1	3	0	1	0	0	0	0
1300	1069	0	964	75	12	7	4	4	0	2	1	0	0	0
1400	1481	2	1374	76	8	6	4	6	0	2	1	0	0	2
1500	1471	0	1449	12	1	2	3	1	0	1	0	0	0	2
1600	1406	4	1382	16	2	0	1	0	0	0	0	0	0	1
1700	1288	0	1273	11	1	0	2	0	0	0	1	0	0	0
1800	1263	0	1207	47	4	3	0	0	0	1	0	0	0	1
1900	729	0	677	44	4	1	0	3	0	0	0	0	0	0
2000	437	0	407	22	3	3	1	1	0	0	0	0	0	0
2100	331	0	305	22	2	1	1	0	0	0	0	0	0	0
2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2300	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00-00	18440	11	16976	1091	137	96	53	51	1	13	4	0	0	7
	100.00%	0.06%	92.06%	5.92%	0.74%	0.52%	0.29%	0.28%	0.01%	0.07%	0.02%	0.00%	0.00%	0.04%

Classification Report

Job # 150_045_HSH_Loc_B
Area Milton, MA
Location Randolph Avenue (Route 28), south of Chickatawbut Road
Direction Southbound
Monday, December 11, 2017



Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0400	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0500	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0600	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0700	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0900	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1200	516	0	444	52	6	2	5	2	0	3	0	0	0	2
1300	616	0	532	65	6	5	5	0	0	1	0	0	0	2
1400	770	0	648	68	9	4	6	11	0	7	1	0	0	16
1500	1153	8	915	77	6	8	23	44	0	8	4	0	0	60
1600	1171	18	939	28	3	4	26	51	0	5	8	0	0	89
1700	1236	27	975	18	4	1	33	62	0	4	14	0	0	98
1800	895	6	741	22	6	3	18	23	1	8	2	0	0	65
1900	627	1	564	37	5	7	5	1	0	2	0	0	0	5
2000	500	0	454	38	4	2	1	1	0	0	0	0	0	0
2100	349	0	319	23	4	2	1	0	0	0	0	0	0	0
2200	282	0	260	17	4	0	1	0	0	0	0	0	0	0
2300	272	0	254	15	2	1	0	0	0	0	0	0	0	0
00-00	8387	60	7045	460	59	39	124	195	1	38	29	0	0	337
	100.00%	0.72%	84.00%	5.48%	0.70%	0.47%	1.48%	2.33%	0.01%	0.45%	0.35%	0.00%	0.00%	4.02%

Classification Report

Job # 150_045_HSH_Loc_B
Area Milton, MA
Location Randolph Avenue (Route 28), south of Chickatawbut Road
Direction Southbound
Tuesday, December 12, 2017



Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	138	0	133	4	0	0	1	0	0	0	0	0	0	0
0100	59	0	50	3	3	2	0	0	0	0	1	0	0	0
0200	35	0	30	4	0	1	0	0	0	0	0	0	0	0
0300	31	0	26	4	0	1	0	0	0	0	0	0	0	0
0400	54	0	46	2	2	2	1	0	0	1	0	0	0	0
0500	139	0	124	13	0	1	0	0	0	1	0	0	0	0
0600	302	1	282	15	2	1	0	0	0	0	0	0	0	1
0700	589	0	543	36	4	3	1	0	0	0	0	0	0	2
0800	687	0	640	32	7	2	1	1	0	0	0	0	0	4
0900	484	2	417	46	4	6	4	0	1	2	0	0	0	2
1000	460	2	386	47	4	10	7	2	0	2	0	0	0	0
1100	475	0	398	48	5	8	7	1	1	3	1	0	0	3
1200	597	2	502	71	7	7	3	1	0	3	0	0	0	1
1300	575	0	492	62	4	7	6	0	0	3	0	0	0	1
1400	753	1	647	77	3	5	1	6	0	3	0	0	0	10
1500	1125	11	933	68	2	9	8	35	0	7	5	1	0	46
1600	1182	14	987	28	4	4	14	39	0	6	11	0	0	75
1700	1291	21	1090	19	4	0	22	65	0	3	9	0	0	58
1800	972	13	804	20	5	2	18	38	0	4	6	0	0	62
1900	663	0	575	38	4	6	7	15	0	4	0	0	0	14
2000	522	0	476	31	1	2	6	3	0	0	0	0	0	3
2100	369	0	332	22	2	4	1	6	0	1	0	0	0	1
2200	249	0	226	18	4	0	0	0	0	0	0	0	0	1
2300	267	0	252	13	2	0	0	0	0	0	0	0	0	0
00-00	12018	67	10391	721	73	83	108	212	2	43	33	1	0	284
	100.00%	0.56%	86.46%	6.00%	0.61%	0.69%	0.90%	1.76%	0.02%	0.36%	0.27%	0.01%	0.00%	2.36%

Classification Report

Job # 150_045_HSH_Loc_B
Area Milton, MA
Location Randolph Avenue (Route 28), south of Chickatawbut Road
Direction Southbound
Wednesday, December 13, 2017



Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	138	0	130	8	0	0	0	0	0	0	0	0	0	0
0100	50	0	46	2	1	1	0	0	0	0	0	0	0	0
0200	39	0	34	3	1	1	0	0	0	0	0	0	0	0
0300	37	0	30	1	0	4	1	0	0	1	0	0	0	0
0400	59	0	55	2	1	1	0	0	0	0	0	0	0	0
0500	149	0	133	10	3	1	1	0	0	1	0	0	0	0
0600	285	0	263	18	3	0	1	0	0	0	0	0	0	0
0700	589	1	548	29	3	1	1	3	0	0	0	0	0	3
0800	684	5	631	31	3	2	1	1	0	1	0	0	0	9
0900	552	7	479	50	4	4	2	4	0	0	0	0	0	2
1000	513	0	436	54	5	6	3	4	2	2	0	0	0	1
1100	532	0	457	53	4	2	5	2	0	3	0	0	0	6
1200	543	3	451	61	6	7	5	3	0	3	0	0	0	4
1300	617	1	525	64	3	4	3	4	0	0	2	0	0	11
1400	853	12	705	45	1	6	9	29	0	2	3	0	0	41
1500	1072	30	759	39	4	1	24	82	0	4	8	0	0	121
1600	1082	25	752	18	3	0	24	80	0	4	14	0	0	162
1700	1248	20	998	10	1	1	25	80	0	2	13	0	0	98
1800	1116	18	919	27	7	3	25	56	0	2	3	0	0	56
1900	768	0	696	44	4	10	9	1	0	2	0	0	0	2
2000	525	0	488	30	2	2	1	0	0	0	0	0	0	2
2100	404	0	377	20	2	0	4	0	0	1	0	0	0	0
2200	307	0	276	26	2	2	1	0	0	0	0	0	0	0
2300	287	0	271	13	2	0	1	0	0	0	0	0	0	0
00-00	12449	122	10459	658	65	59	146	349	2	28	43	0	0	518
	100.00%	0.98%	84.01%	5.29%	0.52%	0.47%	1.17%	2.80%	0.02%	0.22%	0.35%	0.00%	0.00%	4.16%

Classification Report

Job # 150_045_HSH_Loc_B
Area Milton, MA
Location Randolph Avenue (Route 28), south of Chickatawbut Road
Direction Southbound
Thursday, December 14, 2017

BOSTON
TRAFFIC DATA
PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataInquiries@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	142	0	137	5	0	0	0	0	0	0	0	0	0	0
0100	69	0	59	7	1	1	1	0	0	0	0	0	0	0
0200	25	0	22	1	2	0	0	0	0	0	0	0	0	0
0300	34	0	31	1	0	2	0	0	0	0	0	0	0	0
0400	45	0	39	5	0	1	0	0	0	0	0	0	0	0
0500	170	0	157	10	2	1	0	0	0	0	0	0	0	0
0600	322	0	297	20	5	0	0	0	0	0	0	0	0	0
0700	566	1	534	21	6	0	2	0	0	1	0	0	0	1
0800	658	0	606	37	8	1	2	0	0	2	0	0	0	2
0900	494	0	435	34	9	7	7	1	0	1	0	0	0	0
1000	481	0	411	47	5	8	0	4	0	0	1	0	0	5
1100	502	1	427	48	7	5	2	6	0	2	1	0	0	3
1200	580	3	487	69	5	4	3	1	1	2	0	0	0	5
1300	620	0	540	55	4	11	5	0	0	2	0	0	0	3
1400	880	0	780	70	5	4	7	1	0	6	0	0	0	7
1500	1450	8	1322	58	0	9	34	5	0	2	2	0	0	10
1600	1473	5	1385	12	0	1	29	11	0	3	14	0	0	13
1700	1340	2	1270	16	1	0	21	19	0	3	1	0	0	7
1800	1223	1	1142	27	2	4	27	3	0	2	4	0	0	11
1900	717	0	654	38	4	3	4	1	0	3	4	0	0	6
2000	596	0	543	36	5	1	8	0	0	1	0	0	0	2
2100	475	0	441	29	1	0	1	0	0	2	0	0	0	1
2200	345	0	326	15	2	0	1	1	0	0	0	0	0	0
2300	301	0	279	17	2	0	1	0	0	1	0	0	0	1
00-00	13508	21	12324	678	76	63	155	53	1	33	27	0	0	77
	100.00%	0.16%	91.23%	5.02%	0.56%	0.47%	1.15%	0.39%	0.01%	0.24%	0.20%	0.00%	0.00%	0.57%

Classification Report

Job # 150_045_HSH_Loc_B
Area Milton, MA
Location Randolph Avenue (Route 28), south of Chickatawbut Road
Direction Southbound
Friday, December 15, 2017



Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	184	0	169	13	1	1	0	0	0	0	0	0	0	0
0100	101	0	90	8	1	1	1	0	0	0	0	0	0	0
0200	54	0	53	1	0	0	0	0	0	0	0	0	0	0
0300	42	0	41	1	0	0	0	0	0	0	0	0	0	0
0400	71	0	68	0	2	0	0	0	0	1	0	0	0	0
0500	189	0	174	11	1	1	2	0	0	0	0	0	0	0
0600	308	1	275	23	3	3	2	0	0	0	0	0	0	1
0700	567	0	534	27	4	1	1	0	0	0	0	0	0	0
0800	725	3	670	30	7	3	7	1	0	0	1	1	0	2
0900	566	0	509	44	5	4	3	0	0	0	0	0	0	1
1000	573	0	511	43	7	9	1	0	1	1	0	0	0	0
1100	601	0	523	54	6	5	9	0	0	2	0	0	0	2
1200	727	0	665	47	4	3	3	0	0	4	1	0	0	0
1300	838	1	751	56	6	5	8	1	0	6	0	0	0	4
1400	1166	1	1073	72	3	5	6	1	1	2	0	0	0	2
1500	1564	5	1461	30	1	2	35	5	1	3	7	0	0	14
1600	1484	4	1395	8	1	0	38	16	0	1	7	0	0	14
1700	1430	4	1342	8	4	1	38	12	0	1	11	0	0	9
1800	1111	2	1050	24	3	3	16	0	0	4	4	0	0	5
1900	684	0	625	39	6	2	5	1	0	4	0	0	0	2
2000	590	0	547	27	2	2	5	1	0	3	0	0	0	3
2100	372	0	343	20	1	3	3	1	0	0	0	0	0	1
2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2300	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00-00	13947	21	12869	586	68	54	183	39	3	32	31	1	0	60
	100.00%	0.15%	92.27%	4.20%	0.49%	0.39%	1.31%	0.28%	0.02%	0.23%	0.22%	0.01%	0.00%	0.43%

Classification Report

Job # 150_045_HSH_Loc_C
Area Milton, MA
Location Chickatawbut Road, east of Randolph Avenue (Route 28)
Direction Eastbound
Thursday, December 14, 2017

Area	Milton, MA
Location	Chickatawbut Road, east of Randolph Avenue (Route 28)
Direction	Eastbound
Thursday, December 14, 2017	

Location Chickatawbut Road, east of Randolph Avenue (Route 28)
Direction Eastbound
Thursday, December 14, 2017

Direction Eastbound
Thursday, December 14, 2017

Thursday, December 14, 2017

BOSTON
TRAFFIC DATA
PO BOX 1723, Framingham, MA 01701
Office: 978-746-1259
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[illegible]

Classification Report

Job # 150_045_HSH_Loc_C
Area Milton, MA
Location Chickatawbut Road, east of Randolph Avenue (Route 28)
Direction Westbound
Monday, December 11, 2017



Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0400	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0500	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0600	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0700	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0900	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1200	53	0	48	5	0	0	0	0	0	0	0	0	0	0
1300	188	1	165	22	0	0	0	0	0	0	0	0	0	0
1400	232	1	201	28	1	0	0	1	0	0	0	0	0	0
1500	355	0	311	38	2	2	2	0	0	0	0	0	0	0
1600	380	3	339	28	5	2	1	2	0	0	0	0	0	0
1700	311	0	286	23	0	0	1	1	0	0	0	0	0	0
1800	206	0	187	17	0	2	0	0	0	0	0	0	0	0
1900	91	0	87	4	0	0	0	0	0	0	0	0	0	0
2000	82	0	76	6	0	0	0	0	0	0	0	0	0	0
2100	51	0	48	3	0	0	0	0	0	0	0	0	0	0
2200	36	0	33	3	0	0	0	0	0	0	0	0	0	0
2300	13	0	12	1	0	0	0	0	0	0	0	0	0	0
00-00	1998	5	1793	178	8	6	4	4	0	0	0	0	0	0
	100.00%	0.25%	89.74%	8.91%	0.40%	0.30%	0.20%	0.20%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Classification Report

Job # 150_045_HSH_Loc_C
Area Milton, MA
Location Chickatawbut Road, east of Randolph Avenue (Route 28)
Direction Westbound
Tuesday, December 12, 2017



Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	9	0	9	0	0	0	0	0	0	0	0	0	0	0
0100	2	0	2	0	0	0	0	0	0	0	0	0	0	0
0200	3	0	2	1	0	0	0	0	0	0	0	0	0	0
0300	1	0	1	0	0	0	0	0	0	0	0	0	0	0
0400	2	0	1	1	0	0	0	0	0	0	0	0	0	0
0500	13	0	7	6	0	0	0	0	0	0	0	0	0	0
0600	170	0	144	25	1	0	0	0	0	0	0	0	0	0
0700	334	0	290	43	0	1	0	0	0	0	0	0	0	0
0800	285	0	250	35	0	0	0	0	0	0	0	0	0	0
0900	117	0	101	15	0	1	0	0	0	0	0	0	0	0
1000	120	1	104	13	0	0	2	0	0	0	0	0	0	0
1100	147	0	107	14	0	0	26	0	0	0	0	0	0	0
1200	145	0	122	11	0	1	11	0	0	0	0	0	0	0
1300	187	0	146	14	0	0	27	0	0	0	0	0	0	0
1400	259	0	194	19	0	1	44	1	0	0	0	0	0	0
1500	353	0	293	28	0	3	29	0	0	0	0	0	0	0
1600	320	0	294	17	3	1	1	3	0	1	0	0	0	0
1700	268	1	243	17	1	2	2	2	0	0	0	0	0	0
1800	227	0	212	13	0	1	0	0	0	0	1	0	0	0
1900	115	0	106	6	0	0	3	0	0	0	0	0	0	0
2000	59	0	52	6	0	0	1	0	0	0	0	0	0	0
2100	70	0	67	3	0	0	0	0	0	0	0	0	0	0
2200	40	0	37	2	0	0	1	0	0	0	0	0	0	0
2300	20	0	19	1	0	0	0	0	0	0	0	0	0	0
00-00	3266	2	2803	290	5	11	147	6	0	1	1	0	0	0
	100.00%	0.06%	85.82%	8.88%	0.15%	0.34%	4.50%	0.18%	0.00%	0.03%	0.03%	0.00%	0.00%	0.00%

Classification Report

Job # 150_045_HSH_Loc_C
Area Milton, MA
Location Chickatawbut Road, east of Randolph Avenue (Route 28)
Direction Westbound
Wednesday, December 13, 2017



Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	11	0	9	2	0	0	0	0	0	0	0	0	0	0
0100	4	0	3	1	0	0	0	0	0	0	0	0	0	0
0200	1	0	1	0	0	0	0	0	0	0	0	0	0	0
0300	1	0	1	0	0	0	0	0	0	0	0	0	0	0
0400	2	0	1	1	0	0	0	0	0	0	0	0	0	0
0500	13	0	10	3	0	0	0	0	0	0	0	0	0	0
0600	158	0	135	23	0	0	0	0	0	0	0	0	0	0
0700	329	0	302	26	0	1	0	0	0	0	0	0	0	0
0800	292	1	259	30	0	1	1	0	0	0	0	0	0	0
0900	142	0	120	22	0	0	0	0	0	0	0	0	0	0
1000	116	0	103	12	0	1	0	0	0	0	0	0	0	0
1100	143	0	124	19	0	0	0	0	0	0	0	0	0	0
1200	167	0	147	19	1	0	0	0	0	0	0	0	0	0
1300	171	0	149	21	0	0	1	0	0	0	0	0	0	0
1400	362	0	325	33	1	3	0	0	0	0	0	0	0	0
1500	494	1	437	49	0	3	2	1	0	1	0	0	0	0
1600	355	1	306	31	12	2	1	2	0	0	0	0	0	0
1700	307	2	279	13	9	1	0	3	0	0	0	0	0	0
1800	274	1	251	14	4	0	3	1	0	0	0	0	0	0
1900	104	0	99	5	0	0	0	0	0	0	0	0	0	0
2000	77	0	72	5	0	0	0	0	0	0	0	0	0	0
2100	78	1	74	3	0	0	0	0	0	0	0	0	0	0
2200	37	0	36	1	0	0	0	0	0	0	0	0	0	0
2300	22	0	20	2	0	0	0	0	0	0	0	0	0	0
00-00	3660	7	3263	335	27	12	8	7	0	1	0	0	0	0
	100.00%	0.19%	89.15%	9.15%	0.74%	0.33%	0.22%	0.19%	0.00%	0.03%	0.00%	0.00%	0.00%	0.00%

Classification Report

Job # 150_045_HSH_Loc_C
Area Milton, MA
Location Chickatawbut Road, east of Randolph Avenue (Route 28)
Direction Westbound
Thursday, December 14, 2017



Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	12	0	11	1	0	0	0	0	0	0	0	0	0	0
0100	6	0	6	0	0	0	0	0	0	0	0	0	0	0
0200	4	0	4	0	0	0	0	0	0	0	0	0	0	0
0300	4	0	4	0	0	0	0	0	0	0	0	0	0	0
0400	2	0	1	1	0	0	0	0	0	0	0	0	0	0
0500	16	0	11	5	0	0	0	0	0	0	0	0	0	0
0600	154	0	127	26	0	0	0	1	0	0	0	0	0	0
0700	335	0	307	25	0	2	1	0	0	0	0	0	0	0
0800	286	1	252	30	0	1	0	1	0	1	0	0	0	0
0900	127	0	104	21	0	2	0	0	0	0	0	0	0	0
1000	132	0	110	22	0	0	0	0	0	0	0	0	0	0
1100	136	1	121	14	0	0	0	0	0	0	0	0	0	0
1200	155	0	142	12	0	1	0	0	0	0	0	0	0	0
1300	188	0	171	17	0	0	0	0	0	0	0	0	0	0
1400	352	0	323	26	0	2	0	1	0	0	0	0	0	0
1500	418	1	372	37	3	4	0	0	0	1	0	0	0	0
1600	364	2	331	20	8	2	0	1	0	0	0	0	0	0
1700	342	0	313	23	4	0	1	0	0	1	0	0	0	0
1800	203	1	194	6	0	1	1	0	0	0	0	0	0	0
1900	126	1	109	16	0	0	0	0	0	0	0	0	0	0
2000	83	0	76	7	0	0	0	0	0	0	0	0	0	0
2100	63	1	57	5	0	0	0	0	0	0	0	0	0	0
2200	56	0	53	3	0	0	0	0	0	0	0	0	0	0
2300	25	0	22	3	0	0	0	0	0	0	0	0	0	0
00-00	3589	8	3221	320	15	15	3	4	0	3	0	0	0	0
	100.00%	0.22%	89.75%	8.92%	0.42%	0.42%	0.08%	0.11%	0.00%	0.08%	0.00%	0.00%	0.00%	0.00%

Classification Report

Job # 150_045_HSH_Loc_C
Area Milton, MA
Location Chickatawbut Road, east of Randolph Avenue (Route 28)
Direction Westbound
Friday, December 15, 2017



Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	16	0	15	1	0	0	0	0	0	0	0	0	0	0
0100	15	0	14	1	0	0	0	0	0	0	0	0	0	0
0200	5	0	5	0	0	0	0	0	0	0	0	0	0	0
0300	7	0	6	1	0	0	0	0	0	0	0	0	0	0
0400	2	0	1	1	0	0	0	0	0	0	0	0	0	0
0500	14	0	11	3	0	0	0	0	0	0	0	0	0	0
0600	150	0	128	22	0	0	0	0	0	0	0	0	0	0
0700	259	0	230	27	0	2	0	0	0	0	0	0	0	0
0800	234	0	212	21	0	0	0	1	0	0	0	0	0	0
0900	120	0	110	10	0	0	0	0	0	0	0	0	0	0
1000	117	0	109	8	0	0	0	0	0	0	0	0	0	0
1100	171	0	157	14	0	0	0	0	0	0	0	0	0	0
1200	268	0	237	30	0	1	0	0	0	0	0	0	0	0
1300	274	0	241	33	0	0	0	0	0	0	0	0	0	0
1400	413	1	355	43	3	5	3	1	0	1	1	0	0	0
1500	478	0	428	45	2	0	1	2	0	0	0	0	0	0
1600	381	2	335	30	5	4	1	2	0	2	0	0	0	0
1700	357	4	321	22	4	3	1	2	0	0	0	0	0	0
1800	243	0	230	12	0	0	0	0	0	1	0	0	0	0
1900	116	0	110	5	0	1	0	0	0	0	0	0	0	0
2000	92	0	88	4	0	0	0	0	0	0	0	0	0	0
2100	16	0	15	1	0	0	0	0	0	0	0	0	0	0
2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2300	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00-00	3748	7	3358	334	14	16	6	8	0	4	1	0	0	0
	100.00%	0.19%	89.59%	8.91%	0.37%	0.43%	0.16%	0.21%	0.00%	0.11%	0.03%	0.00%	0.00%	0.00%

Classification Report

Job # 150_045_HSH_Loc_D
Area Milton, MA
Location Chickatawbut Road, west of Randolph Avenue (Route 28)
Direction Eastbound
Monday, December 11, 2017



Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0400	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0500	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0600	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0700	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0900	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1200	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1300	47	0	40	7	0	0	0	0	0	0	0	0	0	0
1400	135	0	111	24	0	0	0	0	0	0	0	0	0	0
1500	228	0	193	31	1	1	2	0	0	0	0	0	0	0
1600	310	0	271	32	1	1	4	0	0	1	0	0	0	0
1700	317	5	283	19	1	0	6	1	0	0	1	0	0	1
1800	204	1	180	18	0	0	3	1	0	0	0	0	0	1
1900	68	0	62	6	0	0	0	0	0	0	0	0	0	0
2000	49	0	45	4	0	0	0	0	0	0	0	0	0	0
2100	17	0	15	2	0	0	0	0	0	0	0	0	0	0
2200	21	0	18	3	0	0	0	0	0	0	0	0	0	0
2300	10	0	10	0	0	0	0	0	0	0	0	0	0	0
00-00	1406	6	1228	146	3	2	15	2	0	1	1	0	0	2
	100.00%	0.43%	87.34%	10.38%	0.21%	0.14%	1.07%	0.14%	0.00%	0.07%	0.07%	0.00%	0.00%	0.14%

Classification Report

Job # 150_045_HSH_Loc_D
Area Milton, MA
Location Chickatawbut Road, west of Randolph Avenue (Route 28)
Direction Eastbound
Tuesday, December 12, 2017



Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	4	0	4	0	0	0	0	0	0	0	0	0	0	0
0100	4	1	2	1	0	0	0	0	0	0	0	0	0	0
0200	1	0	0	1	0	0	0	0	0	0	0	0	0	0
0300	2	0	2	0	0	0	0	0	0	0	0	0	0	0
0400	2	0	1	0	0	0	1	0	0	0	0	0	0	0
0500	30	0	23	7	0	0	0	0	0	0	0	0	0	0
0600	106	0	81	22	0	2	1	0	0	0	0	0	0	0
0700	200	0	173	24	0	2	1	0	0	0	0	0	0	0
0800	188	0	164	22	1	1	0	0	0	0	0	0	0	0
0900	99	0	78	19	0	1	1	0	0	0	0	0	0	0
1000	89	0	74	10	0	3	2	0	0	0	0	0	0	0
1100	94	0	83	10	0	1	0	0	0	0	0	0	0	0
1200	107	0	99	6	0	1	1	0	0	0	0	0	0	0
1300	89	0	77	10	0	1	1	0	0	0	0	0	0	0
1400	144	1	132	8	0	0	3	0	0	0	0	0	0	0
1500	243	0	206	34	0	0	3	0	0	0	0	0	0	0
1600	374	2	336	24	1	1	10	0	0	0	0	0	0	0
1700	385	0	344	24	0	1	11	3	0	1	1	0	0	0
1800	218	0	202	11	0	0	4	1	0	0	0	0	0	0
1900	78	0	67	2	0	0	0	8	0	0	0	0	0	1
2000	53	2	48	0	0	0	3	0	0	0	0	0	0	0
2100	32	0	26	4	0	0	0	2	0	0	0	0	0	0
2200	16	0	16	0	0	0	0	0	0	0	0	0	0	0
2300	16	0	13	2	0	0	1	0	0	0	0	0	0	0
00-00	2574	6	2251	241	2	14	43	14	0	1	1	0	0	1
	100.00%	0.23%	87.45%	9.36%	0.08%	0.54%	1.67%	0.54%	0.00%	0.04%	0.04%	0.00%	0.00%	0.04%

Classification Report

Job # 150_045_HSH_Loc_D
Area Milton, MA
Location Chickatawbut Road, west of Randolph Avenue (Route 28)
Direction Eastbound
Wednesday, December 13, 2017



Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	2	0	1	1	0	0	0	0	0	0	0	0	0	0
0100	3	0	3	0	0	0	0	0	0	0	0	0	0	0
0200	1	0	0	1	0	0	0	0	0	0	0	0	0	0
0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0400	3	0	1	1	0	0	1	0	0	0	0	0	0	0
0500	26	0	16	10	0	0	0	0	0	0	0	0	0	0
0600	101	1	79	17	1	2	1	0	0	0	0	0	0	0
0700	216	3	183	26	0	0	4	0	0	0	0	0	0	0
0800	166	1	145	15	1	0	4	0	0	0	0	0	0	0
0900	108	0	90	14	1	0	2	1	0	0	0	0	0	0
1000	100	1	82	14	0	0	3	0	0	0	0	0	0	0
1100	117	0	99	15	0	1	2	0	0	0	0	0	0	0
1200	114	0	93	17	0	1	2	1	0	0	0	0	0	0
1300	98	0	80	13	0	0	4	1	0	0	0	0	0	0
1400	140	1	112	22	0	1	4	0	0	0	0	0	0	0
1500	248	3	191	40	1	3	6	3	0	0	0	0	0	1
1600	381	4	333	21	2	1	9	8	0	0	0	0	0	3
1700	351	1	303	19	2	3	13	9	0	0	0	0	0	1
1800	275	3	237	20	1	3	5	3	0	1	1	0	0	1
1900	75	0	65	7	0	1	2	0	0	0	0	0	0	0
2000	43	0	40	2	0	1	0	0	0	0	0	0	0	0
2100	26	0	22	4	0	0	0	0	0	0	0	0	0	0
2200	23	0	16	6	0	1	0	0	0	0	0	0	0	0
2300	23	0	18	5	0	0	0	0	0	0	0	0	0	0
00-00	2640	18	2209	290	9	18	62	26	0	1	1	0	0	6
	100.00%	0.68%	83.67%	10.98%	0.34%	0.68%	2.35%	0.98%	0.00%	0.04%	0.04%	0.00%	0.00%	0.23%

Classification Report

Job # 150_045_HSH_Loc_D
Area Milton, MA
Location Chickatawbut Road, west of Randolph Avenue (Route 28)
Direction Eastbound
Thursday, December 14, 2017



Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	12	0	12	0	0	0	0	0	0	0	0	0	0	0
0100	3	0	3	0	0	0	0	0	0	0	0	0	0	0
0200	1	0	1	0	0	0	0	0	0	0	0	0	0	0
0300	2	1	1	0	0	0	0	0	0	0	0	0	0	0
0400	3	0	3	0	0	0	0	0	0	0	0	0	0	0
0500	25	0	16	9	0	0	0	0	0	0	0	0	0	0
0600	93	0	74	18	1	0	0	0	0	0	0	0	0	0
0700	220	1	185	27	1	2	2	2	0	0	0	0	0	0
0800	172	1	137	32	2	0	0	0	0	0	0	0	0	0
0900	115	0	97	15	1	0	2	0	0	0	0	0	0	0
1000	97	1	77	14	0	3	2	0	0	0	0	0	0	0
1100	104	1	73	24	1	2	3	0	0	0	0	0	0	0
1200	96	0	81	14	0	1	0	0	0	0	0	0	0	0
1300	115	0	94	20	0	1	0	0	0	0	0	0	0	0
1400	162	0	128	29	1	3	1	0	0	0	0	0	0	0
1500	334	1	286	40	0	3	3	0	0	1	0	0	0	0
1600	374	0	323	43	3	1	2	1	0	0	0	0	0	1
1700	330	0	290	27	1	0	8	3	0	0	1	0	0	0
1800	344	0	310	25	2	1	6	0	0	0	0	0	0	0
1900	92	0	79	13	0	0	0	0	0	0	0	0	0	0
2000	54	0	50	3	1	0	0	0	0	0	0	0	0	0
2100	32	0	26	6	0	0	0	0	0	0	0	0	0	0
2200	29	0	28	1	0	0	0	0	0	0	0	0	0	0
2300	20	0	18	1	0	1	0	0	0	0	0	0	0	0
00-00	2829	6	2392	361	14	18	29	6	0	1	1	0	0	1
	100.00%	0.21%	84.55%	12.76%	0.49%	0.64%	1.03%	0.21%	0.00%	0.04%	0.04%	0.00%	0.00%	0.04%

Classification Report

Job # 150_045_HSH_Loc_D
Area Milton, MA
Location Chickatawbut Road, west of Randolph Avenue (Route 28)
Direction Eastbound
Friday, December 15, 2017



Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	13	0	11	2	0	0	0	0	0	0	0	0	0	0
0100	3	0	1	1	0	1	0	0	0	0	0	0	0	0
0200	3	0	3	0	0	0	0	0	0	0	0	0	0	0
0300	4	0	4	0	0	0	0	0	0	0	0	0	0	0
0400	1	0	1	0	0	0	0	0	0	0	0	0	0	0
0500	20	0	15	5	0	0	0	0	0	0	0	0	0	0
0600	77	0	56	19	1	1	0	0	0	0	0	0	0	0
0700	150	0	123	25	0	2	0	0	0	0	0	0	0	0
0800	145	0	123	21	1	0	0	0	0	0	0	0	0	0
0900	110	0	83	24	1	2	0	0	0	0	0	0	0	0
1000	83	0	64	19	0	0	0	0	0	0	0	0	0	0
1100	114	0	89	22	1	2	0	0	0	0	0	0	0	0
1200	134	0	112	22	0	0	0	0	0	0	0	0	0	0
1300	143	0	116	25	0	1	1	0	0	0	0	0	0	0
1400	220	0	182	37	0	1	0	0	0	0	0	0	0	0
1500	333	0	268	49	3	5	4	2	0	2	0	0	0	0
1600	390	2	341	33	5	5	3	1	0	0	0	0	0	0
1700	372	0	330	23	0	2	14	2	0	1	0	0	0	0
1800	275	0	245	19	1	0	10	0	0	0	0	0	0	0
1900	87	0	82	4	1	0	0	0	0	0	0	0	0	0
2000	49	0	44	4	0	0	1	0	0	0	0	0	0	0
2100	9	0	8	1	0	0	0	0	0	0	0	0	0	0
2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2300	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00-00	2735	2	2301	355	14	22	33	5	0	3	0	0	0	0
	100.00%	0.07%	84.13%	12.98%	0.51%	0.80%	1.21%	0.18%	0.00%	0.11%	0.00%	0.00%	0.00%	0.00%

Classification Report

Job # 150_045_HSH_Loc_D
Area Milton, MA
Location Chickatawbut Road, west of Randolph Avenue (Route 28)
Direction Westbound
Tuesday, December 12, 2017



Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	6	0	6	0	0	0	0	0	0	0	0	0	0	0
0100	2	0	2	0	0	0	0	0	0	0	0	0	0	0
0200	3	0	2	1	0	0	0	0	0	0	0	0	0	0
0300	1	0	1	0	0	0	0	0	0	0	0	0	0	0
0400	4	0	0	4	0	0	0	0	0	0	0	0	0	0
0500	35	0	23	11	1	0	0	0	0	0	0	0	0	0
0600	139	0	122	16	0	0	0	0	0	1	0	0	0	0
0700	280	0	241	36	0	2	1	0	0	0	0	0	0	0
0800	286	0	245	36	2	2	1	0	0	0	0	0	0	0
0900	119	0	93	23	0	2	1	0	0	0	0	0	0	0
1000	90	0	81	9	0	0	0	0	0	0	0	0	0	0
1100	116	0	101	14	0	0	1	0	0	0	0	0	0	0
1200	129	0	116	13	0	0	0	0	0	0	0	0	0	0
1300	143	0	121	20	0	1	1	0	0	0	0	0	0	0
1400	166	1	147	17	1	0	0	0	0	0	0	0	0	0
1500	167	0	151	14	1	1	0	0	0	0	0	0	0	0
1600	141	0	130	10	0	1	0	0	0	0	0	0	0	0
1700	114	1	103	10	0	0	0	0	0	0	0	0	0	0
1800	131	0	123	8	0	0	0	0	0	0	0	0	0	0
1900	84	0	77	7	0	0	0	0	0	0	0	0	0	0
2000	41	0	39	2	0	0	0	0	0	0	0	0	0	0
2100	37	0	35	2	0	0	0	0	0	0	0	0	0	0
2200	26	0	25	1	0	0	0	0	0	0	0	0	0	0
2300	12	0	10	1	0	1	0	0	0	0	0	0	0	0
00-00	2272	2	1994	255	5	10	5	0	0	1	0	0	0	0
	100.00%	0.09%	87.76%	11.22%	0.22%	0.44%	0.22%	0.00%	0.00%	0.04%	0.00%	0.00%	0.00%	0.00%

Classification Report

Job # 150_045_HSH_Loc_D
Area Milton, MA
Location Chickatawbut Road, west of Randolph Avenue (Route 28)
Direction Westbound
Wednesday, December 13, 2017



Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	4	0	4	0	0	0	0	0	0	0	0	0	0	0
0100	3	0	2	1	0	0	0	0	0	0	0	0	0	0
0200	2	0	2	0	0	0	0	0	0	0	0	0	0	0
0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0400	7	0	2	4	0	0	1	0	0	0	0	0	0	0
0500	29	0	19	9	0	0	0	0	0	1	0	0	0	0
0600	154	0	127	26	0	1	0	0	0	0	0	0	0	0
0700	306	0	278	28	0	0	0	0	0	0	0	0	0	0
0800	313	0	285	26	0	2	0	0	0	0	0	0	0	0
0900	152	0	125	27	0	0	0	0	0	0	0	0	0	0
1000	89	0	75	13	0	1	0	0	0	0	0	0	0	0
1100	109	0	94	13	0	2	0	0	0	0	0	0	0	0
1200	119	0	99	18	0	1	1	0	0	0	0	0	0	0
1300	131	0	111	19	0	1	0	0	0	0	0	0	0	0
1400	190	0	160	29	1	0	0	0	0	0	0	0	0	0
1500	220	0	197	22	0	1	0	0	0	0	0	0	0	0
1600	180	0	167	11	0	2	0	0	0	0	0	0	0	0
1700	132	0	126	6	0	0	0	0	0	0	0	0	0	0
1800	145	0	137	8	0	0	0	0	0	0	0	0	0	0
1900	64	0	56	8	0	0	0	0	0	0	0	0	0	0
2000	42	0	39	2	0	1	0	0	0	0	0	0	0	0
2100	33	0	32	1	0	0	0	0	0	0	0	0	0	0
2200	22	0	19	3	0	0	0	0	0	0	0	0	0	0
2300	12	0	10	2	0	0	0	0	0	0	0	0	0	0
00-00	2458	0	2166	276	1	12	2	0	0	1	0	0	0	0
	100.00%	0.00%	88.12%	11.23%	0.04%	0.49%	0.08%	0.00%	0.00%	0.04%	0.00%	0.00%	0.00%	0.00%

Classification Report

Job # 150_045_HSH_Loc_D
Area Milton, MA
Location Chickatawbut Road, west of Randolph Avenue (Route 28)
Direction Westbound
Thursday, December 14, 2017



Time	Total	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13
		Motorcycle	Passenger Car	Vans, Pick up Trucks	Bus	2 Axle 6 Tires	3 Axle Unit	4 Axles or more Unit	3 or 4 Axle Trailer	5 Axle Trailer	6 Axle or more Trailer	5 Axle or less Multi-Trailer	6 Axle Multi-Trailer	7 Axle or more Multi-Trailer
0000	14	0	14	0	0	0	0	0	0	0	0	0	0	0
0100	4	0	4	0	0	0	0	0	0	0	0	0	0	0
0200	4	0	4	0	0	0	0	0	0	0	0	0	0	0
0300	3	0	3	0	0	0	0	0	0	0	0	0	0	0
0400	6	0	3	3	0	0	0	0	0	0	0	0	0	0
0500	34	0	21	12	0	1	0	0	0	0	0	0	0	0
0600	127	0	107	19	0	0	1	0	0	0	0	0	0	0
0700	298	0	270	27	0	1	0	0	0	0	0	0	0	0
0800	289	0	259	29	0	1	0	0	0	0	0	0	0	0
0900	122	0	99	21	0	2	0	0	0	0	0	0	0	0
1000	96	1	80	12	0	1	1	1	0	0	0	0	0	0
1100	94	0	76	16	0	2	0	0	0	0	0	0	0	0
1200	125	0	109	16	0	0	0	0	0	0	0	0	0	0
1300	120	0	99	20	0	1	0	0	0	0	0	0	0	0
1400	177	0	158	15	2	1	1	0	0	0	0	0	0	0
1500	186	0	167	19	0	0	0	0	0	0	0	0	0	0
1600	139	0	128	10	0	1	0	0	0	0	0	0	0	0
1700	124	0	116	8	0	0	0	0	0	0	0	0	0	0
1800	108	0	103	5	0	0	0	0	0	0	0	0	0	0
1900	72	0	56	16	0	0	0	0	0	0	0	0	0	0
2000	41	0	36	5	0	0	0	0	0	0	0	0	0	0
2100	36	0	33	3	0	0	0	0	0	0	0	0	0	0
2200	38	0	35	3	0	0	0	0	0	0	0	0	0	0
2300	20	0	17	1	0	2	0	0	0	0	0	0	0	0
00-00	2277	1	1997	260	2	13	3	1	0	0	0	0	0	0
	100.00%	0.04%	87.70%	11.42%	0.09%	0.57%	0.13%	0.04%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Classification Report

Job # 150_045_HSH_Loc_D
Area Milton, MA
Location Chickatawbut Road, west of Randolph Avenue (Route 28)
Direction Westbound
Friday, December 15, 2017

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 DataInquiries@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	8	0	7	1	0	0	0	0	0	0	0	0	0	0
0100	8	0	8	0	0	0	0	0	0	0	0	0	0	0
0200	6	0	6	0	0	0	0	0	0	0	0	0	0	0
0300	6	0	5	1	0	0	0	0	0	0	0	0	0	0
0400	3	0	1	2	0	0	0	0	0	0	0	0	0	0
0500	31	0	20	11	0	0	0	0	0	0	0	0	0	0
0600	134	0	111	21	1	1	0	0	0	0	0	0	0	0
0700	246	0	208	38	0	0	0	0	0	0	0	0	0	0
0800	233	0	209	22	1	1	0	0	0	0	0	0	0	0
0900	104	0	83	18	0	1	1	0	0	1	0	0	0	0
1000	88	0	73	14	0	0	0	1	0	0	0	0	0	0
1100	117	0	99	17	0	1	0	0	0	0	0	0	0	0
1200	150	0	129	20	0	0	0	1	0	0	0	0	0	0
1300	168	0	141	25	0	2	0	0	0	0	0	0	0	0
1400	186	0	159	25	0	0	2	0	0	0	0	0	0	0
1500	208	0	186	21	0	1	0	0	0	0	0	0	0	0
1600	154	0	146	7	0	0	1	0	0	0	0	0	0	0
1700	136	0	126	9	0	0	1	0	0	0	0	0	0	0
1800	110	0	102	8	0	0	0	0	0	0	0	0	0	0
1900	60	0	54	6	0	0	0	0	0	0	0	0	0	0
2000	57	0	51	5	0	1	0	0	0	0	0	0	0	0
2100	4	0	3	1	0	0	0	0	0	0	0	0	0	0
2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2300	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00-00	2217	0	1927	272	2	8	5	2	0	1	0	0	0	0
	100.00%	0.00%	86.92%	12.27%	0.09%	0.36%	0.23%	0.09%	0.00%	0.05%	0.00%	0.00%	0.00%	0.00%

Volume Report

Job 150_045_HSH_Loc A
Area Milton, MA
Location Randolph Avenue (Route 28), north of Chickatawbut Road

BOSTON
TRAFFIC DATA

PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Monday, December 11, 2017

Time	Total	NB	SB		Time	Total	NB	SB
0000	0	0	0		1200	0	0	0
0015	0	0	0		1215	0	0	0
0030	0	0	0		1230	0	0	0
0045	0	0	0	0	1245	0	0	0
0100	0	0	0	0	1300	0	0	0
0115	0	0	0	0	1315	0	0	0
0130	0	0	0	0	1330	0	0	0
0145	0	0	0	0	1345	0	0	0
0200	0	0	0	0	1400	0	0	0
0215	0	0	0	0	1415	366	199	167
0230	0	0	0	0	1430	422	221	201
0245	0	0	0	0	1445	394	172	222
0300	0	0	0	0	1500	424	167	257
0315	0	0	0	0	1515	460	177	283
0330	0	0	0	0	1530	512	209	303
0345	0	0	0	0	1545	429	181	248
0400	0	0	0	0	1600	378	174	204
0415	0	0	0	0	1615	345	135	210
0430	0	0	0	0	1630	300	143	157
0445	0	0	0	0	1645	334	145	189
0500	0	0	0	0	1700	361	164	197
0515	0	0	0	0	1715	343	159	184
0530	0	0	0	0	1730	360	185	175
0545	0	0	0	0	1745	336	165	171
0600	0	0	0	0	1800	332	134	198
0615	0	0	0	0	1815	372	148	224
0630	0	0	0	0	1830	364	135	229
0645	0	0	0	0	1845	323	135	188
0700	0	0	0	0	1900	286	124	162
0715	0	0	0	0	1915	285	123	162
0730	0	0	0	0	1930	259	98	161
0745	0	0	0	0	1945	245	89	156
0800	0	0	0	0	2000	249	107	142
0815	0	0	0	0	2015	220	95	125
0830	0	0	0	0	2030	205	83	122
0845	0	0	0	0	2045	190	92	98
0900	0	0	0	0	2100	168	67	101
0915	0	0	0	0	2115	169	80	89
0930	0	0	0	0	2130	142	58	84
0945	0	0	0	0	2145	143	82	61
1000	0	0	0	0	2200	155	70	85
1015	0	0	0	0	2215	120	58	62
1030	0	0	0	0	2230	117	55	62
1045	0	0	0	0	2245	109	50	59
1100	0	0	0	0	2300	109	42	67
1115	0	0	0	0	2315	95	38	57
1130	0	0	0	0	2330	93	33	60
1145	0	0	0	0	2345	87	16	71
					Total	10601	4608	5993

Volume Report

Job 150_045_HSH_Loc A
Area Milton, MA
Location Randolph Avenue (Route 28), north of Chickatawbut Road

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Tuesday, December 12, 2017

Time	Total	NB	SB		Time	Total	NB	SB
0000	90	27	63		1200	308	146	162
0015	47	18	29		1215	297	148	149
0030	38	15	23		1230	330	168	162
0045	30	12	18	133	1245	313	148	165
0100	33	18	15		1300	305	162	143
0115	30	11	19		1315	303	151	152
0130	25	11	14		1330	315	144	171
0145	19	9	10	58	1345	322	157	165
0200	18	9	9		1400	362	206	156
0215	13	8	5		1415	378	211	167
0230	15	7	8		1430	406	203	203
0245	22	11	11	33	1445	439	204	235
0300	15	6	9		1500	399	178	221
0315	14	7	7		1515	462	185	277
0330	12	3	9		1530	475	171	304
0345	16	10	6	31	1545	409	174	235
0400	23	17	6		1600	361	163	198
0415	26	16	10		1615	340	158	182
0430	52	39	13		1630	327	153	174
0445	75	55	20	49	1645	350	170	180
0500	112	86	26		1700	397	196	201
0515	248	212	36		1715	367	177	190
0530	326	296	30		1730	326	168	158
0545	415	367	48	140	1745	322	138	184
0600	347	298	49		1800	373	171	202
0615	436	376	60		1815	373	154	219
0630	479	387	92		1830	373	142	231
0645	480	373	107	308	1845	386	149	237
0700	487	383	104		1900	351	116	235
0715	511	384	127		1915	268	97	171
0730	540	362	178		1930	280	107	173
0745	560	383	177	586	1945	239	101	138
0800	504	313	191		2000	242	97	145
0815	449	302	147		2015	280	103	177
0830	486	328	158		2030	204	92	112
0845	499	329	170	666	2045	196	83	113
0900	476	307	169		2100	174	80	94
0915	368	243	125		2115	167	65	102
0930	362	242	120		2130	177	80	97
0945	319	198	121	535	2145	164	92	72
1000	306	168	138		2200	130	63	67
1015	334	188	146		2215	142	78	64
1030	276	163	113		2230	110	52	58
1045	287	156	131	528	2245	114	55	59
1100	284	158	126		2300	120	46	74
1115	265	148	117		2315	111	41	70
1130	294	142	152		2330	88	33	55
1145	263	141	122	517	2345	72	14	58
Total	25073	13932	11141					

Volume Report

Job 150_045_HSH_Loc A
Area Milton, MA
Location Randolph Avenue (Route 28), north of Chickatawbut Road

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
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Wednesday, December 13, 2017

Time	Total	NB		SB		Time	Total	NB		SB	
0000	76	16		60		1200	294	153		141	
0015	55	23		32		1215	319	172		147	
0030	38	10		28		1230	315	161		154	
0045	33	19	68	14	134	1245	311	148	634	163	605
0100	30	14		16		1300	312	152		160	
0115	27	13		14		1315	298	155		143	
0130	22	8		14		1330	347	167		180	
0145	15	10	45	5	49	1345	358	174	648	184	667
0200	17	6		11		1400	384	188		196	
0215	13	2		11		1415	427	222		205	
0230	12	3		9		1430	411	204		207	
0245	18	11	22	7	38	1445	440	168	782	272	880
0300	16	8		8		1500	501	200		301	
0315	14	4		10		1515	367	135		232	
0330	15	7		8		1530	336	147		189	
0345	21	12	31	9	35	1545	332	146	628	186	908
0400	20	14		6		1600	302	158		144	
0415	25	21		4		1615	314	136		178	
0430	51	38		13		1630	298	118		180	
0445	73	58	131	15	38	1645	303	142	554	161	663
0500	96	73		23		1700	376	177		199	
0515	246	211		35		1715	348	153		195	
0530	311	279		32		1730	384	183		201	
0545	377	336	899	41	131	1745	328	171	684	157	752
0600	413	360		53		1800	440	236		204	
0615	423	349		74		1815	420	207		213	
0630	426	352		74		1830	435	212		223	
0645	483	362	1423	121	322	1845	361	150	805	211	851
0700	489	380		109		1900	371	156		215	
0715	514	384		130		1915	341	134		207	
0730	525	356		169		1930	273	103		170	
0745	543	365	1485	178	586	1945	238	94	487	144	736
0800	505	323		182		2000	226	100		126	
0815	476	312		164		2015	267	125		142	
0830	510	334		176		2030	241	120		121	
0845	516	338	1307	178	700	2045	212	85	430	127	516
0900	467	299		168		2100	190	90		100	
0915	417	266		151		2115	185	80		105	
0930	414	269		145		2130	166	64		102	
0945	316	197	1031	119	583	2145	149	72	306	77	384
1000	365	208		157		2200	153	81		72	
1015	288	162		126		2215	140	66		74	
1030	302	154		148		2230	129	58		71	
1045	278	147	671	131	562	2245	111	47	252	64	281
1100	293	137		156		2300	115	47		68	
1115	303	168		135		2315	123	54		69	
1130	300	148		152		2330	102	35		67	
1145	321	161	614	160	603	2345	74	16	152	58	262
Total	25375			14089						11286	

Volume Report

Job 150_045_HSH_Loc A
Area Milton, MA
Location Randolph Avenue (Route 28), north of Chickatawbut Road

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
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Thursday, December 14, 2017

Time	Total	NB	SB		Time	Total	NB	SB
0000	75	17	58		1200	284	149	135
0015	49	12	37		1215	329	167	162
0030	42	12	30		1230	295	138	157
0045	35	17	18	143	1245	295	153	142
0100	38	11	27		1300	339	182	157
0115	23	6	17		1315	337	172	165
0130	22	10	12		1330	330	171	159
0145	21	9	12	68	1345	396	194	202
0200	15	9	6		1400	376	208	168
0215	9	4	5		1415	434	254	180
0230	11	4	7		1430	498	287	211
0245	12	9	3	21	1445	523	291	232
0300	19	10	9		1500	522	250	272
0315	16	8	8		1515	590	264	326
0330	22	12	10		1530	490	218	272
0345	13	8	5	32	1545	399	179	220
0400	18	11	7		1600	419	197	222
0415	19	13	6		1615	390	196	194
0430	37	26	11		1630	356	176	180
0445	68	54	14	38	1645	383	194	189
0500	111	82	29		1700	386	194	192
0515	197	164	33		1715	370	187	183
0530	295	261	34		1730	399	210	189
0545	373	320	53	149	1745	390	179	211
0600	393	358	35		1800	406	212	194
0615	412	344	68		1815	401	209	192
0630	462	361	101		1830	370	160	210
0645	465	347	118	322	1845	371	175	196
0700	487	368	119		1900	354	163	191
0715	483	360	123		1915	327	130	197
0730	524	374	150		1930	277	112	165
0745	505	342	163	555	1945	310	123	187
0800	492	316	176		2000	248	91	157
0815	447	286	161		2015	249	102	147
0830	488	328	160		2030	245	100	145
0845	452	300	152	649	2045	219	100	119
0900	390	254	136		2100	226	100	126
0915	359	245	114		2115	208	104	104
0930	353	239	114		2130	194	82	112
0945	343	192	151	515	2145	173	76	97
1000	343	192	151		2200	142	56	86
1015	313	186	127		2215	165	77	88
1030	332	179	153		2230	164	90	74
1045	321	194	127	558	2245	147	63	84
1100	271	160	111		2300	125	51	74
1115	309	155	154		2315	143	56	87
1130	336	155	181		2330	96	29	67
1145	329	196	133	579	2345	89	23	66
Total	26328	14814	11514					

Volume Report

Job 150_045_HSH_Loc A
Area Milton, MA
Location Randolph Avenue (Route 28), north of Chickatawbut Road

BOSTON
TRAFFIC DATA

PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Friday, December 15, 2017

Time	Total	NB	SB		Time	Total	NB	SB
0000	88	24	64		1200	398	210	188
0015	74	30	44		1215	413	211	202
0030	46	12	34		1230	412	241	171
0045	35	9	26	168	1245	408	226	182
0100	46	19	27		1300	418	218	200
0115	47	23	24		1315	431	241	190
0130	32	13	19		1330	438	231	207
0145	33	13	20	90	1345	482	253	229
0200	20	7	13		1400	502	293	209
0215	17	6	11		1415	517	306	211
0230	18	8	10		1430	537	308	229
0245	24	15	9	43	1445	427	247	180
0300	26	11	15		1500	476	230	246
0315	15	8	7		1515	477	224	253
0330	15	7	8		1530	483	241	242
0345	12	7	5	35	1545	428	201	227
0400	21	14	7		1600	421	228	193
0415	29	25	4		1615	422	215	207
0430	37	29	8		1630	410	199	211
0445	81	61	20	39	1645	394	208	186
0500	89	71	18		1700	466	229	237
0515	204	176	28		1715	445	214	231
0530	319	278	41		1730	328	166	162
0545	369	327	42	129	1745	441	231	210
0600	384	333	51		1800	362	185	177
0615	386	338	48		1815	373	177	196
0630	493	380	113		1830	468	254	214
0645	461	356	105	317	1845	417	228	189
0700	455	338	117		1900	407	210	197
0715	489	352	137		1915	377	191	186
0730	468	320	148		1930	313	133	180
0745	433	262	171	573	1945	276	125	151
0800	439	267	172		2000	258	100	158
0815	454	269	185		2015	245	110	135
0830	426	242	184		2030	238	109	129
0845	446	253	193	734	2045	260	94	166
0900	394	251	143		2100	219	98	121
0915	343	198	145		2115	179	74	105
0930	345	186	159		2130	0	0	0
0945	339	197	142	589	2145	0	0	0
1000	320	169	151		2200	0	0	0
1015	321	167	154		2215	0	0	0
1030	317	155	162		2230	0	0	0
1045	344	190	154	621	2245	0	0	0
1100	301	153	148		2300	0	0	0
1115	359	172	187		2315	0	0	0
1130	345	153	192		2330	0	0	0
1145	302	151	151	678	2345	0	0	0
Total	26027	14704	11323					

Volume Report

Job 150_045_HSH_Loc_B
Area Milton, MA
Location Randolph Avenue (Route 28), south of Chickatawbut Road

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Monday, December 11, 2017

Time	Total	NB	SB		Time	Total	NB	SB
0000	0	0	0		1200	216	117	99
0015	0	0	0		1215	328	171	157
0030	0	0	0		1230	278	149	129
0045	0	0	0	0	1245	305	174	131
0100	0	0	0		1300	336	181	155
0115	0	0	0		1315	312	158	154
0130	0	0	0		1330	314	171	143
0145	0	0	0	0	1345	351	187	164
0200	0	0	0		1400	383	212	171
0215	0	0	0		1415	420	233	187
0230	0	0	0		1430	420	218	202
0245	0	0	0	0	1445	401	191	210
0300	0	0	0		1500	418	177	241
0315	0	0	0		1515	474	186	288
0330	0	0	0		1530	532	230	302
0345	0	0	0	0	1545	565	243	322
0400	0	0	0		1600	527	207	320
0415	0	0	0		1615	427	163	264
0430	0	0	0		1630	489	190	299
0445	0	0	0	0	1645	481	193	288
0500	0	0	0		1700	487	189	298
0515	0	0	0		1715	529	222	307
0530	0	0	0		1730	598	265	333
0545	0	0	0	0	1745	508	210	298
0600	0	0	0		1800	417	149	268
0615	0	0	0		1815	401	178	223
0630	0	0	0		1830	342	137	205
0645	0	0	0	0	1845	349	150	199
0700	0	0	0		1900	284	123	161
0715	0	0	0		1915	285	120	165
0730	0	0	0		1930	244	87	157
0745	0	0	0	0	1945	232	88	144
0800	0	0	0		2000	231	105	126
0815	0	0	0		2015	220	87	133
0830	0	0	0		2030	208	82	126
0845	0	0	0	0	2045	197	82	115
0900	0	0	0		2100	168	59	109
0915	0	0	0		2115	176	80	96
0930	0	0	0		2130	143	59	84
0945	0	0	0	0	2145	144	84	60
1000	0	0	0		2200	157	67	90
1015	0	0	0		2215	123	57	66
1030	0	0	0		2230	119	51	68
1045	0	0	0	0	2245	102	44	58
1100	0	0	0		2300	108	38	70
1115	0	0	0		2315	94	32	62
1130	0	0	0		2330	95	31	64
1145	0	0	0	0	2345	93	17	76
Total	15031	6644	8387					

Volume Report

Job 150_045_HSH_Loc_B
Area Milton, MA
Location Randolph Avenue (Route 28), south of Chickatawbut Road

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Tuesday, December 12, 2017

Time	Total	NB		SB		Time	Total	NB		SB	
0000	94	27		67		1200	293	146		147	
0015	43	14		29		1215	296	151		145	
0030	37	13		24		1230	323	169		154	
0045	32	14	68	18	138	1245	317	166	632	151	597
0100	32	16		16		1300	285	155		130	
0115	33	14		19		1315	292	153		139	
0130	26	11		15		1330	301	144		157	
0145	17	8	49	9	59	1345	312	163	615	149	575
0200	22	10		12		1400	377	224		153	
0215	11	7		4		1415	418	242		176	
0230	13	6		7		1430	399	207		192	
0245	22	10	33	12	35	1445	441	209	882	232	753
0300	15	6		9		1500	452	200		252	
0315	14	7		7		1515	469	191		278	
0330	12	3		9		1530	512	209		303	
0345	14	8	24	6	31	1545	497	205	805	292	1125
0400	18	11		7		1600	490	210		280	
0415	26	15		11		1615	500	196		304	
0430	50	36		14		1630	476	186		290	
0445	67	45	107	22	54	1645	568	260	852	308	1182
0500	117	90		27		1700	592	269		323	
0515	269	234		35		1715	623	286		337	
0530	366	334		32		1730	517	210		307	
0545	469	424	1082	45	139	1745	554	230	995	324	1291
0600	429	380		49		1800	446	182		264	
0615	472	414		58		1815	458	174		284	
0630	509	428		81		1830	364	144		220	
0645	523	409	1631	114	302	1845	354	150	650	204	972
0700	507	402		105		1900	343	127		216	
0715	514	398		116		1915	260	99		161	
0730	587	414		173		1930	257	102		155	
0745	604	409	1623	195	589	1945	227	96	424	131	663
0800	545	353		192		2000	257	112		145	
0815	502	346		156		2015	253	99		154	
0830	563	392		171		2030	210	97		113	
0845	551	383	1474	168	687	2045	184	74	382	110	522
0900	507	350		157		2100	181	81		100	
0915	359	252		107		2115	172	75		97	
0930	387	275		112		2130	175	70		105	
0945	320	212	1089	108	484	2145	156	89	315	67	369
1000	296	181		115		2200	116	52		64	
1015	339	210		129		2215	152	84		68	
1030	268	161		107		2230	105	51		54	
1045	275	166	718	109	460	2245	125	62	249	63	249
1100	260	159		101		2300	117	46		71	
1115	284	165		119		2315	117	40		77	
1130	284	148		136		2330	90	34		56	
1145	265	146	618	119	475	2345	77	14	134	63	267
Total	27469			15451						12018	

Volume Report

Job 150_045_HSH_Loc_B
Area Milton, MA
Location Randolph Avenue (Route 28), south of Chickatawbut Road

BOSTON
TRAFFIC DATA

PO BOX 1723, Framingham, MA 01701
Office: 978-746-1259
DataRequest@BostonTrafficData.com
www.BostonTrafficData.com

Wednesday, December 13, 2017

Time	Total	NB	SB		Time	Total	NB	SB
0000	78	15	63		1200	290	167	123
0015	57	21	36		1215	301	169	132
0030	33	9	24		1230	313	167	146
0045	35	20	15	138	1245	300	158	142
0100	30	14	16		1300	308	152	156
0115	24	10	14		1315	284	161	123
0130	22	8	14		1330	349	184	165
0145	17	11	6	50	1345	361	188	173
0200	16	5	11		1400	383	207	176
0215	16	4	12		1415	447	238	209
0230	11	3	8		1430	425	217	208
0245	19	11	8	39	1445	470	210	260
0300	16	7	9		1500	487	206	281
0315	13	4	9		1515	439	192	247
0330	18	8	10		1530	437	167	270
0345	19	10	9	37	1545	444	170	274
0400	25	14	11		1600	456	184	272
0415	27	21	6		1615	426	177	249
0430	64	43	21		1630	474	188	286
0445	83	62	21	59	1645	449	174	275
0500	116	84	32		1700	542	239	303
0515	269	231	38		1715	524	230	294
0530	349	315	34		1730	619	287	332
0545	417	372	45	149	1745	578	259	319
0600	464	412	52		1800	578	270	308
0615	489	421	68		1815	617	297	320
0630	487	423	64		1830	547	284	263
0645	509	408	101	285	1845	401	176	225
0700	514	412	102		1900	405	173	232
0715	537	401	136		1915	368	157	211
0730	559	390	169		1930	284	106	178
0745	568	386	182	589	1945	250	103	147
0800	547	385	162		2000	228	104	124
0815	540	375	165		2015	278	128	150
0830	563	391	172		2030	243	117	126
0845	574	389	185	684	2045	212	87	125
0900	523	349	174		2100	210	100	110
0915	438	302	136		2115	196	87	109
0930	411	283	128		2130	173	68	105
0945	325	211	114	552	2145	139	59	80
1000	380	242	138		2200	154	80	74
1015	285	174	111		2215	155	73	82
1030	296	153	143		2230	139	63	76
1045	275	154	121	513	2245	122	47	75
1100	272	146	126		2300	131	51	80
1115	304	172	132		2315	120	48	72
1130	295	170	125		2330	110	37	73
1145	312	163	149	532	2345	76	14	62
Total	28483	16034	12449					

Volume Report

Job 150_045_HSH_Loc_B
Area Milton, MA
Location Randolph Avenue (Route 28), south of Chickatawbut Road

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
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Thursday, December 14, 2017

Time	Total	NB	SB		Time	Total	NB	SB
0000	80	24	56		1200	290	149	141
0015	55	16	39		1215	332	177	155
0030	42	14	28		1230	286	132	154
0045	37	18	19	142	1245	298	168	130
0100	37	10	27		1300	331	189	142
0115	22	5	17		1315	342	192	150
0130	21	10	11		1330	333	183	150
0145	23	9	14	69	1345	387	209	178
0200	14	9	5		1400	394	220	174
0215	12	5	7		1415	495	312	183
0230	13	5	8		1430	531	316	215
0245	16	11	5	25	1445	649	341	308
0300	22	10	12		1500	606	299	307
0315	15	8	7		1515	732	350	382
0330	21	12	9		1530	709	322	387
0345	13	7	6	34	1545	711	337	374
0400	19	12	7		1600	685	310	375
0415	21	14	7		1615	709	346	363
0430	40	27	13		1630	663	313	350
0445	75	57	18	45	1645	759	374	385
0500	126	92	34		1700	680	330	350
0515	236	188	48		1715	640	318	322
0530	331	292	39		1730	651	323	328
0545	430	381	49	170	1745	642	302	340
0600	465	420	45		1800	685	334	351
0615	463	399	64		1815	668	330	338
0630	487	400	87		1830	594	279	315
0645	545	419	126	322	1845	440	221	219
0700	491	382	109		1900	378	187	191
0715	484	363	121		1915	330	141	189
0730	556	386	170		1930	281	120	161
0745	526	360	166	566	1945	299	123	176
0800	513	349	164		2000	252	98	154
0815	507	331	176		2015	266	116	150
0830	519	361	158		2030	253	106	147
0845	503	343	160	658	2045	250	105	145
0900	424	292	132		2100	230	97	133
0915	387	268	119		2115	227	114	113
0930	381	272	109		2130	204	88	116
0945	352	218	134	494	2145	182	69	113
1000	332	208	124		2200	145	53	92
1015	299	191	108		2215	182	87	95
1030	324	197	127		2230	169	96	73
1045	319	197	122	481	2245	162	77	85
1100	263	160	103		2300	133	56	77
1115	307	157	150		2315	144	56	88
1130	292	155	137		2330	107	37	70
1145	312	200	112	502	2345	90	24	66
Total	31298	17790	13508					

Volume Report

Job 150_045_HSH_Loc_B
Area Milton, MA
Location Randolph Avenue (Route 28), south of Chickatawbut Road

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
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Friday, December 15, 2017

Time	Total	NB		SB		Time	Total	NB		SB	
0000	98	30		68		1200	414	244		170	
0015	86	33		53		1215	475	264		211	
0030	43	8		35		1230	453	294		159	
0045	36	8	79	28	184	1245	452	265	1067	187	727
0100	50	21		29		1300	470	256		214	
0115	54	25		29		1315	428	249		179	
0130	34	12		22		1330	453	247		206	
0145	31	10	68	21	101	1345	556	317	1069	239	838
0200	26	11		15		1400	567	343		224	
0215	17	6		11		1415	674	383		291	
0230	20	7		13		1430	693	380		313	
0245	32	17	41	15	54	1445	713	375	1481	338	1166
0300	29	11		18		1500	715	333		382	
0315	16	8		8		1515	747	357		390	
0330	16	6		10		1530	806	403		403	
0345	15	9	34	6	42	1545	767	378	1471	389	1564
0400	27	15		12		1600	734	348		386	
0415	37	26		11		1615	747	373		374	
0430	48	31		17		1630	737	353		384	
0445	95	64	136	31	71	1645	672	332	1406	340	1484
0500	114	80		34		1700	695	324		371	
0515	253	201		52		1715	717	351		366	
0530	342	289		53		1730	641	308		333	
0545	420	370	940	50	189	1745	665	305	1288	360	1430
0600	436	381		55		1800	644	325		319	
0615	451	399		52		1815	625	314		311	
0630	503	401		102		1830	618	343		275	
0645	518	419	1600	99	308	1845	487	281	1263	206	1111
0700	477	366		111		1900	434	248		186	
0715	536	390		146		1915	391	206		185	
0730	495	350		145		1930	295	143		152	
0745	472	307	1413	165	567	1945	293	132	729	161	684
0800	492	320		172		2000	249	102		147	
0815	471	303		168		2015	270	124		146	
0830	509	309		200		2030	247	113		134	
0845	481	296	1228	185	725	2045	261	98	437	163	590
0900	419	280		139		2100	240	112		128	
0915	376	221		155		2115	265	116		149	
0930	361	222		139		2130	198	103		95	
0945	344	211	934	133	566	2145	0	0	331	0	372
1000	327	193		134		2200	0	0		0	
1015	323	178		145		2215	0	0		0	
1030	320	168		152		2230	0	0		0	
1045	332	190	729	142	573	2245	0	0	0	0	0
1100	296	171		125		2300	0	0		0	
1115	370	198		172		2315	0	0		0	
1130	338	162		176		2330	0	0		0	
1145	293	165	696	128	601	2345	0	0	0	0	0
Total	32387			18440					13947		

Volume Report

Job 150_045_HSH_Loc_C
Area Milton, MA
Location Chickatawbut Road, east of Randolph Avenue (Route 28)

BOSTON
TRAFFIC DATA

PO BOX 1723, Framingham, MA 01701
Office: 978-746-1259
DataRequest@BostonTrafficData.com
www.BostonTrafficData.com

Monday, December 11, 2017

Time	Total	EB	WB		Time	Total	EB	WB
0000	0	0	0		1200	0	0	0
0015	0	0	0		1215	0	0	0
0030	0	0	0		1230	26	19	7
0045	0	0	0	0	1245	84	38	57
0100	0	0	0	0	1300	85	36	49
0115	0	0	0	0	1315	78	39	39
0130	0	0	0	0	1330	92	34	58
0145	0	0	0	0	1345	83	41	150
0200	0	0	0	0	1400	76	27	49
0215	0	0	0	0	1415	103	35	68
0230	0	0	0	0	1430	104	33	71
0245	0	0	0	0	1445	81	37	132
0300	0	0	0	0	1500	121	45	76
0315	0	0	0	0	1515	143	53	90
0330	0	0	0	0	1530	143	50	93
0345	0	0	0	0	1545	140	44	192
0400	0	0	0	0	1600	142	41	101
0415	0	0	0	0	1615	117	43	74
0430	0	0	0	0	1630	133	35	98
0445	0	0	0	0	1645	145	38	157
0500	0	0	0	0	1700	115	49	66
0515	0	0	0	0	1715	136	57	79
0530	0	0	0	0	1730	110	38	72
0545	0	0	0	0	1745	120	26	170
0600	0	0	0	0	1800	125	52	73
0615	0	0	0	0	1815	93	47	46
0630	0	0	0	0	1830	91	39	52
0645	0	0	0	0	1845	69	34	172
0700	0	0	0	0	1900	50	22	28
0715	0	0	0	0	1915	47	24	23
0730	0	0	0	0	1930	42	17	25
0745	0	0	0	0	1945	39	24	87
0800	0	0	0	0	2000	51	26	25
0815	0	0	0	0	2015	28	10	18
0830	0	0	0	0	2030	30	11	19
0845	0	0	0	0	2045	29	9	56
0900	0	0	0	0	2100	18	1	17
0915	0	0	0	0	2115	20	4	16
0930	0	0	0	0	2130	15	6	9
0945	0	0	0	0	2145	12	3	14
1000	0	0	0	0	2200	14	2	12
1015	0	0	0	0	2215	16	5	11
1030	0	0	0	0	2230	14	6	8
1045	0	0	0	0	2245	7	2	15
1100	0	0	0	0	2300	5	2	3
1115	0	0	0	0	2315	8	2	6
1130	0	0	0	0	2330	4	1	3
1145	0	0	0	0	2345	4	3	8
Total		3208	1210	1998				

Volume Report

Job 150_045_HSH_Loc_C
Area Milton, MA
Location Chickatawbut Road, east of Randolph Avenue (Route 28)

BOSTON
TRAFFIC DATA

PO BOX 1723, Framingham, MA 01701
Office: 978-746-1259
DataRequest@BostonTrafficData.com
www.BostonTrafficData.com

Tuesday, December 12, 2017

Time	Total	EB	WB		Time	Total	EB	WB
0000	1	0	1		1200	71	34	37
0015	1	0	1		1215	70	36	34
0030	4	1	3		1230	75	43	32
0045	6	2	4	9	1245	82	40	42
0100	3	2	1		1300	73	32	41
0115	1	0	1		1315	77	23	54
0130	0	0	0		1330	90	37	53
0145	1	1	0	2	1345	70	31	39
0200	3	1	2		1400	105	48	57
0215	0	0	0		1415	101	53	48
0230	1	0	1		1430	122	48	74
0245	0	0	0	3	1445	125	45	80
0300	1	0	1		1500	118	45	73
0315	0	0	0		1515	147	51	96
0330	0	0	0		1530	149	54	95
0345	1	1	0	1	1545	140	51	89
0400	1	0	1		1600	148	53	95
0415	2	1	1		1615	118	41	77
0430	1	1	0		1630	125	56	69
0445	2	2	0	2	1645	131	52	79
0500	6	2	4		1700	144	51	93
0515	6	5	1		1715	122	65	57
0530	14	12	2		1730	128	71	57
0545	11	5	6	13	1745	124	63	61
0600	13	3	10		1800	118	47	71
0615	50	6	44		1815	113	38	75
0630	68	10	58		1830	89	51	38
0645	79	21	58	170	1845	72	29	43
0700	87	22	65		1900	61	32	29
0715	104	26	78		1915	60	25	35
0730	146	50	96		1930	58	28	30
0745	144	49	95	334	1945	40	19	21
0800	138	62	76		2000	34	18	16
0815	120	48	72		2015	28	8	20
0830	108	36	72		2030	21	12	9
0845	111	46	65	285	2045	27	13	14
0900	84	47	37		2100	27	7	20
0915	67	33	34		2115	23	8	15
0930	42	23	19		2130	25	5	20
0945	65	38	27	117	2145	19	4	15
1000	57	35	22		2200	26	8	18
1015	62	39	23		2215	13	6	7
1030	75	37	38		2230	9	0	9
1045	80	43	37	120	2245	8	2	6
1100	73	38	35		2300	16	7	9
1115	63	33	30		2315	8	2	6
1130	80	42	38		2330	3	1	2
1145	76	32	44	147	2345	5	12	3
Total	5616	2350	3266					

Volume Report

Job 150_045_HSH_Loc_C
Area Milton, MA
Location Chickatawbut Road, east of Randolph Avenue (Route 28)

BOSTON
TRAFFIC DATA

PO BOX 1723, Framingham, MA 01701
Office: 978-746-1259
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Wednesday, December 13, 2017

Time	Total		EB		WB			Time	Total		EB		WB	
0000	5		2		3			1200	78		38		40	
0015	8		0		8			1215	82		37		45	
0030	0		0		0			1230	77		35		42	
0045	0	13	0	2	0	11		1245	87	324	47	157	40	167
0100	3		2		1			1300	87		42		45	
0115	3		1		2			1315	51		21		30	
0130	0		0		0			1330	73		33		40	
0145	2	8	1	4	1	4		1345	104	315	48	144	56	171
0200	0		0		0			1400	107		43		64	
0215	1		0		1			1415	96		34		62	
0230	0		0		0			1430	156		40		116	
0245	0	1	0	0	0	1		1445	166	525	46	163	120	362
0300	0		0		0			1500	142		41		101	
0315	0		0		0			1515	165		45		120	
0330	1		0		1			1530	179		44		135	
0345	0	1	0	0	0	1		1545	181	667	43	173	138	494
0400	0		0		0			1600	142		45		97	
0415	0		0		0			1615	125		41		84	
0430	2		1		1			1630	122		39		83	
0445	2	4	1	2	1	2		1645	124	513	33	158	91	355
0500	3		2		1			1700	131		53		78	
0515	5		4		1			1715	143		46		97	
0530	10		6		4			1730	86		32		54	
0545	15	33	8	20	7	13		1745	127	487	49	180	78	307
0600	23		5		18			1800	133		45		88	
0615	38		8		30			1815	158		72		86	
0630	52		10		42			1830	90		41		49	
0645	89	202	21	44	68	158		1845	99	480	48	206	51	274
0700	85		18		67			1900	62		22		40	
0715	114		25		89			1915	49		22		27	
0730	127		39		88			1930	34		16		18	
0745	148	474	63	145	85	329		1945	35	180	16	76	19	104
0800	145		59		86			2000	29		9		20	
0815	117		41		76			2015	31		11		20	
0830	107		41		66			2030	31		9		22	
0845	104	473	40	181	64	292		2045	26	117	11	40	15	77
0900	74		36		38			2100	26		9		17	
0915	74		31		43			2115	26		3		23	
0930	71		33		38			2130	23		6		17	
0945	57	276	34	134	23	142		2145	28	103	7	25	21	78
1000	67		43		24			2200	27		7		20	
1015	63		38		25			2215	14		5		9	
1030	77		37		40			2230	5		1		4	
1045	73	280	46	164	27	116		2245	9	55	5	18	4	37
1100	69		38		31			2300	14		3		11	
1115	87		45		42			2315	9		3		6	
1130	80		48		32			2330	4		2		2	
1145	101	337	63	194	38	143		2345	8	35	5	13	3	22
								Total	5903		2243		3660	

Volume Report

Location Chickatawbut Road, east of Randolph Avenue (Route 28)

PO BOX 1723, Framingham, MA 01701
Office: 978-746-1259
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www.BostonTrafficData.com

Thursday, December 14, 2017

Total	6257		2668		3589	
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Volume Report

Job 150_045_HSH_Loc_C
Area Milton, MA
Location Chickatawbut Road, east of Randolph Avenue (Route 28)

BOSTON
TRAFFIC DATA

PO BOX 1723, Framingham, MA 01701
Office: 978-746-1259
DataRequest@BostonTrafficData.com
www.BostonTrafficData.com

Friday, December 15, 2017

Time	Total	EB	WB		Time	Total	EB	WB
0000	11	2	9		1200	122	45	77
0015	9	3	6		1215	142	69	73
0030	2	1	1		1230	115	61	54
0045	1	1	0	16	1245	127	63	64
0100	5	1	4		1300	127	58	69
0115	5	0	5		1315	113	43	70
0130	5	0	5		1330	119	42	77
0145	2	1	1	15	1345	126	68	58
0200	4	3	1		1400	134	54	80
0215	1	0	1		1415	177	50	127
0230	2	0	2		1430	152	62	90
0245	2	1	1	5	1445	168	52	116
0300	6	3	3		1500	210	68	142
0315	0	0	0		1515	196	65	131
0330	2	1	1		1530	170	45	125
0345	3	0	3	7	1545	133	53	80
0400	1	0	1		1600	144	47	97
0415	1	0	1		1615	119	43	76
0430	1	1	0		1630	157	47	110
0445	2	2	0	2	1645	137	39	98
0500	3	2	1		1700	145	46	99
0515	8	5	3		1715	148	55	93
0530	5	4	1		1730	124	59	65
0545	11	2	9	14	1745	151	51	100
0600	24	9	15		1800	132	73	59
0615	44	6	38		1815	150	72	78
0630	61	9	52		1830	126	58	68
0645	64	19	45	150	1845	98	60	38
0700	74	18	56		1900	70	41	29
0715	96	31	65		1915	56	28	28
0730	101	31	70		1930	58	28	30
0745	107	39	68	259	1945	49	20	29
0800	115	50	65		2000	45	24	21
0815	118	51	67		2015	37	15	22
0830	95	45	50		2030	27	7	20
0845	91	39	52	234	2045	44	15	29
0900	68	36	32		2100	26	10	16
0915	56	31	25		2115	0	0	0
0930	57	30	27		2130	0	0	0
0945	77	41	36	120	2145	0	0	0
1000	52	35	17		2200	0	0	0
1015	63	34	29		2215	0	0	0
1030	72	35	37		2230	0	0	0
1045	80	46	34	117	2245	0	0	0
1100	79	40	39		2300	0	0	0
1115	91	55	36		2315	0	0	0
1130	107	62	45		2330	0	0	0
1145	113	62	51	171	2345	0	0	0
Total	6371	2623	3748					

Volume Report

Job 150_045_HSH_Loc_D
Area Milton, MA
Location Chickatawbut Road, west of Randolph Avenue (Route 28)

BOSTON
TRAFFIC DATA

PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
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Monday, December 11, 2017

Time	Total	EB	WB		Time	Total	EB	WB
0000	0	0	0		1200	0	0	0
0015	0	0	0		1215	0	0	0
0030	0	0	0		1230	0	0	0
0045	0	0	0	0	1245	0	0	0
0100	0	0	0		1300	0	0	0
0115	0	0	0		1315	0	0	0
0130	0	0	0		1330	41	18	23
0145	0	0	0	0	1345	61	29	32
0200	0	0	0		1400	53	22	31
0215	0	0	0		1415	68	38	30
0230	0	0	0		1430	75	36	39
0245	0	0	0	0	1445	67	39	28
0300	0	0	0		1500	81	38	43
0315	0	0	0		1515	102	58	44
0330	0	0	0		1530	95	61	34
0345	0	0	0	0	1545	118	71	47
0400	0	0	0		1600	97	56	41
0415	0	0	0		1615	118	85	33
0430	0	0	0		1630	131	86	45
0445	0	0	0	0	1645	130	83	47
0500	0	0	0		1700	109	84	25
0515	0	0	0		1715	108	85	23
0530	0	0	0		1730	112	79	33
0545	0	0	0	0	1745	105	69	36
0600	0	0	0		1800	103	67	36
0615	0	0	0		1815	84	59	25
0630	0	0	0		1830	76	44	32
0645	0	0	0	0	1845	59	34	25
0700	0	0	0		1900	35	19	16
0715	0	0	0		1915	38	21	17
0730	0	0	0		1930	26	12	14
0745	0	0	0	0	1945	25	16	9
0800	0	0	0		2000	27	14	13
0815	0	0	0		2015	17	9	8
0830	0	0	0		2030	35	16	19
0845	0	0	0	0	2045	18	10	8
0900	0	0	0		2100	11	4	7
0915	0	0	0		2115	12	3	9
0930	0	0	0		2130	11	5	6
0945	0	0	0	0	2145	12	5	7
1000	0	0	0		2200	14	5	9
1015	0	0	0		2215	11	6	5
1030	0	0	0		2230	9	8	1
1045	0	0	0	0	2245	4	2	2
1100	0	0	0		2300	2	1	1
1115	0	0	0		2315	7	4	3
1130	0	0	0		2330	2	1	1
1145	0	0	0	0	2345	4	4	0
Total		2313	1406	907				

Volume Report

Job 150_045_HSH_Loc_D
Area Milton, MA
Location Chickatawbut Road, west of Randolph Avenue (Route 28)

BOSTON
TRAFFIC DATA

PO BOX 1723, Framingham, MA 01701
Office: 978-746-1259
DataRequest@BostonTrafficData.com
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Tuesday, December 12, 2017

Time	Total	EB	WB		Time	Total	EB	WB
0000	1	1	0		1200	58	20	38
0015	1	1	0		1215	61	32	29
0030	3	2	1		1230	51	29	22
0045	5	0	5	6	1245	66	26	40
0100	2	2	0		1300	43	22	21
0115	2	0	2		1315	45	10	35
0130	1	1	0		1330	82	33	49
0145	1	1	0	2	1345	62	24	38
0200	4	1	3		1400	62	30	32
0215	0	0	0		1415	69	33	36
0230	0	0	0		1430	87	42	45
0245	0	0	0	3	1445	92	39	53
0300	1	0	1		1500	96	52	44
0315	0	0	0		1515	94	54	40
0330	0	0	0		1530	120	70	50
0345	2	2	0	1	1545	100	67	33
0400	0	0	0		1600	132	87	45
0415	2	1	1		1615	120	92	28
0430	1	0	1		1630	136	101	35
0445	3	1	2	4	1645	127	94	33
0500	6	3	3		1700	136	95	41
0515	11	4	7		1715	137	105	32
0530	28	16	12		1730	117	97	20
0545	20	7	13	35	1745	109	88	21
0600	26	8	18		1800	103	68	35
0615	48	20	28		1815	104	70	34
0630	81	33	48		1830	67	41	26
0645	90	45	45	139	1845	75	39	36
0700	87	27	60		1900	57	34	23
0715	103	43	60		1915	43	19	24
0730	144	64	80		1930	28	9	19
0745	146	66	80	280	1945	34	16	18
0800	146	60	86		2000	26	14	12
0815	117	46	71		2015	22	10	12
0830	112	38	74		2030	22	13	9
0845	99	44	55	286	2045	24	16	8
0900	83	38	45		2100	12	4	8
0915	45	18	27		2115	24	11	13
0930	36	14	22		2130	20	11	9
0945	54	29	25	119	2145	13	6	7
1000	41	21	20		2200	12	6	6
1015	39	20	19		2215	18	7	11
1030	53	27	26		2230	6	0	6
1045	46	21	25	90	2245	6	3	3
1100	52	22	30		2300	11	6	5
1115	58	26	32		2315	9	4	5
1130	44	21	23		2330	5	4	1
1145	56	25	31	116	2345	3	2	1
Total	4846	2574	2272					

Volume Report

Job 150_045_HSH_Loc_D
Area Milton, MA
Location Chickatawbut Road, west of Randolph Avenue (Route 28)

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
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Wednesday, December 13, 2017

Time	Total		EB		WB			Time	Total		EB		WB	
0000	2		2		0			1200	61		28		33	
0015	4		0		4			1215	56		28		28	
0030	0		0		0			1230	54		26		28	
0045	0	6	0	2	0	4		1245	62	233	32	114	30	119
0100	3		1		2			1300	42		19		23	
0115	1		1		0			1315	51		20		31	
0130	0		0		0			1330	63		24		39	
0145	2	6	1	3	1	3		1345	73	229	35	98	38	131
0200	1		1		0			1400	63		24		39	
0215	2		0		2			1415	68		27		41	
0230	0		0		0			1430	87		37		50	
0245	0	3	0	1	0	2		1445	112	330	52	140	60	190
0300	0		0		0			1500	94		48		46	
0315	0		0		0			1515	110		56		54	
0330	0		0		0			1530	129		59		70	
0345	0	0	0	0	0	0		1545	135	468	85	248	50	220
0400	1		1		0			1600	154		102		52	
0415	2		0		2			1615	116		84		32	
0430	2		1		1			1630	137		96		41	
0445	5	10	1	3	4	7		1645	154	561	99	381	55	180
0500	4		1		3			1700	139		102		37	
0515	9		4		5			1715	122		86		36	
0530	22		8		14			1730	98		77		21	
0545	20	55	13	26	7	29		1745	124	483	86	351	38	132
0600	37		17		20			1800	135		97		38	
0615	56		24		32			1815	130		89		41	
0630	64		22		42			1830	77		40		37	
0645	98	255	38	101	60	154		1845	78	420	49	275	29	145
0700	92		40		52			1900	56		30		26	
0715	135		45		90			1915	35		18		17	
0730	130		62		68			1930	25		16		9	
0745	165	522	69	216	96	306		1945	23	139	11	75	12	64
0800	140		46		94			2000	19		10		9	
0815	126		41		85			2015	29		19		10	
0830	114		41		73			2030	20		7		13	
0845	99	479	38	166	61	313		2045	17	85	7	43	10	42
0900	98		40		58			2100	18		9		9	
0915	62		21		41			2115	19		6		13	
0930	53		26		27			2130	17		7		10	
0945	47	260	21	108	26	152		2145	5	59	4	26	1	33
1000	53		26		27			2200	11		4		7	
1015	40		24		16			2215	17		8		9	
1030	54		28		26			2230	9		6		3	
1045	42	189	22	100	20	89		2245	8	45	5	23	3	22
1100	48		19		29			2300	15		9		6	
1115	61		32		29			2315	10		6		4	
1130	52		27		25			2330	5		4		1	
1145	65	226	39	117	26	109		2345	5	35	4	23	1	12
Total								5098		2640		2458		

Volume Report

Job 150_045_HSH_Loc_D
Area Milton, MA
Location Chickatawbut Road, west of Randolph Avenue (Route 28)

BOSTON
TRAFFIC DATA

PO BOX 1723, Framingham, MA 01701
Office: 978-746-1259
DataRequest@BostonTrafficData.com
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Thursday, December 14, 2017

Time	Total	EB	WB		Time	Total	EB	WB
0000	7	2	5		1200	52	27	25
0015	9	5	4		1215	50	24	26
0030	6	2	4		1230	63	31	32
0045	4	3	1	14	1245	56	14	96
0100	0	0	0		1300	55	27	28
0115	2	2	0		1315	60	31	29
0130	3	0	3		1330	54	32	22
0145	2	1	1	4	1345	66	25	115
0200	1	0	1		1400	58	28	30
0215	2	0	2		1415	83	30	53
0230	1	0	1		1430	99	41	58
0245	1	1	0	4	1445	99	63	162
0300	1	1	0		1500	124	71	53
0315	3	1	2		1515	128	79	49
0330	0	0	0		1530	129	90	39
0345	1	0	1	3	1545	139	94	334
0400	2	1	1		1600	119	88	31
0415	3	0	3		1615	142	99	43
0430	3	2	1		1630	106	74	32
0445	1	0	1	6	1645	146	113	374
0500	3	0	3		1700	115	82	33
0515	10	7	3		1715	114	86	28
0530	23	11	12		1730	113	77	36
0545	23	7	16	34	1745	112	85	330
0600	28	12	16		1800	115	89	26
0615	48	18	30		1815	129	107	22
0630	61	27	34		1830	126	100	26
0645	83	36	47	127	1845	82	48	344
0700	108	48	60		1900	62	40	22
0715	124	39	85		1915	42	19	23
0730	143	71	72		1930	36	21	15
0745	143	62	81	298	1945	24	12	92
0800	146	45	101		2000	24	13	11
0815	118	42	76		2015	23	14	9
0830	118	51	67		2030	22	12	10
0845	79	34	45	289	2045	26	15	54
0900	65	26	39		2100	16	9	7
0915	64	29	35		2115	20	12	8
0930	60	37	23		2130	16	7	9
0945	48	23	25	122	2145	16	4	32
1000	44	25	19		2200	18	5	13
1015	49	22	27		2215	19	13	6
1030	50	29	21		2230	16	6	10
1045	50	21	29	96	2245	14	5	29
1100	35	20	15		2300	11	5	6
1115	57	31	26		2315	15	7	8
1130	51	26	25		2330	7	4	3
1145	55	27	28	94	2345	7	4	20
Total		5106	2829	2277				

Volume Report

Job 150_045_HSH_Loc_D
Area Milton, MA
Location Chickatawbut Road, west of Randolph Avenue (Route 28)

BOSTON
TRAFFIC DATA

PO BOX 1723, Framingham, MA 01701
Office: 978-746-1259
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Friday, December 15, 2017

Time	Total	EB	WB		Time	Total	EB	WB
0000	10	4	6		1200	62	23	39
0015	6	4	2		1215	68	32	36
0030	2	2	0		1230	72	33	39
0045	3	3	0	8	1245	82	46	36
0100	5	2	3		1300	66	28	38
0115	4	0	4		1315	86	42	44
0130	1	0	1		1330	77	35	42
0145	1	1	0	8	1345	82	38	44
0200	4	2	2		1400	95	48	47
0215	1	0	1		1415	96	45	51
0230	2	1	1		1430	106	66	40
0245	2	0	2	6	1445	109	61	48
0300	4	2	2		1500	141	76	65
0315	0	0	0		1515	133	76	57
0330	2	2	0		1530	136	89	47
0345	4	0	4	6	1545	131	92	39
0400	2	0	2		1600	135	98	37
0415	2	1	1		1615	133	107	26
0430	0	0	0		1630	145	93	52
0445	0	0	0	3	1645	131	92	39
0500	9	4	5		1700	121	75	46
0515	12	4	8		1715	146	108	38
0530	13	5	8		1730	122	99	23
0545	17	7	10	31	1745	119	90	29
0600	31	13	18		1800	113	76	37
0615	35	11	24		1815	124	91	33
0630	68	22	46		1830	77	57	20
0645	77	31	46	134	1845	71	51	20
0700	74	23	51		1900	44	28	16
0715	124	54	70		1915	42	23	19
0730	105	38	67		1930	33	20	13
0745	93	35	58	246	1945	28	16	12
0800	106	39	67		2000	23	15	8
0815	106	38	68		2015	29	13	16
0830	102	35	67		2030	24	9	15
0845	64	33	31	233	2045	30	12	18
0900	59	33	26		2100	13	9	4
0915	52	29	23		2115	0	0	0
0930	54	24	30		2130	0	0	0
0945	49	24	25	104	2145	0	0	0
1000	38	19	19		2200	0	0	0
1015	40	20	20		2215	0	0	0
1030	45	19	26		2230	0	0	0
1045	48	25	23	88	2245	0	0	0
1100	56	23	33		2300	0	0	0
1115	57	33	24		2315	0	0	0
1130	56	30	26		2330	0	0	0
1145	62	28	34	117	2345	0	0	0
Total		4952	2735	2217				

Speed Report

Job 150_045_HSH_Loc A
 Area Milton, MA
 Location Randolph Avenue (Route 28), north of Chickatawbut Road
 Dir Northbound
Monday, December 11, 2017

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
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Time	Total	Speed Bins(mph)															
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80	
1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1400	592	1	2	10	6	26	86	195	166	81	13	5	1	0	0	0	
1500	734	5	5	3	3	9	115	292	214	73	11	3	1	0	0	0	
1600	597	25	29	11	3	5	130	311	72	10	1	0	0	0	0	0	
1700	673	11	24	2	2	19	191	365	50	8	1	0	0	0	0	0	
1800	552	1	7	7	5	16	66	230	159	55	6	0	0	0	0	0	
1900	434	0	1	0	2	7	41	143	166	62	12	0	0	0	0	0	
2000	377	0	0	0	1	2	42	122	135	59	16	0	0	0	0	0	
2100	287	0	0	0	0	0	36	78	95	54	21	3	0	0	0	0	
2200	233	0	0	1	1	0	10	54	84	62	12	8	1	0	0	0	
2300	129	0	0	0	0	1	6	28	34	37	16	5	2	0	0	0	
00-00	4608	43	68	34	23	85	723	1818	1175	501	109	24	5	0	0	0	

100.00% 0.93% 1.48% 0.74% 0.50% 1.84% 15.69% 39.45% 25.50% 10.87% 2.37% 0.52% 0.11% 0.00% 0.00% 0.00%

Maximum = 62.8 mph, Minimum = 6.3 mph, Mean = 38.5 mph
 85% Speed = 44.63 mph, 95% Speed = 48.32 mph, Median = 38.70 mph
 10 mph Pace = 34 - 44, Number in Pace = 3125 (67.82%)
 Variance = 48.93, Standard Deviation = 7.00 mph

Speed Report

Job 150_045_HSH_Loc A
 Area Milton, MA
 Location Randolph Avenue (Route 28), north of Chickatawbut Road
 Dir Northbound
 Tuesday, December 12, 2017

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Speed Bins(mph)															
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80	
0000	72	0	0	0	0	0	3	14	28	19	5	1	2	0	0	0	
0100	49	0	0	0	0	1	2	10	14	16	4	1	1	0	0	0	
0200	35	0	0	0	0	1	4	5	12	5	3	3	2	0	0	0	
0300	26	0	0	0	0	1	1	1	5	8	5	1	3	1	0	0	
0400	127	0	0	0	0	0	1	16	21	40	31	15	2	1	0	0	
0500	961	0	0	0	0	1	14	115	335	298	146	45	6	1	0	0	
0600	1434	0	0	0	0	9	177	544	497	175	28	4	0	0	0	0	
0700	1512	5	82	39	24	23	165	575	481	100	13	5	0	0	0	0	
0800	1272	6	4	3	2	13	189	544	396	106	8	0	1	0	0	0	
0900	990	0	0	0	0	11	78	371	383	130	17	0	0	0	0	0	
1000	675	0	0	1	0	2	59	248	266	84	14	1	0	0	0	0	
1100	589	0	1	2	4	4	68	230	198	73	8	1	0	0	0	0	
1200	610	0	2	2	1	12	57	217	215	81	17	6	0	0	0	0	
1300	614	0	0	2	1	5	76	226	210	82	11	1	0	0	0	0	
1400	824	0	5	5	5	11	123	316	253	94	12	0	0	0	0	0	
1500	708	1	10	7	6	12	151	296	185	39	1	0	0	0	0	0	
1600	644	26	26	12	3	43	209	263	54	7	0	0	1	0	0	0	
1700	679	19	28	15	9	37	193	309	59	9	1	0	0	0	0	0	
1800	616	1	10	9	12	22	113	250	159	36	3	1	0	0	0	0	
1900	421	0	2	2	6	4	51	161	137	46	8	4	0	0	0	0	
2000	375	0	0	0	1	2	36	147	129	51	7	2	0	0	0	0	
2100	317	0	0	1	2	1	35	96	126	43	9	4	0	0	0	0	
2200	248	0	0	0	0	2	14	76	88	50	12	5	1	0	0	0	
2300	134	0	0	0	0	0	1	33	46	38	10	3	3	0	0	0	
00-00	13932	58	170	100	76	217	1820	5063	4297	1630	373	103	22	3	0	0	
	100.00%	0.42%	1.22%	0.72%	0.55%	1.56%	13.06%	36.34%	30.84%	11.70%	2.68%	0.74%	0.16%	0.02%	0.00%	0.00%	

Maximum = 66.9 mph, Minimum = 6.4 mph, Mean = 39.3 mph
 85% Speed = 45.07 mph, 95% Speed = 48.84 mph, Median = 39.54 mph
 10 mph Pace = 34 - 44, Number in Pace = 9474 (68.00%)
 Variance = 44.11, Standard Deviation = 6.64 mph

Speed Report

Job 150_045_HSH_Loc A
 Area Milton, MA
 Location Randolph Avenue (Route 28), north of Chickatawbut Road
 Dir Northbound
 Wednesday, December 13, 2017



Time	Total	Speed Bins(mph)															
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80	
0000	68	0	0	0	0	0	5	14	17	19	8	3	1	0	0	1	
0100	45	0	0	0	0	1	5	9	18	8	2	2	0	0	0	0	
0200	22	0	0	0	0	1	1	5	6	4	2	0	2	1	0	0	
0300	31	0	0	0	0	1	1	7	6	6	5	4	1	0	0	0	
0400	131	0	0	0	0	2	0	14	30	47	31	7	0	0	0	0	
0500	899	0	0	0	0	3	20	142	305	304	110	13	2	0	0	0	
0600	1423	0	1	0	0	11	136	509	508	205	50	1	2	0	0	0	
0700	1485	3	2	12	20	49	193	614	470	104	14	2	1	1	0	0	
0800	1307	0	0	1	4	19	192	577	411	90	11	2	0	0	0	0	
0900	1031	1	2	0	0	21	168	416	322	83	13	5	0	0	0	0	
1000	671	0	3	0	1	16	66	245	234	76	29	1	0	0	0	0	
1100	614	0	0	0	1	0	32	238	219	87	33	4	0	0	0	0	
1200	634	0	0	0	1	5	59	222	235	89	19	4	0	0	0	0	
1300	648	0	1	1	2	14	54	215	246	93	18	4	0	0	0	0	
1400	782	0	7	1	2	17	110	317	246	72	9	1	0	0	0	0	
1500	628	6	22	27	7	24	115	302	111	13	1	0	0	0	0	0	
1600	554	19	25	8	1	6	87	317	80	11	0	0	0	0	0	0	
1700	684	16	24	6	11	77	263	215	61	7	1	0	0	3	0	0	
1800	805	3	17	14	4	24	212	303	175	43	8	1	1	0	0	0	
1900	487	0	0	1	5	13	61	159	189	43	13	3	0	0	0	0	
2000	430	0	0	1	0	7	33	126	168	77	15	1	2	0	0	0	
2100	306	0	0	0	0	2	28	105	109	46	11	4	1	0	0	0	
2200	252	0	0	0	0	0	10	60	84	67	22	9	0	0	0	0	
2300	152	0	0	0	0	1	5	25	47	49	16	8	1	0	0	0	
00-00	14089	48	104	72	59	314	1856	5156	4297	1643	441	79	14	5	0	1	
	100.00%	0.34%	0.74%	0.51%	0.42%	2.23%	13.17%	36.60%	30.50%	11.66%	3.13%	0.56%	0.10%	0.04%	0.00%	0.01%	

Maximum = 75.1 mph, Minimum = 6.4 mph, Mean = 39.5 mph
 85% Speed = 45.13 mph, 95% Speed = 49.16 mph, Median = 39.48 mph
 10 mph Pace = 34 - 44, Number in Pace = 9487 (67.34%)
 Variance = 40.05, Standard Deviation = 6.33 mph

Speed Report

Job 150_045_HSH_Loc A
 Area Milton, MA
 Location Randolph Avenue (Route 28), north of Chickatawbut Road
 Dir Northbound
 Thursday, December 14, 2017



Time	Total	Speed Bins(mph)																
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80		
0000	58	0	0	0	0	0	3	9	19	15	10	1	0	1	0	0		
0100	36	0	0	0	0	1	5	5	6	12	4	3	0	0	0	0		
0200	26	0	0	0	0	0	1	6	7	8	2	1	1	0	0	0		
0300	38	0	1	0	0	0	2	3	7	15	7	3	0	0	0	0		
0400	104	0	0	0	0	1	0	5	18	32	22	21	3	2	0	0		
0500	827	0	0	0	0	1	29	142	275	270	91	17	2	0	0	0		
0600	1410	0	0	1	3	2	116	537	512	205	32	2	0	0	0	0		
0700	1444	1	3	5	0	14	163	713	440	94	9	2	0	0	0	0		
0800	1230	0	1	1	5	21	201	558	346	87	8	2	0	0	0	0		
0900	930	0	0	1	0	5	61	294	387	157	22	3	0	0	0	0		
1000	751	0	0	1	1	6	51	246	297	113	30	5	1	0	0	0		
1100	666	0	0	0	0	6	59	220	274	91	16	0	0	0	0	0		
1200	607	0	0	0	1	9	75	210	225	74	13	0	0	0	0	0		
1300	719	1	2	4	4	13	103	263	224	84	20	0	1	0	0	0		
1400	1040	0	4	10	7	10	148	402	350	94	10	3	2	0	0	0		
1500	911	4	19	8	12	23	122	446	226	47	4	0	0	0	0	0		
1600	763	15	35	7	6	17	248	322	97	6	2	3	2	0	0	0		
1700	770	21	40	14	9	64	284	283	43	10	2	0	0	0	0	0		
1800	756	10	22	11	21	33	175	287	139	51	6	1	0	0	0	0		
1900	528	0	0	0	1	4	44	184	213	71	9	2	0	0	0	0		
2000	393	0	0	0	0	0	33	98	152	82	23	2	2	1	0	0		
2100	362	0	0	0	0	1	23	102	149	57	24	5	1	0	0	0		
2200	286	0	0	0	0	1	15	73	102	65	23	4	2	1	0	0		
2300	159	0	0	0	0	0	1	40	48	45	19	3	3	0	0	0		
00-00	14814	52	127	63	70	232	1962	5448	4556	1785	408	83	20	5	0	0		
	100.00%	0.35%	0.86%	0.43%	0.47%	1.57%	13.24%	36.78%	30.75%	12.05%	2.75%	0.56%	0.14%	0.03%	0.00%	0.00%		

Maximum = 93.1 mph, Minimum = 6.4 mph, Mean = 39.5 mph
 85% Speed = 45.19 mph, 95% Speed = 48.82 mph, Median = 39.54 mph
 10 mph Pace = 34 - 44, Number in Pace = 10077 (68.02%)
 Variance = 39.85, Standard Deviation = 6.31 mph

Speed Report

Job 150_045_HSH_Loc A
 Area Milton, MA
 Location Randolph Avenue (Route 28), north of Chickatawbut Road
 Dir Northbound
 Friday, December 15, 2017

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Speed Bins(mph)															
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80	
0000	75	0	0	0	0	0	1	15	26	23	5	1	2	1	0	1	
0100	68	0	0	0	0	0	5	11	23	18	4	3	2	2	0	0	
0200	36	0	0	0	0	0	2	6	12	9	2	4	1	0	0	0	
0300	33	0	0	0	0	0	1	3	6	11	8	2	2	0	0	0	
0400	129	0	0	0	0	0	1	7	21	43	32	19	6	0	0	0	
0500	852	0	0	0	0	1	18	84	245	298	161	34	10	1	0	0	
0600	1407	0	0	0	2	9	124	441	549	231	38	12	1	0	0	0	
0700	1272	0	0	2	4	3	110	481	492	148	29	2	1	0	0	0	
0800	1031	0	2	7	5	6	117	457	319	103	15	0	0	0	0	0	
0900	832	1	0	0	4	6	81	391	278	68	3	0	0	0	0	0	
1000	681	0	0	0	1	3	29	198	303	124	21	2	0	0	0	0	
1100	629	0	0	1	5	0	37	202	255	105	19	4	1	0	0	0	
1200	888	0	1	0	0	11	89	291	331	132	28	5	0	0	0	0	
1300	943	0	3	5	2	13	92	304	354	147	22	0	1	0	0	0	
1400	1154	8	14	14	4	20	194	507	315	66	9	2	1	0	0	0	
1500	896	17	32	36	4	31	234	393	135	10	2	0	0	0	0	2	
1600	850	19	26	14	12	102	296	295	74	10	2	0	0	0	0	0	
1700	840	16	36	18	19	83	300	300	58	8	2	0	0	0	0	0	
1800	844	7	18	30	31	40	138	328	213	38	1	0	0	0	0	0	
1900	659	1	0	1	0	6	64	255	237	76	16	2	1	0	0	0	
2000	413	0	0	1	1	9	39	150	131	66	15	1	0	0	0	0	
2100	172	0	0	0	0	3	20	67	65	13	4	0	0	0	0	0	
2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
00-00	14704	69	132	129	94	346	1992	5186	4442	1747	438	93	29	4	0	3	
100.00%		0.47%	0.90%	0.88%	0.64%	2.35%	13.55%	35.27%	30.21%	11.88%	2.98%	0.63%	0.20%	0.03%	0.00%	0.02%	

Maximum = 79.3 mph, Minimum = 6.4 mph, Mean = 39.3 mph
 85% Speed = 45.19 mph, 95% Speed = 49.10 mph, Median = 39.48 mph
 10 mph Pace = 34 - 44, Number in Pace = 9662 (65.71%)
 Variance = 45.54, Standard Deviation = 6.75 mph

Speed Report

Job 150_045_HSH_Loc A
 Area Milton, MA
 Location Randolph Avenue (Route 28), north of Chickatawbut Road
 Dir Southbound
 Monday, December 11, 2017

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Speed Bins(mph)															
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80	
1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1400	590	1	6	30	59	92	159	154	64	22	3	0	0	0	0	0	0
1500	1091	23	117	128	130	137	200	191	119	39	6	0	1	0	0	0	0
1600	760	350	252	82	9	1	20	34	10	2	0	0	0	0	0	0	0
1700	727	321	268	60	9	7	25	32	4	1	0	0	0	0	0	0	0
1800	839	58	129	70	100	131	140	128	65	13	2	1	2	0	0	0	0
1900	641	0	2	8	20	61	155	213	128	45	7	2	0	0	0	0	0
2000	487	0	0	0	4	25	107	178	118	42	10	2	1	0	0	0	0
2100	335	0	0	2	2	21	57	112	88	39	12	2	0	0	0	0	0
2200	268	0	0	1	3	8	37	84	71	41	17	6	0	0	0	0	0
2300	255	0	0	0	1	2	17	59	99	62	11	4	0	0	0	0	0
00-00	5993	753	774	381	337	485	917	1185	766	306	68	17	4	0	0	0	0
100.00%		12.56%	12.92%	6.36%	5.62%	8.09%	15.30%	19.77%	12.78%	5.11%	1.13%	0.28%	0.07%	0.00%	0.00%	0.00%	

Maximum = 63.1 mph, Minimum = 6.2 mph, Mean = 28.2 mph
 85% Speed = 41.33 mph, 95% Speed = 45.91 mph, Median = 31.82 mph
 10 mph Pace = 32 - 42, Number in Pace = 2206 (36.81%)
 Variance = 167.06, Standard Deviation = 12.93 mph

Speed Report

Job 150_045_HSH_Loc A
 Area Milton, MA
 Location Randolph Avenue (Route 28), north of Chickatawbut Road
 Dir Southbound
 Tuesday, December 12, 2017

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Speed Bins(mph)															
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80	
0000	133	0	0	0	0	3	11	41	41	21	11	4	1	0	0	0	
0100	58	0	0	0	0	2	4	14	14	10	9	4	0	1	0	0	
0200	33	0	0	1	0	0	3	8	7	9	3	2	0	0	0	0	
0300	31	0	0	0	0	0	2	0	14	8	3	3	0	1	0	0	
0400	49	0	0	0	0	1	2	5	14	16	7	2	2	0	0	0	
0500	140	0	0	1	1	4	16	26	40	30	18	3	1	0	0	0	
0600	308	1	0	1	4	9	58	127	83	20	3	2	0	0	0	0	
0700	586	1	8	19	32	70	136	142	118	38	14	6	1	1	0	0	
0800	666	1	6	25	42	103	172	176	107	27	4	1	0	2	0	0	
0900	535	0	1	4	15	50	129	159	127	41	8	1	0	0	0	0	
1000	528	0	0	0	12	66	163	167	89	23	7	1	0	0	0	0	
1100	517	0	0	3	22	53	130	166	103	32	6	2	0	0	0	0	
1200	638	0	0	2	15	63	147	221	139	40	10	0	1	0	0	0	
1300	631	1	1	0	7	51	197	200	123	42	6	3	0	0	0	0	
1400	761	2	8	21	54	137	212	193	95	34	5	0	0	0	0	0	
1500	1037	46	91	120	148	154	190	183	82	19	4	0	0	0	0	0	
1600	734	298	275	57	19	8	37	29	8	1	0	2	0	0	0	0	
1700	733	321	278	51	10	6	32	30	2	3	0	0	0	0	0	0	
1800	889	84	161	147	121	127	114	89	36	9	0	1	0	0	0	0	
1900	717	0	8	15	55	131	198	179	102	22	6	1	0	0	0	0	
2000	547	0	1	0	16	43	144	172	105	52	11	2	1	0	0	0	
2100	365	0	1	3	16	17	84	114	83	30	13	1	1	2	0	0	
2200	248	0	0	0	1	8	29	68	90	40	7	5	0	0	0	0	
2300	257	0	1	0	2	2	29	62	75	52	25	5	3	0	1	0	
00-00	11141	755	840	470	592	1108	2239	2571	1697	619	180	51	11	7	1	0	
	100.00%	6.78%	7.54%	4.22%	5.31%	9.95%	20.10%	23.08%	15.23%	5.56%	1.62%	0.46%	0.10%	0.06%	0.01%	0.00%	

Maximum = 70.6 mph, Minimum = 6.2 mph, Mean = 31.7 mph
 85% Speed = 42.22 mph, 95% Speed = 46.81 mph, Median = 34.17 mph
 10 mph Pace = 31 - 41, Number in Pace = 4924 (44.20%)
 Variance = 131.49, Standard Deviation = 11.47 mph

Speed Report

Job 150_045_HSH_Loc A
 Area Milton, MA
 Location Randolph Avenue (Route 28), north of Chickatawbut Road
 Dir Southbound
 Wednesday, December 13, 2017

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Speed Bins(mph)															
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80	
0000	134	0	0	0	1	4	12	42	39	27	5	3	0	1	0	0	
0100	49	0	0	0	0	0	5	14	13	8	8	1	0	0	0	0	
0200	38	0	0	0	0	1	4	11	13	5	3	0	1	0	0	0	
0300	35	0	0	0	0	0	5	4	7	11	7	0	1	0	0	0	
0400	38	0	0	0	1	1	5	4	11	9	2	4	1	0	0	0	
0500	131	0	0	1	1	4	10	30	29	36	14	6	0	0	0	0	
0600	322	0	0	0	1	9	66	108	74	41	21	1	1	0	0	0	
0700	586	2	5	13	23	57	164	162	107	33	14	5	0	1	0	0	
0800	700	0	3	7	43	83	207	219	100	33	4	1	0	0	0	0	
0900	583	2	18	16	26	92	160	154	81	21	9	4	0	0	0	0	
1000	562	0	3	2	18	59	124	182	115	51	7	1	0	0	0	0	
1100	603	0	0	3	25	62	122	190	157	31	7	5	1	0	0	0	
1200	605	0	0	7	14	43	153	218	127	34	6	2	0	1	0	0	
1300	667	0	0	8	14	88	169	197	135	43	12	1	0	0	0	0	
1400	880	16	70	89	110	145	193	155	81	17	4	0	0	0	0	0	
1500	908	172	243	139	76	95	85	63	32	3	0	0	0	0	0	0	
1600	663	368	183	50	5	2	11	32	9	3	0	0	0	0	0	0	
1700	752	426	194	37	12	13	30	23	12	1	0	0	0	4	0	0	
1800	851	122	203	138	54	80	100	84	50	12	7	0	1	0	0	0	
1900	736	0	2	6	59	127	199	193	95	45	6	3	1	0	0	0	
2000	516	0	0	0	2	38	137	165	107	44	16	3	3	1	0	0	
2100	384	0	1	2	6	38	63	119	98	41	12	1	1	1	1	0	
2200	281	0	0	0	0	11	40	82	84	47	16	1	0	0	0	0	
2300	262	0	0	0	1	4	22	70	88	48	23	6	0	0	0	0	
00-00	11286	1108	925	518	492	1056	2086	2521	1664	644	203	48	11	9	1	0	
	100.00%	9.82%	8.20%	4.59%	4.36%	9.36%	18.48%	22.34%	14.74%	5.71%	1.80%	0.43%	0.10%	0.08%	0.01%	0.00%	

Maximum = 70.1 mph, Minimum = 6.2 mph, Mean = 30.8 mph
 85% Speed = 42.17 mph, 95% Speed = 47.03 mph, Median = 33.83 mph
 10 mph Pace = 32 - 42, Number in Pace = 4758 (42.16%)
 Variance = 150.30, Standard Deviation = 12.26 mph

Speed Report

Job 150_045_HSH_Loc A
 Area Milton, MA
 Location Randolph Avenue (Route 28), north of Chickatawbut Road
 Dir Southbound
 Thursday, December 14, 2017

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Speed Bins(mph)															
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80	
0000	143	0	0	0	2	2	12	34	45	28	11	5	0	1	1	2	
0100	68	0	0	0	1	0	5	12	26	20	0	2	2	0	0	0	
0200	21	0	0	0	0	1	1	4	8	5	2	0	0	0	0	0	
0300	32	0	1	0	0	0	2	7	7	7	5	1	1	1	0	0	
0400	38	0	0	0	0	0	1	4	12	12	5	3	1	0	0	0	
0500	149	0	0	0	0	4	5	28	50	31	23	7	0	1	0	0	
0600	322	0	0	3	6	28	72	109	73	25	2	3	0	1	0	0	
0700	555	2	9	11	29	56	162	157	85	39	5	0	0	0	0	0	
0800	649	2	15	31	72	127	184	133	70	13	2	0	0	0	0	0	
0900	515	0	2	2	12	41	115	142	136	57	5	3	0	0	0	0	
1000	558	0	0	4	24	59	154	182	89	35	7	3	1	0	0	0	
1100	579	0	2	5	24	63	165	183	92	35	8	2	0	0	0	0	
1200	596	0	0	3	25	52	138	222	122	24	9	1	0	0	0	0	
1300	683	1	5	15	33	105	228	155	96	33	11	0	1	0	0	0	
1400	791	30	77	91	88	117	162	129	75	16	4	1	1	0	0	0	
1500	1090	101	190	166	127	163	129	135	51	22	6	0	0	0	0	0	
1600	785	318	304	54	7	18	29	27	15	7	1	2	0	0	0	0	
1700	775	283	314	62	5	33	37	34	7	0	0	0	0	0	0	0	
1800	792	128	257	135	57	65	64	56	22	5	2	1	0	0	0	0	
1900	740	1	0	5	38	113	213	212	122	27	6	3	0	0	0	0	
2000	568	0	0	0	19	45	120	169	138	61	13	1	2	0	0	0	
2100	439	0	0	0	8	34	83	116	136	44	14	3	1	0	0	0	
2200	332	0	0	1	4	18	53	98	77	56	19	3	2	1	0	0	
2300	294	0	0	1	1	8	33	77	91	60	17	5	1	0	0	0	
00-00	11514	866	1176	589	582	1152	2167	2425	1645	662	177	49	13	5	1	2	
	100.00%	7.52%	10.21%	5.12%	5.05%	10.01%	18.82%	21.06%	14.29%	5.75%	1.54%	0.43%	0.11%	0.04%	0.01%	0.02%	

Maximum = 93.1 mph, Minimum = 6.2 mph, Mean = 30.6 mph
 85% Speed = 42.17 mph, 95% Speed = 46.86 mph, Median = 33.39 mph
 10 mph Pace = 31 - 41, Number in Pace = 4679 (40.64%)
 Variance = 145.70, Standard Deviation = 12.07 mph

Speed Report

Job 150_045_HSH_Loc A
 Area Milton, MA
 Location Randolph Avenue (Route 28), north of Chickatawbut Road
 Dir Southbound
 Friday, December 15, 2017

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Speed Bins(mph)															
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80	
0000	168	0	0	0	0	1	23	50	49	30	11	1	1	1	0	0	
0100	90	0	0	0	1	5	9	21	25	16	8	2	2	0	1	0	
0200	43	0	0	0	0	0	3	7	17	13	0	1	0	1	1	0	
0300	35	0	0	0	0	1	3	7	13	5	5	0	1	0	0	0	
0400	39	0	0	0	0	0	3	3	11	16	4	2	0	0	0	0	
0500	129	0	0	0	2	2	16	32	38	20	16	3	0	0	0	0	
0600	317	0	1	0	7	37	45	92	81	41	11	2	0	0	0	0	
0700	573	0	0	5	27	59	130	175	126	38	10	2	1	0	0	0	
0800	734	2	20	58	86	121	169	150	82	41	4	0	1	0	0	0	
0900	589	2	1	27	41	106	154	152	86	16	4	0	0	0	0	0	
1000	621	0	2	2	17	61	127	231	125	44	10	2	0	0	0	0	
1100	678	0	1	15	44	82	181	208	105	33	7	1	0	1	0	0	
1200	743	2	2	17	54	102	250	187	96	26	5	1	0	1	0	0	
1300	826	14	32	50	79	108	189	210	105	31	4	1	2	1	0	0	
1400	829	87	146	113	120	126	91	93	39	12	0	0	2	0	0	0	
1500	968	267	356	196	33	17	45	27	24	0	0	0	0	0	0	3	
1600	797	267	342	49	21	26	35	42	9	5	1	0	0	0	0	0	
1700	840	257	379	61	18	20	49	40	11	4	1	0	0	0	0	0	
1800	776	91	164	108	80	87	125	83	26	9	2	0	1	0	0	0	
1900	714	3	5	5	46	89	201	195	108	39	17	5	1	0	0	0	
2000	588	0	0	2	16	49	135	214	120	39	11	1	0	0	0	1	
2100	226	1	0	1	11	24	57	64	55	12	1	0	0	0	0	0	
2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
00-00	11323	993	1451	709	703	1123	2040	2283	1351	490	132	24	12	5	2	4	
100.00%		8.77%	12.81%	6.26%	6.21%	9.92%	18.02%	20.16%	11.93%	4.33%	1.17%	0.21%	0.11%	0.04%	0.02%	0.04%	

Maximum = 95.8 mph, Minimum = 6.2 mph, Mean = 28.9 mph
 85% Speed = 40.94 mph, 95% Speed = 45.69 mph, Median = 31.99 mph
 10 mph Pace = 31 - 41, Number in Pace = 4366 (38.56%)
 Variance = 149.73, Standard Deviation = 12.24 mph

Speed Report

Job 150_045_HSH_Loc_B
 Area Milton, MA
 Location Randolph Avenue (Route 28), south of Chickatawbut Road
 Dir Northbound
 Monday, December 11, 2017

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Speed Bins(mph)															
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80	
1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1200	611	0	2	4	17	55	169	227	107	25	2	2	0	0	1	0	0
1300	697	0	0	0	5	34	138	321	166	31	1	1	0	0	0	0	0
1400	854	0	0	4	27	78	257	284	170	30	4	0	0	0	0	0	0
1500	836	7	34	46	98	196	204	178	60	8	4	0	0	0	0	0	0
1600	753	18	53	37	88	222	220	96	16	3	0	0	0	0	0	0	0
1700	886	28	95	82	174	282	184	33	6	0	0	1	1	0	0	0	0
1800	614	5	10	7	38	131	179	165	69	6	3	0	0	1	0	0	0
1900	418	0	0	0	6	27	80	187	95	22	1	0	0	0	0	0	0
2000	356	0	0	0	1	15	64	126	98	43	8	1	0	0	0	0	0
2100	282	0	0	0	1	17	46	91	77	36	11	3	0	0	0	0	0
2200	219	0	0	0	0	10	25	64	65	44	8	3	0	0	0	0	0
2300	118	0	0	0	0	2	11	39	35	19	12	0	0	0	0	0	0
00-00	6644	58	194	180	455	1069	1577	1811	964	267	54	11	1	1	1	0	
	100.00%	0.87%	2.92%	2.71%	6.85%	16.09%	23.74%	27.26%	14.51%	4.02%	0.81%	0.17%	0.02%	0.02%	0.02%	0.00%	

Maximum = 86.7 mph, Minimum = 6.9 mph, Mean = 33.4 mph
 85% Speed = 41.16 mph, 95% Speed = 45.02 mph, Median = 34.39 mph
 10 mph Pace = 30 - 40, Number in Pace = 3408 (51.29%)
 Variance = 67.25, Standard Deviation = 8.20 mph

Speed Report

Job 150_045_HSH_Loc_B
 Area Milton, MA
 Location Randolph Avenue (Route 28), south of Chickatawbut Road
 Dir Northbound
 Tuesday, December 12, 2017



Time	Total	Speed Bins(mph)															
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80	
0000	68	0	0	1	0	1	4	20	19	20	3	0	0	0	0	0	
0100	49	0	0	0	0	0	4	12	19	10	3	0	1	0	0	0	
0200	33	0	0	0	1	1	3	7	8	7	4	0	0	2	0	0	
0300	24	0	0	0	0	0	1	2	6	6	3	4	2	0	0	0	
0400	107	0	0	0	0	0	6	20	30	31	13	7	0	0	0	0	
0500	1082	0	0	0	13	98	278	387	230	64	10	2	0	0	0	0	
0600	1631	10	57	121	197	411	500	285	48	2	0	0	0	0	0	0	
0700	1623	7	41	164	291	411	479	197	30	3	0	0	0	0	0	0	
0800	1474	1	22	78	201	365	474	257	68	8	0	0	0	0	0	0	
0900	1089	0	2	15	64	173	313	351	150	18	3	0	0	0	0	0	
1000	718	0	0	0	10	52	266	282	102	6	0	0	0	0	0	0	
1100	618	0	0	0	9	50	178	240	117	22	2	0	0	0	0	0	
1200	632	0	0	3	8	42	182	235	129	28	1	3	1	0	0	0	
1300	615	0	0	1	9	47	164	243	121	27	3	0	0	0	0	0	
1400	882	0	0	7	31	142	261	295	134	11	1	0	0	0	0	0	
1500	805	7	25	29	76	164	301	154	46	3	0	0	0	0	0	0	
1600	852	35	70	96	189	255	154	41	5	3	2	0	0	0	2	0	
1700	995	30	91	175	232	294	125	37	7	0	3	0	0	0	0	0	
1800	650	8	17	19	46	148	219	140	51	2	0	0	0	0	0	0	
1900	424	0	0	3	17	62	120	162	47	12	1	0	0	0	0	0	
2000	382	0	0	0	2	38	104	144	77	16	0	1	0	0	0	0	
2100	315	0	0	0	7	31	53	122	83	16	2	1	0	0	0	0	
2200	249	0	0	0	0	6	45	97	75	22	3	1	0	0	0	0	
2300	134	0	0	0	1	5	15	37	45	20	9	2	0	0	0	0	
00-00	15451	98	325	712	1404	2796	4249	3767	1647	357	66	21	4	2	2	0	
100.00%		0.63%	2.10%	4.61%	9.09%	18.10%	27.50%	24.38%	10.66%	2.31%	0.43%	0.14%	0.03%	0.01%	0.01%	0.00%	

Maximum = 80.0 mph, Minimum = 6.3 mph, Mean = 32.2 mph
 85% Speed = 39.59 mph, 95% Speed = 43.23 mph, Median = 32.99 mph
 10 mph Pace = 29 - 39, Number in Pace = 8202 (53.08%)
 Variance = 59.25, Standard Deviation = 7.70 mph

Speed Report

Job 150_045_HSH_Loc_B
 Area Milton, MA
 Location Randolph Avenue (Route 28), south of Chickatawbut Road
 Dir Northbound
Wednesday, December 13, 2017

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Speed Bins(mph)															
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80	
0000	65	0	0	0	0	0	3	21	18	13	9	1	0	0	0	0	
0100	43	0	0	0	0	1	6	13	20	1	1	1	0	0	0	0	
0200	23	0	0	0	0	0	3	2	10	5	1	1	0	0	1	0	
0300	29	0	0	0	1	0	3	8	4	7	5	1	0	0	0	0	
0400	140	0	0	0	0	0	2	25	56	44	11	2	0	0	0	0	
0500	1002	0	0	1	11	63	220	338	288	71	7	3	0	0	0	0	
0600	1664	0	7	36	185	403	591	367	66	7	2	0	0	0	0	0	
0700	1589	7	41	130	294	459	467	153	26	11	0	0	0	0	0	1	
0800	1540	2	31	121	264	492	465	143	19	3	0	0	0	0	0	0	
0900	1145	2	23	83	146	255	300	240	81	13	1	1	0	0	0	0	
1000	723	0	0	1	12	81	206	272	115	34	1	1	0	0	0	0	
1100	651	0	0	0	7	40	180	254	131	31	7	1	0	0	0	0	
1200	661	0	0	1	5	51	167	248	150	37	2	0	0	0	0	0	
1300	685	0	0	0	5	61	182	274	130	32	0	0	1	0	0	0	
1400	872	2	9	15	57	131	252	258	115	30	3	0	0	0	0	0	
1500	735	21	29	49	58	195	192	153	24	11	2	1	0	0	0	0	
1600	723	16	47	21	55	183	227	129	39	4	2	0	0	0	0	0	
1700	1015	50	176	343	265	138	22	14	0	0	1	3	1	0	0	0	
1800	1027	5	36	68	120	211	283	215	71	17	1	0	0	0	0	0	
1900	539	0	0	0	5	52	124	227	112	17	2	0	0	0	0	0	
2000	436	0	0	0	5	33	82	157	116	34	7	2	0	0	0	0	
2100	314	0	0	1	14	30	80	105	65	19	0	0	0	0	0	0	
2200	263	0	0	0	1	7	33	85	106	20	10	1	0	0	0	0	
2300	150	1	0	0	3	5	14	39	53	27	5	2	1	0	0	0	
00-00	16034	106	399	870	1513	2891	4104	3740	1815	488	80	21	3	0	1	1	
	100.00%	0.66%	2.49%	5.43%	9.44%	18.03%	25.60%	23.33%	11.32%	3.04%	0.50%	0.13%	0.02%	0.00%	0.01%	0.01%	

Maximum = 95.3 mph, Minimum = 6.4 mph, Mean = 32.1 mph
 85% Speed = 39.99 mph, 95% Speed = 44.01 mph, Median = 32.77 mph
 10 mph Pace = 28 - 38, Number in Pace = 7946 (49.56%)
 Variance = 65.30, Standard Deviation = 8.08 mph

Speed Report

Job 150_045_HSH_Loc_B
 Area Milton, MA
 Location Randolph Avenue (Route 28), south of Chickatawbut Road
 Dir Northbound
 Thursday, December 14, 2017



Time	Total	Speed Bins(mph)															
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80	
0000	72	0	0	0	0	2	14	19	22	11	4	0	0	0	0	0	0
0100	34	0	0	0	1	0	3	10	7	8	3	2	0	0	0	0	0
0200	30	0	0	0	0	0	1	9	7	8	4	1	0	0	0	0	0
0300	37	0	0	1	0	0	1	6	14	7	6	1	1	0	0	0	0
0400	110	0	0	0	0	0	3	13	51	19	14	7	3	0	0	0	0
0500	953	0	0	2	24	104	211	289	238	76	9	0	0	0	0	0	0
0600	1638	1	11	67	133	410	582	392	35	5	2	0	0	0	0	0	0
0700	1491	4	50	131	229	404	458	177	34	4	0	0	0	0	0	0	0
0800	1384	6	65	116	200	337	378	262	18	2	0	0	0	0	0	0	0
0900	1050	0	3	10	32	146	366	356	117	19	1	0	0	0	0	0	0
1000	793	0	0	1	10	65	312	263	117	23	2	0	0	0	0	0	0
1100	672	0	0	1	25	67	169	234	138	29	9	0	0	0	0	0	0
1200	626	0	0	0	7	39	124	249	172	31	3	1	0	0	0	0	0
1300	773	0	0	1	16	104	232	277	112	28	3	0	0	0	0	0	0
1400	1189	6	16	60	106	220	326	356	84	14	1	0	0	0	0	0	0
1500	1308	15	75	136	296	340	289	127	27	2	1	0	0	0	0	0	0
1600	1343	36	130	201	326	352	199	84	12	1	0	0	0	0	0	0	2
1700	1273	53	239	461	356	148	16	0	0	0	0	0	0	0	0	0	0
1800	1164	11	37	83	124	210	355	257	71	14	0	0	0	0	2	0	0
1900	571	0	0	0	7	38	140	241	121	23	1	0	0	0	0	0	0
2000	425	0	0	0	1	12	77	148	133	45	9	0	0	0	0	0	0
2100	368	0	0	0	1	14	69	149	102	26	6	1	0	0	0	0	0
2200	313	0	0	0	1	10	52	128	87	26	9	0	0	0	0	0	0
2300	173	0	0	0	0	1	21	53	73	23	2	0	0	0	0	0	0
00-00	17790	132	626	1271	1895	3023	4398	4099	1792	444	89	13	4	0	2	2	
	100.00%	0.74%	3.52%	7.14%	10.65%	16.99%	24.72%	23.04%	10.07%	2.50%	0.50%	0.07%	0.02%	0.00%	0.01%	0.01%	

Maximum = 75.1 mph, Minimum = 6.2 mph, Mean = 31.3 mph
 85% Speed = 39.48 mph, 95% Speed = 43.56 mph, Median = 32.38 mph
 10 mph Pace = 30 - 40, Number in Pace = 8533 (47.97%)
 Variance = 70.47, Standard Deviation = 8.39 mph

Speed Report

Job 150_045_HSH_Loc_B
 Area Milton, MA
 Location Randolph Avenue (Route 28), south of Chickatawbut Road
 Dir Northbound
 Friday, December 15, 2017

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Speed Bins(mph)															
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80	
0000	79	0	0	0	0	0	4	20	32	16	2	1	2	0	1	0	
0100	68	0	0	0	0	1	7	19	26	12	1	0	1	0	0	1	
0200	41	0	0	0	0	0	2	23	15	0	1	0	0	0	0	0	
0300	34	0	0	0	0	1	1	5	14	7	4	2	0	0	0	0	
0400	136	0	0	0	0	0	4	24	42	36	21	9	0	0	0	0	
0500	940	0	0	1	7	34	131	333	305	92	31	4	2	0	0	0	
0600	1600	1	9	38	176	358	536	395	82	4	0	1	0	0	0	0	
0700	1413	1	15	40	135	362	418	342	94	5	0	1	0	0	0	0	
0800	1228	3	16	42	162	289	333	285	94	4	0	0	0	0	0	0	
0900	934	0	4	26	95	201	275	228	90	15	0	0	0	0	0	0	
1000	729	0	0	1	7	40	184	309	165	23	0	0	0	0	0	0	
1100	696	0	0	4	6	40	206	289	135	14	2	0	0	0	0	0	
1200	1067	0	0	16	34	143	330	380	149	13	2	0	0	0	0	0	
1300	1069	0	2	20	54	165	332	312	153	30	1	0	0	0	0	0	
1400	1481	12	46	125	214	349	468	235	26	3	0	1	2	0	0	0	
1500	1471	21	195	295	365	269	261	58	6	0	0	0	0	1	0	0	
1600	1406	19	233	393	490	220	39	1	9	0	0	1	0	0	0	0	
1700	1288	60	268	471	340	126	14	3	5	0	0	0	1	0	0	0	
1800	1263	13	55	44	111	250	411	316	61	2	0	0	0	0	0	0	
1900	729	0	0	5	13	93	207	257	122	26	4	0	0	0	0	2	
2000	437	0	0	3	4	48	126	143	83	25	5	0	0	0	0	0	
2100	331	0	0	2	13	70	101	107	30	8	0	0	0	0	0	0	
2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
00-00	18440	130	843	1526	2226	3059	4390	4084	1738	335	74	20	8	1	1	3	
100.00%		0.70%	4.57%	8.28%	12.07%	16.59%	23.81%	22.15%	9.43%	1.82%	0.40%	0.11%	0.04%	0.01%	0.01%	0.02%	

Maximum = 88.3 mph, Minimum = 6.4 mph, Mean = 30.6 mph
 85% Speed = 39.09 mph, 95% Speed = 42.84 mph, Median = 31.88 mph
 10 mph Pace = 29 - 39, Number in Pace = 8590 (46.58%)
 Variance = 74.16, Standard Deviation = 8.61 mph

Speed Report

Job 150_045_HSH_Loc_B
 Area Milton, MA
 Location Randolph Avenue (Route 28), south of Chickatawbut Road
 Dir Southbound
 Monday, December 11, 2017

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Speed Bins(mph)															
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80	
1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1200	516	0	0	7	10	60	204	160	58	12	3	1	0	0	1	0	0
1300	616	0	0	3	15	64	172	244	92	21	5	0	0	0	0	0	0
1400	770	0	2	16	34	142	292	190	80	11	3	0	0	0	0	0	0
1500	1153	101	197	160	77	172	223	146	60	10	4	0	0	0	0	0	0
1600	1171	271	707	105	17	31	23	14	1	0	0	0	0	1	0	0	0
1700	1236	346	688	116	15	32	27	6	3	0	0	1	2	0	0	0	0
1800	895	73	153	73	73	171	218	93	28	8	3	0	0	2	0	0	0
1900	627	1	5	4	9	65	227	202	85	27	2	0	0	0	0	0	0
2000	500	0	0	0	1	18	143	213	92	24	6	2	1	0	0	0	0
2100	349	0	0	0	0	14	86	134	74	28	12	0	1	0	0	0	0
2200	282	0	0	0	0	12	46	95	67	46	14	2	0	0	0	0	0
2300	272	0	0	0	0	1	28	70	121	35	12	5	0	0	0	0	0
00-00	8387	792	1752	484	251	782	1689	1567	761	222	64	11	4	3	1	0	
100.00%		9.44%	20.89%	5.77%	2.99%	9.32%	20.14%	18.68%	9.07%	2.65%	0.76%	0.13%	0.05%	0.04%	0.01%	0.00%	

Maximum = 97.8 mph, Minimum = 6.2 mph, Mean = 26.9 mph
 85% Speed = 39.20 mph, 95% Speed = 43.84 mph, Median = 30.48 mph
 10 mph Pace = 29 - 39, Number in Pace = 3299 (39.33%)
 Variance = 152.39, Standard Deviation = 12.34 mph

Speed Report

Job 150_045_HSH_Loc_B
 Area Milton, MA
 Location Randolph Avenue (Route 28), south of Chickatawbut Road
 Dir Southbound
 Tuesday, December 12, 2017

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Speed Bins(mph)															
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80	
0000	138	0	0	0	0	1	19	42	41	25	7	2	1	0	0	0	
0100	59	0	0	0	0	0	3	17	18	11	6	2	1	1	0	0	
0200	35	0	0	0	0	1	3	6	10	11	4	0	0	0	0	0	
0300	31	0	0	0	0	0	1	4	10	8	5	0	2	0	1	0	
0400	54	0	0	0	0	1	2	7	19	19	3	2	0	0	1	0	
0500	139	0	0	0	0	3	22	39	41	29	2	3	0	0	0	0	
0600	302	0	2	4	2	2	32	138	93	26	2	1	0	0	0	0	
0700	589	1	5	1	11	46	171	225	96	26	5	2	0	0	0	0	
0800	687	0	1	3	9	46	236	276	99	11	4	2	0	0	0	0	
0900	484	0	0	0	3	21	130	227	83	14	6	0	0	0	0	0	
1000	460	0	0	0	14	57	176	160	43	8	2	0	0	0	0	0	
1100	475	0	0	0	5	34	165	153	91	22	4	1	0	0	0	0	
1200	597	0	0	4	4	51	227	186	104	15	6	0	0	0	0	0	
1300	575	0	1	3	5	46	186	206	97	28	2	1	0	0	0	0	
1400	753	1	2	17	34	112	288	209	76	11	2	1	0	0	0	0	
1500	1125	115	202	101	62	145	254	177	56	12	1	0	0	0	0	0	
1600	1182	469	556	64	24	36	19	2	4	4	2	0	0	0	2	0	
1700	1291	369	760	78	33	33	6	5	2	0	2	0	1	0	0	0	
1800	972	238	300	52	72	129	103	60	17	1	0	0	0	0	0	0	
1900	663	3	10	31	56	137	237	150	28	11	0	0	0	0	0	0	
2000	522	0	0	6	10	80	161	169	75	14	5	1	0	1	0	0	
2100	369	0	1	2	5	26	118	125	60	28	3	1	0	0	0	0	
2200	249	0	0	0	0	8	45	85	71	30	8	1	1	0	0	0	
2300	267	0	0	0	1	3	32	97	82	36	10	4	1	0	1	0	
00-00	12018	1196	1840	366	350	1018	2636	2765	1316	400	91	24	7	2	5	0	
	100.00%	9.95%	15.31%	3.05%	2.91%	8.47%	21.93%	23.01%	10.95%	3.33%	0.76%	0.20%	0.06%	0.02%	0.04%	0.00%	

Maximum = 80.0 mph, Minimum = 6.2 mph, Mean = 28.8 mph
 85% Speed = 40.11 mph, 95% Speed = 44.52 mph, Median = 32.74 mph
 10 mph Pace = 31 - 41, Number in Pace = 5453 (45.37%)
 Variance = 148.83, Standard Deviation = 12.20 mph

Speed Report

Job 150_045_HSH_Loc_B
 Area Milton, MA
 Location Randolph Avenue (Route 28), south of Chickatawbut Road
 Dir Southbound
 Wednesday, December 13, 2017

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Speed Bins(mph)															
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80	
0000	138	0	0	0	2	1	13	43	43	26	4	2	3	1	0	0	
0100	50	0	0	0	0	0	2	14	19	8	6	0	1	0	0	0	
0200	39	0	0	0	0	0	5	13	11	8	1	1	0	0	0	0	
0300	37	0	0	0	0	0	4	9	7	7	6	1	3	0	0	0	
0400	59	0	0	0	0	0	1	7	30	11	7	3	0	0	0	0	
0500	149	0	0	0	0	0	13	45	51	33	5	2	0	0	0	0	
0600	285	0	0	0	2	4	40	104	97	30	7	1	0	0	0	0	
0700	589	0	3	5	6	41	215	188	93	34	2	1	0	0	0	1	
0800	684	2	3	11	26	78	208	281	64	10	1	0	0	0	0	0	
0900	552	1	2	6	16	44	187	195	76	18	4	3	0	0	0	0	
1000	513	0	0	0	6	49	152	182	92	25	5	2	0	0	0	0	
1100	532	0	3	4	9	45	150	177	109	31	4	0	0	0	0	0	
1200	543	2	0	2	16	50	152	197	96	20	6	2	0	0	0	0	
1300	617	0	0	3	14	58	188	219	99	30	6	0	0	0	0	0	
1400	853	21	67	48	49	113	285	206	55	9	0	0	0	0	0	0	
1500	1072	266	439	138	46	53	82	36	5	5	0	2	0	0	0	0	
1600	1082	241	650	119	22	17	21	7	4	0	1	0	0	0	0	0	
1700	1248	329	746	115	32	11	4	6	0	0	1	0	2	0	0	0	
1800	1116	49	284	131	79	227	220	100	21	3	2	0	0	0	0	0	
1900	768	0	0	3	27	167	272	198	85	15	1	0	0	0	0	0	
2000	525	0	0	0	0	41	177	174	82	33	13	2	2	1	0	0	
2100	404	0	0	0	3	40	93	162	78	19	5	1	2	1	0	0	
2200	307	0	0	0	1	12	45	105	98	36	9	1	0	0	0	0	
2300	287	2	0	2	6	2	22	98	92	52	7	4	0	0	0	0	
00-00	12449	913	2197	587	362	1053	2551	2766	1407	463	103	28	13	3	0	1	
	100.00%	7.33%	17.65%	4.72%	2.91%	8.46%	20.49%	22.22%	11.30%	3.72%	0.83%	0.22%	0.10%	0.02%	0.00%	0.01%	

Maximum = 95.3 mph, Minimum = 6.2 mph, Mean = 28.8 mph
 85% Speed = 40.38 mph, 95% Speed = 44.96 mph, Median = 32.55 mph
 10 mph Pace = 31 - 41, Number in Pace = 5346 (42.94%)
 Variance = 148.44, Standard Deviation = 12.18 mph

Speed Report

Job 150_045_HSH_Loc_B
 Area Milton, MA
 Location Randolph Avenue (Route 28), south of Chickatawbut Road
 Dir Southbound
 Thursday, December 14, 2017

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Speed Bins(mph)															
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80	
0000	142	0	0	0	0	1	8	44	50	18	7	8	2	1	3	0	
0100	69	0	0	0	0	1	5	20	27	12	1	2	1	0	0	0	
0200	25	0	0	0	0	0	1	7	11	4	2	0	0	0	0	0	
0300	34	0	0	0	0	0	3	6	15	4	3	0	3	0	0	0	
0400	45	0	0	0	0	0	1	5	15	17	5	1	1	0	0	0	
0500	170	0	0	0	0	2	7	35	66	36	19	5	0	0	0	0	
0600	322	0	0	2	3	11	65	125	79	24	11	0	2	0	0	0	
0700	566	0	3	2	15	66	182	208	69	20	1	0	0	0	0	0	
0800	658	1	3	4	13	64	260	262	43	6	2	0	0	0	0	0	
0900	494	0	0	3	21	94	163	163	45	5	0	0	0	0	0	0	
1000	481	0	0	0	18	89	158	150	57	6	3	0	0	0	0	0	
1100	502	0	0	1	9	29	131	223	82	19	7	1	0	0	0	0	
1200	580	1	0	0	3	40	170	220	114	28	3	1	0	0	0	0	
1300	620	0	7	3	20	102	178	229	62	15	3	1	0	0	0	0	
1400	880	0	0	3	44	202	315	230	68	15	1	2	0	0	0	0	
1500	1450	207	436	205	116	147	190	120	23	5	1	0	0	0	0	0	
1600	1473	324	827	175	28	70	34	9	6	0	0	0	0	0	0	0	
1700	1340	525	665	79	33	34	4	0	0	0	0	0	0	0	0	0	
1800	1223	110	172	163	135	231	286	99	19	7	0	0	0	0	1	0	
1900	717	0	0	0	12	118	278	217	75	11	6	0	0	0	0	0	
2000	596	0	6	5	12	32	150	222	115	43	8	3	0	0	0	0	
2100	475	0	0	0	1	21	117	176	126	27	5	2	0	0	0	0	
2200	345	0	0	0	0	8	59	129	88	47	11	2	1	0	0	0	
2300	301	0	0	0	0	5	26	103	106	43	15	3	0	0	0	0	
00-00	13508	1168	2119	645	483	1367	2791	3002	1361	412	114	31	10	1	4	0	
	100.00%	8.65%	15.69%	4.77%	3.58%	10.12%	20.66%	22.22%	10.08%	3.05%	0.84%	0.23%	0.07%	0.01%	0.03%	0.00%	

Maximum = 72.3 mph, Minimum = 6.2 mph, Mean = 28.5 mph
 85% Speed = 39.82 mph, 95% Speed = 44.35 mph, Median = 31.99 mph
 10 mph Pace = 30 - 40, Number in Pace = 5821 (43.09%)
 Variance = 142.73, Standard Deviation = 11.95 mph

Speed Report

Job 150_045_HSH_Loc_B
 Area Milton, MA
 Location Randolph Avenue (Route 28), south of Chickatawbut Road
 Dir Southbound
 Friday, December 15, 2017

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Speed Bins(mph)															
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80	
0000	184	0	0	1	0	4	11	60	61	35	9	1	1	0	0	0	
0100	101	0	0	0	0	2	6	30	34	17	5	6	1	0	0	0	
0200	54	0	0	0	0	0	1	13	23	9	5	1	0	1	1	0	
0300	42	0	0	0	0	0	2	4	21	11	1	3	0	0	0	0	
0400	71	0	0	0	0	0	1	5	23	35	5	2	0	0	0	0	
0500	189	0	0	0	1	1	17	49	48	49	20	3	1	0	0	0	
0600	308	0	0	0	4	7	47	141	65	39	3	2	0	0	0	0	
0700	567	0	1	0	4	16	150	227	128	32	8	1	0	0	0	0	
0800	725	1	1	4	35	99	225	251	98	10	1	0	0	0	0	0	
0900	566	0	0	0	11	78	246	164	56	10	1	0	0	0	0	0	
1000	573	0	0	0	2	28	181	235	108	16	3	0	0	0	0	0	
1100	601	0	1	15	20	61	210	185	89	16	3	1	0	0	0	0	
1200	727	0	0	5	17	121	263	243	61	14	3	0	0	0	0	0	
1300	838	0	3	13	18	161	284	240	102	15	1	1	0	0	0	0	
1400	1166	2	28	31	78	174	436	360	48	7	0	1	1	0	0	0	
1500	1564	167	766	210	82	152	118	54	12	1	0	0	0	2	0	0	
1600	1484	280	858	223	65	42	10	0	3	0	0	2	0	0	0	0	
1700	1430	473	750	107	65	31	2	2	0	0	0	0	0	0	0	0	
1800	1111	71	82	69	143	323	281	119	22	0	1	0	0	0	0	0	
1900	684	0	0	4	17	126	213	211	84	24	2	2	0	0	0	1	
2000	590	0	0	0	5	71	196	224	65	20	6	2	0	1	0	0	
2100	372	0	0	2	3	67	158	93	40	7	1	1	0	0	0	0	
2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
00-00	13947	994	2490	684	570	1564	3058	2910	1191	367	78	29	4	4	1	1	
100.00%		7.13%	17.85%	4.90%	4.09%	11.21%	21.93%	20.86%	8.54%	2.63%	0.56%	0.21%	0.03%	0.03%	0.01%	0.01%	

Maximum = 88.3 mph, Minimum = 6.2 mph, Mean = 27.9 mph
 85% Speed = 39.03 mph, 95% Speed = 43.62 mph, Median = 31.32 mph
 10 mph Pace = 29 - 39, Number in Pace = 6008 (43.08%)
 Variance = 135.48, Standard Deviation = 11.64 mph

Speed Report

Job 150_045_HSH_Loc_C
 Area Milton, MA
 Location Chickatawbut Road, east of Randolph Avenue (Route 28)
 Dir Eastbound
 Monday, December 11, 2017

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Speed Bins(mph)															
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80	
1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1200	57	2	4	6	13	22	10	0	0	0	0	0	0	0	0	0	0
1300	150	0	1	3	6	59	67	13	1	0	0	0	0	0	0	0	0
1400	132	0	0	3	10	39	65	14	1	0	0	0	0	0	0	0	0
1500	192	1	1	2	9	43	107	28	0	1	0	0	0	0	0	0	0
1600	157	4	1	1	19	57	61	13	1	0	0	0	0	0	0	0	0
1700	170	3	2	6	35	78	40	5	1	0	0	0	0	0	0	0	0
1800	172	0	1	5	15	67	67	13	4	0	0	0	0	0	0	0	0
1900	87	0	0	1	7	28	39	12	0	0	0	0	0	0	0	0	0
2000	56	0	2	0	1	26	18	8	1	0	0	0	0	0	0	0	0
2100	14	0	0	1	0	5	6	2	0	0	0	0	0	0	0	0	0
2200	15	0	0	1	3	6	3	1	1	0	0	0	0	0	0	0	0
2300	8	0	0	0	1	3	3	1	0	0	0	0	0	0	0	0	0
00-00	1210	10	12	29	119	433	486	110	10	1	0	0	0	0	0	0	0
	100.00%	0.83%	0.99%	2.40%	9.83%	35.79%	40.17%	9.09%	0.83%	0.08%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Maximum = 45.7 mph, Minimum = 6.3 mph, Mean = 29.5 mph
 85% Speed = 33.97 mph, 95% Speed = 36.65 mph, Median = 30.03 mph
 10 mph Pace = 25 - 35, Number in Pace = 923 (76.28%)
 Variance = 25.34, Standard Deviation = 5.03 mph

Speed Report

Job 150_045_HSH_Loc_C
 Area Milton, MA
 Location Chickatawbut Road, east of Randolph Avenue (Route 28)
 Dir Eastbound
 Tuesday, December 12, 2017

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Speed Bins(mph)															
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80	
0000	3	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0
0100	3	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0
0200	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
0300	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
0400	4	0	1	0	1	1	0	1	0	0	0	0	0	0	0	0	0
0500	24	0	0	1	1	3	13	5	1	0	0	0	0	0	0	0	0
0600	40	0	0	0	1	12	18	9	0	0	0	0	0	0	0	0	0
0700	147	1	0	3	1	31	79	28	3	1	0	0	0	0	0	0	0
0800	192	0	1	1	7	54	96	29	4	0	0	0	0	0	0	0	0
0900	141	0	1	2	8	53	65	11	1	0	0	0	0	0	0	0	0
1000	154	0	2	1	8	57	73	11	2	0	0	0	0	0	0	0	0
1100	145	0	1	4	8	59	56	17	0	0	0	0	0	0	0	0	0
1200	153	0	0	6	7	62	62	16	0	0	0	0	0	0	0	0	0
1300	123	0	2	1	10	40	54	14	2	0	0	0	0	0	0	0	0
1400	194	0	1	2	7	50	107	25	2	0	0	0	0	0	0	0	0
1500	201	0	2	0	15	74	79	29	1	1	0	0	0	0	0	0	0
1600	202	3	4	7	42	107	37	1	1	0	0	0	0	0	0	0	0
1700	250	0	1	3	42	117	68	17	2	0	0	0	0	0	0	0	0
1800	165	1	0	4	26	75	57	1	1	0	0	0	0	0	0	0	0
1900	104	0	0	2	8	59	30	3	0	2	0	0	0	0	0	0	0
2000	51	0	0	0	3	18	27	2	1	0	0	0	0	0	0	0	0
2100	24	0	0	1	1	9	9	3	1	0	0	0	0	0	0	0	0
2200	16	0	0	0	3	5	7	1	0	0	0	0	0	0	0	0	0
2300	12	0	0	0	0	7	3	2	0	0	0	0	0	0	0	0	0
00-00	2350	5	16	38	199	896	943	227	22	4	0	0	0	0	0	0	0
		100.00%	0.21%	0.68%	1.62%	8.47%	38.13%	40.13%	9.66%	0.94%	0.17%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Maximum = 47.8 mph, Minimum = 6.4 mph, Mean = 29.9 mph
 85% Speed = 34.17 mph, 95% Speed = 36.74 mph, Median = 30.09 mph
 10 mph Pace = 25 - 35, Number in Pace = 1839 (78.26%)
 Variance = 20.40, Standard Deviation = 4.52 mph

Speed Report

Job 150_045_HSH_Loc_C
 Area Milton, MA
 Location Chickatawbut Road, east of Randolph Avenue (Route 28)
 Dir Eastbound
 Wednesday, December 13, 2017

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Speed Bins(mph)															
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80	
0000	2	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
0100	4	0	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0
0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0400	2	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
0500	20	0	0	0	0	3	11	6	0	0	0	0	0	0	0	0	0
0600	44	0	0	1	1	15	19	7	0	1	0	0	0	0	0	0	0
0700	145	0	1	2	3	30	75	30	4	0	0	0	0	0	0	0	0
0800	181	0	1	1	4	43	108	20	4	0	0	0	0	0	0	0	0
0900	134	0	0	1	13	52	54	12	2	0	0	0	0	0	0	0	0
1000	164	0	0	3	8	57	73	22	1	0	0	0	0	0	0	0	0
1100	194	0	0	10	13	80	66	23	2	0	0	0	0	0	0	0	0
1200	157	0	0	7	2	53	71	21	3	0	0	0	0	0	0	0	0
1300	144	0	0	3	12	52	71	5	1	0	0	0	0	0	0	0	0
1400	163	1	1	3	19	76	56	6	1	0	0	0	0	0	0	0	0
1500	173	2	4	5	18	78	56	8	2	0	0	0	0	0	0	0	0
1600	158	3	2	4	22	72	49	5	1	0	0	0	0	0	0	0	0
1700	180	3	0	9	30	97	37	3	1	0	0	0	0	0	0	0	0
1800	206	0	2	3	19	83	88	8	3	0	0	0	0	0	0	0	0
1900	76	0	0	0	5	28	28	12	1	2	0	0	0	0	0	0	0
2000	40	0	0	2	5	7	19	7	0	0	0	0	0	0	0	0	0
2100	25	0	0	0	1	11	8	5	0	0	0	0	0	0	0	0	0
2200	18	0	1	3	2	4	5	3	0	0	0	0	0	0	0	0	0
2300	13	0	0	0	0	4	6	1	2	0	0	0	0	0	0	0	0
00-00	2243	9	12	57	177	846	905	206	28	3	0	0	0	0	0	0	0
		100.00%	0.40%	0.53%	2.54%	7.89%	37.72%	40.35%	9.18%	1.25%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Maximum = 49.1 mph, Minimum = 6.6 mph, Mean = 29.8 mph
 85% Speed = 34.17 mph, 95% Speed = 36.84 mph, Median = 30.09 mph
 10 mph Pace = 25 - 35, Number in Pace = 1754 (78.20%)
 Variance = 22.49, Standard Deviation = 4.74 mph

Speed Report

Job 150_045_HSH_Loc_C
 Area Milton, MA
 Location Chickatawbut Road, east of Randolph Avenue (Route 28)
 Dir Eastbound
 Thursday, December 14, 2017

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Speed Bins(mph)															
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80	
0000	13	0	1	0	1	4	4	1	1	0	0	0	1	0	0	0	
0100	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	
0200	4	0	0	1	0	1	0	2	0	0	0	0	0	0	0	0	
0300	4	0	1	0	0	2	1	0	0	0	0	0	0	0	0	0	
0400	3	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	
0500	19	0	0	0	1	2	11	5	0	0	0	0	0	0	0	0	
0600	32	0	0	1	2	11	13	4	1	0	0	0	0	0	0	0	
0700	146	1	1	1	2	28	77	33	3	0	0	0	0	0	0	0	
0800	172	1	0	2	17	41	87	24	0	0	0	0	0	0	0	0	
0900	144	0	0	0	6	38	64	29	5	2	0	0	0	0	0	0	
1000	157	0	1	1	7	47	80	16	5	0	0	0	0	0	0	0	
1100	150	0	1	5	10	57	56	19	2	0	0	0	0	0	0	0	
1200	127	0	0	2	4	39	61	18	3	0	0	0	0	0	0	0	
1300	188	2	1	1	8	67	76	30	3	0	0	0	0	0	0	0	
1400	203	0	1	5	18	55	94	27	3	0	0	0	0	0	0	0	
1500	284	1	1	7	22	89	129	32	3	0	0	0	0	0	0	0	
1600	187	3	6	1	14	108	46	7	2	0	0	0	0	0	0	0	
1700	265	1	3	8	57	129	56	11	0	0	0	0	0	0	0	0	
1800	313	0	0	0	9	107	154	40	3	0	0	0	0	0	0	0	
1900	126	0	0	0	4	44	63	15	0	0	0	0	0	0	0	0	
2000	48	0	0	0	3	13	20	9	1	0	1	0	0	0	0	0	
2100	29	0	0	0	3	7	11	6	1	1	0	0	0	0	0	0	
2200	28	0	0	1	1	10	10	6	0	0	0	0	0	0	0	0	
2300	23	0	0	0	1	8	11	3	0	0	0	0	0	0	0	0	
00-00	2668	9	17	36	190	910	1125	338	37	3	1	0	1	0	0	0	
100.00%		0.34%	0.64%	1.35%	7.12%	34.11%	42.17%	12.67%	1.39%	0.11%	0.04%	0.00%	0.04%	0.00%	0.00%	0.00%	

Maximum = 91.9 mph, Minimum = 6.5 mph, Mean = 30.5 mph
 85% Speed = 34.84 mph, 95% Speed = 37.52 mph, Median = 30.65 mph
 10 mph Pace = 26 - 36, Number in Pace = 2063 (77.32%)
 Variance = 24.13, Standard Deviation = 4.91 mph

Speed Report

Job 150_045_HSH_Loc_C
 Area Milton, MA
 Location Chickatawbut Road, east of Randolph Avenue (Route 28)
 Dir Eastbound
 Friday, December 15, 2017

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Speed Bins(mph)															
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80	
0000	7	0	0	0	0	5	2	0	0	0	0	0	0	0	0	0	
0100	2	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	
0200	4	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	
0300	4	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	
0400	3	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	
0500	13	0	0	0	0	0	6	5	2	0	0	0	0	0	0	0	
0600	43	1	0	0	1	6	21	12	2	0	0	0	0	0	0	0	
0700	119	0	0	0	2	20	52	41	4	0	0	0	0	0	0	0	
0800	185	0	1	2	4	37	96	38	6	0	1	0	0	0	0	0	
0900	138	1	1	6	10	50	54	15	1	0	0	0	0	0	0	0	
1000	150	0	1	1	10	41	70	22	4	0	1	0	0	0	0	0	
1100	219	0	0	6	7	64	104	34	4	0	0	0	0	0	0	0	
1200	238	0	0	6	14	85	101	28	4	0	0	0	0	0	0	0	
1300	211	0	0	4	11	65	102	27	1	0	1	0	0	0	0	0	
1400	218	1	0	0	26	91	77	20	3	0	0	0	0	0	0	0	
1500	231	0	2	4	23	98	85	19	0	0	0	0	0	0	0	0	
1600	176	2	1	6	33	87	40	7	0	0	0	0	0	0	0	0	
1700	211	2	2	2	33	99	58	11	3	1	0	0	0	0	0	0	
1800	263	0	0	2	18	96	120	24	3	0	0	0	0	0	0	0	
1900	117	0	0	0	8	46	54	8	1	0	0	0	0	0	0	0	
2000	61	0	0	2	1	19	31	7	0	0	1	0	0	0	0	0	
2100	10	0	1	2	1	1	4	1	0	0	0	0	0	0	0	0	
2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
00-00	2623	7	9	43	204	915	1081	320	39	1	4	0	0	0	0	0	
100.00%		0.27%	0.34%	1.64%	7.78%	34.88%	41.21%	12.20%	1.49%	0.04%	0.15%	0.00%	0.00%	0.00%	0.00%	0.00%	

Maximum = 51.9 mph, Minimum = 7.2 mph, Mean = 30.4 mph
 85% Speed = 34.73 mph, 95% Speed = 37.52 mph, Median = 30.53 mph
 10 mph Pace = 25 - 35, Number in Pace = 2021 (77.05%)
 Variance = 21.52, Standard Deviation = 4.64 mph

Speed Report

Job 150_045_HSH_Loc_C
 Area Milton, MA
 Location Chickatawbut Road, east of Randolph Avenue (Route 28)
 Dir Westbound
 Monday, December 11, 2017

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Speed Bins(mph)															
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80	
1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1200	53	1	8	11	21	7	5	0	0	0	0	0	0	0	0	0	0
1300	188	0	4	14	31	86	47	6	0	0	0	0	0	0	0	0	0
1400	232	1	10	34	61	86	35	5	0	0	0	0	0	0	0	0	0
1500	355	21	81	100	74	60	16	3	0	0	0	0	0	0	0	0	0
1600	380	137	129	68	34	7	5	0	0	0	0	0	0	0	0	0	0
1700	311	88	117	41	30	25	9	1	0	0	0	0	0	0	0	0	0
1800	206	6	28	34	53	62	23	0	0	0	0	0	0	0	0	0	0
1900	91	0	0	3	11	47	25	5	0	0	0	0	0	0	0	0	0
2000	82	0	0	3	9	44	20	6	0	0	0	0	0	0	0	0	0
2100	51	0	0	0	4	28	18	1	0	0	0	0	0	0	0	0	0
2200	36	0	0	1	10	13	8	4	0	0	0	0	0	0	0	0	0
2300	13	0	0	0	3	6	3	1	0	0	0	0	0	0	0	0	0
00-00	1998	254	377	309	341	471	214	32	0	0	0	0	0	0	0	0	0
	100.00%	12.71%	18.87%	15.47%	17.07%	23.57%	10.71%	1.60%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Maximum = 38.5 mph, Minimum = 6.2 mph, Mean = 20.5 mph
 85% Speed = 29.37 mph, 95% Speed = 32.55 mph, Median = 20.86 mph
 10 mph Pace = 20 - 30, Number in Pace = 831 (41.59%)
 Variance = 65.00, Standard Deviation = 8.06 mph

Speed Report

Job 150_045_HSH_Loc_C
 Area Milton, MA
 Location Chickatawbut Road, east of Randolph Avenue (Route 28)
 Dir Westbound
 Tuesday, December 12, 2017

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Speed Bins(mph)																
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80		
0000	9	0	0	0	3	5	1	0	0	0	0	0	0	0	0	0	0	
0100	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	
0200	3	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	
0300	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	
0400	2	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	
0500	13	0	0	0	3	4	4	2	0	0	0	0	0	0	0	0	0	
0600	170	2	5	19	38	52	44	10	0	0	0	0	0	0	0	0	0	
0700	334	5	44	71	99	78	31	6	0	0	0	0	0	0	0	0	0	
0800	285	4	13	58	84	88	32	5	1	0	0	0	0	0	0	0	0	
0900	117	0	1	5	19	51	36	5	0	0	0	0	0	0	0	0	0	
1000	120	0	0	7	26	58	25	4	0	0	0	0	0	0	0	0	0	
1100	147	0	6	13	40	66	21	1	0	0	0	0	0	0	0	0	0	
1200	145	0	1	12	36	64	30	2	0	0	0	0	0	0	0	0	0	
1300	187	1	6	23	39	86	29	3	0	0	0	0	0	0	0	0	0	
1400	259	2	18	49	75	86	27	2	0	0	0	0	0	0	0	0	0	
1500	353	31	70	91	68	71	22	0	0	0	0	0	0	0	0	0	0	
1600	320	98	126	81	7	5	3	0	0	0	0	0	0	0	0	0	0	
1700	268	59	103	43	26	25	11	1	0	0	0	0	0	0	0	0	0	
1800	227	32	59	46	43	37	8	2	0	0	0	0	0	0	0	0	0	
1900	115	1	2	9	38	55	10	0	0	0	0	0	0	0	0	0	0	
2000	59	0	0	5	12	33	9	0	0	0	0	0	0	0	0	0	0	
2100	70	0	0	9	22	28	11	0	0	0	0	0	0	0	0	0	0	
2200	40	0	0	3	12	16	8	1	0	0	0	0	0	0	0	0	0	
2300	20	0	0	0	3	10	5	2	0	0	0	0	0	0	0	0	0	
00-00	3266	235	454	544	694	922	370	46	1	0	0	0	0	0	0	0	0	
	100.00%	7.20%	13.90%	16.66%	21.25%	28.23%	11.33%	1.41%	0.03%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	

Maximum = 40.1 mph, Minimum = 6.2 mph, Mean = 22.0 mph
 85% Speed = 29.52 mph, 95% Speed = 32.66 mph, Median = 23.32 mph
 10 mph Pace = 21 - 31, Number in Pace = 1644 (50.34%)
 Variance = 53.42, Standard Deviation = 7.31 mph

Speed Report

Job 150_045_HSH_Loc_C
 Area Milton, MA
 Location Chickatawbut Road, east of Randolph Avenue (Route 28)
 Dir Westbound
 Wednesday, December 13, 2017

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Speed Bins(mph)															
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80	
0000	11	0	0	1	3	4	2	1	0	0	0	0	0	0	0	0	0
0100	4	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0
0200	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
0300	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
0400	2	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
0500	13	0	0	0	2	8	3	0	0	0	0	0	0	0	0	0	0
0600	158	0	12	19	46	57	23	1	0	0	0	0	0	0	0	0	0
0700	329	9	37	84	87	72	35	5	0	0	0	0	0	0	0	0	0
0800	292	3	36	82	71	65	31	4	0	0	0	0	0	0	0	0	0
0900	142	0	1	12	31	63	33	2	0	0	0	0	0	0	0	0	0
1000	116	0	1	4	24	57	27	3	0	0	0	0	0	0	0	0	0
1100	143	0	0	2	29	70	40	2	0	0	0	0	0	0	0	0	0
1200	167	0	1	6	32	84	35	9	0	0	0	0	0	0	0	0	0
1300	171	0	1	21	50	67	29	3	0	0	0	0	0	0	0	0	0
1400	362	14	70	100	115	47	16	0	0	0	0	0	0	0	0	0	0
1500	494	53	173	184	68	12	2	0	2	0	0	0	0	0	0	0	0
1600	355	120	158	65	9	1	2	0	0	0	0	0	0	0	0	0	0
1700	307	91	118	70	16	8	4	0	0	0	0	0	0	0	0	0	0
1800	274	19	73	72	48	42	17	2	0	0	0	0	0	0	1	0	0
1900	104	0	0	4	25	41	30	4	0	0	0	0	0	0	0	0	0
2000	77	0	1	1	14	35	24	2	0	0	0	0	0	0	0	0	0
2100	78	0	0	0	17	34	22	5	0	0	0	0	0	0	0	0	0
2200	37	0	0	0	5	15	11	6	0	0	0	0	0	0	0	0	0
2300	22	0	0	1	5	12	4	0	0	0	0	0	0	0	0	0	0
00-00	3660	309	682	729	698	798	392	49	2	0	0	0	0	0	1	0	0
100.00%		8.44%	18.63%	19.92%	19.07%	21.80%	10.71%	1.34%	0.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.03%	0.00%	

Maximum = 70.8 mph, Minimum = 6.2 mph, Mean = 20.7 mph
 85% Speed = 29.25 mph, 95% Speed = 32.27 mph, Median = 20.75 mph
 10 mph Pace = 19 - 29, Number in Pace = 1506 (41.15%)
 Variance = 57.60, Standard Deviation = 7.59 mph

Speed Report

Job 150_045_HSH_Loc_C
 Area Milton, MA
 Location Chickatawbut Road, east of Randolph Avenue (Route 28)
 Dir Westbound
 Thursday, December 14, 2017

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Speed Bins(mph)																
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80		
0000	12	0	0	1	1	8	0	0	0	1	1	0	0	0	0	0	0	0
0100	6	0	0	0	1	2	2	1	0	0	0	0	0	0	0	0	0	0
0200	4	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0
0300	4	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0
0400	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
0500	16	0	0	1	1	10	4	0	0	0	0	0	0	0	0	0	0	0
0600	154	1	9	21	38	49	33	3	0	0	0	0	0	0	0	0	0	0
0700	335	3	37	79	90	81	37	7	1	0	0	0	0	0	0	0	0	0
0800	286	4	36	81	69	72	21	2	1	0	0	0	0	0	0	0	0	0
0900	127	0	3	9	19	60	30	6	0	0	0	0	0	0	0	0	0	0
1000	132	0	2	2	26	60	39	3	0	0	0	0	0	0	0	0	0	0
1100	136	0	0	8	43	56	27	2	0	0	0	0	0	0	0	0	0	0
1200	155	0	0	5	41	69	31	9	0	0	0	0	0	0	0	0	0	0
1300	188	1	7	10	40	72	47	11	0	0	0	0	0	0	0	0	0	0
1400	352	8	35	82	109	73	43	1	1	0	0	0	0	0	0	0	0	0
1500	418	38	131	131	75	26	13	3	0	0	0	1	0	0	0	0	0	0
1600	364	94	146	90	22	8	3	1	0	0	0	0	0	0	0	0	0	0
1700	342	79	125	90	37	7	4	0	0	0	0	0	0	0	0	0	0	0
1800	203	6	15	21	60	74	24	3	0	0	0	0	0	0	0	0	0	0
1900	126	0	2	7	28	47	39	3	0	0	0	0	0	0	0	0	0	0
2000	83	0	0	2	12	37	25	5	1	0	0	0	0	0	0	0	0	0
2100	63	0	0	0	7	35	16	5	0	0	0	0	0	0	0	0	0	0
2200	56	0	0	1	6	26	19	4	0	0	0	0	0	0	0	0	0	0
2300	25	0	0	0	5	11	7	2	0	0	0	0	0	0	0	0	0	0
00-00	3589	234	548	641	732	887	467	72	4	1	1	1	0	0	0	0	0	0
	100.00%	6.52%	15.27%	17.86%	20.40%	24.71%	13.01%	2.01%	0.11%	0.03%	0.03%	0.03%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Maximum = 91.9 mph, Minimum = 6.2 mph, Mean = 22.0 mph
 85% Speed = 30.03 mph, 95% Speed = 33.05 mph, Median = 22.54 mph
 10 mph Pace = 21 - 31, Number in Pace = 1652 (46.03%)
 Variance = 57.73, Standard Deviation = 7.60 mph

Speed Report

Job 150_045_HSH_Loc_C
 Area Milton, MA
 Location Chickatawbut Road, east of Randolph Avenue (Route 28)
 Dir Westbound
 Friday, December 15, 2017

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Speed Bins(mph)															
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80	
0000	16	0	0	0	2	9	4	1	0	0	0	0	0	0	0	0	0
0100	15	0	0	0	0	11	4	0	0	0	0	0	0	0	0	0	0
0200	5	0	0	0	1	2	2	0	0	0	0	0	0	0	0	0	0
0300	7	0	0	0	0	2	4	1	0	0	0	0	0	0	0	0	0
0400	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
0500	14	0	0	0	4	4	6	0	0	0	0	0	0	0	0	0	0
0600	150	1	7	28	36	53	21	3	1	0	0	0	0	0	0	0	0
0700	259	0	14	37	80	92	30	5	1	0	0	0	0	0	0	0	0
0800	234	1	9	29	55	86	48	6	0	0	0	0	0	0	0	0	0
0900	120	0	1	5	27	59	22	6	0	0	0	0	0	0	0	0	0
1000	117	0	0	4	14	60	32	7	0	0	0	0	0	0	0	0	0
1100	171	1	2	10	48	75	31	4	0	0	0	0	0	0	0	0	0
1200	268	2	9	42	80	94	39	2	0	0	0	0	0	0	0	0	0
1300	274	4	21	51	76	74	41	7	0	0	0	0	0	0	0	0	0
1400	413	68	117	102	79	43	3	1	0	0	0	0	0	0	0	0	0
1500	478	33	139	199	85	10	5	2	0	5	0	0	0	0	0	0	0
1600	381	90	177	92	17	2	3	0	0	0	0	0	0	0	0	0	0
1700	357	78	145	102	18	5	6	1	2	0	0	0	0	0	0	0	0
1800	243	5	38	55	52	71	20	2	0	0	0	0	0	0	0	0	0
1900	116	1	1	5	22	57	28	2	0	0	0	0	0	0	0	0	0
2000	92	0	1	2	17	52	16	4	0	0	0	0	0	0	0	0	0
2100	16	0	0	1	4	7	4	0	0	0	0	0	0	0	0	0	0
2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00-00	3748	284	681	764	719	868	369	54	4	5	0	0	0	0	0	0	0
100.00%		7.58%	18.17%	20.38%	19.18%	23.16%	9.85%	1.44%	0.11%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Maximum = 47.6 mph, Minimum = 6.2 mph, Mean = 21.0 mph
 85% Speed = 29.14 mph, 95% Speed = 32.38 mph, Median = 21.14 mph
 10 mph Pace = 20 - 30, Number in Pace = 1612 (43.01%)
 Variance = 56.02, Standard Deviation = 7.48 mph

Speed Report

Job 150_045_HSH_Loc_D
 Area Milton, MA
 Location Chickatawbut Road, west of Randolph Avenue (Route 28)
 Dir Eastbound
 Monday, December 11, 2017

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Speed Bins(mph)															
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80	
1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1300	47	0	0	2	18	23	4	0	0	0	0	0	0	0	0	0	0
1400	135	0	2	10	30	61	28	4	0	0	0	0	0	0	0	0	0
1500	228	2	14	33	66	81	31	1	0	0	0	0	0	0	0	0	0
1600	310	13	69	75	68	65	18	1	0	0	0	0	1	0	0	0	0
1700	317	47	92	75	70	29	4	0	0	0	0	0	0	0	0	0	0
1800	204	11	38	36	54	55	9	1	0	0	0	0	0	0	0	0	0
1900	68	0	1	2	22	32	10	1	0	0	0	0	0	0	0	0	0
2000	49	0	0	4	10	31	4	0	0	0	0	0	0	0	0	0	0
2100	17	0	0	0	4	11	2	0	0	0	0	0	0	0	0	0	0
2200	21	0	0	0	5	11	4	0	1	0	0	0	0	0	0	0	0
2300	10	0	0	0	4	4	1	1	0	0	0	0	0	0	0	0	0
00-00	1406	73	216	237	351	403	115	9	1	0	0	0	1	0	0	0	0
	100.00%	5.19%	15.36%	16.86%	24.96%	28.66%	8.18%	0.64%	0.07%	0.00%	0.00%	0.00%	0.07%	0.00%	0.00%	0.00%	0.00%

Maximum = 64.0 mph, Minimum = 6.2 mph, Mean = 21.8 mph
 85% Speed = 28.86 mph, 95% Speed = 31.47 mph, Median = 22.70 mph
 10 mph Pace = 20 - 30, Number in Pace = 757 (53.84%)
 Variance = 46.85, Standard Deviation = 6.84 mph

Speed Report

Job 150_045_HSH_Loc_D
Area Milton, MA
Location Chickatawbut Road, west of Randolph Avenue (Route 28)
Dir Eastbound
Tuesday, December 12, 2017

BOSTON
TRAFFIC DATA
PO BOX 1723, Framingham, MA 01701
Office: 978-746-1259
DataRequest@BostonTrafficData.com
www.BostonTrafficData.com

Time	Total	Speed Bins(mph)																
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80		
0000	4	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	
0100	4	0	0	0	2	1	1	0	0	0	0	0	0	0	0	0	0	
0200	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	
0300	2	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	
0400	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	
0500	30	0	0	1	5	15	9	0	0	0	0	0	0	0	0	0	0	
0600	106	1	2	18	25	46	14	0	0	0	0	0	0	0	0	0	0	
0700	200	0	8	23	54	80	30	5	0	0	0	0	0	0	0	0	0	
0800	188	1	2	24	54	80	26	1	0	0	0	0	0	0	0	0	0	
0900	99	0	3	16	15	43	17	4	1	0	0	0	0	0	0	0	0	
1000	89	0	2	7	29	44	6	1	0	0	0	0	0	0	0	0	0	
1100	94	0	1	3	19	57	11	3	0	0	0	0	0	0	0	0	0	
1200	107	0	2	8	25	61	11	0	0	0	0	0	0	0	0	0	0	
1300	89	0	0	3	11	61	12	1	1	0	0	0	0	0	0	0	0	
1400	144	0	5	12	28	71	27	1	0	0	0	0	0	0	0	0	0	
1500	243	2	21	49	74	79	15	3	0	0	0	0	0	0	0	0	0	
1600	374	25	128	131	47	37	6	0	0	0	0	0	0	0	0	0	0	
1700	385	53	173	132	24	3	0	0	0	0	0	0	0	0	0	0	0	
1800	218	19	55	47	57	37	3	0	0	0	0	0	0	0	0	0	0	
1900	78	0	2	10	36	27	2	1	0	0	0	0	0	0	0	0	0	
2000	53	0	0	2	27	22	2	0	0	0	0	0	0	0	0	0	0	
2100	32	0	0	2	12	14	4	0	0	0	0	0	0	0	0	0	0	
2200	16	0	0	0	7	7	2	0	0	0	0	0	0	0	0	0	0	
2300	16	0	0	0	5	9	1	1	0	0	0	0	0	0	0	0	0	
00-00	2574	101	404	488	556	802	199	22	2	0	0	0	0	0	0	0	0	
	100.00%	3.92%	15.70%	18.96%	21.60%	31.16%	7.73%	0.85%	0.08%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	

Maximum = 40.6 mph, Minimum = 6.4 mph, Mean = 21.9 mph
85% Speed = 28.74 mph, 95% Speed = 31.39 mph, Median = 22.84 mph
10 mph Pace = 20 - 30, Number in Pace = 1372 (53.30%)
Variance = 43.94, Standard Deviation = 6.63 mph

Speed Report

Job 150_045_HSH_Loc_D
 Area Milton, MA
 Location Chickatawbut Road, west of Randolph Avenue (Route 28)
 Dir Eastbound
 Wednesday, December 13, 2017

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Speed Bins(mph)															
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80	
0000	2	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
0100	3	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0
0200	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0400	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
0500	26	0	0	0	3	14	9	0	0	0	0	0	0	0	0	0	0
0600	101	1	4	11	26	42	16	1	0	0	0	0	0	0	0	0	0
0700	216	2	11	30	70	84	16	3	0	0	0	0	0	0	0	0	0
0800	166	0	3	16	38	79	27	3	0	0	0	0	0	0	0	0	0
0900	108	0	3	3	26	55	18	3	0	0	0	0	0	0	0	0	0
1000	100	0	1	6	30	50	12	1	0	0	0	0	0	0	0	0	0
1100	117	0	1	5	29	57	23	2	0	0	0	0	0	0	0	0	0
1200	114	0	1	1	25	57	29	1	0	0	0	0	0	0	0	0	0
1300	98	0	0	6	13	60	17	2	0	0	0	0	0	0	0	0	0
1400	140	0	2	12	29	64	25	8	0	0	0	0	0	0	0	0	0
1500	248	4	28	34	71	77	32	2	0	0	0	0	0	0	0	0	0
1600	381	74	198	81	13	10	5	0	0	0	0	0	0	0	0	0	0
1700	351	67	162	105	11	3	3	0	0	0	0	0	0	0	0	0	0
1800	275	31	98	55	43	40	8	0	0	0	0	0	0	0	0	0	0
1900	75	0	0	2	20	40	12	1	0	0	0	0	0	0	0	0	0
2000	43	0	0	0	9	21	12	1	0	0	0	0	0	0	0	0	0
2100	26	0	0	1	11	11	3	0	0	0	0	0	0	0	0	0	0
2200	23	0	0	0	4	11	7	1	0	0	0	0	0	0	0	0	0
2300	23	0	0	0	3	13	6	1	0	0	0	0	0	0	0	0	0
00-00	2640	179	512	368	474	794	283	30	0	0	0	0	0	0	0	0	0
100.00%		6.78%	19.39%	13.94%	17.95%	30.08%	10.72%	1.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Maximum = 39.9 mph, Minimum = 6.3 mph, Mean = 21.6 mph
 85% Speed = 29.30 mph, 95% Speed = 31.99 mph, Median = 23.21 mph
 10 mph Pace = 22 - 32, Number in Pace = 1309 (49.58%)
 Variance = 55.95, Standard Deviation = 7.48 mph

Speed Report

Job 150_045_HSH_Loc_D
 Area Milton, MA
 Location Chickatawbut Road, west of Randolph Avenue (Route 28)
 Dir Eastbound
 Thursday, December 14, 2017

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Speed Bins(mph)																
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80		
0000	12	0	0	1	1	5	4	1	0	0	0	0	0	0	0	0	0	0
0100	3	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0
0200	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
0300	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
0400	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
0500	25	0	0	0	4	13	8	0	0	0	0	0	0	0	0	0	0	0
0600	93	0	0	6	40	39	8	0	0	0	0	0	0	0	0	0	0	0
0700	220	7	32	30	54	70	26	1	0	0	0	0	0	0	0	0	0	0
0800	172	0	4	10	52	77	24	5	0	0	0	0	0	0	0	0	0	0
0900	115	0	1	5	23	63	20	3	0	0	0	0	0	0	0	0	0	0
1000	97	0	1	2	27	48	16	1	2	0	0	0	0	0	0	0	0	0
1100	104	0	2	8	17	38	33	6	0	0	0	0	0	0	0	0	0	0
1200	96	0	0	4	21	60	7	3	1	0	0	0	0	0	0	0	0	0
1300	115	0	0	7	33	48	18	6	3	0	0	0	0	0	0	0	0	0
1400	162	0	2	10	34	61	51	4	0	0	0	0	0	0	0	0	0	0
1500	334	15	38	121	71	64	21	4	0	0	0	0	0	0	0	0	0	0
1600	374	69	114	139	25	13	12	2	0	0	0	0	0	0	0	0	0	0
1700	330	71	148	89	14	6	2	0	0	0	0	0	0	0	0	0	0	0
1800	344	23	118	117	52	22	8	4	0	0	0	0	0	0	0	0	0	0
1900	92	0	2	12	38	33	6	0	1	0	0	0	0	0	0	0	0	0
2000	54	0	1	2	12	28	9	2	0	0	0	0	0	0	0	0	0	0
2100	32	0	0	0	9	11	9	3	0	0	0	0	0	0	0	0	0	0
2200	29	0	0	1	8	14	5	1	0	0	0	0	0	0	0	0	0	0
2300	20	0	0	0	7	11	2	0	0	0	0	0	0	0	0	0	0	0
00-00	2829	186	463	564	543	731	289	46	7	0	0	0	0	0	0	0	0	0
100.00%		6.57%	16.37%	19.94%	19.19%	25.84%	10.22%	1.63%	0.25%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Maximum = 43.4 mph, Minimum = 6.2 mph, Mean = 21.5 mph
 85% Speed = 29.36 mph, 95% Speed = 32.49 mph, Median = 22.15 mph
 10 mph Pace = 20 - 30, Number in Pace = 1288 (45.53%)
 Variance = 53.26, Standard Deviation = 7.30 mph

Speed Report

Job 150_045_HSH_Loc_D
 Area Milton, MA
 Location Chickatawbut Road, west of Randolph Avenue (Route 28)
 Dir Eastbound
 Friday, December 15, 2017

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Speed Bins(mph)															
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80	
0000	13	0	0	0	4	5	4	0	0	0	0	0	0	0	0	0	0
0100	3	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0
0200	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
0300	4	0	0	0	1	2	0	1	0	0	0	0	0	0	0	0	0
0400	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
0500	20	0	0	1	1	7	9	2	0	0	0	0	0	0	0	0	0
0600	77	0	0	3	20	41	13	0	0	0	0	0	0	0	0	0	0
0700	150	1	8	18	37	63	21	2	0	0	0	0	0	0	0	0	0
0800	145	0	6	12	42	64	17	4	0	0	0	0	0	0	0	0	0
0900	110	5	5	4	15	55	23	3	0	0	0	0	0	0	0	0	0
1000	83	0	0	2	19	44	15	3	0	0	0	0	0	0	0	0	0
1100	114	0	0	8	22	55	25	4	0	0	0	0	0	0	0	0	0
1200	134	1	3	12	22	65	25	6	0	0	0	0	0	0	0	0	0
1300	143	1	2	16	44	61	19	0	0	0	0	0	0	0	0	0	0
1400	220	4	16	32	63	75	26	4	0	0	0	0	0	0	0	0	0
1500	333	20	75	100	61	51	23	3	0	0	0	0	0	0	0	0	0
1600	390	50	172	140	15	7	6	0	0	0	0	0	0	0	0	0	0
1700	372	56	187	95	22	9	2	0	0	0	0	0	0	0	0	0	1
1800	275	15	75	72	66	34	13	0	0	0	0	0	0	0	0	0	0
1900	87	0	2	10	22	43	10	0	0	0	0	0	0	0	0	0	0
2000	49	0	0	1	11	30	7	0	0	0	0	0	0	0	0	0	0
2100	9	0	0	3	4	2	0	0	0	0	0	0	0	0	0	0	0
2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00-00	2735	153	551	529	492	718	259	32	0	0	0	0	0	0	0	0	1
100.00%		5.59%	20.15%	19.34%	17.99%	26.25%	9.47%	1.17%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.04%	

Maximum = 77.4 mph, Minimum = 6.2 mph, Mean = 21.1 mph
 85% Speed = 29.02 mph, 95% Speed = 31.94 mph, Median = 21.53 mph
 10 mph Pace = 20 - 30, Number in Pace = 1221 (44.64%)
 Variance = 53.26, Standard Deviation = 7.30 mph

Speed Report

Job 150_045_HSH_Loc_D
 Area Milton, MA
 Location Chickatawbut Road, west of Randolph Avenue (Route 28)
 Dir Westbound
 Monday, December 11, 2017

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Speed Bins(mph)																
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80		
1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1300	55	0	1	1	13	22	17	1	0	0	0	0	0	0	0	0	0	0
1400	128	0	0	0	3	61	54	8	2	0	0	0	0	0	0	0	0	0
1500	168	1	1	0	15	61	84	6	0	0	0	0	0	0	0	0	0	0
1600	166	1	1	5	10	69	72	7	0	0	0	0	1	0	0	0	0	0
1700	117	0	3	8	17	69	17	3	0	0	0	0	0	0	0	0	0	0
1800	118	0	1	1	14	68	33	1	0	0	0	0	0	0	0	0	0	0
1900	56	0	0	1	4	22	27	1	1	0	0	0	0	0	0	0	0	0
2000	48	0	0	0	4	26	15	3	0	0	0	0	0	0	0	0	0	0
2100	29	0	0	0	1	14	13	1	0	0	0	0	0	0	0	0	0	0
2200	17	0	0	0	3	5	9	0	0	0	0	0	0	0	0	0	0	0
2300	5	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0
00-00	907	2	7	16	84	420	343	31	3	0	0	0	1	0	0	0	0	0
	100.00%	0.22%	0.77%	1.76%	9.26%	46.31%	37.82%	3.42%	0.33%	0.00%	0.00%	0.00%	0.11%	0.00%	0.00%	0.00%	0.00%	0.00%

Maximum = 64.0 mph, Minimum = 6.3 mph, Mean = 29.0 mph
 85% Speed = 32.60 mph, 95% Speed = 34.62 mph, Median = 29.36 mph
 10 mph Pace = 25 - 35, Number in Pace = 767 (84.56%)
 Variance = 17.05, Standard Deviation = 4.13 mph

Speed Report

Job 150_045_HSH_Loc_D
 Area Milton, MA
 Location Chickatawbut Road, west of Randolph Avenue (Route 28)
 Dir Westbound
 Tuesday, December 12, 2017

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Speed Bins(mph)																
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80		
0000	6	0	0	0	0	2	4	0	0	0	0	0	0	0	0	0	0	0
0100	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
0200	3	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0
0300	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
0400	4	0	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0
0500	35	0	0	0	1	16	16	2	0	0	0	0	0	0	0	0	0	0
0600	139	0	0	0	7	48	71	13	0	0	0	0	0	0	0	0	0	0
0700	280	0	1	0	7	77	172	22	1	0	0	0	0	0	0	0	0	0
0800	286	0	0	1	11	105	156	13	0	0	0	0	0	0	0	0	0	0
0900	119	0	0	0	6	42	62	8	1	0	0	0	0	0	0	0	0	0
1000	90	0	1	0	5	50	32	2	0	0	0	0	0	0	0	0	0	0
1100	116	0	0	0	7	56	51	2	0	0	0	0	0	0	0	0	0	0
1200	129	0	0	1	5	50	69	4	0	0	0	0	0	0	0	0	0	0
1300	143	0	0	0	6	53	77	7	0	0	0	0	0	0	0	0	0	0
1400	166	0	0	1	6	47	100	11	1	0	0	0	0	0	0	0	0	0
1500	167	0	0	0	9	78	75	5	0	0	0	0	0	0	0	0	0	0
1600	141	0	0	3	11	77	45	5	0	0	0	0	0	0	0	0	0	0
1700	114	0	1	3	33	64	13	0	0	0	0	0	0	0	0	0	0	0
1800	131	0	0	1	9	75	45	1	0	0	0	0	0	0	0	0	0	0
1900	84	0	0	0	6	49	28	1	0	0	0	0	0	0	0	0	0	0
2000	41	0	0	0	8	19	11	3	0	0	0	0	0	0	0	0	0	0
2100	37	0	0	1	3	17	16	0	0	0	0	0	0	0	0	0	0	0
2200	26	0	0	1	4	15	5	0	1	0	0	0	0	0	0	0	0	0
2300	12	0	0	0	1	6	5	0	0	0	0	0	0	0	0	0	0	0
00-00	2272	0	3	12	146	952	1056	99	4	0	0	0	0	0	0	0	0	0
100.00%		0.00%	0.13%	0.53%	6.43%	41.90%	46.48%	4.36%	0.18%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Maximum = 42.9 mph, Minimum = 10.8 mph, Mean = 29.8 mph
 85% Speed = 32.94 mph, 95% Speed = 34.84 mph, Median = 30.09 mph
 10 mph Pace = 25 - 35, Number in Pace = 2009 (88.42%)
 Variance = 11.00, Standard Deviation = 3.32 mph

Speed Report

Job 150_045_HSH_Loc_D
 Area Milton, MA
 Location Chickatawbut Road, west of Randolph Avenue (Route 28)
 Dir Westbound
 Wednesday, December 13, 2017

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Speed Bins(mph)															
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80	
0000	4	0	0	0	0	2	1	1	0	0	0	0	0	0	0	0	0
0100	3	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0
0200	2	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0400	7	0	1	0	0	3	3	0	0	0	0	0	0	0	0	0	0
0500	29	0	0	0	1	15	12	1	0	0	0	0	0	0	0	0	0
0600	154	0	0	1	2	66	79	6	0	0	0	0	0	0	0	0	0
0700	306	1	0	2	6	88	181	28	0	0	0	0	0	0	0	0	0
0800	313	0	0	2	7	113	168	23	0	0	0	0	0	0	0	0	0
0900	152	0	1	4	20	77	45	5	0	0	0	0	0	0	0	0	0
1000	89	0	0	0	10	60	18	1	0	0	0	0	0	0	0	0	0
1100	109	0	0	0	6	50	49	4	0	0	0	0	0	0	0	0	0
1200	119	0	0	0	13	47	55	4	0	0	0	0	0	0	0	0	0
1300	131	0	0	0	7	62	56	6	0	0	0	0	0	0	0	0	0
1400	190	0	0	4	3	80	87	15	1	0	0	0	0	0	0	0	0
1500	220	0	1	1	12	86	107	13	0	0	0	0	0	0	0	0	0
1600	180	0	5	7	47	100	21	0	0	0	0	0	0	0	0	0	0
1700	132	2	4	2	30	72	21	1	0	0	0	0	0	0	0	0	0
1800	145	1	8	3	9	77	41	6	0	0	0	0	0	0	0	0	0
1900	64	0	0	0	2	33	23	6	0	0	0	0	0	0	0	0	0
2000	42	0	0	0	1	20	19	2	0	0	0	0	0	0	0	0	0
2100	33	0	0	0	1	16	11	5	0	0	0	0	0	0	0	0	0
2200	22	0	0	0	2	11	8	1	0	0	0	0	0	0	0	0	0
2300	12	0	0	0	2	4	5	1	0	0	0	0	0	0	0	0	0
00-00	2458	4	20	26	181	1084	1013	129	1	0	0	0	0	0	0	0	0
	100.00%	0.16%	0.81%	1.06%	7.36%	44.10%	41.21%	5.25%	0.04%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Maximum = 40.5 mph, Minimum = 7.8 mph, Mean = 29.5 mph
 85% Speed = 32.88 mph, 95% Speed = 35.06 mph, Median = 29.70 mph
 10 mph Pace = 25 - 35, Number in Pace = 2125 (86.45%)
 Variance = 14.89, Standard Deviation = 3.86 mph

Speed Report

Job 150_045_HSH_Loc_D
 Area Milton, MA
 Location Chickatawbut Road, west of Randolph Avenue (Route 28)
 Dir Westbound
 Thursday, December 14, 2017

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Speed Bins(mph)															
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80	
0000	14	0	0	0	1	6	4	3	0	0	0	0	0	0	0	0	0
0100	4	0	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0
0200	4	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0
0300	3	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0
0400	6	0	0	0	0	4	2	0	0	0	0	0	0	0	0	0	0
0500	34	0	0	0	1	18	13	2	0	0	0	0	0	0	0	0	0
0600	127	0	0	0	6	47	72	2	0	0	0	0	0	0	0	0	0
0700	298	2	1	1	4	108	162	20	0	0	0	0	0	0	0	0	0
0800	289	0	0	0	11	90	173	13	2	0	0	0	0	0	0	0	0
0900	122	0	0	0	4	42	69	7	0	0	0	0	0	0	0	0	0
1000	96	0	0	1	5	44	41	5	0	0	0	0	0	0	0	0	0
1100	94	0	0	0	4	39	47	3	1	0	0	0	0	0	0	0	0
1200	125	0	0	0	1	63	47	10	4	0	0	0	0	0	0	0	0
1300	120	0	0	1	5	57	47	10	0	0	0	0	0	0	0	0	0
1400	177	0	0	1	4	72	85	15	0	0	0	0	0	0	0	0	0
1500	186	1	0	1	12	64	93	13	2	0	0	0	0	0	0	0	0
1600	139	1	0	2	19	80	31	6	0	0	0	0	0	0	0	0	0
1700	124	3	5	4	19	66	22	5	0	0	0	0	0	0	0	0	0
1800	108	0	2	1	14	60	28	3	0	0	0	0	0	0	0	0	0
1900	72	0	0	0	3	34	28	6	1	0	0	0	0	0	0	0	0
2000	41	0	0	0	2	17	17	3	1	0	0	1	0	0	0	0	0
2100	36	0	0	0	3	15	13	5	0	0	0	0	0	0	0	0	0
2200	38	0	0	2	2	19	12	2	1	0	0	0	0	0	0	0	0
2300	20	0	0	0	1	11	5	3	0	0	0	0	0	0	0	0	0
00-00	2277	7	9	14	122	961	1014	137	12	0	0	1	0	0	0	0	0
	100.00%	0.31%	0.40%	0.61%	5.36%	42.20%	44.53%	6.02%	0.53%	0.00%	0.00%	0.04%	0.00%	0.00%	0.00%	0.00%	0.00%

Maximum = 55.1 mph, Minimum = 6.5 mph, Mean = 30.0 mph
 85% Speed = 33.39 mph, 95% Speed = 35.57 mph, Median = 30.09 mph
 10 mph Pace = 26 - 36, Number in Pace = 1978 (86.87%)
 Variance = 14.25, Standard Deviation = 3.78 mph

Speed Report

Job 150_045_HSH_Loc_D
 Area Milton, MA
 Location Chickatawbut Road, west of Randolph Avenue (Route 28)
 Dir Westbound
 Friday, December 15, 2017

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Speed Bins(mph)															
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80	
0000	8	0	0	0	0	5	3	0	0	0	0	0	0	0	0	0	0
0100	8	0	0	1	0	4	3	0	0	0	0	0	0	0	0	0	0
0200	6	0	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0
0300	6	0	0	0	1	0	2	1	2	0	0	0	0	0	0	0	0
0400	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
0500	31	0	0	0	0	10	20	1	0	0	0	0	0	0	0	0	0
0600	134	0	0	0	4	46	69	15	0	0	0	0	0	0	0	0	0
0700	246	0	0	0	5	100	122	18	1	0	0	0	0	0	0	0	0
0800	233	0	0	0	11	113	101	7	1	0	0	0	0	0	0	0	0
0900	104	0	0	0	4	32	54	14	0	0	0	0	0	0	0	0	0
1000	88	0	0	0	6	35	42	5	0	0	0	0	0	0	0	0	0
1100	117	0	0	0	2	50	52	12	0	1	0	0	0	0	0	0	0
1200	150	0	0	0	7	53	84	6	0	0	0	0	0	0	0	0	0
1300	168	0	0	0	6	62	88	11	1	0	0	0	0	0	0	0	0
1400	186	0	0	0	5	70	90	18	3	0	0	0	0	0	0	0	0
1500	208	1	7	0	3	87	90	18	2	0	0	0	0	0	0	0	0
1600	154	2	2	6	34	82	28	0	0	0	0	0	0	0	0	0	0
1700	136	1	1	4	42	65	20	2	0	0	0	0	0	0	0	0	1
1800	110	3	3	3	10	45	39	6	1	0	0	0	0	0	0	0	0
1900	60	0	0	1	3	26	27	3	0	0	0	0	0	0	0	0	0
2000	57	0	0	0	5	28	19	5	0	0	0	0	0	0	0	0	0
2100	4	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0
2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00-00	2217	7	13	15	152	919	956	142	11	1	0	0	0	0	0	0	1
	100.00%	0.32%	0.59%	0.68%	6.86%	41.45%	43.12%	6.41%	0.50%	0.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.05%	

Maximum = 77.4 mph, Minimum = 6.5 mph, Mean = 29.8 mph
 85% Speed = 33.27 mph, 95% Speed = 35.68 mph, Median = 30.03 mph
 10 mph Pace = 25 - 35, Number in Pace = 1878 (84.71%)
 Variance = 16.59, Standard Deviation = 4.07 mph

Classification Report

Job # 206_066_HSH_Loc A
Area Milton, MA
Location Randolph Avenue (Route 28), north of Chickatawbut Road
Direction Northbound
Saturday, May 12, 2018

BOSTON
TRAFFIC DATA
PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataInquiries@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	121	2	71	1	1	0	1	44	0	0	0	0	0	1
0100	97	0	57	3	0	0	2	35	0	0	0	0	0	0
0200	80	0	53	4	0	0	0	23	0	0	0	0	0	0
0300	40	0	36	0	0	0	1	3	0	0	0	0	0	0
0400	50	0	36	2	0	1	0	11	0	0	0	0	0	0
0500	147	0	113	16	2	0	1	14	0	1	0	0	0	0
0600	265	2	223	13	2	2	2	17	0	1	2	0	0	1
0700	302	2	218	24	3	1	2	39	1	1	0	0	0	11
0800	466	5	357	24	1	3	4	59	0	2	1	0	0	10
0900	572	8	450	31	1	5	4	62	2	4	0	0	0	5
1000	649	10	534	26	0	4	5	58	1	4	2	0	0	5
1100	674	4	555	37	2	3	6	55	2	1	0	0	0	9
1200	754	4	669	44	1	2	3	18	3	4	1	0	0	5
1300	812	0	745	40	3	0	12	7	2	1	0	1	0	1
1400	942	2	847	62	2	2	12	5	3	1	0	2	0	4
1500	844	0	785	42	0	0	10	3	0	3	0	1	0	0
1600	779	0	709	33	1	1	24	0	3	3	0	1	0	4
1700	788	1	734	28	2	2	14	0	0	2	4	0	0	1
1800	820	2	750	37	6	1	10	3	1	4	3	0	0	3
1900	610	0	566	19	1	1	15	3	1	2	1	0	0	1
2000	485	0	436	19	2	1	22	1	0	1	1	0	0	2
2100	488	0	434	22	1	1	27	0	0	1	0	0	0	2
2200	417	0	371	21	1	1	19	2	0	1	1	0	0	0
2300	282	0	257	9	1	0	13	2	0	0	0	0	0	0
00-00	11484	42	10006	557	33	31	209	464	19	37	16	5	0	65
	100.00%	0.37%	87.13%	4.85%	0.29%	0.27%	1.82%	4.04%	0.17%	0.32%	0.14%	0.04%	0.00%	0.57%

Classification Report

Job # 206_066_HSH_Loc A
Area Milton, MA
Location Randolph Avenue (Route 28), north of Chickatawbut Road
Direction Northbound
Sunday, May 13, 2018



Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	256	0	246	4	1	0	4	1	0	0	0	0	0	0
0100	118	1	109	2	0	0	6	0	0	0	0	0	0	0
0200	84	0	73	4	1	0	6	0	0	0	0	0	0	0
0300	57	0	52	3	0	1	1	0	0	0	0	0	0	0
0400	47	0	42	4	0	0	1	0	0	0	0	0	0	0
0500	110	0	90	12	0	0	7	0	0	1	0	0	0	0
0600	200	0	180	16	0	0	3	1	0	0	0	0	0	0
0700	251	1	219	18	2	1	6	2	2	0	0	0	0	0
0800	362	0	304	30	1	3	17	4	0	3	0	0	0	0
0900	560	0	491	38	1	0	21	2	1	3	0	0	0	3
1000	756	1	649	45	3	5	37	8	2	5	0	0	0	1
1100	1054	0	928	59	2	2	40	5	2	9	2	0	0	5
1200	944	4	844	35	4	4	38	5	2	3	1	0	0	4
1300	1150	1	1038	61	0	0	24	12	1	6	2	0	0	5
1400	1212	1	1092	58	2	2	42	4	1	5	1	0	0	4
1500	904	3	789	47	1	7	31	7	3	8	3	0	0	5
1600	729	3	642	41	2	1	18	4	5	9	2	0	0	2
1700	636	1	569	28	1	3	17	7	2	6	0	0	0	2
1800	812	3	730	42	1	4	24	4	2	1	0	0	0	1
1900	607	2	541	35	2	2	16	3	0	2	2	0	0	2
2000	540	1	469	39	2	3	22	1	1	1	0	0	0	1
2100	406	0	369	14	1	1	17	2	0	0	0	0	0	2
2200	332	0	293	18	1	1	16	1	0	2	0	0	0	0
2300	187	1	173	4	2	0	7	0	0	0	0	0	0	0
00-00	12314	23	10932	657	30	40	421	73	24	64	13	0	0	37
	100.00%	0.19%	88.78%	5.34%	0.24%	0.32%	3.42%	0.59%	0.19%	0.52%	0.11%	0.00%	0.00%	0.30%

Classification Report

Job # 206_066_HSH_Loc A
Area Milton, MA
Location Randolph Avenue (Route 28), north of Chickatawbut Road
Direction Southbound
Saturday, May 12, 2018

BOSTON
TRAFFIC DATA
PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataInquiries@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	266	0	256	7	0	2	0	0	0	0	0	0	0	1
0100	147	0	136	10	1	0	0	0	0	0	0	0	0	0
0200	129	0	122	6	1	0	0	0	0	0	0	0	0	0
0300	66	0	64	1	0	1	0	0	0	0	0	0	0	0
0400	57	0	55	1	0	1	0	0	0	0	0	0	0	0
0500	90	0	81	8	0	1	0	0	0	0	0	0	0	0
0600	223	0	201	17	1	4	0	0	0	0	0	0	0	0
0700	355	1	310	35	4	3	1	1	0	0	0	0	0	0
0800	548	0	499	37	2	1	2	3	2	1	0	0	0	1
0900	673	0	629	31	4	2	1	3	2	1	0	0	0	0
1000	762	1	703	49	2	2	0	1	3	0	0	0	0	1
1100	908	1	818	63	3	4	5	7	4	0	0	0	0	3
1200	859	4	780	39	10	4	10	9	0	1	1	0	0	1
1300	869	6	791	28	7	0	17	8	0	2	3	0	0	7
1400	968	2	874	59	7	11	7	5	2	0	0	0	0	1
1500	1060	4	966	60	2	5	5	12	5	0	0	0	0	1
1600	955	2	882	47	1	4	4	11	1	2	0	0	0	1
1700	1071	0	1019	40	1	2	2	3	2	0	1	0	0	1
1800	1092	0	1028	53	3	1	3	2	1	0	0	0	0	1
1900	869	0	810	31	9	4	2	6	6	1	0	0	0	0
2000	631	0	597	25	2	2	0	2	3	0	0	0	0	0
2100	498	0	475	19	2	0	0	2	0	0	0	0	0	0
2200	389	1	367	18	1	0	0	0	1	0	0	0	0	1
2300	421	0	397	12	8	3	0	0	1	0	0	0	0	0
00-00	13906	22	12860	696	71	57	59	75	33	8	5	0	0	20
	100.00%	0.16%	92.48%	5.01%	0.51%	0.41%	0.42%	0.54%	0.24%	0.06%	0.04%	0.00%	0.00%	0.14%

Classification Report

Job # 206_066_HSH_Loc A
Area Milton, MA
Location Randolph Avenue (Route 28), north of Chickatawbut Road
Direction Southbound
Sunday, May 13, 2018



Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	359	1	345	13	0	0	0	0	0	0	0	0	0	0
0100	216	0	204	8	2	1	0	1	0	0	0	0	0	0
0200	128	0	117	9	1	1	0	0	0	0	0	0	0	0
0300	77	0	75	2	0	0	0	0	0	0	0	0	0	0
0400	57	0	52	3	1	0	0	1	0	0	0	0	0	0
0500	61	0	57	3	0	1	0	0	0	0	0	0	0	0
0600	101	0	90	10	0	1	0	0	0	0	0	0	0	0
0700	260	0	244	13	1	2	0	0	0	0	0	0	0	0
0800	349	1	313	32	0	1	0	2	0	0	0	0	0	0
0900	488	2	443	39	0	1	0	1	1	1	0	0	0	0
1000	670	0	633	33	1	3	0	0	0	0	0	0	0	0
1100	810	0	763	40	2	0	0	2	1	0	0	0	0	2
1200	845	0	786	42	1	2	2	5	5	0	0	1	0	1
1300	1014	2	939	58	1	1	2	5	3	2	0	0	0	1
1400	1023	0	973	36	1	3	1	4	4	0	0	0	0	1
1500	926	2	875	40	1	3	0	4	1	0	0	0	0	0
1600	826	0	765	45	1	3	1	6	3	0	0	0	0	2
1700	663	1	614	35	2	2	0	6	2	1	0	0	0	0
1800	642	2	583	44	5	1	2	3	1	0	1	0	0	0
1900	663	1	633	23	0	2	0	2	2	0	0	0	0	0
2000	558	3	518	27	2	3	0	2	2	1	0	0	0	0
2100	484	0	460	18	1	4	0	0	0	0	0	0	0	1
2200	340	0	325	14	1	0	0	0	0	0	0	0	0	0
2300	325	0	316	8	1	0	0	0	0	0	0	0	0	0
00-00	11885	15	11123	595	25	35	8	44	25	5	1	1	0	8
	100.00%	0.13%	93.59%	5.01%	0.21%	0.29%	0.07%	0.37%	0.21%	0.04%	0.01%	0.01%	0.00%	0.07%

Classification Report

Job # 206_066_HSH_Loc B
Area Milton, MA
Location Randolph Avenue (Route 28), south of Chickatawbut Road
Direction Northbound
Saturday, May 12, 2018

BOSTON
TRAFFIC DATA
PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataInquiries@BostonTrafficData.com
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Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	134	1	126	5	1	1	0	0	0	0	0	0	0	0
0100	101	0	96	5	0	0	0	0	0	0	0	0	0	0
0200	90	0	82	7	0	1	0	0	0	0	0	0	0	0
0300	48	0	47	1	0	0	0	0	0	0	0	0	0	0
0400	58	0	54	4	0	0	0	0	0	0	0	0	0	0
0500	177	0	149	23	3	1	0	0	0	0	1	0	0	0
0600	337	0	287	43	5	1	1	0	0	0	0	0	0	0
0700	404	0	336	53	5	7	1	0	0	1	1	0	0	0
0800	614	0	548	51	6	9	0	0	0	0	0	0	0	0
0900	715	1	640	60	4	8	2	0	0	0	0	0	0	0
1000	753	0	681	58	4	4	6	0	0	0	0	0	0	0
1100	767	0	698	60	4	2	3	0	0	0	0	0	0	0
1200	928	1	847	67	5	3	4	0	1	0	0	0	0	0
1300	867	0	800	57	5	5	0	0	0	0	0	0	0	0
1400	992	0	921	64	4	3	0	0	0	0	0	0	0	0
1500	937	0	860	65	2	4	2	4	0	0	0	0	0	0
1600	763	0	715	44	2	2	0	0	0	0	0	0	0	0
1700	722	0	674	43	4	1	0	0	0	0	0	0	0	0
1800	812	0	765	37	9	1	0	0	0	0	0	0	0	0
1900	575	0	540	33	2	0	0	0	0	0	0	0	0	0
2000	484	0	458	23	3	0	0	0	0	0	0	0	0	0
2100	488	0	463	25	0	0	0	0	0	0	0	0	0	0
2200	449	0	424	24	1	0	0	0	0	0	0	0	0	0
2300	297	0	284	11	1	1	0	0	0	0	0	0	0	0
00-00	12512	3	11495	863	70	54	19	4	1	1	2	0	0	0
	100.00%	0.02%	91.87%	6.90%	0.56%	0.43%	0.15%	0.03%	0.01%	0.01%	0.02%	0.00%	0.00%	0.00%

Classification Report

Job # 206_066_HSH_Loc B
Area Milton, MA
Location Randolph Avenue (Route 28), south of Chickatawbut Road
Direction Northbound
Sunday, May 13, 2018



Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	259	0	241	16	1	1	0	0	0	0	0	0	0	0
0100	121	0	115	5	0	1	0	0	0	0	0	0	0	0
0200	85	0	78	5	2	0	0	0	0	0	0	0	0	0
0300	56	0	54	2	0	0	0	0	0	0	0	0	0	0
0400	49	0	47	2	0	0	0	0	0	0	0	0	0	0
0500	114	0	103	11	0	0	0	0	0	0	0	0	0	0
0600	208	0	194	14	0	0	0	0	0	0	0	0	0	0
0700	257	2	234	18	3	0	0	0	0	0	0	0	0	0
0800	377	0	335	39	1	2	0	0	0	0	0	0	0	0
0900	587	0	546	36	1	3	0	0	0	1	0	0	0	0
1000	828	0	763	59	3	3	0	0	0	0	0	0	0	0
1100	1134	0	1053	77	1	2	1	0	0	0	0	0	0	0
1200	983	1	913	61	5	3	0	0	0	0	0	0	0	0
1300	1217	2	1144	68	1	2	0	0	0	0	0	0	0	0
1400	1243	1	1159	78	3	2	0	0	0	0	0	0	0	0
1500	935	3	864	61	2	5	0	0	0	0	0	0	0	0
1600	751	2	700	46	2	1	0	0	0	0	0	0	0	0
1700	640	2	598	36	1	2	0	0	0	1	0	0	0	0
1800	831	6	779	42	2	2	0	0	0	0	0	0	0	0
1900	628	2	582	38	3	3	0	0	0	0	0	0	0	0
2000	574	3	539	30	1	1	0	0	0	0	0	0	0	0
2100	413	0	396	16	0	1	0	0	0	0	0	0	0	0
2200	344	0	325	16	1	2	0	0	0	0	0	0	0	0
2300	187	1	176	7	1	2	0	0	0	0	0	0	0	0
00-00	12821	25	11938	783	34	38	1	0	0	2	0	0	0	0
	100.00%	0.19%	93.11%	6.11%	0.27%	0.30%	0.01%	0.00%	0.00%	0.02%	0.00%	0.00%	0.00%	0.00%

Classification Report

Job # 206_066_HSH_Loc B
Area Milton, MA
Location Randolph Avenue (Route 28), south of Chickatawbut Road
Direction Southbound
Saturday, May 12, 2018



Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	262	0	248	10	0	3	0	1	0	0	0	0	0	0
0100	133	0	121	10	1	1	0	0	0	0	0	0	0	0
0200	123	0	112	10	1	0	0	0	0	0	0	0	0	0
0300	65	0	63	1	0	1	0	0	0	0	0	0	0	0
0400	51	0	48	2	0	1	0	0	0	0	0	0	0	0
0500	67	0	59	8	0	0	0	0	0	0	0	0	0	0
0600	147	0	123	18	2	3	1	0	0	0	0	0	0	0
0700	305	0	259	41	1	3	1	0	0	0	0	0	0	0
0800	446	0	388	48	2	7	1	0	0	0	0	0	0	0
0900	558	0	499	51	4	3	1	0	0	0	0	0	0	0
1000	636	1	559	68	3	4	1	0	0	0	0	0	0	0
1100	747	0	656	81	1	7	1	0	1	0	0	0	0	0
1200	947	0	843	91	4	9	0	0	0	0	0	0	0	0
1300	1000	0	877	110	3	7	2	0	1	0	0	0	0	0
1400	898	0	783	101	4	8	0	1	1	0	0	0	0	0
1500	1049	0	948	91	1	6	2	1	0	0	0	0	0	0
1600	1086	0	980	96	2	7	1	0	0	0	0	0	0	0
1700	892	0	818	69	2	3	0	0	0	0	0	0	0	0
1800	810	0	738	68	2	1	0	1	0	0	0	0	0	0
1900	672	0	616	45	6	3	1	0	0	1	0	0	0	0
2000	574	0	547	24	0	3	0	0	0	0	0	0	0	0
2100	450	0	418	28	2	2	0	0	0	0	0	0	0	0
2200	358	1	327	30	0	0	0	0	0	0	0	0	0	0
2300	366	0	335	23	6	1	1	0	0	0	0	0	0	0
00-00	12642	2	11365	1124	47	83	13	4	3	1	0	0	0	0
	100.00%	0.02%	89.90%	8.89%	0.37%	0.66%	0.10%	0.03%	0.02%	0.01%	0.00%	0.00%	0.00%	0.00%

Classification Report

Job # 206_066_HSH_Loc B
Area Milton, MA
Location Randolph Avenue (Route 28), south of Chickatawbut Road
Direction Southbound
Sunday, May 13, 2018



Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	247	1	223	23	0	0	0	0	0	0	0	0	0	0
0100	165	0	151	12	2	0	0	0	0	0	0	0	0	0
0200	125	0	113	10	1	1	0	0	0	0	0	0	0	0
0300	70	0	67	3	0	0	0	0	0	0	0	0	0	0
0400	49	0	44	4	1	0	0	0	0	0	0	0	0	0
0500	56	0	51	5	0	0	0	0	0	0	0	0	0	0
0600	77	0	65	11	0	1	0	0	0	0	0	0	0	0
0700	229	0	212	15	0	2	0	0	0	0	0	0	0	0
0800	289	0	248	39	0	1	1	0	0	0	0	0	0	0
0900	413	1	365	43	1	2	0	0	0	1	0	0	0	0
1000	545	0	499	41	1	4	0	0	0	0	0	0	0	0
1100	675	0	599	69	2	4	1	0	0	0	0	0	0	0
1200	751	0	659	88	1	3	0	0	0	0	0	0	0	0
1300	883	3	791	82	1	2	1	3	0	0	0	0	0	0
1400	939	0	865	69	0	5	0	0	0	0	0	0	0	0
1500	857	2	785	66	1	1	1	0	0	1	0	0	0	0
1600	772	1	704	62	2	3	0	0	0	0	0	0	0	0
1700	633	2	571	54	2	4	0	0	0	0	0	0	0	0
1800	643	0	564	69	4	5	1	0	0	0	0	0	0	0
1900	617	2	569	44	1	1	0	0	0	0	0	0	0	0
2000	563	3	517	35	2	5	1	0	0	0	0	0	0	0
2100	458	1	421	30	1	5	0	0	0	0	0	0	0	0
2200	318	0	296	21	1	0	0	0	0	0	0	0	0	0
2300	294	0	278	16	0	0	0	0	0	0	0	0	0	0
00-00	10668	16	9657	911	24	49	6	3	0	2	0	0	0	0
	100.00%	0.15%	90.52%	8.54%	0.22%	0.46%	0.06%	0.03%	0.00%	0.02%	0.00%	0.00%	0.00%	0.00%

Classification Report

Job # 206_066_HSH_Loc C
Area Milton, MA
Location Chickatawbut Road, east of Randolph Avenue (Route 28)
Direction Eastbound
Saturday, May 12, 2018



Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	15	1	13	1	0	0	0	0	0	0	0	0	0	0
0100	14	0	14	0	0	0	0	0	0	0	0	0	0	0
0200	4	0	4	0	0	0	0	0	0	0	0	0	0	0
0300	3	1	2	0	0	0	0	0	0	0	0	0	0	0
0400	2	0	1	1	0	0	0	0	0	0	0	0	0	0
0500	9	0	4	5	0	0	0	0	0	0	0	0	0	0
0600	20	0	15	4	0	0	0	1	0	0	0	0	0	0
0700	45	7	31	6	0	0	0	1	0	0	0	0	0	0
0800	94	2	78	11	0	3	0	0	0	0	0	0	0	0
0900	116	2	96	17	0	1	0	0	0	0	0	0	0	0
1000	186	2	164	18	0	2	0	0	0	0	0	0	0	0
1100	207	0	189	16	0	2	0	0	0	0	0	0	0	0
1200	225	2	212	11	0	0	0	0	0	0	0	0	0	0
1300	284	0	252	31	0	1	0	0	0	0	0	0	0	0
1400	303	0	266	34	0	3	0	0	0	0	0	0	0	0
1500	437	0	391	43	0	3	0	0	0	0	0	0	0	0
1600	294	1	262	30	0	1	0	0	0	0	0	0	0	0
1700	251	1	222	24	0	4	0	0	0	0	0	0	0	0
1800	245	0	217	27	0	1	0	0	0	0	0	0	0	0
1900	138	0	133	5	0	0	0	0	0	0	0	0	0	0
2000	69	0	61	8	0	0	0	0	0	0	0	0	0	0
2100	31	0	30	1	0	0	0	0	0	0	0	0	0	0
2200	26	0	25	1	0	0	0	0	0	0	0	0	0	0
2300	14	0	13	1	0	0	0	0	0	0	0	0	0	0
00-00	3032	19	2695	295	0	21	0	2	0	0	0	0	0	0
	100.00%	0.63%	88.89%	9.73%	0.00%	0.69%	0.00%	0.07%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Classification Report

Job # 206_066_HSH_Loc C
Area Milton, MA
Location Chickatawbut Road, east of Randolph Avenue (Route 28)
Direction Eastbound
Sunday, May 13, 2018

BOSTON
TRAFFIC DATA
PO BOX 1723, Framingham, MA 01701
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Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	24	2	22	0	0	0	0	0	0	0	0	0	0	0
0100	11	0	10	1	0	0	0	0	0	0	0	0	0	0
0200	3	0	3	0	0	0	0	0	0	0	0	0	0	0
0300	5	1	3	1	0	0	0	0	0	0	0	0	0	0
0400	4	0	3	1	0	0	0	0	0	0	0	0	0	0
0500	6	0	3	3	0	0	0	0	0	0	0	0	0	0
0600	17	1	15	1	0	0	0	0	0	0	0	0	0	0
0700	24	2	13	9	0	0	0	0	0	0	0	0	0	0
0800	44	1	35	7	0	0	0	1	0	0	0	0	0	0
0900	87	4	71	11	0	1	0	0	0	0	0	0	0	0
1000	145	1	131	11	0	2	0	0	0	0	0	0	0	0
1100	195	4	169	21	0	0	0	1	0	0	0	0	0	0
1200	221	1	199	20	1	0	0	0	0	0	0	0	0	0
1300	253	4	233	16	0	0	0	0	0	0	0	0	0	0
1400	202	4	175	20	0	2	0	1	0	0	0	0	0	0
1500	209	6	191	12	0	0	0	0	0	0	0	0	0	0
1600	206	8	176	20	0	2	0	0	0	0	0	0	0	0
1700	132	4	110	16	0	2	0	0	0	0	0	0	0	0
1800	106	8	81	16	0	1	0	0	0	0	0	0	0	0
1900	113	4	101	8	0	0	0	0	0	0	0	0	0	0
2000	55	1	49	5	0	0	0	0	0	0	0	0	0	0
2100	39	0	34	4	0	1	0	0	0	0	0	0	0	0
2200	28	0	26	2	0	0	0	0	0	0	0	0	0	0
2300	16	0	16	0	0	0	0	0	0	0	0	0	0	0
00-00	2145	56	1869	205	1	11	0	3	0	0	0	0	0	0
	100.00%	2.61%	87.13%	9.56%	0.05%	0.51%	0.00%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Classification Report

Job # 206_066_HSH_Loc C
Area Milton, MA
Location Chickatawbut Road, east of Randolph Avenue (Route 28)
Direction Westbound
Saturday, May 12, 2018



Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	19	0	18	1	0	0	0	0	0	0	0	0	0	0
0100	16	0	16	0	0	0	0	0	0	0	0	0	0	0
0200	10	0	10	0	0	0	0	0	0	0	0	0	0	0
0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0400	2	0	2	0	0	0	0	0	0	0	0	0	0	0
0500	9	0	7	2	0	0	0	0	0	0	0	0	0	0
0600	31	4	22	5	0	0	0	0	0	0	0	0	0	0
0700	42	1	29	12	0	0	0	0	0	0	0	0	0	0
0800	68	8	49	10	0	1	0	0	0	0	0	0	0	0
0900	110	1	91	18	0	0	0	0	0	0	0	0	0	0
1000	146	4	121	20	0	1	0	0	0	0	0	0	0	0
1100	221	1	194	24	0	2	0	0	0	0	0	0	0	0
1200	286	1	263	21	0	1	0	0	0	0	0	0	0	0
1300	257	0	229	28	0	0	0	0	0	0	0	0	0	0
1400	288	1	264	22	0	1	0	0	0	0	0	0	0	0
1500	324	1	289	25	8	0	0	1	0	0	0	0	0	0
1600	350	0	321	25	1	3	0	0	0	0	0	0	0	0
1700	318	0	290	28	0	0	0	0	0	0	0	0	0	0
1800	233	0	215	16	0	2	0	0	0	0	0	0	0	0
1900	163	0	155	8	0	0	0	0	0	0	0	0	0	0
2000	119	0	113	6	0	0	0	0	0	0	0	0	0	0
2100	111	0	105	6	0	0	0	0	0	0	0	0	0	0
2200	56	0	52	4	0	0	0	0	0	0	0	0	0	0
2300	30	0	28	2	0	0	0	0	0	0	0	0	0	0
00-00	3209	22	2883	283	9	11	0	1	0	0	0	0	0	0
	100.00%	0.69%	89.84%	8.82%	0.28%	0.34%	0.00%	0.03%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Classification Report

Job # 206_066_HSH_Loc C
Area Milton, MA
Location Chickatawbut Road, east of Randolph Avenue (Route 28)
Direction Westbound
Sunday, May 13, 2018



Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	24	0	24	0	0	0	0	0	0	0	0	0	0	0
0100	9	0	9	0	0	0	0	0	0	0	0	0	0	0
0200	10	0	10	0	0	0	0	0	0	0	0	0	0	0
0300	8	0	5	3	0	0	0	0	0	0	0	0	0	0
0400	1	0	0	1	0	0	0	0	0	0	0	0	0	0
0500	6	0	6	0	0	0	0	0	0	0	0	0	0	0
0600	18	2	11	4	0	0	0	1	0	0	0	0	0	0
0700	39	3	30	6	0	0	0	0	0	0	0	0	0	0
0800	45	4	33	7	0	0	0	1	0	0	0	0	0	0
0900	79	5	60	13	0	1	0	0	0	0	0	0	0	0
1000	99	0	86	12	0	1	0	0	0	0	0	0	0	0
1100	179	7	154	18	0	0	0	0	0	0	0	0	0	0
1200	288	2	257	27	0	2	0	0	0	0	0	0	0	0
1300	236	4	210	21	0	1	0	0	0	0	0	0	0	0
1400	283	2	261	20	0	0	0	0	0	0	0	0	0	0
1500	291	8	268	15	0	0	0	0	0	0	0	0	0	0
1600	231	7	208	16	0	0	0	0	0	0	0	0	0	0
1700	160	3	147	8	0	1	0	1	0	0	0	0	0	0
1800	153	3	134	14	0	2	0	0	0	0	0	0	0	0
1900	149	10	129	9	0	1	0	0	0	0	0	0	0	0
2000	90	2	83	5	0	0	0	0	0	0	0	0	0	0
2100	54	0	49	5	0	0	0	0	0	0	0	0	0	0
2200	37	0	35	2	0	0	0	0	0	0	0	0	0	0
2300	29	1	27	1	0	0	0	0	0	0	0	0	0	0
00-00	2518	63	2236	207	0	9	0	3	0	0	0	0	0	0
	100.00%	2.50%	88.80%	8.22%	0.00%	0.36%	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Classification Report

Job # 206_066_HSH_Loc D
Area Milton, MA
Location Chickatawbut Road, west of Randolph Avenue (Route 28)
Direction Eastbound
Saturday, May 12, 2018

Area	Milton, MA
Location	Chickatawbut Road, west of Randolph Avenue (Route 28)
Direction	Eastbound
Saturday, May 12, 2018	

Location Chickatawbut Road, west of Randolph Avenue (Route 28)
Direction Eastbound
Saturday, May 12, 2018

Direction Eastbound
Saturday, May 12, 2018

Saturday, May 12, 2018

BOSTON
TRAFFIC DATA
PO BOX 1723, Framingham, MA 01701
Office: 978-746-1259
DataRequest@BostonTrafficData.com
www.BostonTrafficData.com

Time	Total	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13
		Motorcycle	Passenger Car	Vans, Pick up Trucks	Bus	2 Axle 6 Tires	3 Axle Unit	4 Axles or more Unit	3 or 4 Axle Trailer	5 Axle Trailer	6 Axle or more Trailer	5 Axle or less Multi-Trailer	6 Axle Multi-Trailer	7 Axle or more Multi-Trailer
0000	11	0	9	2	0	0	0	0	0	0	0	0	0	0
0100	12	0	12	0	0	0	0	0	0	0	0	0	0	0
0200	7	1	5	1	0	0	0	0	0	0	0	0	0	0
0300	5	0	5	0	0	0	0	0	0	0	0	0	0	0
0400	3	0	2	1	0	0	0	0	0	0	0	0	0	0
0500	4	0	2	2	0	0	0	0	0	0	0	0	0	0
0600	17	0	8	8	0	0	0	1	0	0	0	0	0	0
0700	46	5	34	7	0	0	0	0	0	0	0	0	0	0
0800	62	3	48	9	0	2	0	0	0	0	0	0	0	0
0900	110	5	90	15	0	0	0	0	0	0	0	0	0	0
1000	116	1	102	13	0	0	0	0	0	0	0	0	0	0
1100	133	0	118	15	0	0	0	0	0	0	0	0	0	0
1200	154	1	135	17	1	0	0	0	0	0	0	0	0	0
1300	251	0	227	23	0	1	0	0	0	0	0	0	0	0
1400	212	0	191	20	1	0	0	0	0	0	0	0	0	0
1500	297	0	263	24	8	1	1	0	0	0	0	0	0	0
1600	266	0	238	26	0	2	0	0	0	0	0	0	0	0
1700	205	1	189	14	0	1	0	0	0	0	0	0	0	0
1800	188	0	168	20	0	0	0	0	0	0	0	0	0	0
1900	81	0	76	5	0	0	0	0	0	0	0	0	0	0
2000	61	0	55	6	0	0	0	0	0	0	0	0	0	0
2100	26	0	22	4	0	0	0	0	0	0	0	0	0	0
2200	24	0	23	1	0	0	0	0	0	0	0	0	0	0
2300	23	0	22	1	0	0	0	0	0	0	0	0	0	0
00-00	2314	17	2044	234	10	7	1	1	0	0	0	0	0	0
	100.00%	0.73%	88.33%	10.11%	0.43%	0.30%	0.04%	0.04%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Classification Report

Job # 206_066_HSH_Loc D
Area Milton, MA
Location Chickatawbut Road, west of Randolph Avenue (Route 28)
Direction Eastbound
Sunday, May 13, 2018

BOSTON
TRAFFIC DATA
PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataInquiries@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	24	2	22	0	0	0	0	0	0	0	0	0	0	0
0100	10	0	9	1	0	0	0	0	0	0	0	0	0	0
0200	7	0	7	0	0	0	0	0	0	0	0	0	0	0
0300	5	1	3	1	0	0	0	0	0	0	0	0	0	0
0400	3	0	3	0	0	0	0	0	0	0	0	0	0	0
0500	6	0	4	2	0	0	0	0	0	0	0	0	0	0
0600	11	2	7	2	0	0	0	0	0	0	0	0	0	0
0700	26	1	15	10	0	0	0	0	0	0	0	0	0	0
0800	40	2	33	5	0	0	0	0	0	0	0	0	0	0
0900	81	2	73	5	0	0	0	1	0	0	0	0	0	0
1000	98	1	83	14	0	0	0	0	0	0	0	0	0	0
1100	137	4	114	19	0	0	0	0	0	0	0	0	0	0
1200	150	4	133	12	1	0	0	0	0	0	0	0	0	0
1300	191	4	171	16	0	0	0	0	0	0	0	0	0	0
1400	138	3	114	20	0	0	0	0	0	1	0	0	0	0
1500	155	4	140	11	0	0	0	0	0	0	0	0	0	0
1600	145	7	120	17	0	1	0	0	0	0	0	0	0	0
1700	131	3	115	12	0	1	0	0	0	0	0	0	0	0
1800	95	8	75	11	0	1	0	0	0	0	0	0	0	0
1900	92	4	83	5	0	0	0	0	0	0	0	0	0	0
2000	62	0	58	4	0	0	0	0	0	0	0	0	0	0
2100	34	0	30	3	0	1	0	0	0	0	0	0	0	0
2200	35	0	33	2	0	0	0	0	0	0	0	0	0	0
2300	16	0	16	0	0	0	0	0	0	0	0	0	0	0
00-00	1692	52	1461	172	1	4	0	1	0	1	0	0	0	0
	100.00%	3.07%	86.35%	10.17%	0.06%	0.24%	0.00%	0.06%	0.00%	0.06%	0.00%	0.00%	0.00%	0.00%

Classification Report

Job # 206_066_HSH_Loc D
Area Milton, MA
Location Chickatawbut Road, west of Randolph Avenue (Route 28)
Direction Westbound
Saturday, May 12, 2018



Time	Total	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13
		Motorcycle	Passenger Car	Vans, Pick up Trucks	Bus	2 Axle 6 Tires	3 Axle Unit	4 Axles or more Unit	3 or 4 Axle Trailer	5 Axle Trailer	6 Axle or more Trailer	5 Axle or less Multi-Trailer	6 Axle Multi-Trailer	7 Axle or more Multi-Trailer
0000	11	0	11	0	0	0	0	0	0	0	0	0	0	0
0100	9	0	8	1	0	0	0	0	0	0	0	0	0	0
0200	6	0	6	0	0	0	0	0	0	0	0	0	0	0
0300	1	0	1	0	0	0	0	0	0	0	0	0	0	0
0400	2	0	2	0	0	0	0	0	0	0	0	0	0	0
0500	8	0	5	3	0	0	0	0	0	0	0	0	0	0
0600	29	1	17	9	0	1	0	1	0	0	0	0	0	0
0700	56	2	46	7	1	0	0	0	0	0	0	0	0	0
0800	83	8	54	20	0	0	0	1	0	0	0	0	0	0
0900	103	1	84	16	0	1	0	1	0	0	0	0	0	0
1000	117	4	92	19	0	2	0	0	0	0	0	0	0	0
1100	155	1	125	25	0	4	0	0	0	0	0	0	0	0
1200	162	0	138	23	0	1	0	0	0	0	0	0	0	0
1300	139	0	114	25	0	0	0	0	0	0	0	0	0	0
1400	170	0	147	22	1	0	0	0	0	0	0	0	0	0
1500	155	0	124	31	0	0	0	0	0	0	0	0	0	0
1600	203	0	169	32	0	2	0	0	0	0	0	0	0	0
1700	144	0	123	21	0	0	0	0	0	0	0	0	0	0
1800	107	0	96	10	0	1	0	0	0	0	0	0	0	0
1900	87	0	75	11	0	1	0	0	0	0	0	0	0	0
2000	52	0	47	5	0	0	0	0	0	0	0	0	0	0
2100	53	0	50	2	0	1	0	0	0	0	0	0	0	0
2200	35	0	27	8	0	0	0	0	0	0	0	0	0	0
2300	28	0	22	6	0	0	0	0	0	0	0	0	0	0
00-00	1915	17	1583	296	2	14	0	3	0	0	0	0	0	0
	100.00%	0.89%	82.66%	15.46%	0.10%	0.73%	0.00%	0.16%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Classification Report

Job # 206_066_HSH_Loc D
Area Milton, MA
Location Chickatawbut Road, west of Randolph Avenue (Route 28)
Direction Westbound
Sunday, May 13, 2018



Time	Total	Class 1 Motorcycle	Class 2 Passenger Car	Class 3 Vans, Pick up Trucks	Class 4 Bus	Class 5 2 Axle 6 Tires	Class 6 3 Axle Unit	Class 7 4 Axles or more Unit	Class 8 3 or 4 Axle Trailer	Class 9 5 Axle Trailer	Class 10 6 Axle or more Trailer	Class 11 5 Axle or less Multi-Trailer	Class 12 6 Axle Multi-Trailer	Class 13 7 Axle or more Multi-Trailer
0000	18	0	17	1	0	0	0	0	0	0	0	0	0	0
0100	6	0	6	0	0	0	0	0	0	0	0	0	0	0
0200	8	0	8	0	0	0	0	0	0	0	0	0	0	0
0300	7	0	4	3	0	0	0	0	0	0	0	0	0	0
0400	1	0	1	0	0	0	0	0	0	0	0	0	0	0
0500	6	0	4	2	0	0	0	0	0	0	0	0	0	0
0600	16	1	13	2	0	0	0	0	0	0	0	0	0	0
0700	32	3	26	3	0	0	0	0	0	0	0	0	0	0
0800	47	3	33	10	0	0	0	1	0	0	0	0	0	0
0900	69	4	58	7	0	0	0	0	0	0	0	0	0	0
1000	92	0	69	22	0	1	0	0	0	0	0	0	0	0
1100	118	5	99	12	0	1	0	1	0	0	0	0	0	0
1200	191	3	165	21	0	2	0	0	0	0	0	0	0	0
1300	173	4	146	23	0	0	0	0	0	0	0	0	0	0
1400	176	2	155	19	0	0	0	0	0	0	0	0	0	0
1500	156	5	126	24	0	1	0	0	0	0	0	0	0	0
1600	129	6	104	19	0	0	0	0	0	0	0	0	0	0
1700	95	3	82	9	0	1	0	0	0	0	0	0	0	0
1800	115	2	100	12	0	1	0	0	0	0	0	0	0	0
1900	108	10	80	16	1	1	0	0	0	0	0	0	0	0
2000	63	0	57	4	0	1	0	1	0	0	0	0	0	0
2100	31	0	29	2	0	0	0	0	0	0	0	0	0	0
2200	27	0	23	4	0	0	0	0	0	0	0	0	0	0
2300	22	1	17	4	0	0	0	0	0	0	0	0	0	0
00-00	1706	52	1422	219	1	9	0	3	0	0	0	0	0	0
	100.00%	3.05%	83.35%	12.84%	0.06%	0.53%	0.00%	0.18%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Volume Report

Job 206_066_HSH_Loc A
Area Milton, MA
Location Randolph Avenue (Route 28), north of Chickatawbut Road

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Saturday, May 12, 2018

Time	Total	NB	SB		Time	Total	NB	SB
0000	118	31	87		1200	459	206	253
0015	94	33	61		1215	429	179	250
0030	106	35	71		1230	327	167	160
0045	69	22	47	266	1245	398	202	196
0100	81	33	48		1300	419	196	223
0115	60	29	31		1315	452	233	219
0130	57	20	37		1330	414	190	224
0145	46	15	31	147	1345	396	193	203
0200	71	34	37		1400	462	214	248
0215	45	18	27		1415	510	247	263
0230	43	10	33		1430	480	244	236
0245	50	18	32	129	1445	458	237	221
0300	32	12	20		1500	422	217	205
0315	29	8	21		1515	446	195	251
0330	21	7	14		1530	508	219	289
0345	24	13	11	66	1545	528	213	315
0400	25	9	16		1600	404	183	221
0415	23	10	13		1615	455	204	251
0430	25	13	12		1630	441	206	235
0445	34	18	16	57	1645	434	186	248
0500	35	22	13		1700	475	207	268
0515	42	26	16		1715	465	189	276
0530	81	51	30		1730	439	178	261
0545	79	48	31	90	1745	480	214	266
0600	75	41	34		1800	483	222	261
0615	111	64	47		1815	495	210	285
0630	160	92	68		1830	450	191	259
0645	142	68	74	223	1845	484	197	287
0700	135	67	68		1900	433	194	239
0715	135	67	68		1915	370	150	220
0730	189	80	109		1930	362	138	224
0745	198	88	110	355	1945	314	128	186
0800	203	93	110		2000	279	118	161
0815	242	112	130		2015	283	117	166
0830	281	138	143		2030	278	122	156
0845	288	123	165	548	2045	276	128	148
0900	259	119	140		2100	248	128	120
0915	301	135	166		2115	256	124	132
0930	323	153	170		2130	263	129	134
0945	362	165	197	673	2145	219	107	112
1000	307	134	173		2200	214	106	108
1015	349	182	167		2215	190	95	95
1030	352	149	203		2230	204	108	96
1045	403	184	219	762	2245	198	108	90
1100	356	151	205		2300	175	89	86
1115	416	194	222		2315	173	70	103
1130	411	182	229		2330	182	66	116
1145	399	147	252	908	2345	173	57	116
Total		25390	11484	13906				

Volume Report

Job 206_066_HSH_Loc A
Area Milton, MA
Location Randolph Avenue (Route 28), north of Chickatawbut Road

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Sunday, May 13, 2018

Time	Total	NB	SB		Time	Total	NB	SB
0000	179	65	114		1200	421	234	187
0015	189	79	110		1215	468	230	238
0030	134	64	70		1230	470	254	216
0045	113	48	65	359	1245	430	226	204
0100	96	35	61		1300	482	245	237
0115	103	33	70		1315	552	300	252
0130	65	25	40		1330	554	298	256
0145	70	25	45	216	1345	576	307	269
0200	65	27	38		1400	514	264	250
0215	57	21	36		1415	587	318	269
0230	44	17	27		1430	562	305	257
0245	46	19	27	128	1445	572	325	247
0300	33	15	18		1500	460	225	235
0315	34	11	23		1515	481	228	253
0330	38	17	21		1530	452	228	224
0345	29	14	15	77	1545	437	223	214
0400	23	8	15		1600	391	180	211
0415	23	10	13		1615	415	189	226
0430	22	8	14		1630	383	187	196
0445	36	21	15	57	1645	366	173	193
0500	32	15	17		1700	324	168	156
0515	39	27	12		1715	309	143	166
0530	42	29	13		1730	304	160	144
0545	58	39	19	61	1745	362	165	197
0600	52	35	17		1800	338	197	141
0615	73	43	30		1815	383	209	174
0630	94	62	32		1830	393	225	168
0645	82	60	22	101	1845	340	181	159
0700	109	58	51		1900	342	166	176
0715	127	57	70		1915	306	142	164
0730	125	60	65		1930	300	138	162
0745	150	76	74	260	1945	322	161	161
0800	163	92	71		2000	304	148	156
0815	168	85	83		2015	278	145	133
0830	183	90	93		2030	266	130	136
0845	197	95	102	349	2045	250	117	133
0900	224	127	97		2100	213	90	123
0915	243	138	105		2115	235	117	118
0930	290	143	147		2130	215	102	113
0945	291	152	139	488	2145	227	97	130
1000	321	174	147		2200	199	92	107
1015	326	178	148		2215	176	94	82
1030	422	220	202		2230	165	79	86
1045	357	184	173	670	2245	132	67	65
1100	383	188	195		2300	133	54	79
1115	486	274	212		2315	148	52	96
1130	540	330	210		2330	121	38	83
1145	455	262	193	810	2345	110	43	67
Total	24199						12314	11885

Volume Report

Job 206_066_HSH_Loc B
Area Milton, MA
Location Randolph Avenue (Route 28), south of Chickatawbut Road

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Saturday, May 12, 2018

Time	Total	NB	SB		Time	Total	NB	SB
0000	124	36	88		1200	489	242	247
0015	101	41	60		1215	501	236	265
0030	96	33	63		1230	461	249	212
0045	75	24	51	262	1245	424	201	223
0100	74	33	41		1300	447	191	256
0115	60	30	30		1315	481	242	239
0130	54	22	32		1330	456	192	264
0145	46	16	30	133	1345	483	242	241
0200	68	33	35		1400	488	231	257
0215	48	21	27		1415	485	244	241
0230	49	20	29		1430	460	251	209
0245	48	16	32	123	1445	457	266	191
0300	33	14	19		1500	513	266	247
0315	34	13	21		1515	478	245	233
0330	25	8	17		1530	505	242	263
0345	21	13	8	65	1545	490	184	306
0400	32	13	19		1600	485	186	299
0415	20	11	9		1615	512	211	301
0430	24	15	9		1630	415	185	230
0445	33	19	14	51	1645	437	181	256
0500	36	27	9		1700	437	197	240
0515	60	51	9		1715	386	156	230
0530	73	48	25		1730	379	178	201
0545	75	51	24	67	1745	412	191	221
0600	81	62	19		1800	411	215	196
0615	103	77	26		1815	418	196	222
0630	159	111	48		1830	379	190	189
0645	141	87	54	147	1845	414	211	203
0700	151	95	56		1900	362	182	180
0715	165	96	69		1915	318	144	174
0730	176	88	88		1930	304	131	173
0745	217	125	92	305	1945	263	118	145
0800	227	126	101		2000	261	115	146
0815	236	138	98		2015	268	120	148
0830	282	172	110		2030	251	121	130
0845	315	178	137	446	2045	278	128	150
0900	289	164	125		2100	221	113	108
0915	306	167	139		2115	238	125	113
0930	331	193	138		2130	249	135	114
0945	347	191	156	558	2145	230	115	115
1000	335	190	145		2200	208	113	95
1015	340	190	150		2215	187	92	95
1030	339	185	154		2230	204	125	79
1045	375	188	187	636	2245	208	119	89
1100	365	185	180		2300	171	91	80
1115	378	187	191		2315	172	78	94
1130	374	188	186		2330	159	61	98
1145	397	207	190	747	2345	161	67	94
Total		25154	12512	12642				

Volume Report

Job 206_066_HSH_Loc B
Area Milton, MA
Location Randolph Avenue (Route 28), south of Chickatawbut Road

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
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Sunday, May 13, 2018

Time	Total	NB	SB		Time	Total	NB	SB
0000	148	61	87		1200	395	227	168
0015	154	86	68		1215	461	267	194
0030	113	67	46		1230	438	253	185
0045	91	45	46	247	1245	440	236	204
0100	72	31	41		1300	451	246	205
0115	91	35	56		1315	538	326	212
0130	60	27	33		1330	548	322	226
0145	63	28	35	165	1345	563	323	240
0200	57	27	30		1400	497	281	216
0215	59	20	39		1415	565	339	226
0230	49	20	29		1430	549	296	253
0245	45	18	27	125	1445	571	327	244
0300	33	16	17		1500	453	223	230
0315	30	10	20		1515	506	247	259
0330	35	16	19		1530	430	240	190
0345	28	14	14	70	1545	403	225	178
0400	20	5	15		1600	400	210	190
0415	24	13	11		1615	392	184	208
0430	22	11	11		1630	364	183	181
0445	32	20	12	49	1645	367	174	193
0500	32	15	17		1700	307	161	146
0515	38	28	10		1715	302	146	156
0530	42	33	9		1730	318	161	157
0545	58	38	20	56	1745	346	172	174
0600	49	37	12		1800	333	186	147
0615	63	44	19		1815	400	222	178
0630	99	72	27		1830	398	223	175
0645	74	55	19	77	1845	343	200	143
0700	104	57	47		1900	331	166	165
0715	113	53	60		1915	290	151	139
0730	133	73	60		1930	309	146	163
0745	136	74	62	229	1945	315	165	150
0800	153	90	63		2000	313	153	160
0815	172	100	72		2015	294	156	138
0830	155	78	77		2030	293	150	143
0845	186	109	77	289	2045	237	115	122
0900	215	132	83		2100	211	94	117
0915	235	139	96		2115	232	125	107
0930	266	155	111		2130	205	91	114
0945	284	161	123	413	2145	223	103	120
1000	328	208	120		2200	194	94	100
1015	318	190	128		2215	188	101	87
1030	373	228	145		2230	160	86	74
1045	354	202	152	545	2245	120	63	57
1100	364	204	160		2300	144	58	86
1115	478	294	184		2315	127	53	74
1130	517	341	176		2330	117	38	79
1145	450	295	155	675	2345	93	38	55
Total		23489	12821	10668				

Volume Report

Job 206_066_HSH_Loc C
Area Milton, MA
Location Chickatawbut Road, east of Randolph Avenue (Route 28)

BOSTON
TRAFFIC DATA

PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
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Saturday, May 12, 2018

Time	Total		EB		WB			Time	Total		EB		WB	
0000	10		3		7			1200	105		48		57	
0015	9		6		3			1215	125		51		74	
0030	9		5		4			1230	141		54		87	
0045	6	34	1	15	5	19		1245	140	511	72	225	68	286
0100	8		6		2			1300	135		73		62	
0115	11		4		7			1315	140		72		68	
0130	3		1		2			1330	140		74		66	
0145	8	30	3	14	5	16		1345	126	541	65	284	61	257
0200	10		3		7			1400	144		81		63	
0215	4		1		3			1415	141		67		74	
0230	0		0		0			1430	154		80		74	
0245	0	14	0	4	0	10		1445	152	591	75	303	77	288
0300	1		1		0			1500	228		132		96	
0315	1		1		0			1515	213		127		86	
0330	0		0		0			1530	162		103		59	
0345	1	3	1	3	0	0		1545	158	761	75	437	83	324
0400	1		0		1			1600	151		74		77	
0415	2		1		1			1615	163		74		89	
0430	1		1		0			1630	166		72		94	
0445	0	4	0	2	0	2		1645	164	644	74	294	90	350
0500	4		3		1			1700	145		66		79	
0515	4		3		1			1715	149		67		82	
0530	4		2		2			1730	127		56		71	
0545	6	18	1	9	5	9		1745	148	569	62	251	86	318
0600	12		5		7			1800	131		60		71	
0615	9		3		6			1815	140		70		70	
0630	15		7		8			1830	122		62		60	
0645	15	51	5	20	10	31		1845	85	478	53	245	32	233
0700	13		6		7			1900	96		46		50	
0715	23		13		10			1915	91		41		50	
0730	31		12		19			1930	52		24		28	
0745	20	87	14	45	6	42		1945	62	301	27	138	35	163
0800	28		16		12			2000	45		19		26	
0815	37		24		13			2015	55		20		35	
0830	51		25		26			2030	43		16		27	
0845	46	162	29	94	17	68		2045	45	188	14	69	31	119
0900	49		20		29			2100	38		11		27	
0915	64		35		29			2115	49		8		41	
0930	58		30		28			2130	26		6		20	
0945	55	226	31	116	24	110		2145	29	142	6	31	23	111
1000	76		46		30			2200	20		9		11	
1015	70		36		34			2215	23		4		19	
1030	82		44		38			2230	23		9		14	
1045	104	332	60	186	44	146		2245	16	82	4	26	12	56
1100	105		51		54			2300	11		3		8	
1115	104		44		60			2315	12		4		8	
1130	120		58		62			2330	7		3		4	
1145	99	428	54	207	45	221		2345	14	44	4	14	10	30
Total								6241			3032		3209	

Volume Report

Job 206_066_HSH_Loc C
Area Milton, MA
Location Chickatawbut Road, east of Randolph Avenue (Route 28)

BOSTON
TRAFFIC DATA

PO BOX 1723, Framingham, MA 01701
Office: 978-746-1259
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Sunday, May 13, 2018

Time	Total		EB		WB			Time	Total		EB		WB	
0000	15		7		8			1200	131		53		78	
0015	10		7		3			1215	123		53		70	
0030	13		5		8			1230	132		64		68	
0045	10	48	5	24	5	24		1245	123	509	51	221	72	288
0100	6		3		3			1300	107		50		57	
0115	6		4		2			1315	128		61		67	
0130	3		2		1			1330	118		64		54	
0145	5	20	2	11	3	9		1345	136	489	78	253	58	236
0200	4		1		3			1400	112		53		59	
0215	3		1		2			1415	122		55		67	
0230	2		0		2			1430	128		47		81	
0245	4	13	1	3	3	10		1445	123	485	47	202	76	283
0300	6		2		4			1500	137		51		86	
0315	4		2		2			1515	125		50		75	
0330	2		1		1			1530	118		51		67	
0345	1	13	0	5	1	8		1545	120	500	57	209	63	291
0400	2		1		1			1600	103		52		51	
0415	0		0		0			1615	145		65		80	
0430	2		2		0			1630	97		45		52	
0445	1	5	1	4	0	1		1645	92	437	44	206	48	231
0500	2		0		2			1700	69		30		39	
0515	2		2		0			1715	82		41		41	
0530	5		3		2			1730	77		34		43	
0545	3	12	1	6	2	6		1745	64	292	27	132	37	160
0600	7		1		6			1800	66		23		43	
0615	11		7		4			1815	49		20		29	
0630	7		5		2			1830	74		30		44	
0645	10	35	4	17	6	18		1845	70	259	33	106	37	153
0700	11		4		7			1900	78		35		43	
0715	11		4		7			1915	68		31		37	
0730	23		11		12			1930	65		32		33	
0745	18	63	5	24	13	39		1945	51	262	15	113	36	149
0800	16		9		7			2000	49		20		29	
0815	34		19		15			2015	38		15		23	
0830	16		7		9			2030	31		12		19	
0845	23	89	9	44	14	45		2045	27	145	8	55	19	90
0900	30		15		15			2100	15		8		7	
0915	36		20		16			2115	18		7		11	
0930	47		27		20			2130	31		11		20	
0945	53	166	25	87	28	79		2145	29	93	13	39	16	54
1000	40		25		15			2200	16		6		10	
1015	62		31		31			2215	25		9		16	
1030	72		53		19			2230	12		8		4	
1045	70	244	36	145	34	99		2245	12	65	5	28	7	37
1100	63		35		28			2300	14		2		12	
1115	90		45		45			2315	13		3		10	
1130	101		50		51			2330	8		5		3	
1145	120	374	65	195	55	179		2345	10	45	6	16	4	29
Total								4663			2145		2518	

Volume Report

Job 206_066_HSH_Loc D
Area Milton, MA
Location Chickatawbut Road, west of Randolph Avenue (Route 28)

BOSTON
TRAFFIC DATA

PO BOX 1723, Framingham, MA 01701
Office: 978-746-1259
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Saturday, May 12, 2018

Time	Total	EB	WB		Time	Total	EB	WB
0000	8	3	5		1200	66	32	34
0015	4	3	1		1215	76	32	44
0030	5	3	2		1230	77	35	42
0045	5	2	3	11	1245	97	55	42
0100	9	7	2	11	1300	101	69	32
0115	3	0	3		1315	103	66	37
0130	4	2	2		1330	103	67	36
0145	5	3	2	9	1345	83	49	34
0200	4	2	2		1400	103	56	47
0215	5	2	3		1415	89	59	30
0230	2	1	1		1430	94	51	43
0245	2	2	0	6	1445	96	46	50
0300	1	1	0		1500	139	103	36
0315	3	2	1		1515	80	41	39
0330	1	1	0		1530	108	70	38
0345	1	1	0	1	1545	125	83	42
0400	1	0	1		1600	122	74	48
0415	1	0	1		1615	122	67	55
0430	1	1	0		1630	122	67	55
0445	2	2	0	2	1645	103	58	45
0500	2	1	1		1700	96	53	43
0515	2	1	1		1715	86	52	34
0530	3	1	2		1730	83	49	34
0545	5	1	4	8	1745	84	51	33
0600	9	3	6		1800	80	45	35
0615	12	3	9		1815	84	55	29
0630	15	6	9		1830	72	47	25
0645	10	5	5	29	1845	59	41	18
0700	21	7	14		1900	56	31	25
0715	21	10	11		1915	52	25	27
0730	28	13	15		1930	31	8	23
0745	32	16	16	56	1945	29	17	12
0800	37	16	21		2000	35	19	16
0815	36	16	20		2015	31	13	18
0830	41	17	24		2030	23	14	9
0845	31	13	18	83	2045	24	15	9
0900	52	23	29		2100	16	8	8
0915	59	32	27		2115	24	5	19
0930	49	30	19		2130	15	5	10
0945	53	25	28	103	2145	24	8	16
1000	53	25	28		2200	15	7	8
1015	62	31	31		2215	16	7	9
1030	57	28	29		2230	18	8	10
1045	61	32	29	117	2245	10	2	8
1100	67	33	34		2300	18	9	9
1115	67	30	37		2315	13	5	8
1130	77	35	42		2330	11	8	3
1145	77	35	42	155	2345	9	1	8
Total		4229	2314	1915				

Volume Report

Job	206_066_HSH_Loc D
Area	Milton, MA
Location	Chickatawbut Road, west of Randolph Avenue (Route 28)

BOSTON
TRAFFIC DATA
PO BOX 1723, Framingham, MA 01701
Office: 978-746-1259
DataRequest@BostonTrafficData.com
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Sunday, May 13, 2018

Time	Total		EB		WB			Time	Total		EB		WB	
0000	11		6		5			1200	78		38		40	
0015	8		6		2			1215	82		27		55	
0030	13		7		6			1230	82		40		42	
0045	10	42	5	24	5	18		1245	99	341	45	150	54	191
0100	4		4		0			1300	71		36		35	
0115	7		4		3			1315	95		47		48	
0130	0		0		0			1330	92		48		44	
0145	5	16	2	10	3	6		1345	106	364	60	191	46	173
0200	2		1		1			1400	81		36		45	
0215	5		4		1			1415	76		32		44	
0230	3		0		3			1430	75		37		38	
0245	5	15	2	7	3	8		1445	82	314	33	138	49	176
0300	4		2		2			1500	78		40		38	
0315	4		1		3			1515	69		34		35	
0330	3		2		1			1530	81		44		37	
0345	1	12	0	5	1	7		1545	83	311	37	155	46	156
0400	3		3		0			1600	66		37		29	
0415	1		0		1			1615	80		41		39	
0430	0		0		0			1630	62		32		30	
0445	0	4	0	3	0	1		1645	66	274	35	145	31	129
0500	4		2		2			1700	52		29		23	
0515	2		1		1			1715	59		33		26	
0530	2		1		1			1730	71		41		30	
0545	4	12	2	6	2	6		1745	44	226	28	131	16	95
0600	8		1		7			1800	52		23		29	
0615	6		3		3			1815	56		28		28	
0630	4		2		2			1830	48		19		29	
0645	9	27	5	11	4	16		1845	54	210	25	95	29	115
0700	7		5		2			1900	48		23		25	
0715	13		7		6			1915	53		25		28	
0730	17		8		9			1930	55		28		27	
0745	21	58	6	26	15	32		1945	44	200	16	92	28	108
0800	18		9		9			2000	49		26		23	
0815	26		11		15			2015	25		16		9	
0830	17		8		9			2030	28		11		17	
0845	26	87	12	40	14	47		2045	23	125	9	62	14	63
0900	27		12		15			2100	14		7		7	
0915	36		21		15			2115	15		7		8	
0930	47		25		22			2130	22		12		10	
0945	40	150	23	81	17	69		2145	14	65	8	34	6	31
1000	34		14		20			2200	19		12		7	
1015	42		20		22			2215	16		7		9	
1030	63		37		26			2230	20		10		10	
1045	51	190	27	98	24	92		2245	7	62	6	35	1	27
1100	61		29		32			2300	14		5		9	
1115	61		36		25			2315	11		2		9	
1130	66		38		28			2330	10		7		3	
1145	67	255	34	137	33	118		2345	3	38	2	16	1	22
Total								3398		1692		1706		

Speed Report

Job 206_066_HSH_Loc A
 Area Milton, MA
 Location Randolph Avenue (Route 28), north of Chickatawbut Road
 Dir Northbound
 Saturday, May 12, 2018

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Speed Bins(mph)																
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80		
0000	121	0	0	0	0	0	2	13	50	39	15	2	0	0	0	0		
0100	97	0	0	1	0	1	1	11	36	34	9	1	1	2	0	0		
0200	80	0	0	0	0	0	2	12	38	18	6	2	0	1	1	0		
0300	40	0	0	0	0	0	4	6	6	13	7	4	0	0	0	0		
0400	50	0	0	2	0	0	1	5	16	13	6	3	2	1	1	0		
0500	147	0	0	0	0	1	1	6	40	54	36	4	5	0	0	0		
0600	265	0	0	1	0	0	1	16	54	108	67	13	3	2	0	0		
0700	302	0	4	1	1	1	14	33	98	82	55	8	5	0	0	0		
0800	466	0	0	5	4	4	15	66	190	128	46	8	0	0	0	0		
0900	572	0	0	5	11	7	26	137	230	117	32	6	1	0	0	0		
1000	649	0	1	5	11	14	45	152	252	138	21	8	2	0	0	0		
1100	674	0	0	9	12	17	55	146	262	145	23	5	0	0	0	0		
1200	754	16	13	9	18	35	114	203	266	72	5	3	0	0	0	0		
1300	812	10	23	17	8	42	77	272	294	53	11	4	1	0	0	0		
1400	942	1	1	9	13	25	85	290	333	140	38	4	3	0	0	0		
1500	844	3	8	5	13	29	89	302	220	124	36	10	4	1	0	0		
1600	779	1	6	10	19	29	86	200	257	128	34	6	3	0	0	0		
1700	788	0	1	5	2	7	38	212	296	198	26	2	1	0	0	0		
1800	820	0	0	0	1	10	47	181	329	186	59	5	1	1	0	0		
1900	610	0	0	1	0	2	9	110	309	153	20	5	0	1	0	0		
2000	485	0	0	0	0	1	15	90	201	136	34	5	2	1	0	0		
2100	488	0	0	0	0	1	20	99	169	129	56	12	2	0	0	0		
2200	417	0	0	0	1	0	5	56	155	140	47	11	1	1	0	0		
2300	282	0	0	0	0	1	5	35	87	97	40	13	4	0	0	0		
00-00	11484	31	57	85	114	227	757	2653	4188	2445	729	144	41	11	2	0		

100.00% 0.27% 0.50% 0.74% 0.99% 1.98% 6.59% 23.10% 36.47% 21.29% 6.35% 1.25% 0.36% 0.10% 0.02% 0.00%

Maximum = 74.5 mph, Minimum = 5.0 mph, Mean = 41.8 mph
 85% Speed = 47.72 mph, 95% Speed = 51.67 mph, Median = 42.11 mph
 10 mph Pace = 37 - 47, Number in Pace = 7406 (64.49%)
 Variance = 47.39, Standard Deviation = 6.88 mph

Speed Report

Job 206_066_HSH_Loc A
 Area Milton, MA
 Location Randolph Avenue (Route 28), north of Chickatawbut Road
 Dir Northbound
 Sunday, May 13, 2018

BOSTON
TRAFFIC DATA
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 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
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Time	Total	Speed Bins(mph)															
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80	
0000	256	0	0	0	0	0	3	28	120	81	18	5	1	0	0	0	
0100	118	0	0	0	0	1	1	11	44	40	15	5	0	0	1	0	
0200	84	0	0	0	0	0	0	3	13	27	27	6	7	0	1	0	
0300	57	0	0	0	0	0	0	1	2	16	16	14	6	1	1	0	
0400	47	0	0	0	0	1	1	3	6	18	9	6	2	1	0	0	
0500	110	0	0	0	0	0	0	2	13	35	33	20	6	1	0	0	
0600	200	0	0	0	0	0	1	2	17	63	78	28	6	3	1	1	
0700	251	0	0	0	0	2	2	20	50	83	61	29	3	1	0	0	
0800	362	0	0	0	3	3	7	23	93	135	78	15	3	2	0	0	
0900	560	0	1	4	5	5	25	91	171	167	72	18	1	0	0	0	
1000	756	0	0	6	10	13	31	107	261	241	74	13	0	0	0	0	
1100	1054	0	1	10	14	7	51	203	412	277	65	9	5	0	0	0	
1200	944	0	1	9	15	7	36	135	341	290	91	17	1	1	0	0	
1300	1150	0	1	9	10	15	89	301	442	210	59	12	2	0	0	0	
1400	1212	0	0	12	13	23	51	240	424	313	105	26	5	0	0	0	
1500	904	1	1	7	11	9	47	170	296	269	75	14	4	0	0	0	
1600	729	0	0	9	5	5	27	88	227	253	91	20	3	1	0	0	
1700	636	0	0	1	6	1	20	82	229	196	85	13	2	1	0	0	
1800	812	0	0	0	0	0	6	38	204	314	192	43	12	2	0	1	
1900	607	0	0	0	0	1	8	48	144	258	118	25	3	1	0	0	
2000	540	0	0	0	0	0	7	57	202	175	69	20	6	3	0	1	
2100	406	0	0	0	0	1	3	54	149	159	26	11	2	1	0	0	
2200	332	0	0	1	0	0	8	33	111	120	51	6	1	0	1	0	
2300	187	0	0	0	1	1	7	22	51	63	35	5	1	1	0	0	
00-00	12314	1	5	68	93	95	431	1762	4022	3803	1543	380	82	20	5	3	
	100.00%	0.01%	0.04%	0.55%	0.76%	0.77%	3.50%	14.31%	32.66%	30.88%	12.53%	3.09%	0.67%	0.16%	0.04%	0.02%	

Maximum = 86.4 mph, Minimum = 8.8 mph, Mean = 44.5 mph
 85% Speed = 50.33 mph, 95% Speed = 54.30 mph, Median = 44.63 mph
 10 mph Pace = 39 - 49, Number in Pace = 7867 (63.89%)
 Variance = 41.45, Standard Deviation = 6.44 mph

Speed Report

Job 206_066_HSH_Loc A
 Area Milton, MA
 Location Randolph Avenue (Route 28), north of Chickatawbut Road
 Dir Southbound
Saturday, May 12, 2018

BOSTON
TRAFFIC DATA
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Time	Total	Speed Bins(mph)															
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80	
0000	266	0	0	0	0	3	12	46	91	75	27	9	0	3	0	0	
0100	147	0	0	1	0	3	8	33	60	29	9	1	3	0	0	0	
0200	129	0	0	0	1	1	8	21	41	36	9	10	1	0	1	0	
0300	66	0	0	0	0	0	3	11	27	15	6	2	1	0	0	0	
0400	57	0	0	0	0	0	1	10	16	20	5	3	1	1	0	0	
0500	90	0	0	0	0	0	1	4	28	36	15	5	1	0	0	0	
0600	223	0	1	0	1	2	5	31	65	88	22	4	3	1	0	0	
0700	355	0	1	1	1	0	9	46	108	125	47	10	5	1	1	0	
0800	548	0	0	2	3	7	21	91	232	142	42	5	1	2	0	0	
0900	673	0	0	0	6	13	59	172	247	137	31	6	1	1	0	0	
1000	762	0	0	5	6	20	57	236	274	112	42	7	3	0	0	0	
1100	908	0	0	5	17	57	170	309	261	71	15	3	0	0	0	0	
1200	859	275	109	75	63	74	93	103	52	14	1	0	0	0	0	0	
1300	869	279	301	151	60	32	14	16	15	0	1	0	0	0	0	0	
1400	968	22	20	77	109	190	243	201	87	16	3	0	0	0	0	0	
1500	1060	86	131	127	151	154	147	173	68	18	5	0	0	0	0	0	
1600	955	55	106	44	48	69	112	236	197	68	17	1	2	0	0	0	
1700	1071	0	0	0	7	26	95	306	422	165	47	3	0	0	0	0	
1800	1092	0	0	1	0	25	95	374	414	159	20	3	1	0	0	0	
1900	869	0	0	0	0	3	36	250	378	164	30	6	1	1	0	0	
2000	631	0	0	0	0	1	49	197	244	98	34	8	0	0	0	0	
2100	498	0	0	0	0	1	26	128	195	118	22	8	0	0	0	0	
2200	389	0	1	0	0	1	20	94	147	79	39	6	2	0	0	0	
2300	421	0	0	0	0	0	24	82	180	109	21	4	1	0	0	0	
00-00	13906	717	670	489	473	682	1308	3170	3849	1894	510	104	27	10	2	0	
	100.00%	5.16%	4.82%	3.52%	3.40%	4.90%	9.41%	22.80%	27.68%	13.62%	3.67%	0.75%	0.19%	0.07%	0.01%	0.00%	

Maximum = 89.0 mph, Minimum = 5.0 mph, Mean = 36.1 mph
 85% Speed = 45.85 mph, 95% Speed = 49.77 mph, Median = 39.26 mph
 10 mph Pace = 36 - 46, Number in Pace = 7125 (51.24%)
 Variance = 135.70, Standard Deviation = 11.65 mph

Speed Report

Job 206_066_HSH_Loc A
 Area Milton, MA
 Location Randolph Avenue (Route 28), north of Chickatawbut Road
 Dir Southbound
 Sunday, May 13, 2018

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TRAFFIC DATA
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Time	Total	Speed Bins(mph)															
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80	
0000	359	0	0	0	0	0	8	55	152	103	29	5	3	3	0	1	
0100	216	0	0	0	0	1	6	32	67	69	24	9	3	4	0	0	
0200	128	0	0	0	0	2	5	18	35	38	19	7	4	0	0	0	
0300	77	0	0	0	0	1	0	7	28	16	17	6	0	2	0	0	
0400	57	0	0	0	0	1	3	5	18	14	11	4	1	0	0	0	
0500	61	0	0	0	0	0	1	13	15	12	12	4	2	2	0	0	
0600	101	0	0	0	0	2	3	5	17	45	19	5	3	0	1	0	
0700	260	0	0	0	0	2	3	28	75	80	42	20	6	4	0	0	
0800	349	0	2	0	3	5	10	49	120	107	41	10	0	2	0	0	
0900	488	0	0	2	2	5	27	93	193	122	36	6	2	0	0	0	
1000	670	0	1	1	7	17	41	151	272	137	36	4	3	0	0	0	
1100	810	0	2	5	9	26	61	211	301	151	41	2	1	0	0	0	
1200	845	0	1	0	4	18	94	251	283	146	36	7	4	1	0	0	
1300	1014	1	3	4	9	23	118	268	404	143	33	7	1	0	0	0	
1400	1023	0	0	0	3	33	95	299	402	151	34	5	1	0	0	0	
1500	926	1	0	2	9	15	63	201	348	208	61	14	3	1	0	0	
1600	826	0	0	4	5	16	56	168	308	178	72	12	4	3	0	0	
1700	663	0	0	0	1	7	23	99	265	197	59	8	3	1	0	0	
1800	642	0	0	0	0	0	29	107	217	202	70	11	5	1	0	0	
1900	663	0	0	0	1	1	14	116	276	178	66	9	1	0	1	0	
2000	558	0	0	0	0	7	36	134	243	93	31	11	3	0	0	0	
2100	484	0	0	0	0	2	17	120	176	123	38	4	1	2	1	0	
2200	340	0	0	0	0	0	7	89	127	89	22	1	4	1	0	0	
2300	325	0	0	0	0	1	12	40	108	94	54	10	4	2	0	0	
00-00	11885	2	9	18	53	185	732	2559	4450	2696	903	181	62	29	3	1	
		100.00%	0.02%	0.08%	0.15%	0.45%	1.56%	6.16%	21.53%	37.44%	22.68%	7.60%	1.52%	0.52%	0.24%	0.03%	0.01%

Maximum = 93.1 mph, Minimum = 8.5 mph, Mean = 42.7 mph
 85% Speed = 48.26 mph, 95% Speed = 52.46 mph, Median = 42.73 mph
 10 mph Pace = 38 - 48, Number in Pace = 7766 (65.34%)
 Variance = 37.55, Standard Deviation = 6.13 mph

Speed Report

Job 206_066_HSH_Loc B
 Area Milton, MA
 Location Randolph Avenue (Route 28), south of Chickatawbut Road
 Dir Northbound
Saturday, May 12, 2018

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TRAFFIC DATA
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Time	Total	Speed Bins(mph)															
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80	
0000	134	0	0	0	0	2	12	17	47	36	17	2	1	0	0	0	
0100	101	0	0	0	0	0	4	9	35	29	15	7	0	2	0	0	
0200	90	0	0	0	0	1	2	22	36	14	11	3	1	0	0	0	
0300	48	0	0	0	0	0	1	8	17	10	7	3	2	0	0	0	
0400	58	0	0	0	0	0	1	6	17	19	10	4	1	0	0	0	
0500	177	0	0	0	0	0	3	23	46	74	23	5	2	1	0	0	
0600	337	0	0	1	0	0	2	34	127	117	50	5	1	0	0	0	
0700	404	0	0	0	4	1	18	56	160	123	35	5	2	0	0	0	
0800	614	0	0	0	0	0	29	116	271	152	41	4	1	0	0	0	
0900	715	0	0	1	1	7	55	199	273	141	34	4	0	0	0	0	
1000	753	0	0	0	0	1	31	226	340	128	25	2	0	0	0	0	
1100	767	0	0	0	1	5	63	242	305	119	27	4	1	0	0	0	
1200	928	0	0	0	1	16	130	372	300	99	10	0	0	0	0	0	
1300	867	0	0	0	0	17	57	319	342	111	20	1	0	0	0	0	
1400	992	0	0	0	0	4	83	333	424	136	11	0	1	0	0	0	
1500	937	36	95	66	79	97	101	174	220	61	8	0	0	0	0	0	
1600	763	0	0	0	0	1	84	300	273	86	16	2	1	0	0	0	
1700	722	0	0	0	0	3	75	253	250	127	13	1	0	0	0	0	
1800	812	1	1	2	4	11	82	314	285	96	12	4	0	0	0	0	
1900	575	0	0	0	4	3	43	176	236	93	19	1	0	0	0	0	
2000	484	0	0	0	0	17	41	170	167	76	12	1	0	0	0	0	
2100	488	0	0	0	0	1	50	179	163	73	20	2	0	0	0	0	
2200	449	0	0	0	0	3	26	154	178	69	17	2	0	0	0	0	
2300	297	0	0	0	0	2	14	83	104	63	20	10	0	1	0	0	
00-00	12512	37	96	70	94	192	1007	3785	4616	2052	473	72	14	4	0	0	
	100.00%	0.30%	0.77%	0.56%	0.75%	1.53%	8.05%	30.25%	36.89%	16.40%	3.78%	0.58%	0.11%	0.03%	0.00%	0.00%	

Maximum = 69.0 mph, Minimum = 5.4 mph, Mean = 40.6 mph
 85% Speed = 46.08 mph, 95% Speed = 49.72 mph, Median = 40.99 mph
 10 mph Pace = 36 - 46, Number in Pace = 8579 (68.57%)
 Variance = 40.37, Standard Deviation = 6.35 mph

Speed Report

Job 206_066_HSH_Loc B
 Area Milton, MA
 Location Randolph Avenue (Route 28), south of Chickatawbut Road
 Dir Northbound
 Sunday, May 13, 2018

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Time	Total	Speed Bins(mph)															
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80	
0000	259	0	0	0	0	5	27	73	86	46	19	3	0	0	0	0	
0100	121	0	0	0	0	1	4	26	43	30	12	3	2	0	0	0	
0200	85	0	0	0	0	0	3	17	18	30	12	4	1	0	0	0	
0300	56	0	0	0	0	0	3	4	18	15	7	5	2	2	0	0	
0400	49	0	0	0	0	0	1	8	15	14	8	2	1	0	0	0	
0500	114	0	0	0	0	0	0	11	35	36	22	8	2	0	0	0	
0600	208	0	0	0	0	0	2	24	61	71	42	7	0	1	0	0	
0700	257	0	0	0	0	0	4	33	88	89	30	10	3	0	0	0	
0800	377	0	0	0	0	4	5	53	157	121	29	6	1	1	0	0	
0900	587	0	0	0	0	0	16	133	235	174	27	1	1	0	0	0	
1000	828	0	0	4	6	13	93	265	286	131	23	7	0	0	0	0	
1100	1134	3	9	13	24	24	102	426	386	121	22	3	0	0	1	0	
1200	983	0	0	0	0	18	54	350	369	162	27	3	0	0	0	0	
1300	1217	1	4	2	8	49	259	469	307	101	15	2	0	0	0	0	
1400	1243	0	3	12	21	42	152	439	427	124	19	2	1	0	0	1	
1500	935	0	0	1	3	5	60	224	382	217	41	2	0	0	0	0	
1600	751	0	0	0	0	5	24	140	299	228	48	5	2	0	0	0	
1700	640	0	0	0	0	1	17	122	237	194	59	8	1	1	0	0	
1800	831	0	0	0	0	2	13	164	385	199	58	10	0	0	0	0	
1900	628	0	0	0	0	0	21	113	274	188	27	5	0	0	0	0	
2000	574	0	0	0	0	1	14	145	244	133	29	6	1	0	0	1	
2100	413	0	0	0	0	1	42	111	143	84	21	8	1	2	0	0	
2200	344	0	0	0	0	3	15	109	126	65	17	7	1	1	0	0	
2300	187	0	0	0	1	1	7	43	71	37	21	6	0	0	0	0	
00-00	12821	4	16	32	63	175	938	3502	4692	2610	635	123	20	8	1	2	
	100.00%	0.03%	0.12%	0.25%	0.49%	1.36%	7.32%	27.31%	36.60%	20.36%	4.95%	0.96%	0.16%	0.06%	0.01%	0.02%	

Maximum = 78.5 mph, Minimum = 7.0 mph, Mean = 41.7 mph
 85% Speed = 47.09 mph, 95% Speed = 50.67 mph, Median = 41.72 mph
 10 mph Pace = 37 - 47, Number in Pace = 8621 (67.24%)
 Variance = 32.89, Standard Deviation = 5.73 mph

Speed Report

Job 206_066_HSH_Loc B
 Area Milton, MA
 Location Randolph Avenue (Route 28), south of Chickatawbut Road
 Dir Southbound
Saturday, May 12, 2018

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Time	Total	Speed Bins(mph)															
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80	
0000	262	0	0	0	0	1	14	60	90	60	20	11	4	1	0	1	
0100	133	0	0	0	0	0	4	20	44	28	26	8	2	0	1	0	
0200	123	0	0	0	0	1	6	16	33	39	17	5	4	2	0	0	
0300	65	0	0	0	0	1	2	9	14	23	8	5	2	0	0	1	
0400	51	0	0	0	0	0	0	7	5	21	8	6	4	0	0	0	
0500	67	0	0	0	0	0	1	6	16	20	12	7	3	2	0	0	
0600	147	0	0	0	0	0	0	19	50	41	22	11	4	0	0	0	
0700	305	0	0	0	1	0	10	20	87	107	63	9	5	2	0	1	
0800	446	0	0	1	0	0	10	68	190	123	40	11	2	1	0	0	
0900	558	0	0	0	0	2	22	174	208	117	27	8	0	0	0	0	
1000	636	0	0	0	3	6	30	177	267	91	56	6	0	0	0	0	
1100	747	0	0	1	2	30	124	235	234	91	26	2	2	0	0	0	
1200	947	0	0	1	2	24	186	420	228	72	14	0	0	0	0	0	
1300	1000	0	0	0	2	15	137	429	311	92	12	2	0	0	0	0	
1400	898	0	1	9	9	16	117	334	254	123	30	5	0	0	0	0	
1500	1049	2	3	3	16	62	249	411	218	67	15	3	0	0	0	0	
1600	1086	0	0	0	1	8	142	446	329	118	35	6	1	0	0	0	
1700	892	0	0	0	0	2	58	313	345	130	41	3	0	0	0	0	
1800	810	0	0	1	0	17	126	315	218	101	26	6	0	0	0	0	
1900	672	0	0	0	0	23	111	287	187	46	14	3	1	0	0	0	
2000	574	0	0	1	1	7	97	247	152	53	15	0	0	1	0	0	
2100	450	0	0	0	0	10	63	152	149	59	12	5	0	0	0	0	
2200	358	0	0	0	1	15	57	89	111	54	25	5	0	1	0	0	
2300	366	0	0	1	0	2	31	93	137	76	20	5	0	1	0	0	
00-00	12642	2	4	18	38	242	1597	4347	3877	1752	584	132	34	11	1	3	
	100.00%	0.02%	0.03%	0.14%	0.30%	1.91%	12.63%	34.39%	30.67%	13.86%	4.62%	1.04%	0.27%	0.09%	0.01%	0.02%	

Maximum = 77.7 mph, Minimum = 8.8 mph, Mean = 40.5 mph
 85% Speed = 46.30 mph, 95% Speed = 50.67 mph, Median = 40.10 mph
 10 mph Pace = 35 - 45, Number in Pace = 8249 (65.25%)
 Variance = 34.50, Standard Deviation = 5.87 mph

Speed Report

Job 206_066_HSH_Loc B
 Area Milton, MA
 Location Randolph Avenue (Route 28), south of Chickatawbut Road
 Dir Southbound
 Sunday, May 13, 2018

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
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Time	Total	Speed Bins(mph)															
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80	
0000	247	0	0	0	0	1	12	49	68	76	33	4	3	0	1	0	
0100	165	0	0	0	0	0	7	22	51	50	25	7	2	0	0	1	
0200	125	0	0	0	0	2	6	12	32	39	20	5	7	1	1	0	
0300	70	0	0	0	0	1	0	4	25	16	15	6	2	1	0	0	
0400	49	0	0	0	0	0	1	9	9	12	11	4	3	0	0	0	
0500	56	0	0	0	0	0	3	2	15	18	6	4	7	1	0	0	
0600	77	0	0	0	1	0	0	5	10	35	12	7	5	0	0	0	
0700	229	0	0	0	0	0	2	18	67	79	40	18	3	2	0	0	
0800	289	0	0	0	0	3	0	32	83	107	46	17	1	0	0	0	
0900	413	1	0	0	0	1	4	62	174	126	40	4	1	0	0	0	
1000	545	0	0	2	19	12	35	112	217	105	31	10	1	1	0	0	
1100	675	0	1	2	0	1	33	220	246	129	37	4	0	2	0	0	
1200	751	0	1	0	7	16	90	203	249	129	47	8	1	0	0	0	
1300	883	0	0	3	22	31	71	250	314	155	32	5	0	0	0	0	
1400	939	0	0	1	2	15	117	270	362	129	37	5	0	0	0	1	
1500	857	0	1	3	0	6	78	194	316	206	48	5	0	0	0	0	
1600	772	0	0	0	0	8	58	212	275	149	60	6	3	1	0	0	
1700	633	0	0	0	0	0	31	133	239	169	52	7	0	1	1	0	
1800	643	0	0	0	1	5	52	127	244	153	47	10	2	1	1	0	
1900	617	0	0	0	0	0	26	109	222	172	65	18	4	1	0	0	
2000	563	0	0	0	1	9	54	171	186	102	29	5	3	3	0	0	
2100	458	0	0	0	0	0	24	106	190	95	30	11	2	0	0	0	
2200	318	0	0	0	0	3	23	46	100	97	31	10	6	2	0	0	
2300	294	0	0	0	0	0	16	43	92	90	37	11	2	1	1	1	
00-00	10668	1	3	11	53	114	743	2411	3786	2438	831	191	58	18	5	3	
100.00%		0.01%	0.03%	0.10%	0.50%	1.07%	6.96%	22.60%	35.49%	22.85%	7.79%	1.79%	0.54%	0.17%	0.05%	0.03%	

Maximum = 80.6 mph, Minimum = 7.7 mph, Mean = 42.8 mph
 85% Speed = 48.65 mph, 95% Speed = 52.62 mph, Median = 42.61 mph
 10 mph Pace = 38 - 48, Number in Pace = 6705 (62.85%)
 Variance = 37.86, Standard Deviation = 6.15 mph

Speed Report

Job 206_066_HSH_Loc C
 Area Milton, MA
 Location Chickatawbut Road, east of Randolph Avenue (Route 28)
 Dir Eastbound
Saturday, May 12, 2018

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TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
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Time	Total	Speed Bins(mph)																
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80		
0000	15	0	0	0	1	1	3	3	5	1	1	0	0	0	0	0		
0100	14	0	0	0	0	0	7	6	0	0	0	1	0	0	0	0		
0200	4	0	0	0	0	0	3	0	0	0	0	0	0	1	0	0		
0300	3	0	0	0	0	1	0	2	0	0	0	0	0	0	0	0		
0400	2	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0		
0500	9	0	0	0	0	0	4	2	1	2	0	0	0	0	0	0		
0600	20	0	1	0	1	2	7	8	1	0	0	0	0	0	0	0		
0700	45	3	4	1	0	2	13	12	8	0	2	0	0	0	0	0		
0800	94	1	1	0	0	3	27	46	12	4	0	0	0	0	0	0		
0900	116	0	1	0	3	3	37	59	12	1	0	0	0	0	0	0		
1000	186	2	0	1	1	12	70	87	11	2	0	0	0	0	0	0		
1100	207	0	0	0	0	15	91	80	20	1	0	0	0	0	0	0		
1200	225	1	0	0	2	11	102	96	12	0	1	0	0	0	0	0		
1300	284	0	0	0	2	10	127	128	15	2	0	0	0	0	0	0		
1400	303	0	0	0	0	27	116	145	13	2	0	0	0	0	0	0		
1500	437	4	1	1	9	79	239	93	11	0	0	0	0	0	0	0		
1600	294	2	0	1	4	24	152	92	18	1	0	0	0	0	0	0		
1700	251	0	0	0	0	10	117	108	16	0	0	0	0	0	0	0		
1800	245	0	0	0	0	17	114	104	9	1	0	0	0	0	0	0		
1900	138	0	0	0	2	9	60	54	11	2	0	0	0	0	0	0		
2000	69	0	0	1	1	4	32	23	8	0	0	0	0	0	0	0		
2100	31	0	0	0	0	6	13	9	3	0	0	0	0	0	0	0		
2200	26	0	0	0	0	1	10	9	5	1	0	0	0	0	0	0		
2300	14	0	0	0	0	2	4	4	4	0	0	0	0	0	0	0		
00-00	3032	13	8	5	26	239	1349	1170	196	20	4	1	0	1	0	0		
100.00%		0.43%	0.26%	0.16%	0.86%	7.88%	44.49%	38.59%	6.46%	0.66%	0.13%	0.03%	0.00%	0.03%	0.00%	0.00%		

Maximum = 68.4 mph, Minimum = 5.3 mph, Mean = 34.5 mph
 85% Speed = 38.25 mph, 95% Speed = 40.88 mph, Median = 34.62 mph
 10 mph Pace = 29 - 39, Number in Pace = 2529 (83.41%)
 Variance = 19.51, Standard Deviation = 4.42 mph

Speed Report

Job 206_066_HSH_Loc C
 Area Milton, MA
 Location Chickatawbut Road, east of Randolph Avenue (Route 28)
 Dir Eastbound
 Sunday, May 13, 2018

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TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
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Time	Total	Speed Bins(mph)															
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80	
0000	24	0	0	0	0	2	8	9	5	0	0	0	0	0	0	0	0
0100	11	0	0	0	0	1	4	4	1	1	0	0	0	0	0	0	0
0200	3	0	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0
0300	5	0	0	0	0	0	2	2	1	0	0	0	0	0	0	0	0
0400	4	0	0	0	0	0	1	2	0	1	0	0	0	0	0	0	0
0500	6	0	0	0	1	0	1	2	1	0	1	0	0	0	0	0	0
0600	17	1	0	0	0	4	4	5	3	0	0	0	0	0	0	0	0
0700	24	2	0	0	0	0	4	10	8	0	0	0	0	0	0	0	0
0800	44	1	1	0	0	5	13	22	2	0	0	0	0	0	0	0	0
0900	87	1	3	0	1	7	33	32	9	1	0	0	0	0	0	0	0
1000	145	0	1	0	1	11	55	60	13	4	0	0	0	0	0	0	0
1100	195	1	3	0	1	4	80	79	26	0	0	1	0	0	0	0	0
1200	221	0	0	0	0	13	97	88	21	2	0	0	0	0	0	0	0
1300	253	0	0	0	0	12	114	100	22	5	0	0	0	0	0	0	0
1400	202	0	2	0	1	13	72	98	14	2	0	0	0	0	0	0	0
1500	209	0	2	1	0	11	82	88	17	7	0	1	0	0	0	0	0
1600	206	0	2	0	0	12	76	86	24	3	3	0	0	0	0	0	0
1700	132	0	1	0	0	1	36	58	29	6	1	0	0	0	0	0	0
1800	106	0	1	1	0	6	35	50	12	1	0	0	0	0	0	0	0
1900	113	0	0	0	1	4	32	48	17	9	0	1	0	1	0	0	0
2000	55	0	0	0	0	7	13	23	10	1	1	0	0	0	0	0	0
2100	39	0	0	0	0	1	8	20	8	1	1	0	0	0	0	0	0
2200	28	0	0	0	0	1	10	11	1	1	0	0	3	1	0	0	0
2300	16	0	0	0	2	0	4	6	2	1	0	0	0	1	0	0	0
00-00	2145	6	16	2	8	115	786	903	246	47	7	3	3	3	0	0	
		100.00%	0.28%	0.75%	0.09%	0.37%	5.36%	36.64%	42.10%	11.47%	2.19%	0.33%	0.14%	0.14%	0.14%	0.00%	0.00%

Maximum = 68.9 mph, Minimum = 8.7 mph, Mean = 35.8 mph
 85% Speed = 39.87 mph, 95% Speed = 43.36 mph, Median = 35.62 mph
 10 mph Pace = 31 - 41, Number in Pace = 1725 (80.42%)
 Variance = 25.85, Standard Deviation = 5.08 mph

Speed Report

Job 206_066_HSH_Loc C
 Area Milton, MA
 Location Chickatawbut Road, east of Randolph Avenue (Route 28)
 Dir Westbound
Saturday, May 12, 2018

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Time	Total	Speed Bins(mph)															
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80	
0000	19	0	0	0	0	0	2	8	6	0	2	0	1	0	0	0	
0100	16	0	0	0	0	1	3	10	2	0	0	0	0	0	0	0	
0200	10	0	0	0	0	1	2	5	2	0	0	0	0	0	0	0	
0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0400	2	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	
0500	9	0	0	0	0	3	2	1	2	1	0	0	0	0	0	0	
0600	31	0	0	0	2	2	4	12	9	2	0	0	0	0	0	0	
0700	42	0	0	0	1	0	6	18	16	1	0	0	0	0	0	0	
0800	68	0	0	0	1	2	14	38	12	1	0	0	0	0	0	0	
0900	110	0	0	0	1	2	25	56	26	0	0	0	0	0	0	0	
1000	146	0	0	0	0	4	33	75	27	7	0	0	0	0	0	0	
1100	221	0	0	0	0	1	52	113	50	5	0	0	0	0	0	0	
1200	286	0	0	0	0	4	96	162	23	1	0	0	0	0	0	0	
1300	257	0	0	0	1	14	74	148	19	1	0	0	0	0	0	0	
1400	288	0	0	0	0	1	69	160	51	7	0	0	0	0	0	0	
1500	324	141	55	3	2	9	43	57	14	0	0	0	0	0	0	0	
1600	350	44	23	8	2	15	120	118	20	0	0	0	0	0	0	0	
1700	318	0	0	0	6	19	114	156	21	2	0	0	0	0	0	0	
1800	233	0	0	0	0	14	103	94	22	0	0	0	0	0	0	0	
1900	163	0	0	0	0	3	69	75	16	0	0	0	0	0	0	0	
2000	119	0	0	0	3	17	42	44	13	0	0	0	0	0	0	0	
2100	111	0	0	0	0	5	46	49	11	0	0	0	0	0	0	0	
2200	56	0	0	0	1	5	22	14	10	4	0	0	0	0	0	0	
2300	30	0	0	0	0	5	10	9	6	0	0	0	0	0	0	0	
00-00	3209	185	78	11	20	127	951	1422	379	33	2	0	1	0	0	0	
	100.00%	5.77%	2.43%	0.34%	0.62%	3.96%	29.64%	44.31%	11.81%	1.03%	0.06%	0.00%	0.03%	0.00%	0.00%	0.00%	

Maximum = 64.2 mph, Minimum = 5.0 mph, Mean = 33.8 mph
 85% Speed = 39.62 mph, 95% Speed = 42.22 mph, Median = 35.68 mph
 10 mph Pace = 31 - 41, Number in Pace = 2431 (75.76%)
 Variance = 72.56, Standard Deviation = 8.52 mph

Speed Report

Job 206_066_HSH_Loc C
 Area Milton, MA
 Location Chickatawbut Road, east of Randolph Avenue (Route 28)
 Dir Westbound
 Sunday, May 13, 2018

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
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Time	Total	Speed Bins(mph)																
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80		
0000	24	0	0	0	1	3	8	9	2	1	0	0	0	0	0	0	0	
0100	9	0	0	0	0	1	0	4	2	1	1	0	0	0	0	0	0	
0200	10	0	0	0	0	1	2	5	2	0	0	0	0	0	0	0	0	
0300	8	0	0	0	0	0	3	2	1	2	0	0	0	0	0	0	0	
0400	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	
0500	6	0	0	0	0	0	2	2	2	0	0	0	0	0	0	0	0	
0600	18	0	0	0	0	0	7	7	4	0	0	0	0	0	0	0	0	
0700	39	0	0	0	0	3	7	15	12	2	0	0	0	0	0	0	0	
0800	45	0	0	0	0	5	3	22	12	2	1	0	0	0	0	0	0	
0900	79	0	0	0	1	4	22	36	14	2	0	0	0	0	0	0	0	
1000	99	0	0	0	0	4	34	42	19	0	0	0	0	0	0	0	0	
1100	179	0	0	0	2	2	40	96	38	1	0	0	0	0	0	0	0	
1200	288	0	0	0	2	11	59	159	50	7	0	0	0	0	0	0	0	
1300	236	0	0	0	0	4	47	124	57	4	0	0	0	0	0	0	0	
1400	283	0	0	0	1	16	62	147	53	4	0	0	0	0	0	0	0	
1500	291	0	0	0	0	5	57	152	65	10	2	0	0	0	0	0	0	
1600	231	0	0	0	1	5	52	120	46	7	0	0	0	0	0	0	0	
1700	160	0	0	0	0	0	24	84	47	4	1	0	0	0	0	0	0	
1800	153	0	0	0	0	1	29	69	43	10	1	0	0	0	0	0	0	
1900	149	0	0	0	0	9	38	70	23	7	0	1	0	1	0	0	0	
2000	90	0	0	0	0	0	28	34	21	6	0	1	0	0	0	0	0	
2100	54	0	0	0	0	3	10	17	21	1	1	1	0	0	0	0	0	
2200	37	0	0	0	1	1	8	11	12	3	1	0	0	0	0	0	0	
2300	29	0	0	0	1	1	4	14	4	4	1	0	0	0	0	0	0	
00-00	2518	0	0	0	10	79	547	1241	550	78	9	3	0	1	0	0	0	
100.00%		0.00%	0.00%	0.00%	0.40%	3.14%	21.72%	49.29%	21.84%	3.10%	0.36%	0.12%	0.00%	0.04%	0.00%	0.00%	0.00%	

Maximum = 67.8 mph, Minimum = 20.6 mph, Mean = 37.5 mph
 85% Speed = 41.44 mph, 95% Speed = 44.35 mph, Median = 37.47 mph
 10 mph Pace = 32 - 42, Number in Pace = 1998 (79.35%)
 Variance = 17.58, Standard Deviation = 4.19 mph

Speed Report

Job 206_066_HSH_Loc D
 Area Milton, MA
 Location Chickatawbut Road, west of Randolph Avenue (Route 28)
 Dir Eastbound
Saturday, May 12, 2018

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
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Time	Total	Speed Bins(mph)																
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80		
0000	11	0	0	0	0	1	1	2	6	1	0	0	0	0	0	0	0	
0100	12	0	0	0	0	0	2	7	2	1	0	0	0	0	0	0	0	
0200	7	0	0	0	0	0	1	3	3	0	0	0	0	0	0	0	0	
0300	5	0	0	0	0	1	1	0	2	1	0	0	0	0	0	0	0	
0400	3	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	
0500	4	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	
0600	17	0	0	0	1	0	1	8	6	1	0	0	0	0	0	0	0	
0700	46	0	0	0	0	5	7	15	14	4	0	0	1	0	0	0	0	
0800	62	0	0	0	2	1	3	19	32	5	0	0	0	0	0	0	0	
0900	110	0	0	0	2	2	13	36	49	8	0	0	0	0	0	0	0	
1000	116	0	0	0	0	2	9	50	46	8	0	1	0	0	0	0	0	
1100	133	0	0	0	0	1	15	55	57	5	0	0	0	0	0	0	0	
1200	154	0	0	0	0	3	11	77	51	12	0	0	0	0	0	0	0	
1300	251	0	0	0	0	1	30	124	82	13	1	0	0	0	0	0	0	
1400	212	0	0	0	0	0	21	101	82	8	0	0	0	0	0	0	0	
1500	297	64	10	3	4	10	30	90	78	6	0	0	1	1	0	0	0	
1600	266	0	0	0	0	2	14	133	110	6	1	0	0	0	0	0	0	
1700	205	0	0	0	0	2	13	99	82	9	0	0	0	0	0	0	0	
1800	188	0	0	0	1	0	10	86	80	10	1	0	0	0	0	0	0	
1900	81	0	0	0	0	0	5	31	39	6	0	0	0	0	0	0	0	
2000	61	0	0	0	0	5	13	28	13	2	0	0	0	0	0	0	0	
2100	26	0	0	0	0	0	6	14	6	0	0	0	0	0	0	0	0	
2200	24	0	0	0	0	0	7	9	8	0	0	0	0	0	0	0	0	
2300	23	0	0	0	0	1	2	13	6	1	0	0	0	0	0	0	0	
00-00	2314	64	10	3	10	37	215	1003	858	107	3	1	2	1	0	0		
	100.00%	2.77%	0.43%	0.13%	0.43%	1.60%	9.29%	43.34%	37.08%	4.62%	0.13%	0.04%	0.09%	0.04%	0.00%	0.00%		

Maximum = 67.7 mph, Minimum = 5.1 mph, Mean = 38.2 mph
 85% Speed = 42.84 mph, 95% Speed = 44.96 mph, Median = 39.26 mph
 10 mph Pace = 35 - 45, Number in Pace = 1883 (81.37%)
 Variance = 46.83, Standard Deviation = 6.84 mph

Speed Report

Job 206_066_HSH_Loc D
 Area Milton, MA
 Location Chickatawbut Road, west of Randolph Avenue (Route 28)
 Dir Eastbound
 Sunday, May 13, 2018

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Speed Bins(mph)															
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80	
0000	24	0	0	0	0	0	3	8	7	5	1	0	0	0	0	0	0
0100	10	0	0	0	0	0	2	3	2	3	0	0	0	0	0	0	0
0200	7	0	0	0	0	0	0	3	2	2	0	0	0	0	0	0	0
0300	5	0	0	0	0	0	1	2	2	0	0	0	0	0	0	0	0
0400	3	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0
0500	6	0	0	0	0	0	0	2	1	2	0	1	0	0	0	0	0
0600	11	0	0	0	0	2	1	4	3	1	0	0	0	0	0	0	0
0700	26	0	0	0	0	1	4	5	11	5	0	0	0	0	0	0	0
0800	40	0	0	0	0	1	7	16	15	1	0	0	0	0	0	0	0
0900	81	0	0	0	0	3	9	32	34	2	1	0	0	0	0	0	0
1000	98	0	0	0	0	0	8	47	31	10	2	0	0	0	0	0	0
1100	137	0	0	0	1	1	14	54	51	14	2	0	0	0	0	0	0
1200	150	0	0	0	0	1	14	69	56	10	0	0	0	0	0	0	0
1300	191	0	0	0	0	0	14	106	57	12	2	0	0	0	0	0	0
1400	138	0	0	0	1	1	28	58	42	7	1	0	0	0	0	0	0
1500	155	0	0	0	0	2	17	65	61	9	0	0	0	1	0	0	0
1600	145	0	0	0	1	2	15	51	59	12	4	1	0	0	0	0	0
1700	131	1	0	1	0	1	14	56	41	13	3	1	0	0	0	0	0
1800	95	0	0	0	0	3	10	41	34	6	1	0	0	0	0	0	0
1900	92	0	1	0	0	0	5	40	34	8	2	0	0	1	1	0	0
2000	62	0	0	0	0	1	10	27	20	3	1	0	0	0	0	0	0
2100	34	0	0	0	0	0	3	18	13	0	0	0	0	0	0	0	0
2200	35	0	1	0	1	1	4	14	7	3	1	2	1	0	0	0	0
2300	16	0	0	0	0	0	1	3	10	1	0	0	0	0	1	0	0
00-00	1692	1	2	1	4	20	184	726	593	130	21	5	1	2	2	0	
100.00%		0.06%	0.12%	0.06%	0.24%	1.18%	10.87%	42.91%	35.05%	7.68%	1.24%	0.30%	0.06%	0.12%	0.12%	0.00%	

Maximum = 74.0 mph, Minimum = 9.5 mph, Mean = 39.6 mph
 85% Speed = 43.62 mph, 95% Speed = 47.09 mph, Median = 39.59 mph
 10 mph Pace = 34 - 44, Number in Pace = 1343 (79.37%)
 Variance = 22.59, Standard Deviation = 4.75 mph

Speed Report

Job 206_066_HSH_Loc D
 Area Milton, MA
 Location Chickatawbut Road, west of Randolph Avenue (Route 28)
 Dir Westbound
Saturday, May 12, 2018

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Speed Bins(mph)															
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80	
0000	11	0	0	0	0	1	0	1	5	4	0	0	0	0	0	0	
0100	9	0	0	0	0	0	2	3	4	0	0	0	0	0	0	0	
0200	6	0	0	0	0	0	0	4	2	0	0	0	0	0	0	0	
0300	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
0400	2	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	
0500	8	0	0	0	0	0	4	0	2	2	0	0	0	0	0	0	
0600	29	0	0	1	1	0	6	8	10	3	0	0	0	0	0	0	
0700	56	0	0	2	1	1	6	22	18	4	1	1	0	0	0	0	
0800	83	0	0	4	3	0	9	36	25	6	0	0	0	0	0	0	
0900	103	0	0	0	1	2	18	43	34	5	0	0	0	0	0	0	
1000	117	0	0	1	2	1	5	57	43	7	0	1	0	0	0	0	
1100	155	0	0	1	0	0	16	77	53	7	1	0	0	0	0	0	
1200	162	0	0	0	0	0	21	91	42	7	1	0	0	0	0	0	
1300	139	0	0	0	2	5	19	68	32	12	1	0	0	0	0	0	
1400	170	0	0	0	1	1	30	72	55	8	2	1	0	0	0	0	
1500	155	1	0	0	2	9	33	66	36	6	2	0	0	0	0	0	
1600	203	0	0	0	0	2	35	105	54	5	0	2	0	0	0	0	
1700	144	0	1	0	0	2	20	56	56	9	0	0	0	0	0	0	
1800	107	0	0	0	0	2	13	50	39	2	1	0	0	0	0	0	
1900	87	0	0	0	0	1	15	34	32	5	0	0	0	0	0	0	
2000	52	0	0	0	0	3	12	22	11	3	1	0	0	0	0	0	
2100	53	0	0	0	0	0	8	27	13	5	0	0	0	0	0	0	
2200	35	0	0	0	0	0	5	17	11	1	1	0	0	0	0	0	
2300	28	0	0	0	0	1	2	13	8	4	0	0	0	0	0	0	
00-00	1915	1	1	9	13	31	279	872	587	106	11	5	0	0	0	0	
		100.00%	0.05%	0.05%	0.47%	0.68%	1.62%	14.57%	45.54%	30.65%	5.54%	0.57%	0.26%	0.00%	0.00%	0.00%	0.00%

Maximum = 55.9 mph, Minimum = 7.1 mph, Mean = 38.6 mph
 85% Speed = 42.73 mph, 95% Speed = 45.59 mph, Median = 38.64 mph
 10 mph Pace = 34 - 44, Number in Pace = 1523 (79.53%)
 Variance = 21.65, Standard Deviation = 4.65 mph

Speed Report

Job 206_066_HSH_Loc D
 Area Milton, MA
 Location Chickatawbut Road, west of Randolph Avenue (Route 28)
 Dir Westbound
 Sunday, May 13, 2018

BOSTON
TRAFFIC DATA
 PO BOX 1723, Framingham, MA 01701
 Office: 978-746-1259
 DataRequest@BostonTrafficData.com
 www.BostonTrafficData.com

Time	Total	Speed Bins(mph)															
		5 10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 55	55 60	60 65	65 70	70 75	75 80	
0000	18	0	0	0	0	1	5	2	6	3	1	0	0	0	0	0	
0100	6	0	0	0	0	0	1	3	2	0	0	0	0	0	0	0	
0200	8	0	0	0	0	0	1	1	4	2	0	0	0	0	0	0	
0300	7	0	0	0	0	0	1	2	2	2	0	0	0	0	0	0	
0400	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	
0500	6	0	0	0	0	0	0	3	2	0	1	0	0	0	0	0	
0600	16	0	0	1	0	0	5	4	5	1	0	0	0	0	0	0	
0700	32	0	0	2	0	1	1	17	8	3	0	0	0	0	0	0	
0800	47	0	1	2	2	1	1	18	18	4	0	0	0	0	0	0	
0900	69	0	0	3	1	0	4	35	19	6	1	0	0	0	0	0	
1000	92	0	0	0	0	0	15	44	26	5	2	0	0	0	0	0	
1100	118	0	0	2	2	0	12	65	28	8	1	0	0	0	0	0	
1200	191	0	0	0	1	0	25	108	46	6	4	1	0	0	0	0	
1300	173	0	1	1	0	1	28	82	48	11	1	0	0	0	0	0	
1400	176	0	0	1	1	2	26	86	48	12	0	0	0	0	0	0	
1500	156	0	0	0	0	1	25	81	40	8	1	0	0	0	0	0	
1600	129	0	0	1	1	3	27	52	41	3	1	0	0	0	0	0	
1700	95	0	0	0	0	4	9	45	28	7	2	0	0	0	0	0	
1800	115	0	0	0	0	3	18	44	39	9	2	0	0	0	0	0	
1900	108	0	0	1	0	0	11	46	28	17	1	1	3	0	0	0	
2000	63	0	0	0	0	0	15	16	24	6	1	1	0	0	0	0	
2100	31	0	0	0	0	0	6	16	5	3	0	0	1	0	0	0	
2200	27	0	0	0	0	2	4	8	7	4	0	0	2	0	0	0	
2300	22	0	0	0	0	0	7	5	5	2	1	0	2	0	0	0	
00-00	1706	0	2	14	8	19	247	783	479	122	21	3	8	0	0	0	
100.00%		0.00%	0.12%	0.82%	0.47%	1.11%	14.48%	45.90%	28.08%	7.15%	1.23%	0.18%	0.47%	0.00%	0.00%	0.00%	

Maximum = 64.2 mph, Minimum = 11.9 mph, Mean = 38.9 mph
 85% Speed = 43.28 mph, 95% Speed = 47.07 mph, Median = 38.70 mph
 10 mph Pace = 34 - 44, Number in Pace = 1311 (76.85%)
 Variance = 26.65, Standard Deviation = 5.16 mph



HOWARD STEIN HUDSON

Engineers + Planners

Appendix B

Traffic Output Reports

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø9
Lane Configurations		↔			↔			↔		↔	↔		
Traffic Volume (vph)	44	83	89	20	200	141	197	1203	36	63	572	29	
Future Volume (vph)	44	83	89	20	200	141	197	1203	36	63	572	29	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	13	12	12	14	12	12	11	12	12	11	12	
Storage Length (ft)	0		0	0		0	330		0	0		0	
Storage Lanes	0		0	0		0	1		0	1		0	
Taper Length (ft)	25			25			25			25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	
Frt		0.944			0.947			0.996			0.993		
Flt Protected		0.990			0.997			0.993		0.950			
Satd. Flow (prot)	0	1835	0	0	1903	0	0	3423	0	1805	1790	0	
Flt Permitted		0.691			0.974			0.630		0.073			
Satd. Flow (perm)	0	1281	0	0	1859	0	0	2172	0	139	1790	0	
Right Turn on Red			No			No		Yes			Yes		
Satd. Flow (RTOR)								3			2		
Link Speed (mph)		35			30			40			40		
Link Distance (ft)		1264			1068			1334			1119		
Travel Time (s)		24.6			24.3			22.7			19.1		
Peak Hour Factor	0.81	0.81	0.81	0.93	0.93	0.93	0.92	0.92	0.92	0.94	0.94	0.94	
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	1%	0%	0%	2%	0%	
Adj. Flow (vph)	54	102	110	22	215	152	214	1308	39	67	609	31	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	266	0	0	389	0	0	1561	0	67	640	0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA		
Protected Phases		4			8		1	6			2		9
Permitted Phases	4			8			6			2			
Detector Phase	4	4		8	8		1	6		2	2		
Switch Phase													
Minimum Initial (s)	8.0	8.0		8.0	8.0		6.0	12.0		12.0	12.0		5.0
Minimum Split (s)	13.0	13.0		13.0	13.0		11.0	18.0		18.0	18.0		23.0
Total Split (s)	33.0	33.0		33.0	33.0		15.0	65.0		50.0	50.0		23.0
Total Split (%)	27.3%	27.3%		27.3%	27.3%		12.4%	53.7%		41.3%	41.3%		19%
Maximum Green (s)	28.0	28.0		28.0	28.0		10.0	59.0		44.0	44.0		19.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0		4.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	2.0		2.0	2.0		0.0
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0		
Total Lost Time (s)		5.0			5.0			6.0		6.0	6.0		
Lead/Lag							Lead			Lag	Lag		
Lead-Lag Optimize?							Yes			Yes	Yes		
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0		2.0
Recall Mode	None	None		None	None		None	Min		Min	Min		None
Walk Time (s)													7.0
Flash Dont Walk (s)													12.0
Pedestrian Calls (#/hr)													3
Act Effct Green (s)		28.2			28.2			59.4		59.4	59.4		
Actuated g/C Ratio		0.27			0.27			0.58		0.58	0.58		
v/c Ratio		0.76			0.76			1.24		0.84	0.62		
Control Delay		50.5			46.4			138.4		90.9	19.0		
Queue Delay		0.0			0.0			0.0		0.0	0.0		
Total Delay		50.5			46.4			138.4		90.9	19.0		
LOS		D			D			F		F	B		
Approach Delay		50.5			46.4			138.4			25.8		
Approach LOS		D			D			F			C		
Queue Length 50th (ft)		149			219			~626		30	228		
Queue Length 95th (ft)		#302			#478			#1030		#150	536		
Internal Link Dist (ft)		1184			988			1254			1039		
Turn Bay Length (ft)													
Base Capacity (vph)		352			511			1258		80	1037		
Starvation Cap Reductn		0			0			0		0	0		
Spillback Cap Reductn		0			0			0		0	0		
Storage Cap Reductn		0			0			0		0	0		
Reduced v/c Ratio		0.76			0.76			1.24		0.84	0.62		

Intersection Summary

Area Type: Other

Cycle Length: 121

Actuated Cycle Length: 102.6

Natural Cycle: 150

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.24

Intersection Signal Delay: 90.9

Intersection LOS: F

Intersection Capacity Utilization 112.9%

ICU Level of Service H

Analysis Period (min) 15

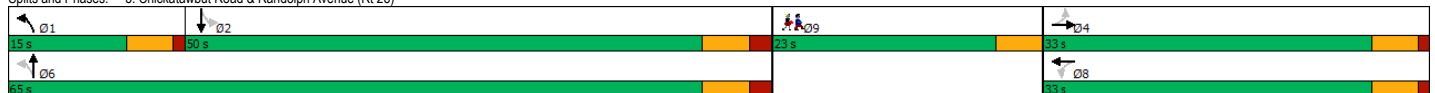
- Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: Chickatawbut Road & Randolph Avenue (Rt 28)



	↖	→	↗	↖	←	↗	↖	↑	↗	↖	↓	↗
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔		↔		
Traffic Volume (vph)	44	83	89	20	200	141	197	1203	36	63	572	29
Future Volume (vph)	44	83	89	20	200	141	197	1203	36	63	572	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	13	12	12	14	12	12	11	12	12	11	12
Total Lost time (s)		5.0			5.0			6.0		6.0	6.0	
Lane Util. Factor		1.00			1.00			0.95		1.00	1.00	
Frt		0.94			0.95			1.00		1.00	0.99	
Flt Protected		0.99			1.00			0.99		0.95	1.00	
Satd. Flow (prot)		1835			1904			3424		1805	1789	
Flt Permitted		0.69			0.97			0.63		0.07	1.00	
Satd. Flow (perm)		1280			1859			2172		138	1789	
Peak-hour factor, PHF	0.81	0.81	0.81	0.93	0.93	0.93	0.92	0.92	0.92	0.94	0.94	0.94
Adj. Flow (vph)	54	102	110	22	215	152	214	1308	39	67	609	31
RTOR Reduction (vph)	0	0	0	0	0	0	0	1	0	0	1	0
Lane Group Flow (vph)	0	266	0	0	389	0	0	1560	0	67	639	0
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	1%	0%	0%	2%	0%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		4			8		1	6			2	
Permitted Phases	4			8			6			2		
Actuated Green, G (s)		28.2			28.2			59.4		59.4	59.4	
Effective Green, g (s)		28.2			28.2			59.4		59.4	59.4	
Actuated g/C Ratio		0.27			0.27			0.56		0.56	0.56	
Clearance Time (s)		5.0			5.0			6.0		6.0	6.0	
Vehicle Extension (s)		2.0			2.0			2.0		2.0	2.0	
Lane Grp Cap (vph)		341			495			1219		77	1004	
v/s Ratio Prot											0.36	
v/s Ratio Perm		0.21			c0.21			c0.72		0.49		
v/c Ratio		0.78			0.79			1.28		0.87	0.64	
Uniform Delay, d1		35.9			36.0			23.2		19.9	15.8	
Progression Factor		1.00			1.00			1.00		1.00	1.00	
Incremental Delay, d2		10.2			7.4			132.2		59.5	1.0	
Delay (s)		46.1			43.4			155.4		79.4	16.8	
Level of Service		D			D			F		E	B	
Approach Delay (s)		46.1			43.4			155.4			22.7	
Approach LOS		D			D			F			C	
Intersection Summary												
HCM 2000 Control Delay		98.5								F		
HCM 2000 Volume to Capacity ratio		1.14										
Actuated Cycle Length (s)		105.8						20.0				
Intersection Capacity Utilization		112.9%								H		
Analysis Period (min)		15										
c Critical Lane Group												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø9
Lane Configurations		↔			↔			↔		↔	↔		
Traffic Volume (vph)	51	105	180	239	65	69	23	618	12	73	980	8	
Future Volume (vph)	51	105	180	239	65	69	23	618	12	73	980	8	
Ideal Flow (vphpl)	1900	1600	1900	1900	1900	1900	1900	1400	1900	1900	1000	1900	
Lane Width (ft)	12	13	12	12	14	12	12	11	12	12	11	12	
Storage Length (ft)	0		0	0		0	330		0	0		0	
Storage Lanes	0		0	0		0	1		0	1		0	
Taper Length (ft)	25			25			25			25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	
Frt		0.928			0.975			0.997			0.999		
Flt Protected		0.992			0.969			0.998		0.950			
Satd. Flow (prot)	0	1506	0	0	1915	0	0	2511	0	1805	947	0	
Flt Permitted		0.907			0.401			0.682		0.304			
Satd. Flow (perm)	0	1377	0	0	792	0	0	1716	0	578	947	0	
Right Turn on Red			No			No			Yes			Yes	
Satd. Flow (RTOR)								2					
Link Speed (mph)		35			30			40			40		
Link Distance (ft)		1264			1068			1334			1119		
Travel Time (s)		24.6			24.3			22.7			19.1		
Peak Hour Factor	0.85	0.85	0.85	0.96	0.96	0.96	0.99	0.99	0.99	0.98	0.98	0.98	
Heavy Vehicles (%)	0%	0%	2%	0%	0%	0%	0%	2%	0%	0%	2%	0%	
Adj. Flow (vph)	60	124	212	249	68	72	23	624	12	74	1000	8	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	396	0	0	389	0	0	659	0	74	1008	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA		
Protected Phases		4			8			6		5	2		9
Permitted Phases	4			8			6			2			
Detector Phase	4	4		8	8		6	6		5	2		
Switch Phase													
Minimum Initial (s)	8.0	8.0		8.0	8.0		12.0	12.0		6.0	12.0		5.0
Minimum Split (s)	13.0	13.0		13.0	13.0		18.0	18.0		11.0	18.0		23.0
Total Split (s)	34.0	34.0		34.0	34.0		51.0	51.0		12.0	63.0		24.0
Total Split (%)	28.1%	28.1%		28.1%	28.1%		42.1%	42.1%		9.9%	52.1%		20%
Maximum Green (s)	29.0	29.0		29.0	29.0		45.0	45.0		7.0	57.0		20.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0		4.0
All-Red Time (s)	1.0	1.0		1.0	1.0		2.0	2.0		1.0	2.0		0.0
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0		
Total Lost Time (s)		5.0			5.0			6.0		5.0	6.0		
Lead/Lag							Lag	Lag		Lead			
Lead-Lag Optimize?							Yes	Yes		Yes			
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		3.0	2.0		2.0
Recall Mode	None	None		None	None		Min	Min		None	Min		None
Walk Time (s)													7.0
Flash Dont Walk (s)													12.0
Pedestrian Calls (#/hr)													2
Act Effct Green (s)					29.2			47.9		58.4	57.4		
Actuated g/C Ratio		0.29			0.29			0.47		0.57	0.56		
v/c Ratio		1.00			1.71			0.81		0.18	1.88		
Control Delay		83.8			365.9			34.9		12.5	426.6		
Queue Delay		0.0			0.0			0.0		0.0	0.0		
Total Delay		83.8			365.9			34.9		12.5	426.6		
LOS		F			F			C		B	F		
Approach Delay		83.8			365.9			34.9			398.3		
Approach LOS		F			F			C			F		
Queue Length 50th (ft)		239			~350			179		18	~943		
Queue Length 95th (ft)		#520			#668			#407		58	#1515		
Internal Link Dist (ft)		1184			988			1254			1039		
Turn Bay Length (ft)													
Base Capacity (vph)		395			227			810		417	535		
Starvation Cap Reductn		0			0			0		0	0		
Spillback Cap Reductn		0			0			0		0	0		
Storage Cap Reductn		0			0			0		0	0		
Reduced v/c Ratio		1.00			1.71			0.81		0.18	1.88		

Intersection Summary

Area Type: Other

Cycle Length: 121

Actuated Cycle Length: 101.6

Natural Cycle: 150

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.88

Intersection Signal Delay: 249.2

Intersection LOS: F

Intersection Capacity Utilization 156.1%

ICU Level of Service H

Analysis Period (min) 15

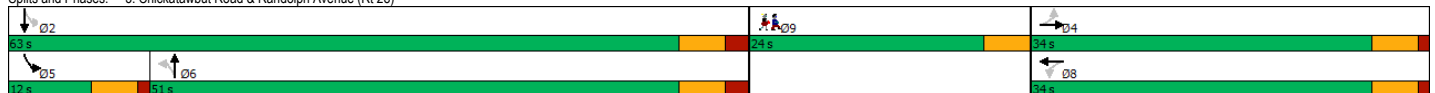
- Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: Chickatawbut Road & Randolph Avenue (Rt 28)



	↖	→	↗	↖	←	↗	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔		↔		
Traffic Volume (vph)	51	105	180	239	65	69	23	618	12	73	980	8
Future Volume (vph)	51	105	180	239	65	69	23	618	12	73	980	8
Ideal Flow (vphpl)	1900	1600	1900	1900	1900	1900	1900	1400	1900	1900	1000	1900
Lane Width	12	13	12	12	14	12	12	11	12	12	11	12
Total Lost time (s)		5.0			5.0			6.0		5.0	6.0	
Lane Util. Factor		1.00			1.00			0.95		1.00	1.00	
Frt		0.93			0.98			1.00		1.00	1.00	
Flt Protected		0.99			0.97			1.00		0.95	1.00	
Satd. Flow (prot)		1506			1915			2512		1805	947	
Flt Permitted		0.91			0.40			0.68		0.30	1.00	
Satd. Flow (perm)		1377			792			1717		578	947	
Peak-hour factor, PHF	0.85	0.85	0.85	0.96	0.96	0.96	0.99	0.99	0.99	0.98	0.98	0.98
Adj. Flow (vph)	60	124	212	249	68	72	23	624	12	74	1000	8
RTOR Reduction (vph)	0	0	0	0	0	0	0	1	0	0	0	0
Lane Group Flow (vph)	0	396	0	0	389	0	0	658	0	74	1008	0
Heavy Vehicles (%)	0%	0%	2%	0%	0%	0%	0%	2%	0%	0%	2%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		4			8			6		5	2	
Permitted Phases	4			8			6			2		
Actuated Green, G (s)		29.2			29.2			47.9		58.4	58.4	
Effective Green, g (s)		29.2			29.2			47.9		58.4	58.4	
Actuated g/C Ratio		0.28			0.28			0.45		0.55	0.55	
Clearance Time (s)		5.0			5.0			6.0		5.0	6.0	
Vehicle Extension (s)		2.0			2.0			2.0		3.0	2.0	
Lane Grp Cap (vph)		380			218			777		382	522	
v/s Ratio Prot										0.01	c1.06	
v/s Ratio Perm		0.29			c0.49			0.38		0.10		
v/c Ratio		1.04			1.78			0.85		0.19	1.93	
Uniform Delay, d1		38.3			38.3			25.7		11.9	23.7	
Progression Factor		1.00			1.00			1.00		1.00	1.00	
Incremental Delay, d2		57.5			370.9			8.1		0.2	426.0	
Delay (s)		95.8			409.2			33.8		12.2	449.7	
Level of Service		F			F			C		B	F	
Approach Delay (s)		95.8			409.2			33.8			419.8	
Approach LOS		F			F			C			F	
Intersection Summary												
HCM 2000 Control Delay		266.7								F		
HCM 2000 Volume to Capacity ratio		1.92										
Actuated Cycle Length (s)		105.8						20.0				
Intersection Capacity Utilization		156.1%								H		
Analysis Period (min)		15										
c Critical Lane Group												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø9
Lane Configurations		↔			↔			↔			↔		
Traffic Volume (vph)	23	99	39	59	111	118	44	751	55	97	575	35	
Future Volume (vph)	23	99	39	59	111	118	44	751	55	97	575	35	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	14	12	12	14	12	12	11	12	12	11	12	
Storage Length (ft)	0		0	0		0	330		0	0		0	
Storage Lanes	0		0	0		0	1		0	0		0	
Taper Length (ft)	25			25			25			25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95	
Frt		0.967			0.945			0.990			0.993		
Flt Protected		0.993			0.990			0.997			0.993		
Satd. Flow (prot)	0	1946	0	0	1896	0	0	3444	0	0	3413	0	
Flt Permitted		0.930			0.901			0.880			0.660		
Satd. Flow (perm)	0	1823	0	0	1726	0	0	3040	0	0	2269	0	
Right Turn on Red			No			No		Yes			Yes		
Satd. Flow (RTOR)							8			5			
Link Speed (mph)		35			30			40			40		
Link Distance (ft)		1264			1068			1334			1119		
Travel Time (s)		24.6			24.3			22.7			19.1		
Peak Hour Factor	0.98	0.98	0.98	0.95	0.95	0.95	0.99	0.99	0.99	0.98	0.98	0.98	
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	
Adj. Flow (vph)	23	101	40	62	117	124	44	759	56	99	587	36	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	164	0	0	303	0	0	859	0	0	722	0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA		
Protected Phases		4			8		1	6			2		9
Permitted Phases	4			8			6			2			
Detector Phase	4	4		8	8		1	6		2	2		
Switch Phase													
Minimum Initial (s)	8.0	8.0		8.0	8.0		6.0	12.0		12.0	12.0		5.0
Minimum Split (s)	13.0	13.0		13.0	13.0		11.0	18.0		18.0	18.0		23.0
Total Split (s)	33.0	33.0		33.0	33.0		15.0	65.0		50.0	50.0		23.0
Total Split (%)	27.3%	27.3%		27.3%	27.3%		12.4%	53.7%		41.3%	41.3%		19%
Maximum Green (s)	28.0	28.0		28.0	28.0		10.0	59.0		44.0	44.0		19.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0		4.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	2.0		2.0	2.0		0.0
Lost Time Adjust (s)		0.0			0.0			0.0			0.0		
Total Lost Time (s)		5.0			5.0			6.0			6.0		
Lead/Lag							Lead			Lag	Lag		
Lead-Lag Optimize?							Yes			Yes	Yes		
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0		2.0
Recall Mode	None	None		None	None		None	Min		Min	Min		None
Walk Time (s)													7.0
Flash Dont Walk (s)													12.0
Pedestrian Calls (#/hr)													3
Act Effct Green (s)		18.9			18.9			26.0			26.0		
Actuated g/C Ratio		0.31			0.31			0.43			0.43		
v/c Ratio		0.29			0.56			0.65			0.73		
Control Delay		21.5			25.6			17.4			20.9		
Queue Delay		0.0			0.0			0.0			0.0		
Total Delay		21.5			25.6			17.4			20.9		
LOS		C			C			B			C		
Approach Delay		21.5			25.6			17.4			20.9		
Approach LOS		C			C			B			C		
Queue Length 50th (ft)		37			75			98			87		
Queue Length 95th (ft)		153			285			313			292		
Internal Link Dist (ft)		1184			988			1254			1039		
Turn Bay Length (ft)													
Base Capacity (vph)		973			921			2758			1806		
Starvation Cap Reductn		0			0			0			0		
Spillback Cap Reductn		0			0			0			0		
Storage Cap Reductn		0			0			0			0		
Reduced v/c Ratio		0.17			0.33			0.31			0.40		

Intersection Summary

Area Type: Other

Cycle Length: 121

Actuated Cycle Length: 60.1

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 20.2

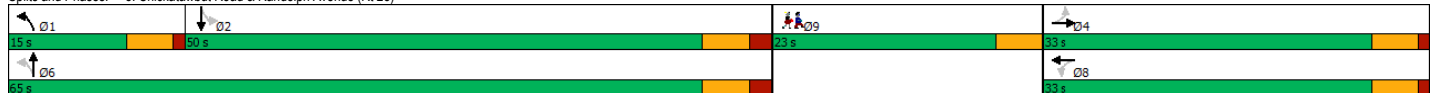
Intersection LOS: C

Intersection Capacity Utilization 82.7%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 3: Chickatawbut Road & Randolph Avenue (Rt 28)



	↖	→	↗	↖	←	↗	↖	↑	↗	↖	↓	↗
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (vph)	23	99	39	59	111	118	44	751	55	97	575	35
Future Volume (vph)	23	99	39	59	111	118	44	751	55	97	575	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	14	12	12	14	12	12	11	12	12	11	12
Total Lost time (s)		5.0			5.0			6.0			6.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		0.97			0.94			0.99			0.99	
Flt Protected		0.99			0.99			1.00			0.99	
Satd. Flow (prot)		1946			1895			3447			3412	
Flt Permitted		0.93			0.90			0.88			0.66	
Satd. Flow (perm)		1824			1726			3042			2267	
Peak-hour factor, PHF	0.98	0.98	0.98	0.95	0.95	0.95	0.99	0.99	0.98	0.98	0.98	0.98
Adj. Flow (vph)	23	101	40	62	117	124	44	759	56	99	587	36
RTOR Reduction (vph)	0	0	0	0	0	0	0	5	0	0	3	0
Lane Group Flow (vph)	0	164	0	0	303	0	0	854	0	0	719	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		4			8		1	6			2	
Permitted Phases	4			8			6			2		
Actuated Green, G (s)		18.9			18.9			26.0			26.0	
Effective Green, g (s)		18.9			18.9			26.0			26.0	
Actuated g/C Ratio		0.30			0.30			0.42			0.42	
Clearance Time (s)		5.0			5.0			6.0			6.0	
Vehicle Extension (s)		2.0			2.0			2.0			2.0	
Lane Grp Cap (vph)		556			526			1275			950	
v/s Ratio Prot												
v/s Ratio Perm		0.09			c0.18			0.28			c0.32	
v/c Ratio		0.29			0.58			0.67			0.76	
Uniform Delay, d1		16.5			18.2			14.5			15.3	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.1			1.0			1.1			3.1	
Delay (s)		16.6			19.1			15.6			18.4	
Level of Service		B			B			B			B	
Approach Delay (s)		16.6			19.1			15.6			18.4	
Approach LOS		B			B			B			B	
Intersection Summary												
HCM 2000 Control Delay			17.2			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.73									
Actuated Cycle Length (s)			62.0			Sum of lost time (s)				20.0		
Intersection Capacity Utilization			82.7%			ICU Level of Service				E		
Analysis Period (min)			15									
c Critical Lane Group												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø9
Lane Configurations		↔			↔			↔		↔			
Traffic Volume (vph)	45	85	91	21	205	144	202	1231	37	65	585	30	
Future Volume (vph)	45	85	91	21	205	144	202	1231	37	65	585	30	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	14	12	12	14	12	12	11	12	12	11	12	
Grade (%)		0%			0%			0%			0%		
Storage Length (ft)	0		0	0		0	330		0	0		0	
Storage Lanes	0		0	0		0	1		0	1		0	
Taper Length (ft)	25			25			25			25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	
Ped Bike Factor													
Frt		0.944			0.947			0.996			0.993		
Flt Protected		0.990			0.997			0.993		0.950			
Satd. Flow (prot)	0	1894	0	0	1903	0	0	3423	0	1805	1790	0	
Flt Permitted		0.685			0.973			0.622		0.067			
Satd. Flow (perm)	0	1311	0	0	1857	0	0	2144	0	127	1790	0	
Right Turn on Red			No			No		Yes			Yes		
Satd. Flow (RTOR)								3			2		
Link Speed (mph)		35			30			40			40		
Link Distance (ft)		1264			1068			1334			1119		
Travel Time (s)		24.6			24.3			22.7			19.1		
Confl. Peds. (#/hr)													
Confl. Bikes (#/hr)													
Peak Hour Factor	0.85	0.85	0.85	0.93	0.93	0.93	0.92	0.92	0.92	0.94	0.94	0.94	
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	1%	0%	0%	2%	0%	
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0	
Parking (#/hr)													
Mid-Block Traffic (%)		0%			0%			0%			0%		
Adj. Flow (vph)	53	100	107	23	220	155	220	1338	40	69	622	32	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	260	0	0	398	0	0	1598	0	69	654	0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA		
Protected Phases		4			8		1	6			2		9
Permitted Phases	4			8			6			2			
Detector Phase	4	4		8	8		1	6		2	2		
Switch Phase													
Minimum Initial (s)	8.0	8.0		8.0	8.0		6.0	12.0		12.0	12.0		5.0
Minimum Split (s)	13.0	13.0		13.0	13.0		11.0	18.0		18.0	18.0		23.0
Total Split (s)	33.0	33.0		33.0	33.0		15.0	65.0		50.0	50.0		23.0
Total Split (%)	27.3%	27.3%		27.3%	27.3%		12.4%	53.7%		41.3%	41.3%		19%
Maximum Green (s)	28.0	28.0		28.0	28.0		10.0	59.0		44.0	44.0		19.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0		4.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	2.0		2.0	2.0		0.0
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0		
Total Lost Time (s)		5.0			5.0			6.0		6.0	6.0		
Lead/Lag							Lead			Lag	Lag		
Lead-Lag Optimize?							Yes			Yes	Yes		
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0		2.0
Minimum Gap (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0		2.0
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Recall Mode	None	None		None	None		None	Min		Min	Min		None
Walk Time (s)													7.0
Flash Dont Walk (s)													12.0
Pedestrian Calls (#/hr)													3
Act Effct Green (s)		28.2			28.2			59.4		59.4	59.4		
Actuated g/C Ratio		0.27			0.27			0.58		0.58	0.58		
v/c Ratio		0.72			0.78			1.29		0.95	0.63		
Control Delay		48.0			47.6			158.4		120.8	19.4		
Queue Delay		0.0			0.0			0.0		0.0	0.0		
Total Delay		48.0			47.6			158.4		120.8	19.4		
LOS		D			D			F		F	B		
Approach Delay		48.0			47.6			158.4			29.0		
Approach LOS		D			D			F			C		
Queue Length 50th (ft)		144			225			-658			235		
Queue Length 95th (ft)		#313			#494			#1068		#114	555		
Internal Link Dist (ft)		1184			988			1254			1039		
Turn Bay Length (ft)													
Base Capacity (vph)		360			510			1242		73	1037		
Starvation Cap Reductn		0			0			0		0	0		
Spillback Cap Reductn		0			0			0		0	0		
Storage Cap Reductn		0			0			0		0	0		
Reduced v/c Ratio		0.72			0.78			1.29		0.95	0.63		

Intersection Summary	
Area Type:	Other
Cycle Length: 121	
Actuated Cycle Length: 102.6	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.29	
Intersection Signal Delay: 102.6	Intersection LOS: F
Intersection Capacity Utilization 114.9%	ICU Level of Service H
Analysis Period (min) 15	
~ Volume exceeds capacity, queue is theoretically infinite.	
Queue shown is maximum after two cycles.	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

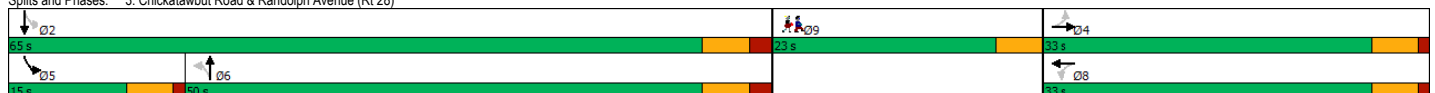
Splits and Phases: 3: Chickatawbut Road & Randolph Avenue (Rt 28)

Ø1	Ø2	Ø3	Ø4
15 s	50 s	23 s	33 s
Ø5	Ø6	Ø7	Ø8
15 s			12 s

	↖	→	↗	↖	→	↗	↖	→	↗	↖	→	↗
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔		↔		
Traffic Volume (vph)	45	85	91	21	205	144	202	1231	37	65	585	30
Future Volume (vph)	45	85	91	21	205	144	202	1231	37	65	585	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	14	12	12	14	12	12	11	12	12	11	12
Total Lost time (s)		5.0			5.0			6.0		6.0		6.0
Lane Util. Factor		1.00			1.00			0.95		1.00		1.00
Frt		0.94			0.95			1.00		1.00		0.99
Flt Protected		0.99			1.00			0.99		0.95		1.00
Satd. Flow (prot)		1895			1904			3424		1805		1789
Flt Permitted		0.68			0.97			0.62		0.07		1.00
Satd. Flow (perm)		1311			1859			2145		128		1789
Peak-hour factor, PHF	0.85	0.85	0.85	0.93	0.93	0.92	0.92	0.92	0.94	0.94	0.94	0.94
Adj. Flow (vph)	53	100	107	23	220	155	220	1338	40	69	622	32
RTOR Reduction (vph)	0	0	0	0	0	0	0	1	0	0	1	0
Lane Group Flow (vph)	0	260	0	0	398	0	0	1597	0	69	653	0
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	0%	1%	0%	0%	2%	0%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		4			8		1	6			2	
Permitted Phases	4			8			6			2		
Actuated Green, G (s)		28.2			28.2			59.4		59.4		59.4
Effective Green, g (s)		28.2			28.2			59.4		59.4		59.4
Actuated g/C Ratio		0.27			0.27			0.56		0.56		0.56
Clearance Time (s)		5.0			5.0			6.0		6.0		6.0
Vehicle Extension (s)		2.0			2.0			2.0		2.0		2.0
Lane Grp Cap (vph)		349			495			1204		71		1004
v/s Ratio Prot												0.37
v/s Ratio Perm		0.20			c0.21			c0.74		0.54		
v/c Ratio		0.74			0.80			1.33		0.97		0.65
Uniform Delay, d1		35.5			36.2			23.2		22.4		16.0
Progression Factor		1.00			1.00			1.00		1.00		1.00
Incremental Delay, d2		7.4			8.7			152.6		96.3		1.2
Delay (s)		42.9			44.9			175.8		118.7		17.2
Level of Service		D			D			F		F		B
Approach Delay (s)		42.9			44.9			175.8				26.9
Approach LOS		D			D			F				C
Intersection Summary												
HCM 2000 Control Delay		110.6								F		
HCM 2000 Volume to Capacity ratio		1.18										
Actuated Cycle Length (s)		105.8						20.0				
Intersection Capacity Utilization		114.9%								H		
Analysis Period (min)		15										
c Critical Lane Group												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø9
Lane Configurations		↕			↕			↕↔		↕	↕		
Traffic Volume (vph)	52	108	185	244	67	71	24	632	12	75	1003	8	
Future Volume (vph)	52	108	185	244	67	71	24	632	12	75	1003	8	
Ideal Flow (vphpl)	1900	1600	1900	1900	1900	1900	1900	1400	1900	1900	1000	1900	
Lane Width (ft)	12	13	12	12	14	12	12	11	12	12	11	12	
Storage Length (ft)	0		0	0		0	330		0	0		0	
Storage Lanes	0		0	0		0	1		0	1		0	
Taper Length (ft)	25			25			25			25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	
Frt		0.928			0.975			0.997			0.999		
Flt Protected		0.992			0.969			0.998		0.950			
Satd. Flow (prot)	0	1506	0	0	1915	0	0	2511	0	1805	947	0	
Flt Permitted		0.909			0.404			0.678		0.300			
Satd. Flow (perm)	0	1380	0	0	798	0	0	1706	0	570	947	0	
Right Turn on Red			No			No			Yes			Yes	
Satd. Flow (RTOR)								2					
Link Speed (mph)		35			30			40			40		
Link Distance (ft)		1264			1068			1334			1119		
Travel Time (s)		24.6			24.3			22.7			19.1		
Peak Hour Factor	0.92	0.92	0.92	0.96	0.96	0.96	0.99	0.99	0.99	0.98	0.98	0.98	
Heavy Vehicles (%)	0%	0%	2%	0%	0%	0%	0%	2%	0%	0%	2%	0%	
Adj. Flow (vph)	57	117	201	254	70	74	24	638	12	77	1023	8	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	375	0	0	398	0	0	674	0	77	1031	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA		
Protected Phases		4			8			6		5	2		9
Permitted Phases	4			8			6			2			
Detector Phase	4	4		8	8		6	6		5	2		
Switch Phase													
Minimum Initial (s)	8.0	8.0		8.0	8.0		12.0	12.0		6.0	12.0		5.0
Minimum Split (s)	13.0	13.0		13.0	13.0		18.0	18.0		11.0	18.0		23.0
Total Split (s)	33.0	33.0		33.0	33.0		50.0	50.0		15.0	65.0		23.0
Total Split (%)	27.3%	27.3%		27.3%	27.3%		41.3%	41.3%		12.4%	53.7%		19%
Maximum Green (s)	28.0	28.0		28.0	28.0		44.0	44.0		10.0	59.0		19.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0		4.0
All-Red Time (s)	1.0	1.0		1.0	1.0		2.0	2.0		1.0	2.0		0.0
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0		
Total Lost Time (s)		5.0			5.0			6.0		5.0	6.0		
Lead/Lag							Lag	Lag		Lead			
Lead-Lag Optimize?							Yes	Yes		Yes			
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		3.0	2.0		2.0
Recall Mode	None	None		None	None		Min	Min		None	Min		None
Walk Time (s)													7.0
Flash Dont Walk (s)													12.0
Pedestrian Calls (#/hr)													2
Act Effct Green (s)		28.2			28.2			49.3		60.4	59.4		
Actuated g/C Ratio		0.27			0.27			0.48		0.59	0.58		
v/c Ratio		0.99			1.82			0.82		0.18	1.88		
Control Delay		82.6			410.5			35.4		11.9	424.1		
Queue Delay		0.0			0.0			0.0		0.0	0.0		
Total Delay		82.6			410.5			35.4		11.9	424.1		
LOS		F			F			D		B	F		
Approach Delay		82.6			410.5			35.4			395.5		
Approach LOS		F			F			D			F		
Queue Length 50th (ft)		229			~371			183		18	~974		
Queue Length 95th (ft)		#544			#694			#434		58	#1554		
Internal Link Dist (ft)		1184			988			1254			1039		
Turn Bay Length (ft)													
Base Capacity (vph)		379			219			820		457	548		
Starvation Cap Reductn		0			0			0		0	0		
Spillback Cap Reductn		0			0			0		0	0		
Storage Cap Reductn		0			0			0		0	0		
Reduced v/c Ratio		0.99			1.82			0.82		0.17	1.88		
Intersection Summary													
Area Type:	Other												
Cycle Length:	121												
Actuated Cycle Length:	102.6												
Natural Cycle:	150												
Control Type:	Actuated-Uncoordinated												
Maximum v/c Ratio:	1.88												
Intersection Signal Delay:	256.9						Intersection LOS: F						
Intersection Capacity Utilization	159.5%						ICU Level of Service H						
Analysis Period (min)	15												
~ Volume exceeds capacity, queue is theoretically infinite.													
Queue shown is maximum after two cycles.													
# 95th percentile volume exceeds capacity, queue may be longer.													
Queue shown is maximum after two cycles.													

Splits and Phases: 3: Chickatawbut Road & Randolph Avenue (Rt 28)



	↖	→	↗	↖	←	↗	↖	↑	↗	↖	↓	↗
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔		↔		
Traffic Volume (vph)	52	108	185	244	67	71	24	632	12	75	1003	8
Future Volume (vph)	52	108	185	244	67	71	24	632	12	75	1003	8
Ideal Flow (vphpl)	1900	1600	1900	1900	1900	1900	1900	1400	1900	1900	1000	1900
Lane Width	12	13	12	12	14	12	12	11	12	12	11	12
Total Lost time (s)		5.0			5.0			6.0		5.0	6.0	
Lane Util. Factor		1.00			1.00			0.95		1.00	1.00	
Frt		0.93			0.97			1.00		1.00	1.00	
Flt Protected		0.99			0.97			1.00		0.95	1.00	
Satd. Flow (prot)		1506			1915			2512		1805	947	
Flt Permitted		0.91			0.40			0.68		0.30	1.00	
Satd. Flow (perm)		1380			799			1706		570	947	
Peak-hour factor, PHF	0.92	0.92	0.92	0.96	0.96	0.99	0.99	0.99	0.99	0.98	0.98	0.98
Adj. Flow (vph)	57	117	201	254	70	74	24	638	12	77	1023	8
RTOR Reduction (vph)	0	0	0	0	0	0	0	1	0	0	0	0
Lane Group Flow (vph)	0	375	0	0	398	0	0	673	0	77	1031	0
Heavy Vehicles (%)	0%	0%	2%	0%	0%	0%	0%	2%	0%	0%	2%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		4			8			6		5	2	
Permitted Phases	4			8			6			2		
Actuated Green, G (s)		28.2			28.2			49.3		60.5	60.5	
Effective Green, g (s)		28.2			28.2			49.3		60.5	60.5	
Actuated g/C Ratio		0.26			0.26			0.46		0.57	0.57	
Clearance Time (s)		5.0			5.0			6.0		5.0	6.0	
Vehicle Extension (s)		2.0			2.0			2.0		3.0	2.0	
Lane Grp Cap (vph)		364			210			786		394	535	
v/s Ratio Prot										0.01	c1.09	
v/s Ratio Perm		0.27			c0.50			0.39		0.10		
v/c Ratio		1.03			1.90			0.86		0.20	1.93	
Uniform Delay, d1		39.4			39.4			25.6		11.4	23.2	
Progression Factor		1.00			1.00			1.00		1.00	1.00	
Incremental Delay, d2		55.2			420.3			8.8		0.2	424.1	
Delay (s)		94.5			459.6			34.4		11.7	447.3	
Level of Service		F			F			C		B	F	
Approach Delay (s)		94.5			459.6			34.4			417.0	
Approach LOS		F			F			C			F	
Intersection Summary												
HCM 2000 Control Delay		275.4								F		
HCM 2000 Volume to Capacity ratio		1.95										
Actuated Cycle Length (s)		106.9						20.0				
Intersection Capacity Utilization		159.5%								H		
Analysis Period (min)		15										
c Critical Lane Group												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø9
Lane Configurations		↔			↔			↔			↔		
Traffic Volume (vph)	24	101	40	61	113	121	45	768	57	99	589	36	
Future Volume (vph)	24	101	40	61	113	121	45	768	57	99	589	36	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	14	12	12	14	12	12	11	12	12	11	12	
Storage Length (ft)	0		0	0		0	0		450	0		0	
Storage Lanes	0		0	0		0	0		1	0		0	
Taper Length (ft)	25			25			25			25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95	
Frt		0.967			0.945			0.990			0.992		
Flt Protected		0.993			0.990			0.997			0.993		
Satd. Flow (prot)	0	1946	0	0	1896	0	0	3444	0	0	3410	0	
Flt Permitted		0.929			0.899			0.878			0.657		
Satd. Flow (perm)	0	1821	0	0	1722	0	0	3033	0	0	2256	0	
Right Turn on Red			No			No		Yes			Yes		
Satd. Flow (RTOR)							8			5			
Link Speed (mph)		35			30			40			40		
Link Distance (ft)		1264			1068			1334			1119		
Travel Time (s)		24.6			24.3			22.7			19.1		
Peak Hour Factor	0.98	0.98	0.98	0.95	0.95	0.95	0.99	0.99	0.99	0.98	0.98	0.98	
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	
Adj. Flow (vph)	24	103	41	64	119	127	45	776	58	101	601	37	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	168	0	0	310	0	0	879	0	0	739	0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA		
Protected Phases		4			8		1	6			2		9
Permitted Phases	4			8			6			2			
Detector Phase	4	4		8	8		1	6		2	2		
Switch Phase													
Minimum Initial (s)	8.0	8.0		8.0	8.0		6.0	12.0		12.0	12.0		5.0
Minimum Split (s)	13.0	13.0		13.0	13.0		11.0	18.0		18.0	18.0		22.0
Total Split (s)	33.0	33.0		33.0	33.0		15.0	65.0		50.0	50.0		22.0
Total Split (%)	27.5%	27.5%		27.5%	27.5%		12.5%	54.2%		41.7%	41.7%		18%
Maximum Green (s)	28.0	28.0		28.0	28.0		10.0	59.0		44.0	44.0		19.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0		3.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	2.0		2.0	2.0		0.0
Lost Time Adjust (s)		0.0			0.0			0.0			0.0		
Total Lost Time (s)		5.0			5.0			6.0			6.0		
Lead/Lag							Lead			Lag	Lag		
Lead-Lag Optimize?							Yes			Yes	Yes		
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0		2.0
Recall Mode	None	None		None	None		None	Min		Min	Min		None
Walk Time (s)													7.0
Flash Dont Walk (s)													12.0
Pedestrian Calls (#/hr)													3
Act Effct Green (s)		19.5			19.5			27.3			27.3		
Actuated g/C Ratio		0.32			0.32			0.44			0.44		
v/c Ratio		0.29			0.57			0.65			0.74		
Control Delay		21.9			26.3			17.5			21.2		
Queue Delay		0.0			0.0			0.0			0.0		
Total Delay		21.9			26.3			17.5			21.2		
LOS		C			C			B			C		
Approach Delay		21.9			26.3			17.5			21.2		
Approach LOS		C			C			B			C		
Queue Length 50th (ft)		40			81			106			95		
Queue Length 95th (ft)		157			292			317			298		
Internal Link Dist (ft)		1184			988			1254			1039		
Turn Bay Length (ft)													
Base Capacity (vph)		936			885			2728			1752		
Starvation Cap Reductn		0			0			0			0		
Spillback Cap Reductn		0			0			0			0		
Storage Cap Reductn		0			0			0			0		
Reduced v/c Ratio		0.18			0.35			0.32			0.42		

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 61.8

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 20.4

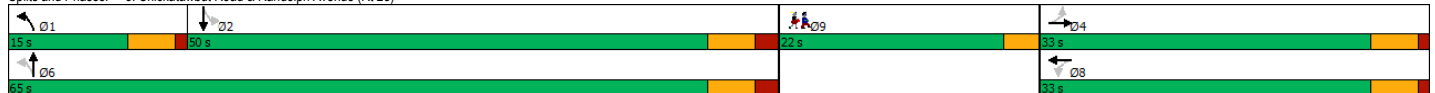
Intersection LOS: C

Intersection Capacity Utilization 84.2%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 3: Chickatawbut Road & Randolph Avenue (Rt 28)



	↖	→	↗	↖	←	↗	↖	↑	↗	↖	↓	↗
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (vph)	24	101	40	61	113	121	45	768	57	99	589	36
Future Volume (vph)	24	101	40	61	113	121	45	768	57	99	589	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	14	12	12	14	12	12	11	12	12	11	12
Total Lost time (s)		5.0			5.0			6.0			6.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		0.97			0.94			0.99			0.99	
Flt Protected		0.99			0.99			1.00			0.99	
Satd. Flow (prot)		1946			1895			3446			3412	
Flt Permitted		0.93			0.90			0.88			0.66	
Satd. Flow (perm)		1821			1722			3034			2257	
Peak-hour factor, PHF	0.98	0.98	0.98	0.95	0.95	0.95	0.99	0.99	0.98	0.98	0.98	0.98
Adj. Flow (vph)	24	103	41	64	119	127	45	776	58	101	601	37
RTOR Reduction (vph)	0	0	0	0	0	0	0	5	0	0	3	0
Lane Group Flow (vph)	0	168	0	0	310	0	0	874	0	0	736	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		4			8		1	6			2	
Permitted Phases	4			8			6			2		
Actuated Green, G (s)		19.5			19.5			27.3			27.3	
Effective Green, g (s)		19.5			19.5			27.3			27.3	
Actuated g/C Ratio		0.31			0.31			0.43			0.43	
Clearance Time (s)		5.0			5.0			6.0			6.0	
Vehicle Extension (s)		2.0			2.0			2.0			2.0	
Lane Grp Cap (vph)		563			533			1314			978	
v/s Ratio Prot												
v/s Ratio Perm		0.09			c0.18			0.29			c0.33	
v/c Ratio		0.30			0.58			0.67			0.75	
Uniform Delay, d1		16.5			18.3			14.2			15.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.1			1.0			1.0			2.9	
Delay (s)		16.7			19.4			15.2			18.0	
Level of Service		B			B			B			B	
Approach Delay (s)		16.7			19.4			15.2			18.0	
Approach LOS		B			B			B			B	
Intersection Summary												
HCM 2000 Control Delay		16.9			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.72										
Actuated Cycle Length (s)		63.0			Sum of lost time (s)			19.0				
Intersection Capacity Utilization		84.2%			ICU Level of Service			E				
Analysis Period (min)		15										
c Critical Lane Group												

MOVEMENT SUMMARY

 **Site: 101 [Route 28 at Chickatawbut Rd - FUTURE AM]**

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Route 28												
3	L2	220	0.0	0.707	14.0	LOS B	11.6	291.6	0.77	0.73	1.07	29.9
8	T1	1339	1.3	0.707	14.0	LOS B	11.6	291.6	0.77	0.73	1.06	30.3
18	R2	40	0.0	0.707	14.0	LOS B	11.5	291.0	0.77	0.73	1.06	29.7
Approach		1599	1.1	0.707	14.0	LOS B	11.6	291.6	0.77	0.73	1.06	30.2
East: Chickatawbut Rd												
1	L2	23	0.0	1.666	353.8	LOS F	58.3	1459.6	1.00	3.95	10.15	5.3
6	T1	220	0.5	1.666	353.9	LOS F	58.3	1459.6	1.00	3.95	10.15	5.2
16	R2	155	0.0	1.666	353.8	LOS F	58.3	1459.6	1.00	3.95	10.15	5.2
Approach		398	0.3	1.666	353.9	LOS F	58.3	1459.6	1.00	3.95	10.15	5.2
North: Route 28												
7	L2	69	0.0	0.474	9.4	LOS A	3.1	79.6	0.65	0.61	0.73	32.1
4	T1	622	2.0	0.474	8.4	LOS A	3.1	79.6	0.61	0.55	0.66	32.7
14	R2	32	0.0	0.287	6.7	LOS A	1.4	36.0	0.55	0.46	0.55	32.8
Approach		723	1.7	0.474	8.5	LOS A	3.1	79.6	0.61	0.55	0.66	32.7
West: Chickatawbut Rd												
5	L2	49	0.0	0.347	9.7	LOS A	1.7	42.0	0.69	0.72	0.77	26.5
2	T1	92	0.0	0.347	9.7	LOS A	1.7	42.0	0.69	0.72	0.77	26.3
12	R2	99	0.0	0.347	9.7	LOS A	1.7	42.0	0.69	0.72	0.77	25.8
Approach		240	0.0	0.347	9.7	LOS A	1.7	42.0	0.69	0.72	0.77	26.1
All Vehicles		2960	1.0	1.666	58.0	LOS F	58.3	1459.6	0.76	1.12	2.16	18.5

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).

Roundabout Capacity Model: US HCM 6.

HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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LANE LEVEL OF SERVICE

Lane Level of Service



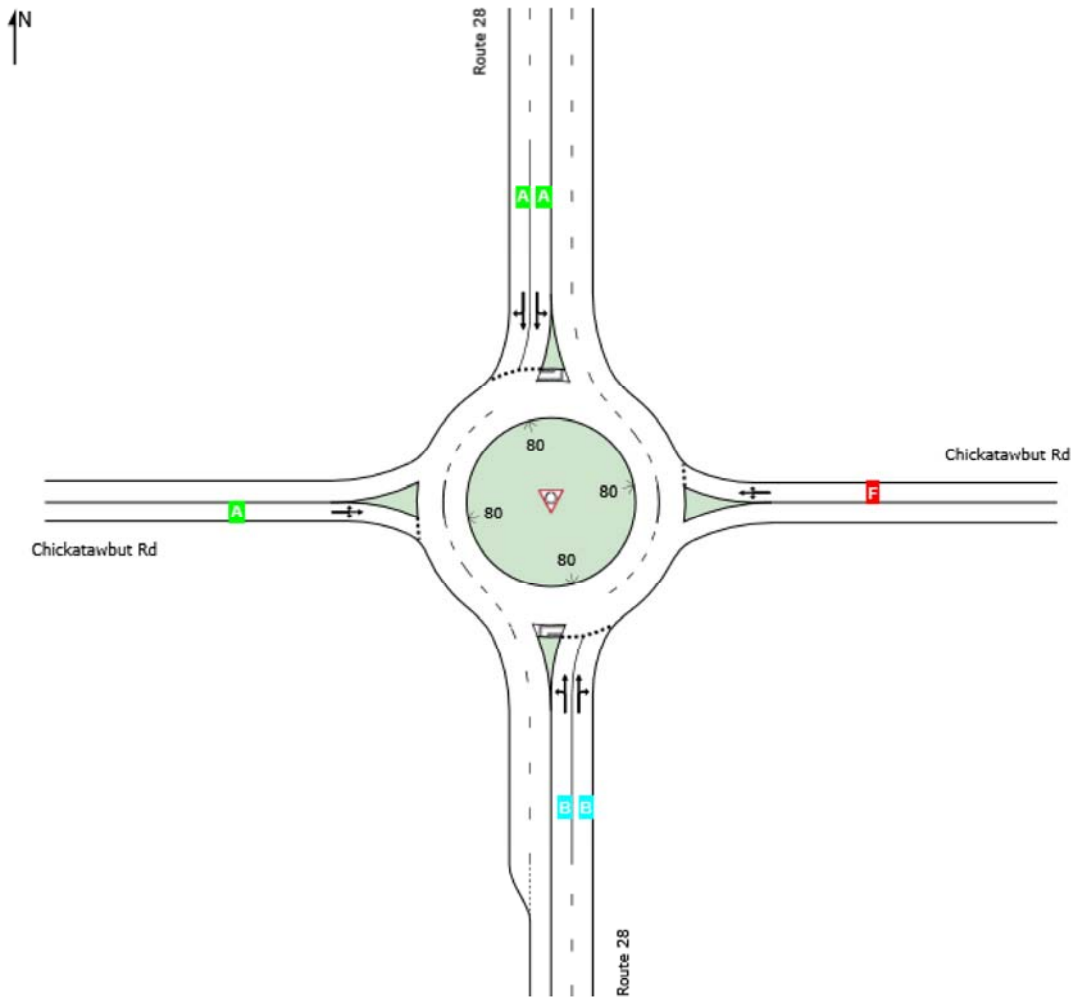
Site: 101 [Route 28 at Chickatawbut Rd - FUTURE AM]

New Site

Site Category: (None)

Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	B	F	A	A	F



Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if $v/c > 1$ irrespective of lane delay value (does not apply for approaches and intersection).

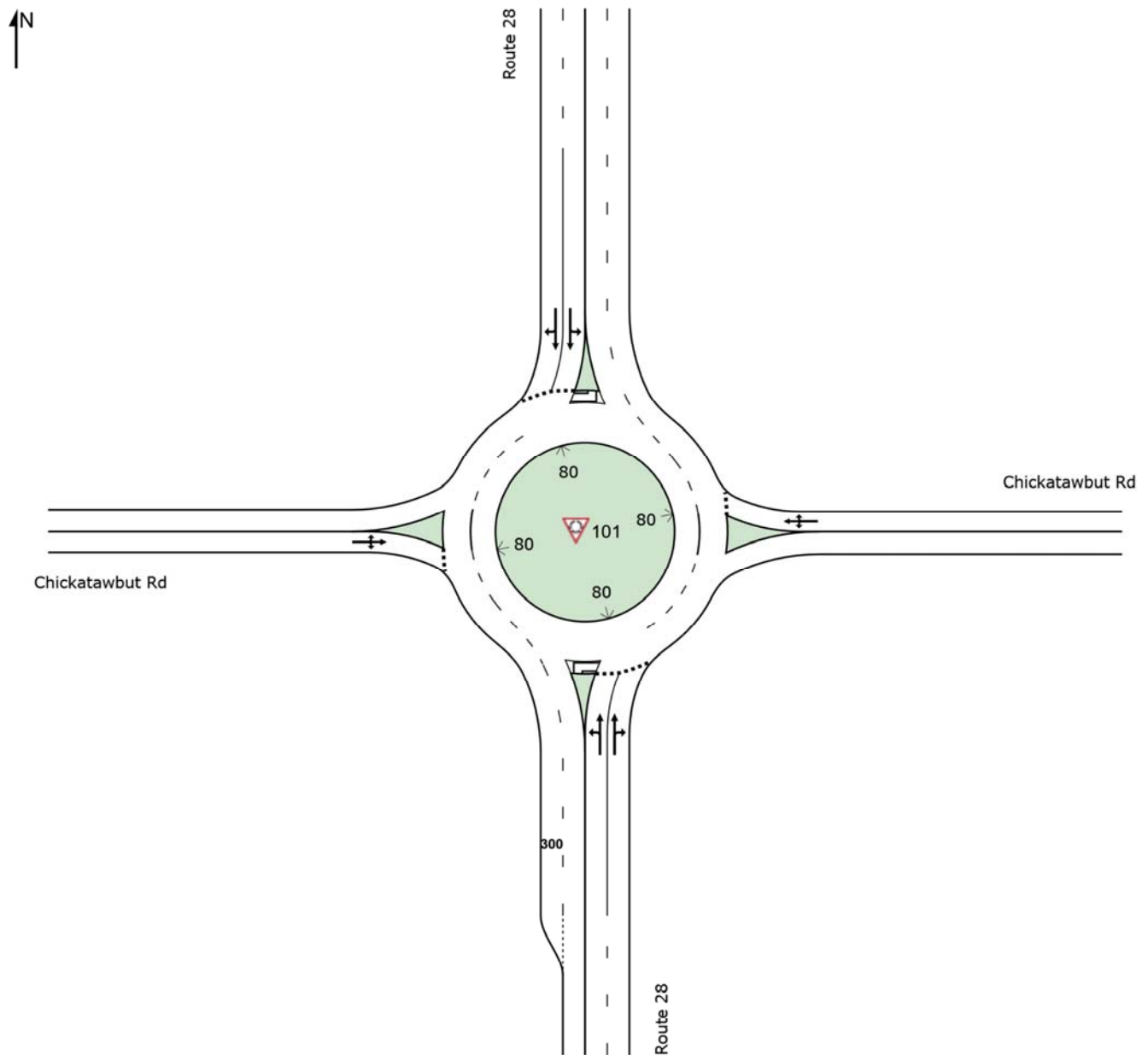
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).

HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

SITE LAYOUT

 **Site: 101 [Route 28 at Chickatawbut Rd - FUTURE AM]**

New Site
Site Category: (None)
Roundabout



LANE SUMMARY

 Site: 101 [Route 28 at Chickatawbut Rd - FUTURE AM]

New Site
Site Category: (None)
Roundabout

Lane Use and Performance													
	Demand Total veh/h	Flows HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Veh	Queue Dist ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Route 28													
Lane 1 ^d	801	0.9	1132	0.707	100	14.0	LOS B	11.6	291.6	Full	300	0.0	4.2
Lane 2	798	1.2	1129	0.707	100	14.0	LOS B	11.5	291.0	Full	1600	0.0	0.0
Approach	1599	1.1		0.707		14.0	LOS B	11.6	291.6				
East: Chickatawbut Rd													
Lane 1 ^d	398	0.3	239	1.666	100	353.9	LOS F	58.3	1459.6	Full	1600	0.0	2.3
Approach	398	0.3		1.666		353.9	LOS F	58.3	1459.6				
North: Route 28													
Lane 1 ^d	451	1.7	951	0.474	100	9.5	LOS A	3.1	79.6	Full	1600	0.0	0.0
Lane 2	273	1.8	950	0.287	61 ⁶	6.7	LOS A	1.4	36.0	Full	1600	0.0	0.0
Approach	723	1.7		0.474		8.5	LOS A	3.1	79.6				
West: Chickatawbut Rd													
Lane 1 ^d	240	0.0	693	0.347	100	9.7	LOS A	1.7	42.0	Full	1600	0.0	0.0
Approach	240	0.0		0.347		9.7	LOS A	1.7	42.0				
Intersection	2960	1.0		1.666		58.0	LOS F	58.3	1459.6				

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).

Roundabout Capacity Model: US HCM 6.

HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

⁶ Lane under-utilisation due to downstream effects

^d Dominant lane on roundabout approach

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INPUT VOLUMES

Vehicles and pedestrians per 60 minutes

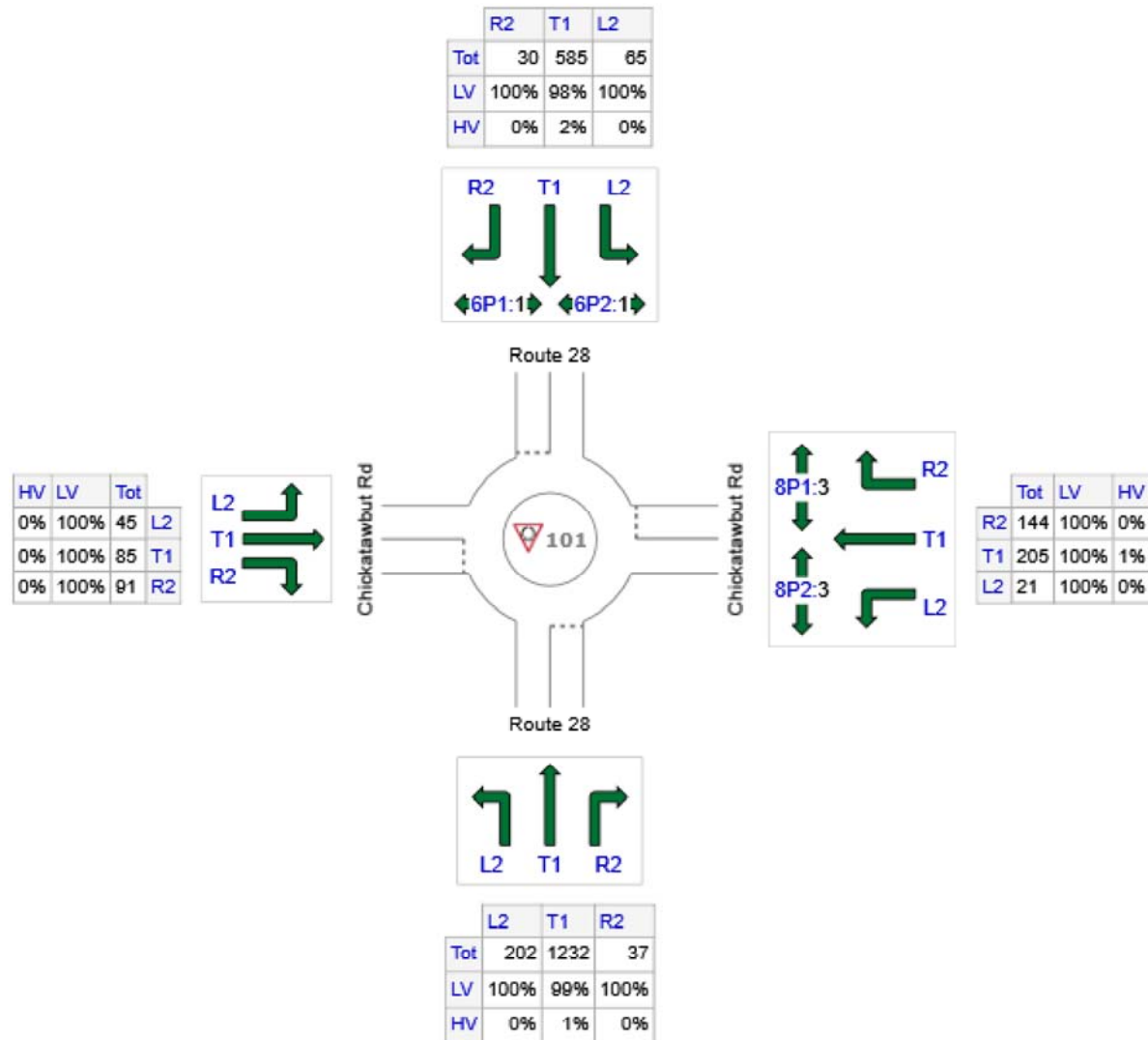
 Site: 101 [Route 28 at Chickatawbut Rd - FUTURE AM]

New Site

Site Category: (None)

Roundabout

Volume Display Method: Total and %



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Route 28	1471	1455	16
E: Chickatawbut Rd	370	369	1
N: Route 28	680	668	12
W: Chickatawbut Rd	221	221	0
Total	2742	2713	29

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VEHICLE QUEUE (AVER)

Average Back of Queue for any lane used by movement (vehicles)

 **Site: 101 [Route 28 at Chickatawbut Rd - FUTURE AM]**

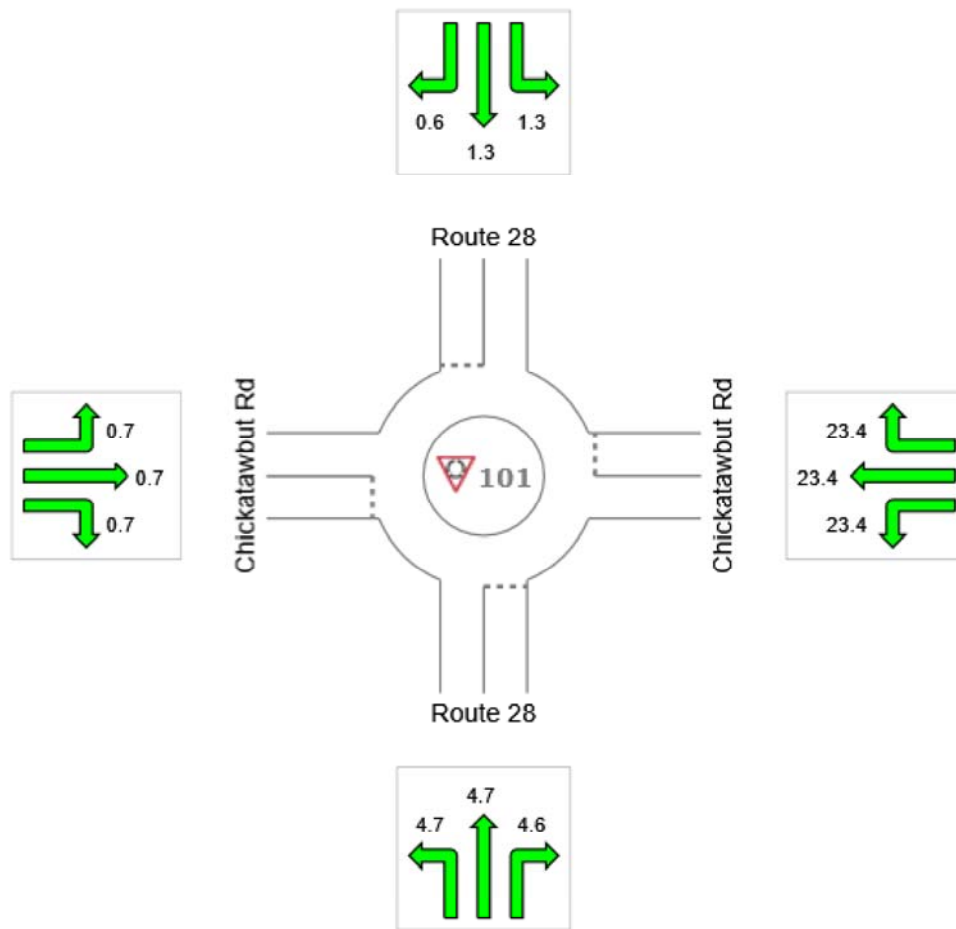
New Site

Site Category: (None)

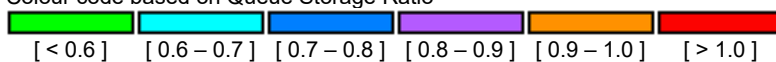
Roundabout

All Movement Classes

	Approaches				Intersection
	South	East	North	West	
Vehicle Queue (Aver)	4.7	23.4	1.3	0.7	23.4



Colour code based on Queue Storage Ratio



VEHICLE QUEUE (%ILE)

Largest 95% Back of Queue for any lane used by movement (vehicles)



Site: 101 [Route 28 at Chickatawbut Rd - FUTURE AM]

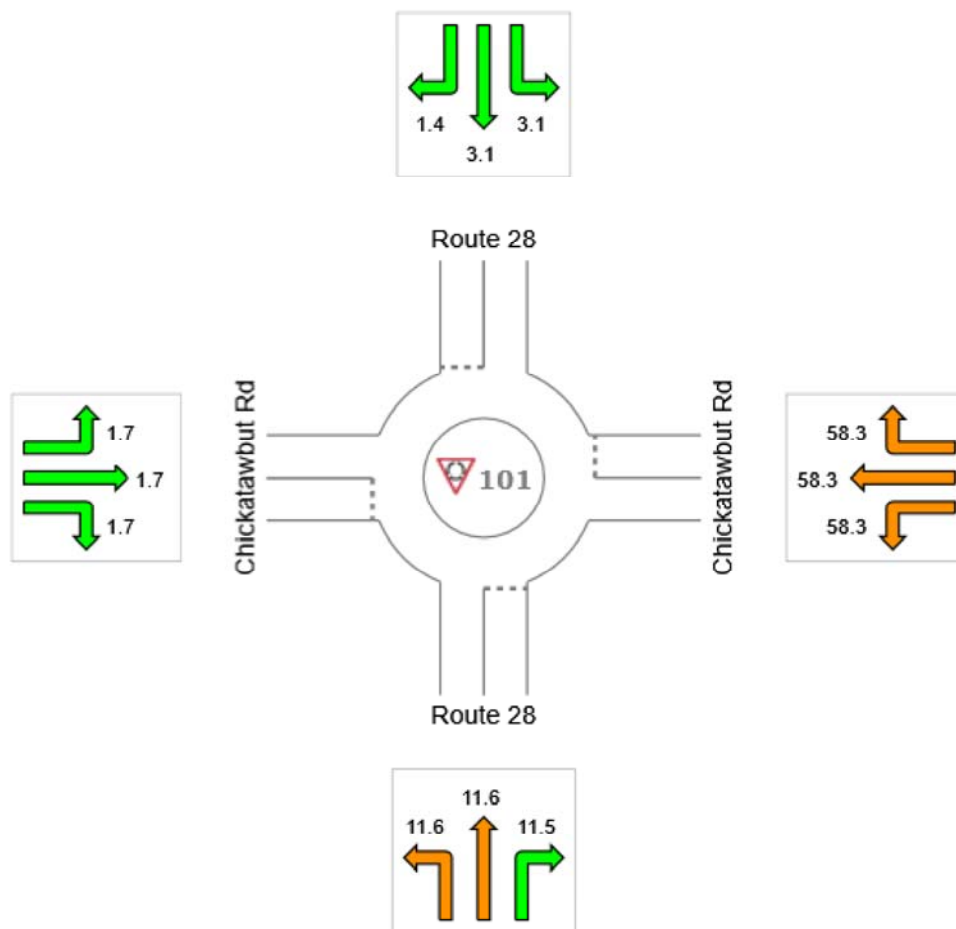
New Site

Site Category: (None)

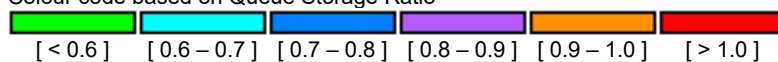
Roundabout

All Movement Classes

	Approaches				Intersection
	South	East	North	West	
Vehicle Queue (%ile)	11.6	58.3	3.1	1.7	58.3



Colour code based on Queue Storage Ratio



ROUNABOUT ANALYSIS

 **Site: 101 [Route 28 at Chickatawbut Rd - FUTURE AM]**

New Site
Site Category: (None)
Roundabout

Roundabout Basic Parameters												
Location	Name	Central Island Diam	Circ Width	Insc Diam	Entry Radius	Entry Angle	Circ Lanes	Entry Lanes	Av.Entry Lane Width	App. Dist	Prop Queued Upstr Signal	Extra Bunching
		ft	ft	ft	ft	°			ft	ft		%
South	Route 28	80.00*	14.00*	108.0*	65.0*	30.0*	1	2	12.00*	1600.0	NA ⁵	0.0 ¹
East	Chickatawbut Rd	80.00*	30.00*	140.0*	65.0*	30.0*	2	1	11.00*	1600.0	NA ⁵	0.0 ¹
North	Route 28	80.00*	14.00*	108.0*	65.0*	30.0*	1	2	12.00*	1600.0	NA ⁵	0.0 ¹
West	Chickatawbut Rd	80.00*	30.00*	140.0*	65.0*	30.0*	2	1	11.00*	1600.0	NA ⁵	0.0 ¹

Roundabout Capacity Model: US HCM 6

* These parameters do not affect estimated capacity values in the HCM 6 Capacity Model.

¹ Program option resulted in zero value (single Site analysis or unconnected Site in Network analysis).

⁵ Not Applicable (single Site analysis or unconnected Site in Network analysis).

Roundabout Entry and Circulating / Exiting Stream Parameters													
To Approach	Turn	Lane No	Lane Type	Opng Flow	Opng In-Bunch Flow	Headway	Prop. Bunched	Cap Const Effect	Priority Sharing	OD Factor	HVE for Entry	Critical Gap	Follow-up Headway
				veh/h	pcu/h	sec						sec	sec
South: Route 28													
Model Calibration Factor (HCM 6): 1.00													
Entry/Circ Flow Adj (HCM 6): None													
West	L2	1	Dominant	210	210	0.00	0.000	No	No	0.975	1.00	4.54	2.54
North	T1	1	Dominant	210	210	0.00	0.000	No	No	0.975	1.01	4.54	2.54
North	T1	2	Subdom.	210	210	0.00	0.000	No	No	0.975	1.01	4.54	2.54
East	R2	2	Subdom.	210	210	0.00	0.000	No	No	0.975	1.00	4.54	2.54
East: Chickatawbut Rd													
Model Calibration Factor (HCM 6): 1.00													
Entry/Circ Flow Adj (HCM 6): None													
South	L2	1	Dominant	1608	1625	0.00	0.000	No	No	0.665	1.00	4.33	2.54
West	T1	1	Dominant	1608	1625	0.00	0.000	No	No	0.665	1.01	4.33	2.54
North	R2	1	Dominant	1608	1625	0.00	0.000	No	No	0.665	1.00	4.33	2.54
North: Route 28													
Model Calibration Factor (HCM 6): 1.00													
Entry/Circ Flow Adj (HCM 6): None													
East	L2	1	Dominant	367	367	0.00	0.000	No	No	0.957	1.00	4.54	2.54
South	T1	1	Dominant	367	367	0.00	0.000	No	No	0.957	1.02	4.54	2.54
South	T1	2	Subdom.	367	367	0.00	0.000	Yes	No	0.957	1.02	4.54	2.54
West	R2	2	Subdom.	367	367	0.00	0.000	Yes	No	0.957	1.00	4.54	2.54
West: Chickatawbut Rd													
Model Calibration Factor (HCM 6): 1.00													
Entry/Circ Flow Adj (HCM 6): None													
North	L2	1	Dominant	705	718	0.00	0.000	Yes	No	0.898	1.00	4.33	2.54
East	T1	1	Dominant	705	718	0.00	0.000	Yes	No	0.898	1.00	4.33	2.54
South	R2	1	Dominant	705	718	0.00	0.000	Yes	No	0.898	1.00	4.33	2.54

Roundabout Capacity Model: US HCM 6

Circulating Lane Flow Rates			
Lane No	veh/h	Circulating Flow Rate pcu/h	Percent
South: Route 28			
Lane 1	210	210	100.0
Approach	210	210	
East: Chickatawbut Rd			
Lane 1	850	857	52.7
Lane 2	758	768	47.3
Approach	1608	1625	
North: Route 28			
Lane 1	367	367	100.0
Approach	367	367	
West: Chickatawbut Rd			
Lane 1	464	472	65.8
Lane 2	241	246	34.2
Approach	705	718	

Roundabout Capacity Model: The US HCM 6 roundabout capacity model option is in use.

Roundabout Capacity Model: The HCM 6.0 roundabout capacity model option is in use. This model considers only the total circulating flow and not the flow rates in individual circulating lanes.

To model the effects of flow distribution in circulating lanes on the entry capacity results, you should use the SIDRA Standard roundabout capacity model.

Gap Acceptance Cycle Parameters (Lanes)					
Opposed Lane	Cycle Time sec	Blocked Time sec	Unblocked Time sec	Unblocked Time Ratio	Minimum Delay sec
South: Route 28					
1	22.83	4.46	18.37	0.805	3.2
2	22.83	4.46	18.37	0.805	3.2
East: Chickatawbut Rd					
1	20.84	17.35	3.48	0.167	15.2
North: Route 28					
1	16.15	5.08	11.07	0.685	3.8
2	16.15	5.08	11.07	0.685	3.8
West: Chickatawbut Rd					
1	12.89	6.60	6.28	0.488	5.2

Roundabout Capacity Model: US HCM 6

Gap Acceptance Cycle Parameters (Movements)							
To Approach	Turn	Lane No	Cycle Time sec	Blocked Time sec	Unblocked Time sec	Unblocked Time Ratio	Minimum Delay sec
South: Route 28							
West	L2	1	22.83	4.46	18.37	0.805	3.2
North	T1	1	22.83	4.46	18.37	0.805	3.2
North	T1	2	22.83	4.46	18.37	0.805	3.2
East	R2	2	22.83	4.46	18.37	0.805	3.2
East: Chickatawbut Rd							
South	L2	1	20.84	17.35	3.48	0.167	15.2
West	T1	1	20.84	17.35	3.48	0.167	15.2
North	R2	1	20.84	17.35	3.48	0.167	15.2
North: Route 28							

East	L2	1	16.15	5.08	11.07	0.685	3.7
South	T1	1	16.15	5.08	11.07	0.685	3.8
South	T1	2	16.15	5.08	11.07	0.685	3.8
West	R2	2	16.15	5.08	11.07	0.685	3.7
West: Chickatawbut Rd							
North	L2	1	12.89	6.60	6.28	0.488	5.2
East	T1	1	12.89	6.60	6.28	0.488	5.2
South	R2	1	12.89	6.60	6.28	0.488	5.2

Roundabout Capacity Model: US HCM 6

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QUEUE DISTANCE (AVER)

Average Back of Queue Distance for any lane used by vehicle movement (feet)

 **Site: 101 [Route 28 at Chickatawbut Rd - FUTURE AM]**

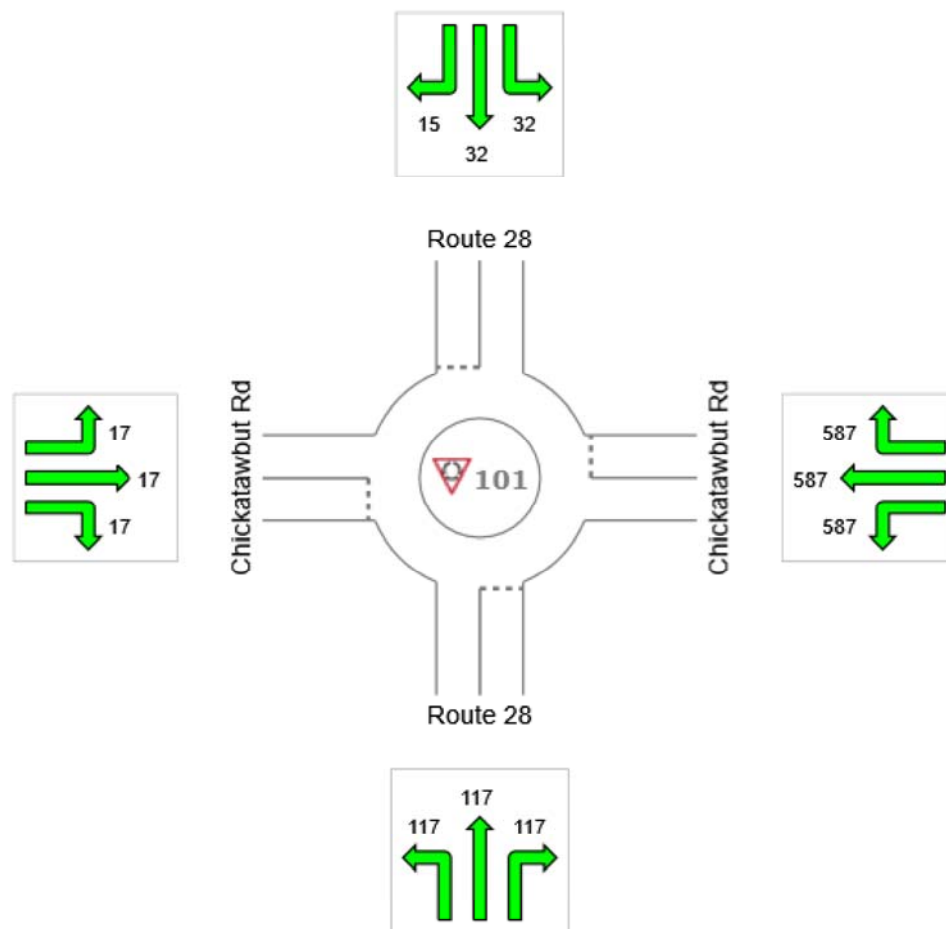
New Site

Site Category: (None)

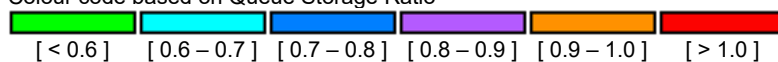
Roundabout

All Movement Classes

	Approaches				Intersection
	South	East	North	West	
Queue Distance (Aver)	117	587	32	17	587



Colour code based on Queue Storage Ratio



QUEUE DISTANCE (%ILE)

Largest 95% Back of Queue Distance for any lane used by vehicle movement (feet)



Site: 101 [Route 28 at Chickatawbut Rd - FUTURE AM]

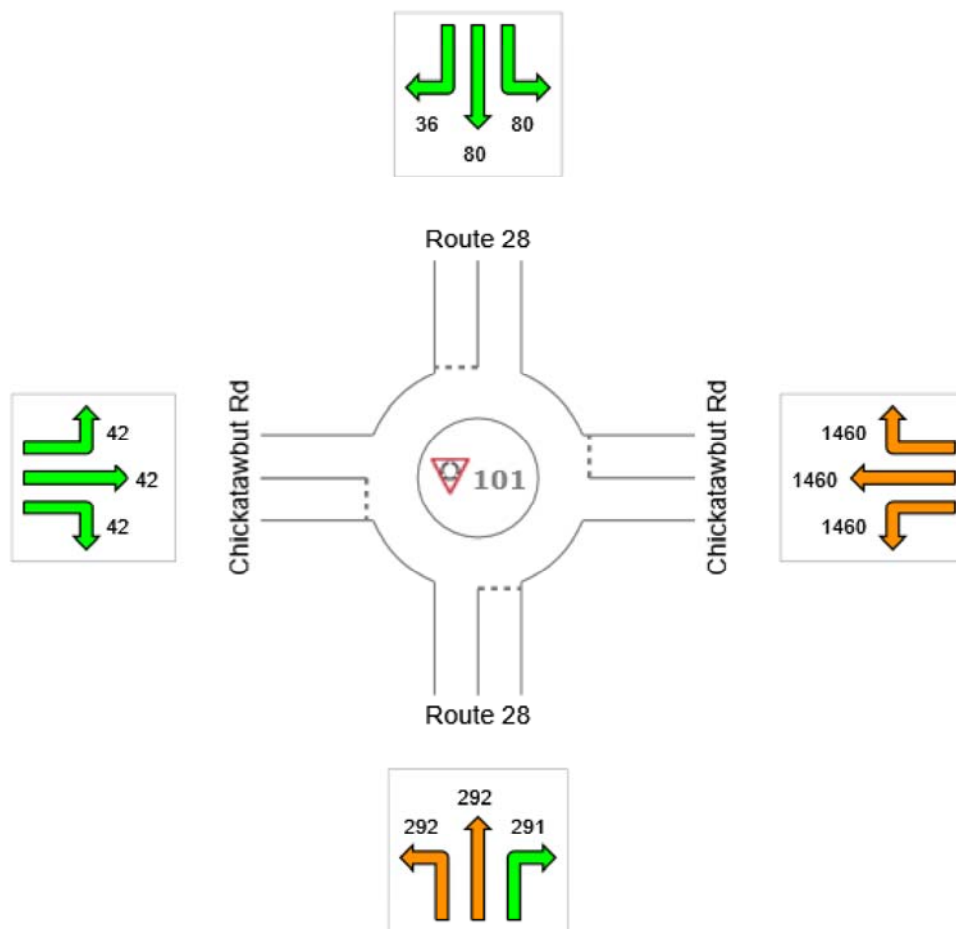
New Site

Site Category: (None)

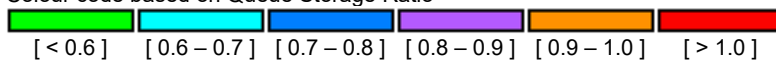
Roundabout

All Movement Classes

	Approaches				Intersection
	South	East	North	West	
Vehicle Queue (%ile)	292	1460	80	42	1460



Colour code based on Queue Storage Ratio



LANE SUMMARY

 Site: 101 [Route 28 at Chickatawbut Rd - FUTURE PM - REV VOLUMES]

New Site
Site Category: (None)
Roundabout

Lane Use and Performance													
	Demand Total veh/h	Flows HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Veh	Queue Dist ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Route 28													
Lane 1	337	1.7	1088	0.310	100	6.3	LOS A	1.8	44.4	Full	400	0.0	0.0
Lane 2 ^d	337	1.7	1088	0.310	100	6.3	LOS A	1.8	44.4	Full	1600	0.0	0.0
Approach	675	1.7		0.310		6.3	LOS A	1.8	44.4				
East: Chickatawbut Rd													
Lane 1 ^d	398	0.3	706	0.564	100	14.3	LOS B	4.1	102.7	Full	1600	0.0	0.0
Approach	398	0.3		0.564		14.3	LOS B	4.1	102.7				
North: Route 28													
Lane 1 ^d	691	1.9	951	0.727	100	16.8	LOS C	12.0	303.9	Full	1600	0.0	0.0
Lane 2	417	2.1	949	0.440	61 ⁶	8.9	LOS A	2.7	67.4	Full	1600	0.0	0.0
Approach	1108	1.9		0.727		13.8	LOS B	12.0	303.9				
West: Chickatawbut Rd													
Lane 1 ^d	375	1.2	323	1.161	100	137.1	LOS F	26.2	661.6	Full	1600	0.0	0.0
Approach	375	1.2		1.161		137.1	LOS F	26.2	661.6				
Intersection	2556	1.5		1.161		30.0	LOS D	26.2	661.6				

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).

Roundabout Capacity Model: US HCM 6.

HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

⁶ Lane under-utilisation due to downstream effects

^d Dominant lane on roundabout approach

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INPUT VOLUMES

Vehicles and pedestrians per 60 minutes

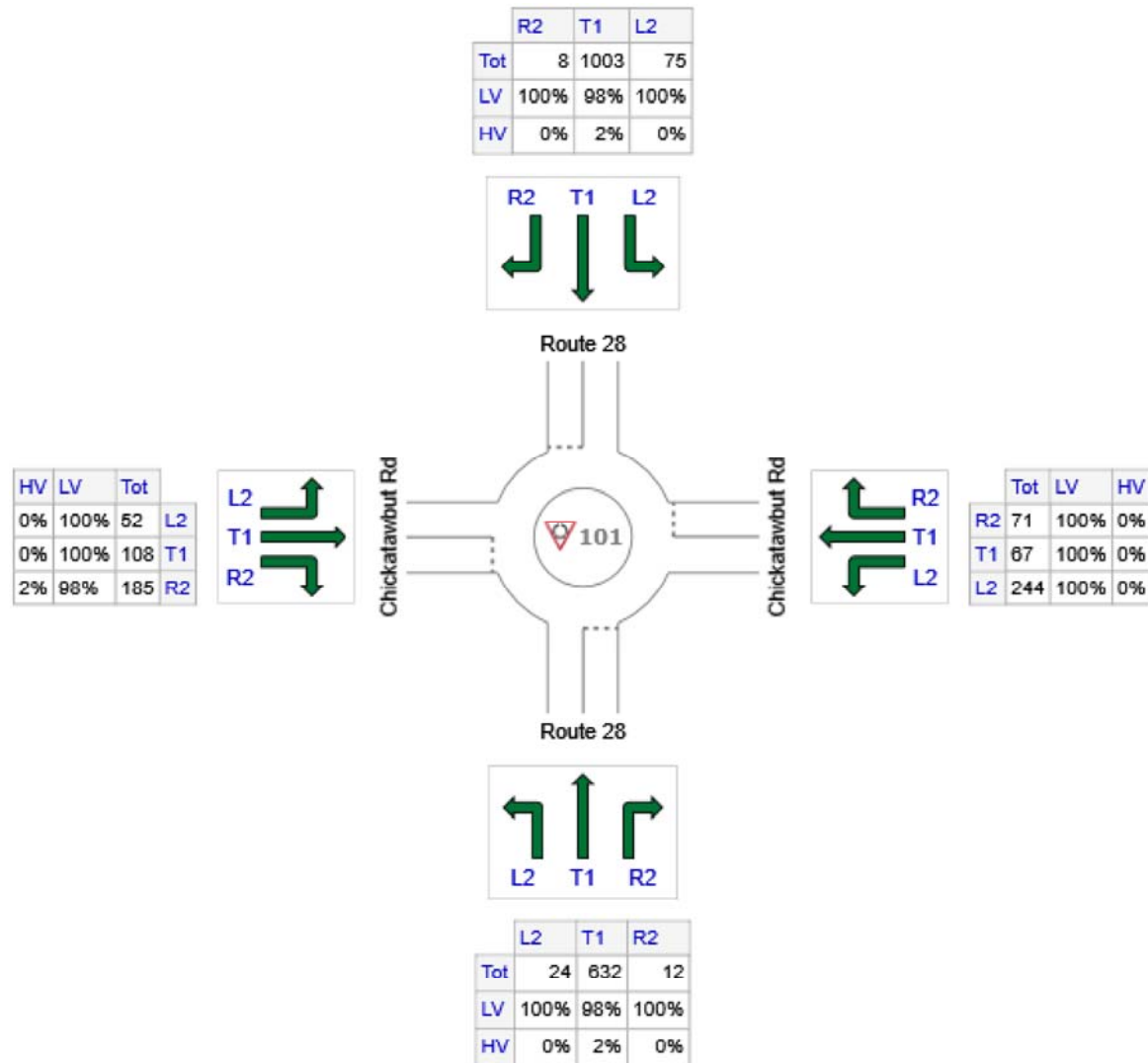
 Site: 101 [Route 28 at Chickatawbut Rd - FUTURE PM - REV VOLUMES]

New Site

Site Category: (None)

Roundabout

Volume Display Method: Total and %



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Route 28	668	657	11
E: Chickatawbut Rd	382	381	1
N: Route 28	1086	1065	21
W: Chickatawbut Rd	345	341	4
Total	2481	2444	37

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VEHICLE QUEUE (%ILE)

Largest 95% Back of Queue for any lane used by movement (vehicles)

 **Site: 101 [Route 28 at Chickatawbut Rd - FUTURE PM - REV VOLUMES]**

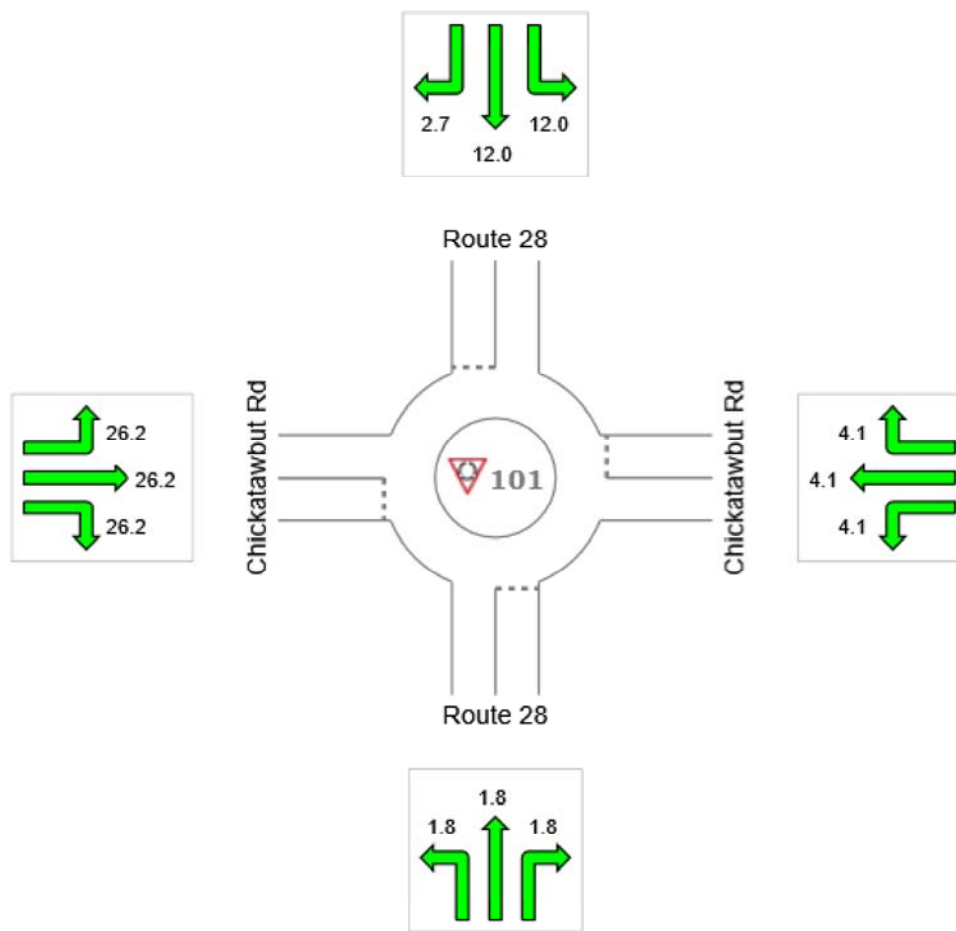
New Site

Site Category: (None)

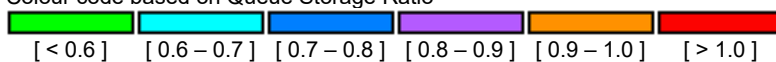
Roundabout

All Movement Classes

	Approaches				Intersection
	South	East	North	West	
Vehicle Queue (%ile)	1.8	4.1	12.0	26.2	26.2



Colour code based on Queue Storage Ratio



QUEUE DISTANCE (%ILE)

Largest 95% Back of Queue Distance for any lane used by vehicle movement (feet)

 **Site: 101 [Route 28 at Chickatawbut Rd - FUTURE PM - REV VOLUMES]**

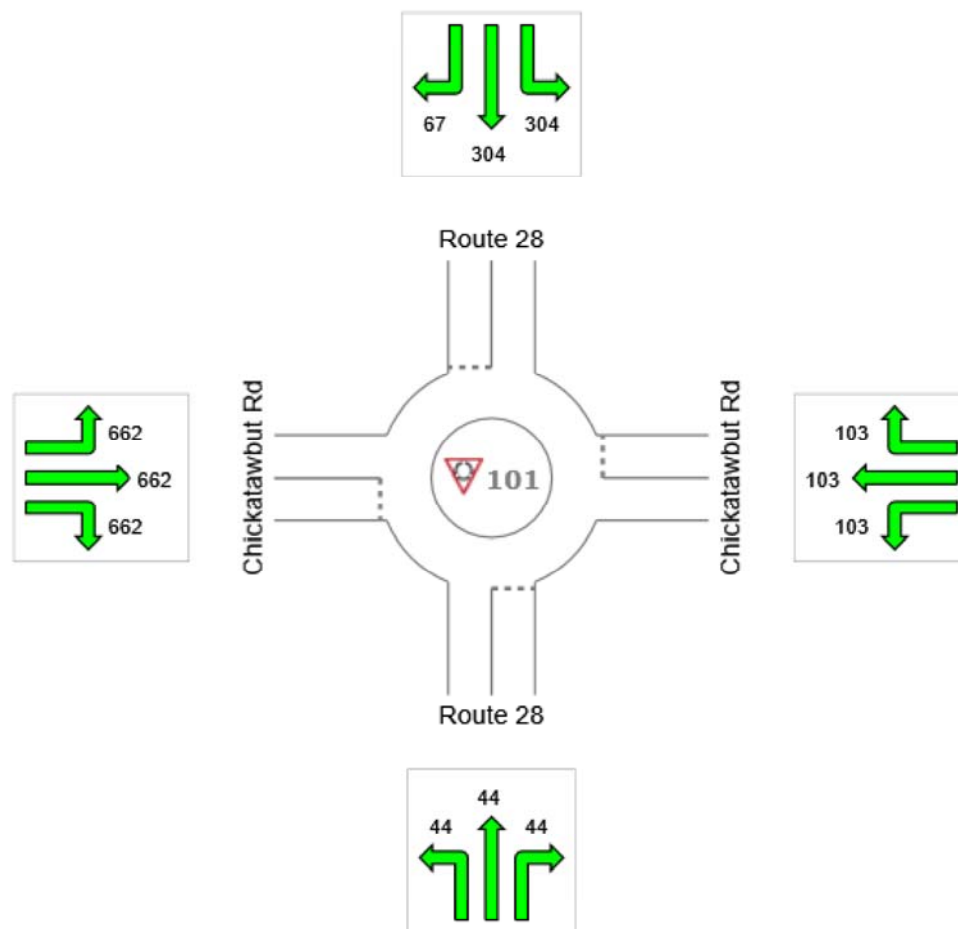
New Site

Site Category: (None)

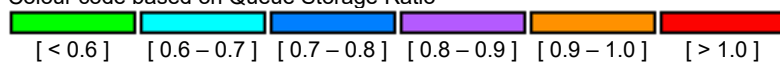
Roundabout

All Movement Classes

	Approaches				Intersection
	South	East	North	West	
Vehicle Queue (%ile)	44	103	304	662	662



Colour code based on Queue Storage Ratio



VEHICLE QUEUE (AVER)

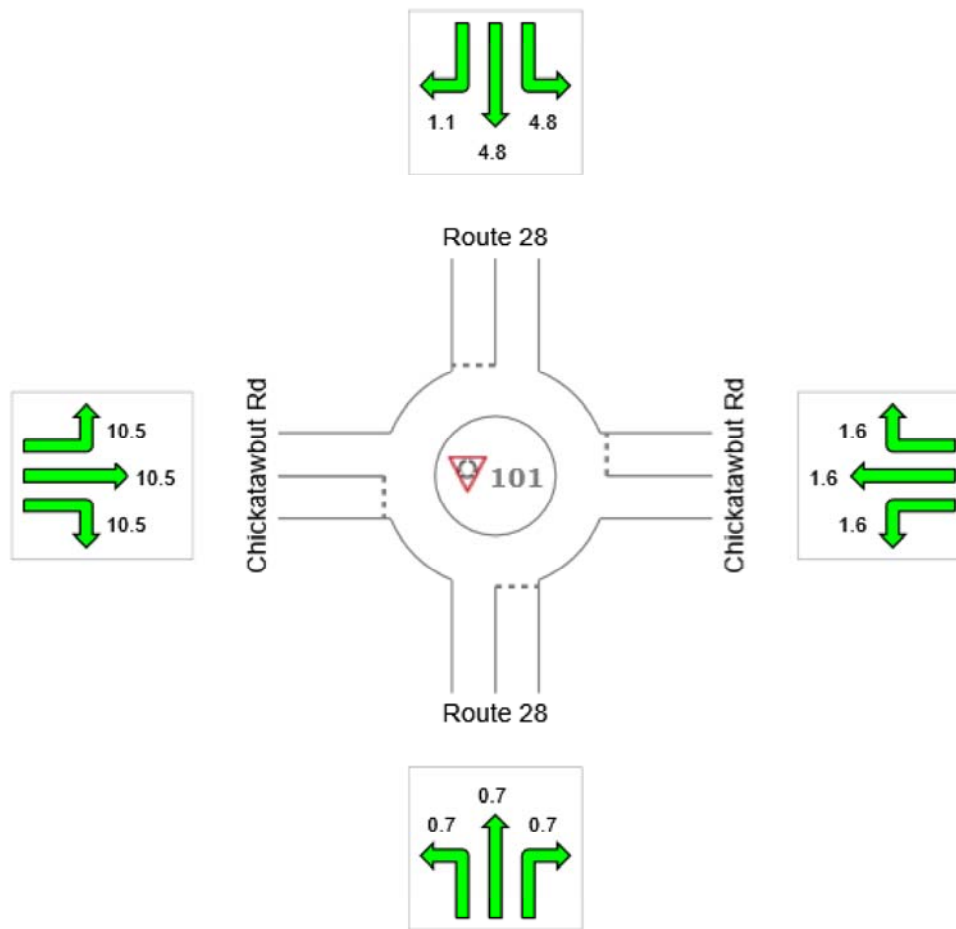
Average Back of Queue for any lane used by movement (vehicles)

 **Site: 101 [Route 28 at Chickatawbut Rd - FUTURE PM - REV VOLUMES]**

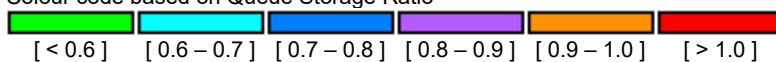
New Site
Site Category: (None)
Roundabout

All Movement Classes

	Approaches				Intersection
	South	East	North	West	
Vehicle Queue (Aver)	0.7	1.6	4.8	10.5	10.5



Colour code based on Queue Storage Ratio



ROUNABOUT ANALYSIS

 **Site: 101 [Route 28 at Chickatawbut Rd - FUTURE PM - REV VOLUMES]**

New Site
Site Category: (None)
Roundabout

Roundabout Basic Parameters												
Location	Name	Central Island Diam	Circ Width	Insc Diam	Entry Radius	Entry Angle	Circ Lanes	Entry Lanes	Av.Entry Lane Width	App. Dist	Prop Queued Upstr Signal	Extra Bunching
		ft	ft	ft	ft	°			ft	ft		%
South	Route 28	80.00*	14.00*	108.0*	65.0*	30.0*	1	2	12.00*	1600.0	NA ⁵	0.0 ¹
East	Chickatawbut Rd	80.00*	30.00*	140.0*	65.0*	30.0*	2	1	11.00*	1600.0	NA ⁵	0.0 ¹
North	Route 28	80.00*	14.00*	108.0*	65.0*	30.0*	1	2	12.00*	1600.0	NA ⁵	0.0 ¹
West	Chickatawbut Rd	80.00*	30.00*	140.0*	65.0*	30.0*	2	1	11.00*	1600.0	NA ⁵	0.0 ¹

Roundabout Capacity Model: US HCM 6

* These parameters do not affect estimated capacity values in the HCM 6 Capacity Model.

¹ Program option resulted in zero value (single Site analysis or unconnected Site in Network analysis).

⁵ Not Applicable (single Site analysis or unconnected Site in Network analysis).

Roundabout Entry and Circulating / Exiting Stream Parameters													
To Approach	Turn	Lane No	Lane Type	Opng Flow	Opng In-Bunch Flow	Headway	Prop. Bunched	Cap Const Effect	Priority Sharing	OD Factor	HVE for Entry	Critical Gap	Follow-up Headway
				veh/h	pcu/h	sec						sec	sec
South: Route 28													
Model Calibration Factor (HCM 6): 1.00													
Entry/Circ Flow Adj (HCM 6): None													
West	L2	1	Subdom.	227	227	0.00	0.000	No	No	0.961	1.00	4.54	2.54
North	T1	1	Subdom.	227	227	0.00	0.000	No	No	0.961	1.02	4.54	2.54
North	T1	2	Dominant	227	227	0.00	0.000	Yes	No	0.961	1.02	4.54	2.54
East	R2	2	Dominant	227	227	0.00	0.000	Yes	No	0.961	1.00	4.54	2.54
East: Chickatawbut Rd													
Model Calibration Factor (HCM 6): 1.00													
Entry/Circ Flow Adj (HCM 6): None													
South	L2	1	Dominant	712	723	0.00	0.000	Yes	No	0.922	1.00	4.33	2.54
West	T1	1	Dominant	712	723	0.00	0.000	Yes	No	0.922	1.00	4.33	2.54
North	R2	1	Dominant	712	723	0.00	0.000	Yes	No	0.922	1.00	4.33	2.54
North: Route 28													
Model Calibration Factor (HCM 6): 1.00													
Entry/Circ Flow Adj (HCM 6): None													
East	L2	1	Dominant	348	349	0.00	0.000	No	No	0.936	1.00	4.54	2.54
South	T1	1	Dominant	348	349	0.00	0.000	No	No	0.936	1.02	4.54	2.54
South	T1	2	Subdom.	348	349	0.00	0.000	No	No	0.936	1.02	4.54	2.54
West	R2	2	Subdom.	348	349	0.00	0.000	No	No	0.936	1.00	4.54	2.54
West: Chickatawbut Rd													
Model Calibration Factor (HCM 6): 1.00													
Entry/Circ Flow Adj (HCM 6): None													
North	L2	1	Dominant	1354	1377	0.00	0.000	No	No	0.737	1.00	4.33	2.54
East	T1	1	Dominant	1354	1377	0.00	0.000	No	No	0.737	1.00	4.33	2.54
South	R2	1	Dominant	1354	1377	0.00	0.000	No	No	0.737	1.02	4.33	2.54

Roundabout Capacity Model: US HCM 6

Circulating Lane Flow Rates			
Lane No	veh/h	Circulating Flow Rate pcu/h	Percent
South: Route 28			
Lane 1	227	227	100.0
Approach	227	227	
East: Chickatawbut Rd			
Lane 1	386	392	54.2
Lane 2	325	331	45.8
Approach	711	723	
North: Route 28			
Lane 1	348	349	100.0
Approach	348	349	
West: Chickatawbut Rd			
Lane 1	945	959	69.7
Lane 2	409	418	30.3
Approach	1354	1377	

Roundabout Capacity Model: The US HCM 6 roundabout capacity model option is in use.

Roundabout Capacity Model: The HCM 6.0 roundabout capacity model option is in use. This model considers only the total circulating flow and not the flow rates in individual circulating lanes.

To model the effects of flow distribution in circulating lanes on the entry capacity results, you should use the SIDRA Standard roundabout capacity model.

Gap Acceptance Cycle Parameters (Lanes)					
Opposed Lane	Cycle Time sec	Blocked Time sec	Unblocked Time sec	Unblocked Time Ratio	Minimum Delay sec
South: Route 28					
1	21.89	4.78	17.11	0.782	3.3
2	21.89	4.78	17.11	0.782	3.3
East: Chickatawbut Rd					
1	12.53	6.29	6.25	0.498	5.1
North: Route 28					
1	16.99	5.41	11.58	0.681	3.8
2	16.99	5.41	11.58	0.681	3.8
West: Chickatawbut Rd					
1	16.99	13.10	3.88	0.229	11.2

Roundabout Capacity Model: US HCM 6

Gap Acceptance Cycle Parameters (Movements)							
To Approach	Turn	Lane No	Cycle Time sec	Blocked Time sec	Unblocked Time sec	Unblocked Time Ratio	Minimum Delay sec
South: Route 28							
West	L2	1	21.89	4.78	17.11	0.782	3.3
North	T1	1	21.89	4.78	17.11	0.782	3.3
North	T1	2	21.89	4.78	17.11	0.782	3.3
East	R2	2	21.89	4.78	17.11	0.782	3.3
East: Chickatawbut Rd							
South	L2	1	12.53	6.29	6.25	0.498	5.1
West	T1	1	12.53	6.29	6.25	0.498	5.1
North	R2	1	12.53	6.29	6.25	0.498	5.1
North: Route 28							

East	L2	1	16.99	5.41	11.58	0.681	3.7
South	T1	1	16.99	5.41	11.58	0.681	3.8
South	T1	2	16.99	5.41	11.58	0.681	3.8
West	R2	2	16.99	5.41	11.58	0.681	3.7
West: Chickatawbut Rd							
North	L2	1	16.99	13.10	3.88	0.229	11.1
East	T1	1	16.99	13.10	3.88	0.229	11.1
South	R2	1	16.99	13.10	3.88	0.229	11.3

Roundabout Capacity Model: US HCM 6

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QUEUE DISTANCE (AVER)

Average Back of Queue Distance for any lane used by vehicle movement (feet)

 **Site: 101 [Route 28 at Chickatawbut Rd - FUTURE PM - REV VOLUMES]**

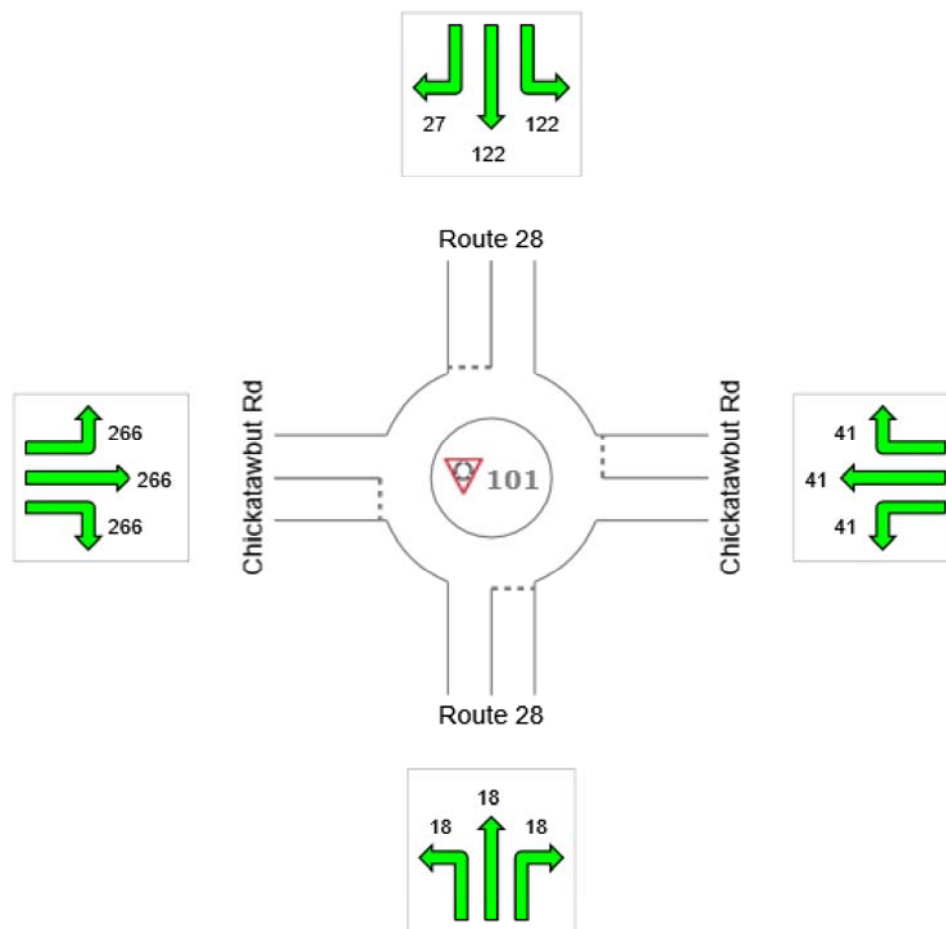
New Site

Site Category: (None)

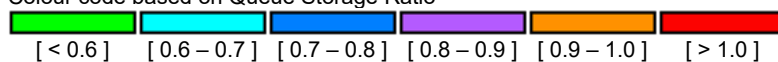
Roundabout

All Movement Classes

	Approaches				Intersection
	South	East	North	West	
Queue Distance (Aver)	18	41	122	266	266



Colour code based on Queue Storage Ratio



MOVEMENT SUMMARY

 **Site: 101 [Route 28 at Chickatawbut Rd - FUTURE PM - REV VOLUMES]**

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Route 28												
3	L2	24	0.0	0.310	6.3	LOS A	1.8	44.4	0.48	0.34	0.48	33.8
8	T1	638	1.8	0.310	6.3	LOS A	1.8	44.4	0.48	0.34	0.48	33.9
18	R2	12	0.0	0.310	6.3	LOS A	1.8	44.4	0.48	0.34	0.48	33.0
Approach		675	1.7	0.310	6.3	LOS A	1.8	44.4	0.48	0.34	0.48	33.9
East: Chickatawbut Rd												
1	L2	254	0.4	0.564	14.3	LOS B	4.1	102.7	0.78	0.97	1.25	24.7
6	T1	70	0.0	0.564	14.3	LOS B	4.1	102.7	0.78	0.97	1.25	24.4
16	R2	74	0.0	0.564	14.3	LOS B	4.1	102.7	0.78	0.97	1.25	24.0
Approach		398	0.3	0.564	14.3	LOS B	4.1	102.7	0.78	0.97	1.25	24.5
North: Route 28												
7	L2	77	0.0	0.727	16.7	LOS C	12.0	303.9	0.89	1.10	1.56	29.2
4	T1	1023	2.1	0.727	13.6	LOS B	12.0	303.9	0.79	0.88	1.20	30.5
14	R2	8	0.0	0.440	8.9	LOS A	2.7	67.4	0.65	0.56	0.65	31.8
Approach		1108	1.9	0.727	13.8	LOS B	12.0	303.9	0.80	0.89	1.22	30.4
West: Chickatawbut Rd												
5	L2	57	0.0	1.161	136.9	LOS F	26.2	661.6	1.00	2.76	6.20	10.6
2	T1	117	0.0	1.161	136.9	LOS F	26.2	661.6	1.00	2.76	6.20	10.6
12	R2	201	2.2	1.161	137.2	LOS F	26.2	661.6	1.00	2.76	6.20	10.5
Approach		375	1.2	1.161	137.1	LOS F	26.2	661.6	1.00	2.76	6.20	10.5
All Vehicles		2556	1.5	1.161	30.0	LOS D	26.2	661.6	0.74	1.03	1.76	23.6

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).

Roundabout Capacity Model: US HCM 6.

HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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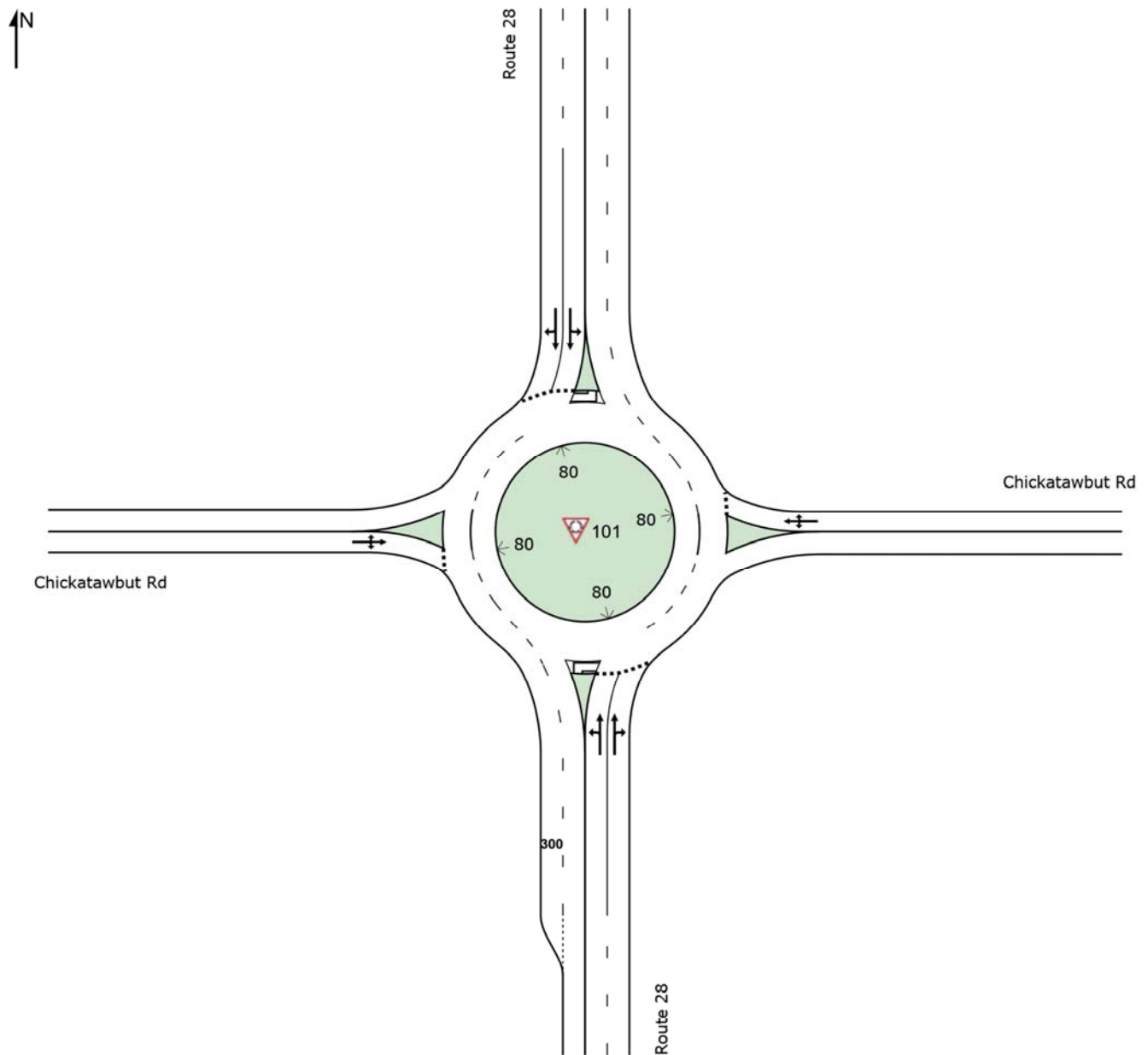
Organisation: HOWARD STEIN HUDSON | Processed: Monday, April 6, 2020 5:14:52 PM

Project: J:\13\13061 - MassDOT Design & Review Services\2013061.41 - Milton - Route 28 at Chickatawbut Road\Project\SIDRA\Milton - Rt 28 at Chickatawbut Rd.sip8

SITE LAYOUT

 **Site: 101 [Route 28 at Chickatawbut Rd - FUTURE PM - REV VOLUMES]**

New Site
Site Category: (None)
Roundabout



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INPUT VOLUMES

Vehicles and pedestrians per 60 minutes

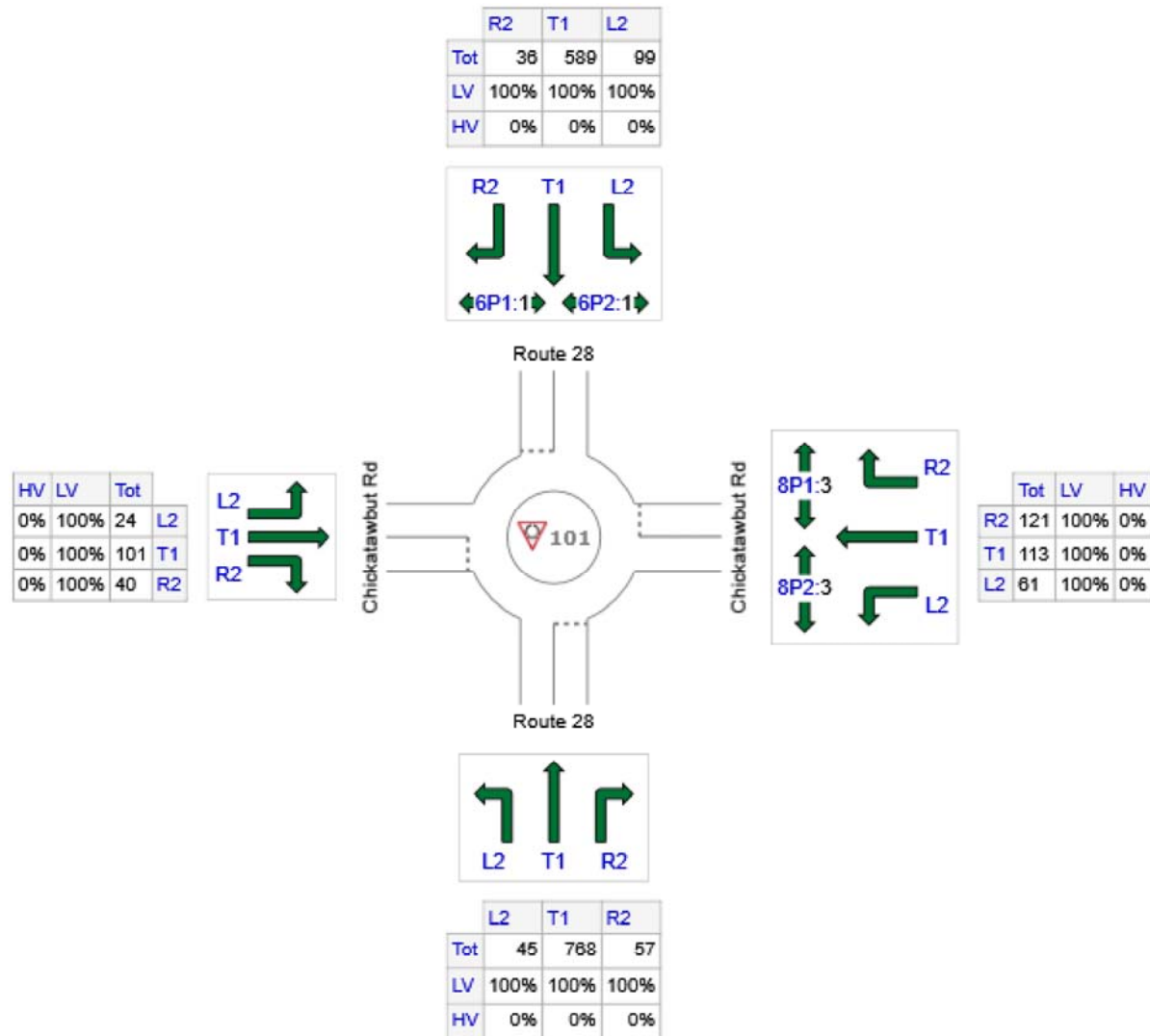
 **Site: 101 [Route 28 at Chickatawbut Rd - FUTURE SAT]**

New Site

Site Category: (None)

Roundabout

Volume Display Method: Total and %



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Route 28	870	869	1
E: Chickatawbut Rd	295	295	0
N: Route 28	724	722	2
W: Chickatawbut Rd	165	165	0
Total	2054	2051	3

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VEHICLE QUEUE (AVER)

Average Back of Queue for any lane used by movement (vehicles)



Site: 101 [Route 28 at Chickatawbut Rd - FUTURE SAT]

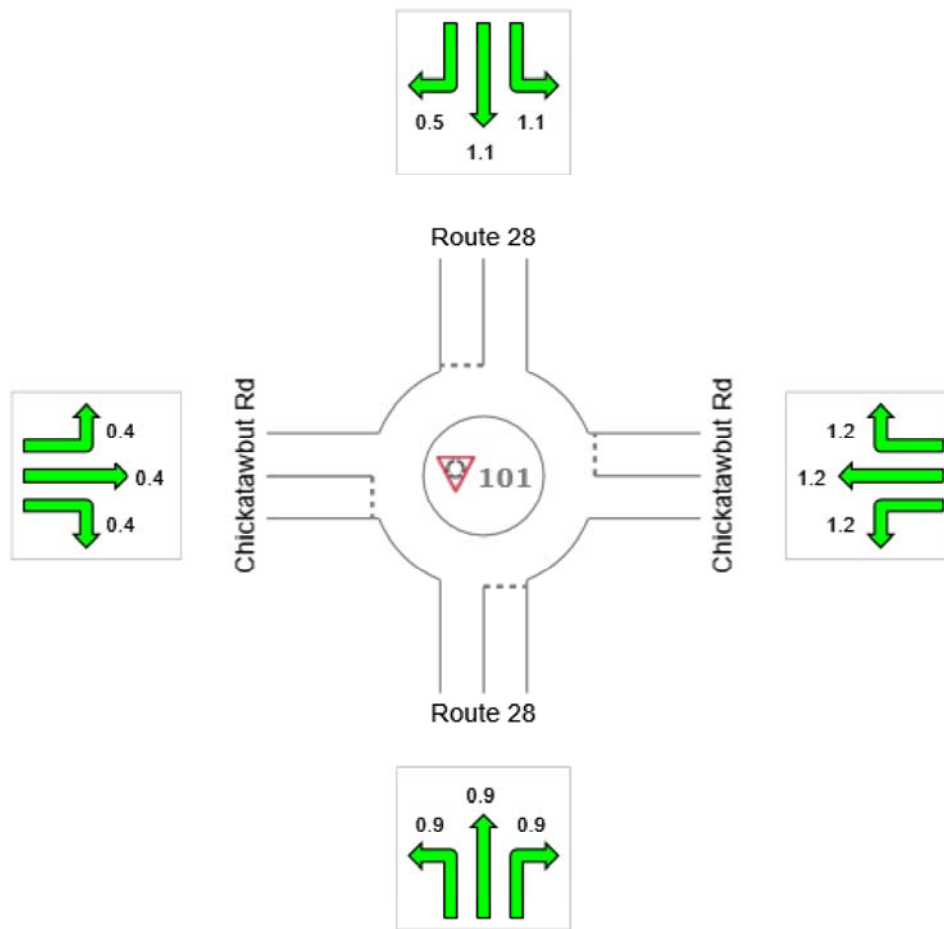
New Site

Site Category: (None)

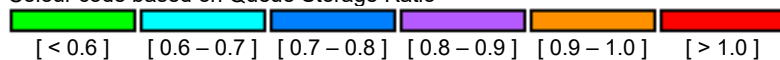
Roundabout

All Movement Classes

	Approaches				Intersection
	South	East	North	West	
Vehicle Queue (Aver)	0.9	1.2	1.1	0.4	1.2



Colour code based on Queue Storage Ratio



VEHICLE QUEUE (%ILE)

Largest 95% Back of Queue for any lane used by movement (vehicles)



Site: 101 [Route 28 at Chickatawbut Rd - FUTURE SAT]

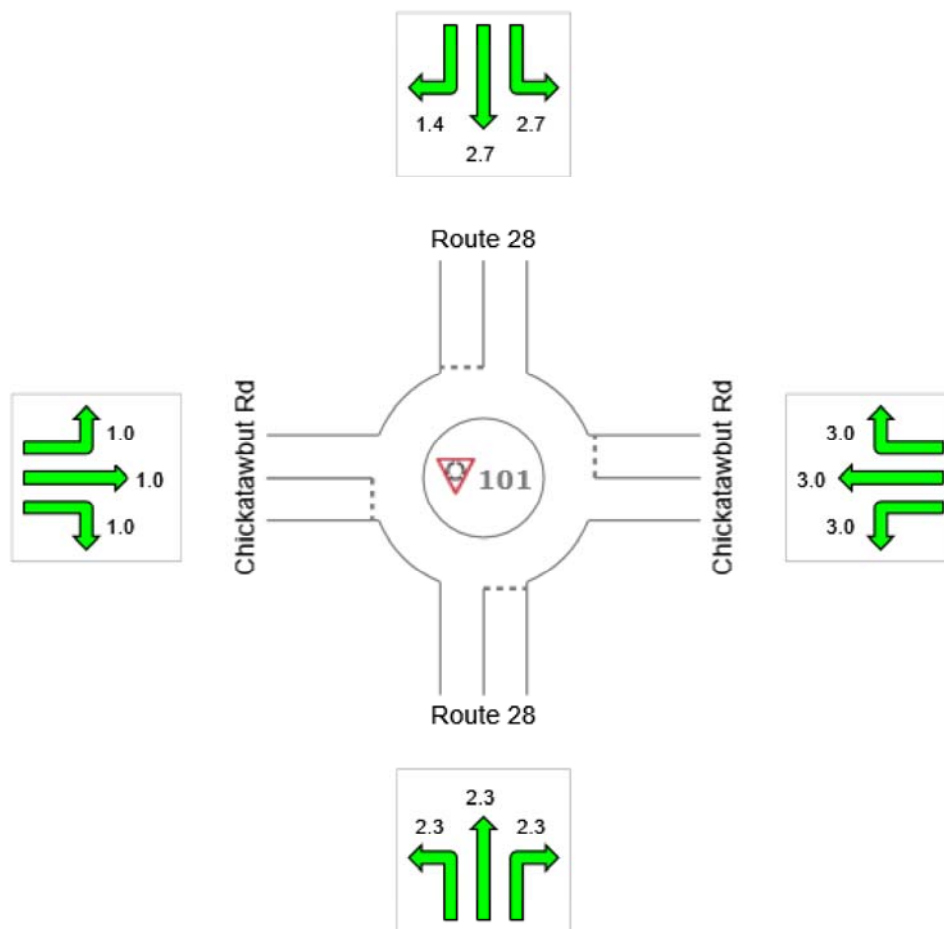
New Site

Site Category: (None)

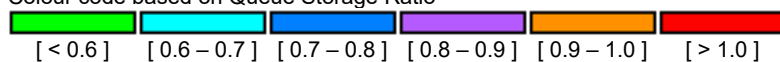
Roundabout

All Movement Classes

	Approaches				Intersection
	South	East	North	West	
Vehicle Queue (%ile)	2.3	3.0	2.7	1.0	3.0



Colour code based on Queue Storage Ratio



ROUNABOUT ANALYSIS

 **Site: 101 [Route 28 at Chickatawbut Rd - FUTURE SAT]**

New Site
Site Category: (None)
Roundabout

Roundabout Basic Parameters												
Location	Name	Central Island Diam	Circ Width	Insc Diam	Entry Radius	Entry Angle	Circ Lanes	Entry Lanes	Av.Entry Lane Width	App. Dist	Prop Queued Upstr Signal	Extra Bunching
		ft	ft	ft	ft	°			ft	ft		%
South	Route 28	80.00*	14.00*	108.0*	65.0*	30.0*	1	2	12.00*	1600.0	NA ⁵	0.0 ¹
East	Chickatawbut Rd	80.00*	30.00*	140.0*	65.0*	30.0*	2	1	11.00*	1600.0	NA ⁵	0.0 ¹
North	Route 28	80.00*	14.00*	108.0*	65.0*	30.0*	1	2	12.00*	1600.0	NA ⁵	0.0 ¹
West	Chickatawbut Rd	80.00*	30.00*	140.0*	65.0*	30.0*	2	1	11.00*	1600.0	NA ⁵	0.0 ¹

Roundabout Capacity Model: US HCM 6

* These parameters do not affect estimated capacity values in the HCM 6 Capacity Model.

¹ Program option resulted in zero value (single Site analysis or unconnected Site in Network analysis).

⁵ Not Applicable (single Site analysis or unconnected Site in Network analysis).

Roundabout Entry and Circulating / Exiting Stream Parameters													
To Approach	Turn	Lane No	Lane Type	Opng Flow	Opng In-Bunch Flow	Headway	Prop. Bunched	Cap Const Effect	Priority Sharing	OD Factor	HVE for Entry	Critical Gap	Follow-up Headway
				veh/h	pcu/h	sec						sec	sec
South: Route 28													
Model Calibration Factor (HCM 6): 1.00													
Entry/Circ Flow Adj (HCM 6): None													
West	L2	1	Subdom.	229	229	0.00	0.000	No	No	0.979	1.00	4.54	2.54
North	T1	1	Subdom.	229	229	0.00	0.000	No	No	0.979	1.00	4.54	2.54
North	T1	2	Dominant	229	229	0.00	0.000	No	No	0.979	1.00	4.54	2.54
East	R2	2	Dominant	229	229	0.00	0.000	No	No	0.979	1.00	4.54	2.54
East: Chickatawbut Rd													
Model Calibration Factor (HCM 6): 1.00													
Entry/Circ Flow Adj (HCM 6): None													
South	L2	1	Dominant	846	846	0.00	0.000	No	No	0.898	1.00	4.33	2.54
West	T1	1	Dominant	846	846	0.00	0.000	No	No	0.898	1.00	4.33	2.54
North	R2	1	Dominant	846	846	0.00	0.000	No	No	0.898	1.00	4.33	2.54
North: Route 28													
Model Calibration Factor (HCM 6): 1.00													
Entry/Circ Flow Adj (HCM 6): None													
East	L2	1	Dominant	229	229	0.00	0.000	No	No	0.964	1.00	4.54	2.54
South	T1	1	Dominant	229	229	0.00	0.000	No	No	0.964	1.00	4.54	2.54
South	T1	2	Subdom.	229	229	0.00	0.000	No	No	0.964	1.00	4.54	2.54
West	R2	2	Subdom.	229	229	0.00	0.000	No	No	0.964	1.00	4.54	2.54
West: Chickatawbut Rd													
Model Calibration Factor (HCM 6): 1.00													
Entry/Circ Flow Adj (HCM 6): None													
North	L2	1	Dominant	766	769	0.00	0.000	No	No	0.912	1.00	4.33	2.54
East	T1	1	Dominant	766	769	0.00	0.000	No	No	0.912	1.00	4.33	2.54
South	R2	1	Dominant	766	769	0.00	0.000	No	No	0.912	1.00	4.33	2.54

Roundabout Capacity Model: US HCM 6

Circulating Lane Flow Rates			
Lane No	veh/h	Circulating Flow Rate pcu/h	Percent
South: Route 28			
Lane 1	229	229	100.0
Approach	229	229	
East: Chickatawbut Rd			
Lane 1	464	464	54.8
Lane 2	382	382	45.2
Approach	846	846	
North: Route 28			
Lane 1	229	229	100.0
Approach	229	229	
West: Chickatawbut Rd			
Lane 1	524	526	68.4
Lane 2	242	243	31.6
Approach	766	769	

Roundabout Capacity Model: The US HCM 6 roundabout capacity model option is in use.

Roundabout Capacity Model: The HCM 6.0 roundabout capacity model option is in use. This model considers only the total circulating flow and not the flow rates in individual circulating lanes.

To model the effects of flow distribution in circulating lanes on the entry capacity results, you should use the SIDRA Standard roundabout capacity model.

Gap Acceptance Cycle Parameters (Lanes)					
Opposed Lane	Cycle Time sec	Blocked Time sec	Unblocked Time sec	Unblocked Time Ratio	Minimum Delay sec
South: Route 28					
1	21.41	4.39	17.02	0.795	3.2
2	21.41	4.39	17.02	0.795	3.2
East: Chickatawbut Rd					
1	12.62	7.10	5.52	0.437	5.8
North: Route 28					
1	21.73	4.72	17.01	0.783	3.3
2	21.73	4.72	17.01	0.783	3.3
West: Chickatawbut Rd					
1	12.55	6.60	5.95	0.474	5.3

Roundabout Capacity Model: US HCM 6

Gap Acceptance Cycle Parameters (Movements)							
To Approach	Turn	Lane No	Cycle Time sec	Blocked Time sec	Unblocked Time sec	Unblocked Time Ratio	Minimum Delay sec
South: Route 28							
West	L2	1	21.41	4.39	17.02	0.795	3.2
North	T1	1	21.41	4.39	17.02	0.795	3.2
North	T1	2	21.41	4.39	17.02	0.795	3.2
East	R2	2	21.41	4.39	17.02	0.795	3.2
East: Chickatawbut Rd							
South	L2	1	12.62	7.10	5.52	0.437	5.8
West	T1	1	12.62	7.10	5.52	0.437	5.8
North	R2	1	12.62	7.10	5.52	0.437	5.8
North: Route 28							

East	L2	1	21.73	4.72	17.01	0.783	3.2
South	T1	1	21.73	4.72	17.01	0.783	3.3
South	T1	2	21.73	4.72	17.01	0.783	3.3
West	R2	2	21.73	4.72	17.01	0.783	3.2
West: Chickatawbut Rd							
North	L2	1	12.55	6.60	5.95	0.474	5.3
East	T1	1	12.55	6.60	5.95	0.474	5.3
South	R2	1	12.55	6.60	5.95	0.474	5.3

Roundabout Capacity Model: US HCM 6

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Project: J:\13\13061 - MassDOT Design & Review Services\2013061.41 - Milton - Route 28 at Chickatawbut Road\Project\SIDRA\Milton - Rt 28 at Chickatawbut Rd.sip8

QUEUE DISTANCE (AVER)

Average Back of Queue Distance for any lane used by vehicle movement (feet)

 **Site: 101 [Route 28 at Chickatawbut Rd - FUTURE SAT]**

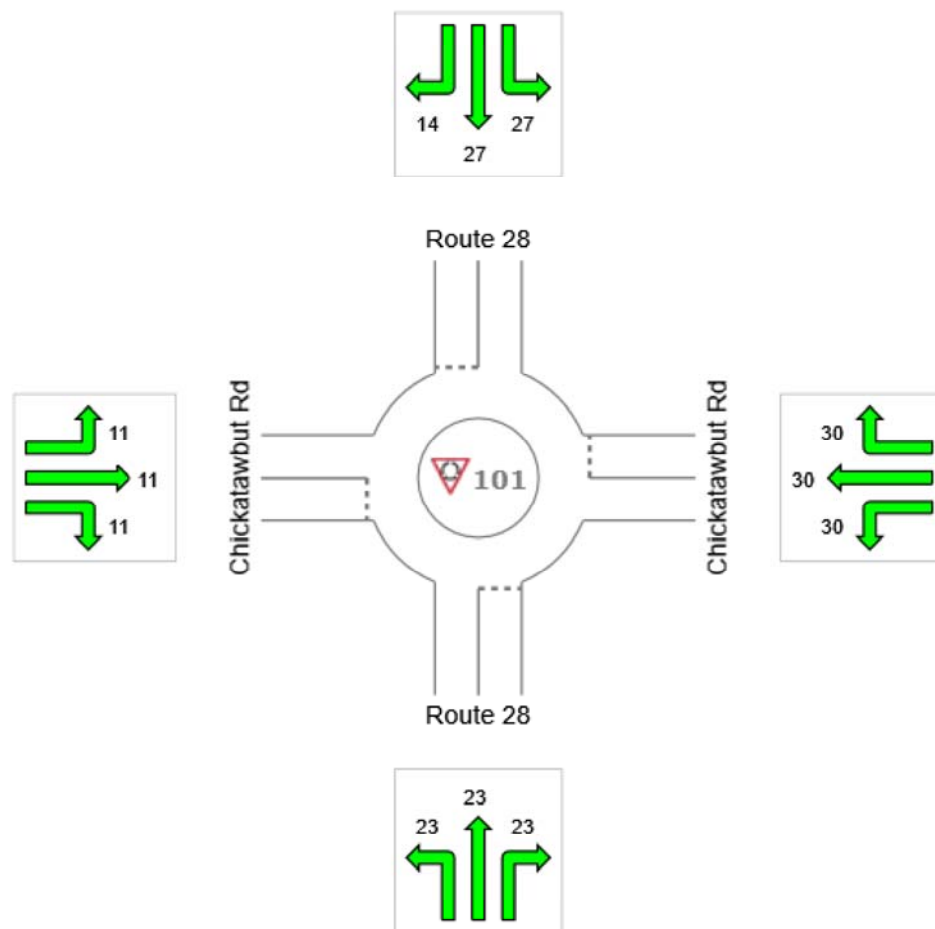
New Site

Site Category: (None)

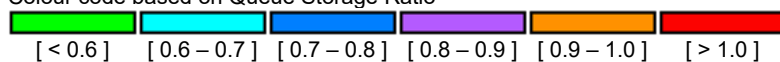
Roundabout

All Movement Classes

	Approaches				Intersection
	South	East	North	West	
Queue Distance (Aver)	23	30	27	11	30



Colour code based on Queue Storage Ratio



QUEUE DISTANCE (%ILE)

Largest 95% Back of Queue Distance for any lane used by vehicle movement (feet)



Site: 101 [Route 28 at Chickatawbut Rd - FUTURE SAT]

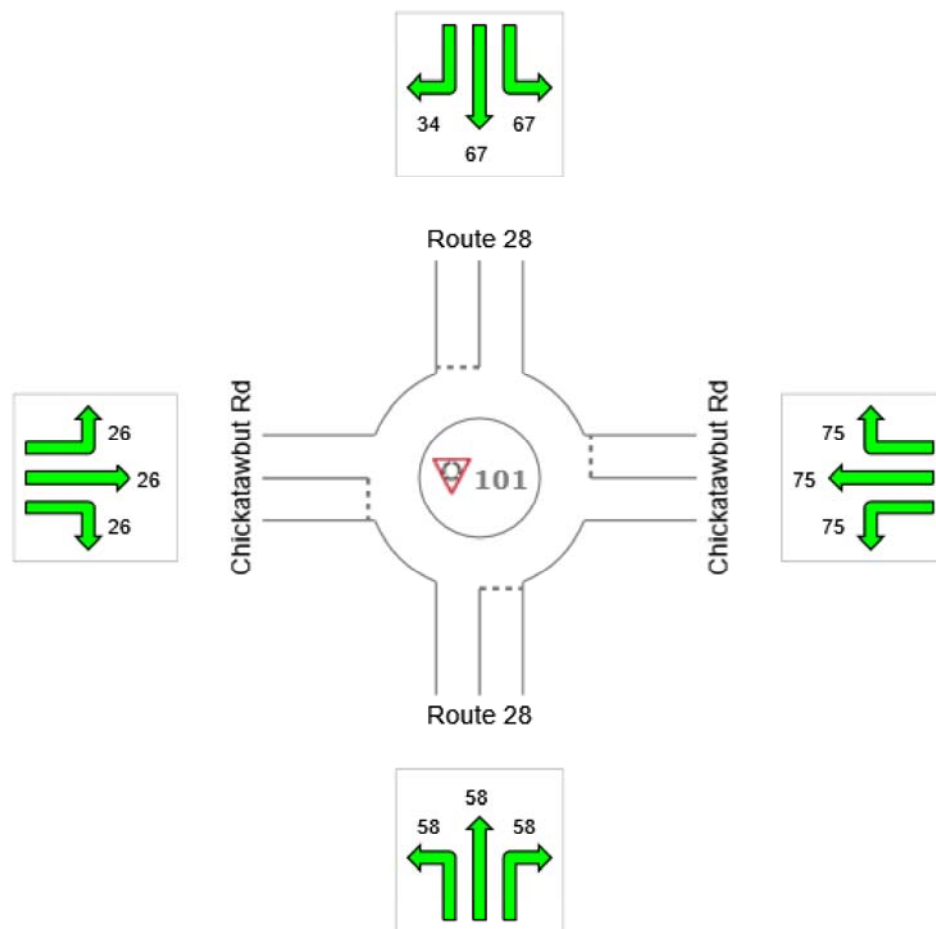
New Site

Site Category: (None)

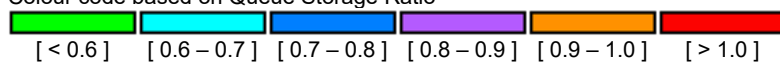
Roundabout

All Movement Classes

	Approaches				Intersection
	South	East	North	West	
Vehicle Queue (%ile)	58	75	67	26	75



Colour code based on Queue Storage Ratio



MOVEMENT SUMMARY

 **Site: 101 [Route 28 at Chickatawbut Rd - FUTURE SAT]**

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Route 28												
3	L2	45	0.0	0.389	7.2	LOS A	2.3	57.9	0.50	0.36	0.50	33.3
8	T1	776	0.1	0.389	7.2	LOS A	2.3	57.9	0.50	0.36	0.50	33.5
18	R2	58	0.0	0.389	7.2	LOS A	2.3	57.9	0.50	0.36	0.50	32.6
Approach		879	0.1	0.389	7.2	LOS A	2.3	57.9	0.50	0.36	0.50	33.4
East: Chickatawbut Rd												
1	L2	64	0.0	0.496	13.8	LOS B	3.0	75.2	0.77	0.91	1.14	25.3
6	T1	119	0.0	0.496	13.8	LOS B	3.0	75.2	0.77	0.91	1.14	25.1
16	R2	127	0.0	0.496	13.8	LOS B	3.0	75.2	0.77	0.91	1.14	24.6
Approach		311	0.0	0.496	13.8	LOS B	3.0	75.2	0.77	0.91	1.14	24.9
North: Route 28												
7	L2	101	0.0	0.415	7.6	LOS A	2.7	66.7	0.54	0.39	0.54	32.8
4	T1	601	0.4	0.415	6.8	LOS A	2.7	66.7	0.50	0.36	0.50	33.5
14	R2	37	0.0	0.251	5.6	LOS A	1.4	33.9	0.45	0.32	0.45	33.4
Approach		739	0.3	0.415	6.8	LOS A	2.7	66.7	0.50	0.36	0.50	33.4
West: Chickatawbut Rd												
5	L2	24	0.0	0.248	8.3	LOS A	1.0	26.1	0.65	0.65	0.65	27.1
2	T1	103	0.0	0.248	8.3	LOS A	1.0	26.1	0.65	0.65	0.65	26.8
12	R2	41	0.0	0.248	8.3	LOS A	1.0	26.1	0.65	0.65	0.65	26.3
Approach		168	0.0	0.248	8.3	LOS A	1.0	26.1	0.65	0.65	0.65	26.7
All Vehicles		2096	0.2	0.496	8.1	LOS A	3.0	75.2	0.55	0.47	0.61	31.2

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).

Roundabout Capacity Model: US HCM 6.

HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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LANE LEVEL OF SERVICE

Lane Level of Service



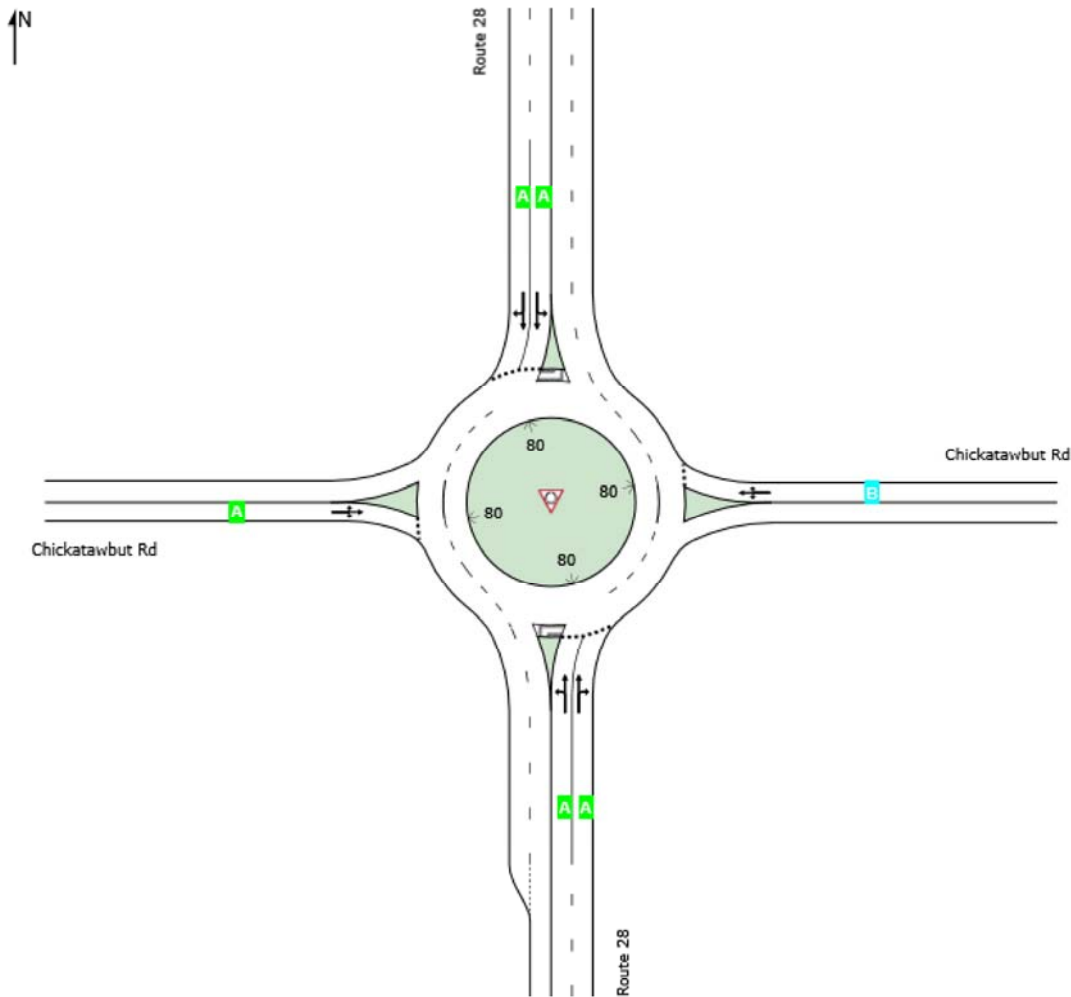
Site: 101 [Route 28 at Chickatawbut Rd - FUTURE SAT]

New Site

Site Category: (None)

Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	B	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if $v/c > 1$ irrespective of lane delay value (does not apply for approaches and intersection).

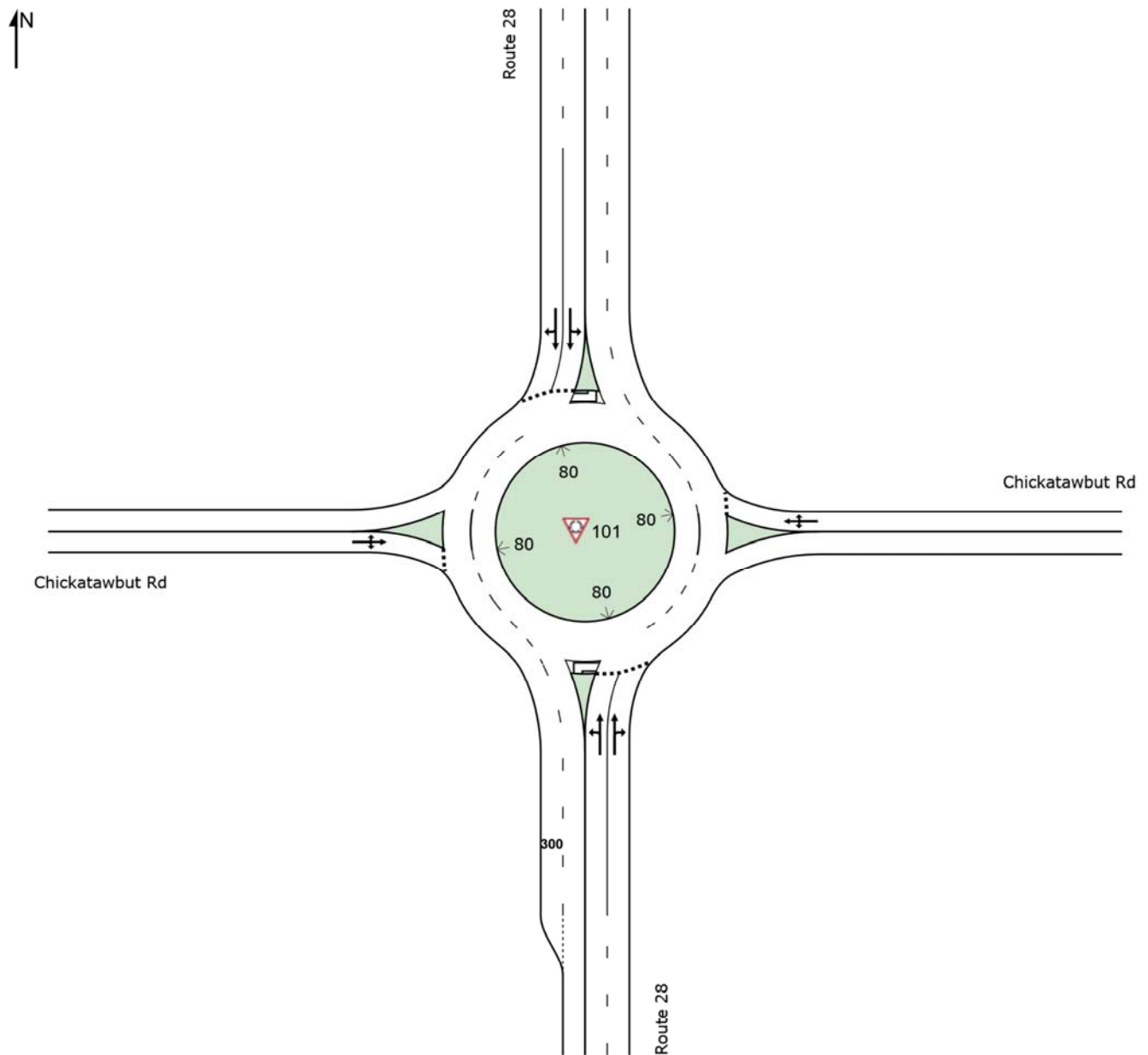
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).

HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

SITE LAYOUT

 **Site: 101 [Route 28 at Chickatawbut Rd - FUTURE SAT]**

New Site
Site Category: (None)
Roundabout



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INTERSECTION SUMMARY



Site: 101 [Route 28 at Chickatawbut Rd - FUTURE SAT]

New Site
Site Category: (None)
Roundabout

Intersection Performance - Hourly Values		
Performance Measure	Vehicles	Persons
Travel Speed (Average)	31.2 mph	31.2 mph
Travel Distance (Total)	1317.2 veh-mi/h	1580.6 pers-mi/h
Travel Time (Total)	42.2 veh-h/h	50.7 pers-h/h
Demand Flows (Total)	2096 veh/h	2516 pers/h
Percent Heavy Vehicles (Demand)	0.2 %	
Degree of Saturation	0.496	
Practical Spare Capacity	71.3 %	
Effective Intersection Capacity	4224 veh/h	
Control Delay (Total)	4.73 veh-h/h	5.68 pers-h/h
Control Delay (Average)	8.1 sec	8.1 sec
Control Delay (Worst Lane)	13.8 sec	
Control Delay (Worst Movement)	13.8 sec	13.8 sec
Geometric Delay (Average)	0.0 sec	
Stop-Line Delay (Average)	8.1 sec	
Idling Time (Average)	4.8 sec	
Intersection Level of Service (LOS)	LOS A	
95% Back of Queue - Vehicles (Worst Lane)	3.0 veh	
95% Back of Queue - Distance (Worst Lane)	75.2 ft	
Queue Storage Ratio (Worst Lane)	0.06	
Total Effective Stops	982 veh/h	1179 pers/h
Effective Stop Rate	0.47	0.47
Proportion Queued	0.55	0.55
Performance Index	57.6	57.6
Cost (Total)	551.36 \$/h	551.36 \$/h
Fuel Consumption (Total)	47.4 gal/h	
Carbon Dioxide (Total)	421.9 kg/h	
Hydrocarbons (Total)	0.040 kg/h	
Carbon Monoxide (Total)	0.498 kg/h	
NOx (Total)	0.194 kg/h	

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Intersection LOS value for Vehicles is based on average delay for all vehicle movements.

Roundabout Capacity Model: US HCM 6.

HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Site Model Variability Index (Iterations 3 to N): 2.4 %

Number of Iterations: 6 (Maximum: 10)

Largest change in Lane Degrees of Saturation for the last three Flow-Capacity Iterations: 2.9% 1.5% 0.8%

Intersection Performance - Annual Values		
Performance Measure	Vehicles	Persons
Demand Flows (Total)	1,006,299 veh/y	1,207,559 pers/y
Delay	2,271 veh-h/y	2,725 pers-h/y
Effective Stops	471,456 veh/y	565,747 pers/y
Travel Distance	632,258 veh-mi/y	758,710 pers-mi/y
Travel Time	20,261 veh-h/y	24,314 pers-h/y
Cost	264,653 \$/y	264,653 \$/y

Fuel Consumption	22,756 gal/y
Carbon Dioxide	202,525 kg/y
Hydrocarbons	19 kg/y
Carbon Monoxide	239 kg/y
NOx	93 kg/y

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HOWARD STEIN HUDSON

Engineers + Planners

Appendix C

Blue Hills Reservation Trail Map

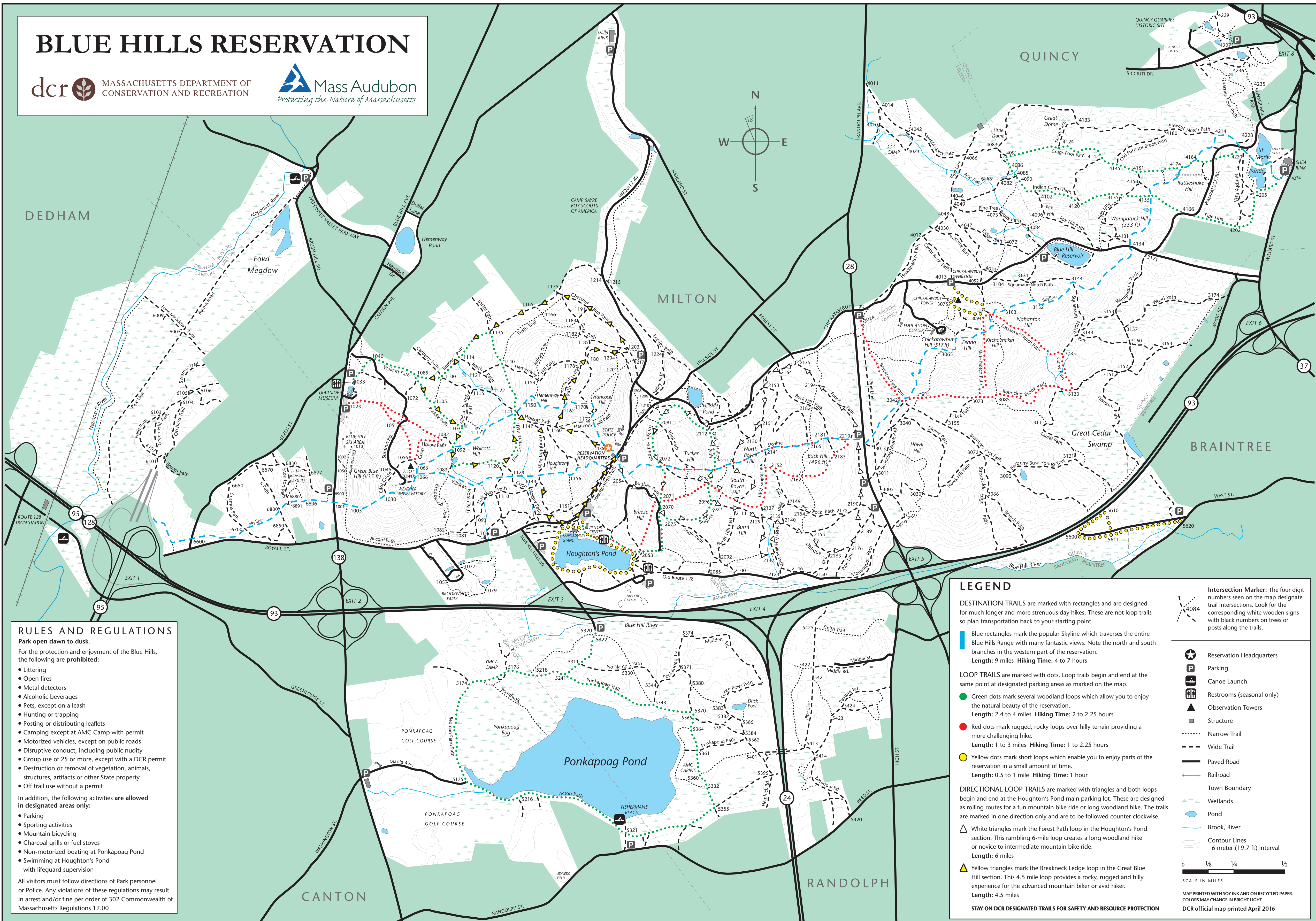
BLUE HILLS RESERVATION



MASSACHUSETTS DEPARTMENT OF
CONSERVATION AND RECREATION



Mass Audubon
Protecting the Nature of Massachusetts



RULES AND REGULATIONS

Park open dawn to dusk.
For the protection and enjoyment of the Blue Hills, the following are **prohibited**:

- Littering
- Open fires
- Metal detectors
- Alcoholic beverages
- Pets, except on a leash
- Hunting or trapping
- Posting or distributing leaflets
- Camping except at AMC Camp with permit
- Motorized vehicles, except on public roads
- Disruptive conduct, including public nudity
- Group use of 25 or more, except with a DCR permit
- Destruction or removal of vegetation, animals, structures, artifacts or other State property
- Off trail use without a permit

In addition, the following activities are **allowed in designated areas only**:

- Parking
- Sporting activities
- Mountain bicycling
- Charcoal grills or fuel stoves
- Non-motorized boating at Ponkapoag Pond
- Swimming at Houghton's Pond with lifeguard supervision

All visitors must follow directions of Park personnel or Police. Any violations of these regulations may result in arrest and/or fine per order of 302 Commonwealth of Massachusetts Regulations 12.00

LEGEND

DESTINATION TRAILS are marked with rectangles and are designed for much longer and more strenuous day hikes. These are not loop trails so plan transportation back to your starting point.

Blue rectangles mark the popular Skyline which traverses the entire Blue Hills Range with many fantastic views. Note the north and south branches in the western part of the reservation.
Length: 9 miles **Hiking Time:** 4 to 7 hours

LOOP TRAILS are marked with dots. Loop trails begin and end at the same point at designated parking areas as marked on the map.

Green dots mark several woodland loops which allow you to enjoy the natural beauty of the reservation.
Length: 2.4 to 4 miles **Hiking Time:** 2 to 2.25 hours

Red dots mark rugged, rocky loops over hilly terrain providing a more challenging hike.
Length: 1 to 3 miles **Hiking Time:** 1 to 2.25 hours

Yellow dots mark short loops which enable you to enjoy parts of the reservation in a small amount of time.
Length: 0.5 to 1 mile **Hiking Time:** 1 hour

DIRECTIONAL LOOP TRAILS are marked with triangles and both loops begin and end at the Houghton's Pond main parking lot. These are designed as rolling routes for a fun mountain bike ride or long woodland hike. The trails are marked in one direction only and are to be followed counter-clockwise.

White triangles mark the Forest Path loop in the Houghton's Pond section. This rambling 6-mile loop creates a long woodland hike or novice to intermediate mountain bike ride.
Length: 6 miles

Yellow triangles mark the Breakneck Ledge loop in the Great Blue Hill section. This 4.5 mile loop provides a rocky, rugged and hilly experience for the advanced mountain biker or avid hiker.
Length: 4.5 miles

STAY ON DCR DESIGNATED TRAILS FOR SAFETY AND RESOURCE PROTECTION

Intersection Marker: The four digit numbers seen on the map designate trail intersections. Look for the corresponding white wooden signs with black numbers on trees or posts along the trails.

★ Reservation Headquarters
P Parking
Canoe Launch
Restrooms (seasonal only)
▲ Observation Towers
■ Structure
--- Narrow Trail
- - - Wide Trail
= Paved Road
+ Railroad
--- Town Boundary
Wetlands
Pond
Brook, River
Contour Lines
6 meter (19.7 ft) interval

0 1/8 1/4 1/2
SCALE IN MILES
MAP PRINTED WITH SOY INK AND ON RECYCLED PAPER.
COLORS MAY CHANGE IN BRIGHT LIGHT.
DCR official map printed April 2016



HOWARD STEIN HUDSON

Engineers + Planners

Appendix D

Bus Route Map & Schedule

Ashmont (Rt. 12)

bat.ridebat.com/schedulemaps/r12/



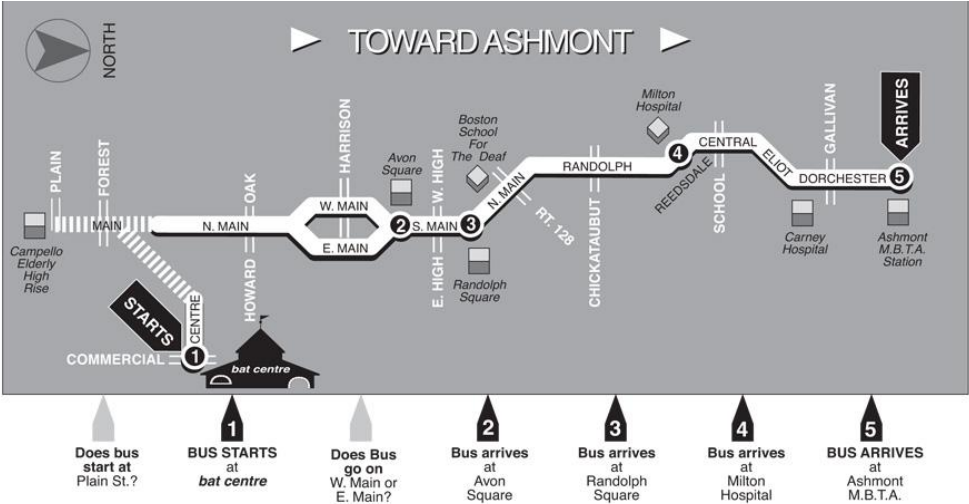
Ashmont Route 12



Â Routes to Boston and Beyond

[Back to All Routes](#)

- [Outbound Schedule](#)
- [Inbound Schedule](#)
- [My NextBus](#)
- [Fares](#)



Weekday Schedule

4:50 am	5:00 am	W	5:12 am	5:16 am	5:27 pm	5:45 am
-	5:00 am	EXPRESS	-	-	-	5:45 am
5:05 am	* 5:15 am	W	5:27 am	5:31 pm	5:42 pm	5:55 am
5:25 am	5:35 am	W	5:47 am	5:51 am	6:02 am	6:20 am
5:45 am	6:00 am	EXPRESS	-	-	-	6:55 am
-	6:00 am	W	6:12 am	6:16 am	6:27 am	6:55 am
6:05 am	6:20 am	W	6:32 am	6:36 am	6:47 am	7:15 am
-	6:35 am	EXPRESS	-	-	-	7:20 am
-	6:40 am	W	6:52 am	6:56 am	7:09 am	7:35 am
-	7:00 am	W	7:12 am	7:16 am	7:29 am	8:00 am
-	7:20 am	EXPRESS	-	-	-	8:10 am
-	7:20 am	W	7:34 am	7:39 am	7:52 am	8:20 am
-	7:40 am	W	7:54 am	7:59 am	8:12 am	8:40 am
-	8:00 am	W	8:14 am	8:19 am	8:32 am	9:00 am
-	8:20 am	W	8:34 am	8:39 am	8:52 am	9:20 am
-	8:45 am	W	8:59 am	9:04 am	9:17 am	9:45 am
-	9:05 am	W	9:19 am	9:24 am	9:37 am	10:00 am
-	9:30 am	W	9:44 am	9:49 am	10:02 am	10:30 am
-	9:50 am	W	10:04 am	10:09 am	10:22 am	10:50 am
-	10:15 am	W	10:29 am	10:34 am	10:47 am	11:15 am
-	11:00 am	W	11:14 am	11:19 am	11:32 am	12:00 pm
-	11:50 am	EXPRESS	-	-	-	12:35 pm
-	11:50 am	W	12:04 pm	12:09 pm	12:22 pm	12:50 pm
-	12:40 pm	EXPRESS	-	-	-	1:30 pm
-	12:40 pm	W	12:54 pm	12:59 pm	1:12 pm	1:40 pm
-	1:05 pm	W	1:19 pm	1:24 pm	1:37 pm	2:05 pm
-	1:30 pm	W	1:44 pm	1:49 pm	2:02 pm	2:30 pm

-	1:55 pm	W	2:09 pm	2:14 pm	2:27 pm	2:55 pm
-	2:20 pm	W	2:34 pm	2:39 pm	2:52 pm	3:20 pm
-	2:45 pm	W	2:59 pm	3:04 pm	3:17 pm	3:45 pm
-	3:10 pm	W	3:24 pm	3:29 pm	3:42 pm	4:10 pm
-	3:35 pm	W	3:49 pm	3:54 pm	4:07 pm	4:35 pm
-	3:35 pm	EXPRESS	-	-	-	-
-	4:00 pm	W	4:14 pm	4:19 pm	4:32 pm	5:00 pm
-	4:25 pm	EXPRESS	-	-	-	5:15 pm
-	4:25 pm	W	4:39 pm	4:44 pm	4:57 pm	5:25 pm
-	4:50 pm	W	5:04 pm	5:09 pm	5:22 pm	5:50 pm
-	5:15 pm	EXPRESS	-	-	-	6:00 pm
-	5:15 pm	W	5:29 pm	5:34 pm	5:47 pm	6:15 pm
-	5:40 pm	EXPRESS	-	-	-	6:25 pm
-	5:40 pm	W	5:54 pm	5:59 pm	6:12 pm	6:40 pm
-	* 6:05 pm	W	6:19 pm	6:24 pm	6:37 pm	7:05 pm
-	* 6:50 pm	W	7:02 pm	7:07 pm	7:19 pm	7:45 pm
-	* 7:35 pm	W	7:47 pm	7:51 pm	8:02 pm	8:25 pm
-	* 8:20 pm	W	8:32 pm	8:36 pm	8:48 pm	9:05 pm
-	* 9:05 pm	W	9:19 pm	9:24 pm	9:35 pm	9:45 pm
9:40 pm	* 9:45 pm	E	9:59 pm	10:04 pm	10:16 pm	10:40 pm
10:40 pm	* 10:45 pm	W	10:57 pm	11:01 pm	11:12 pm	11:30 pm

Saturday Schedule

5:05 am	5:20 am	W	5:32 am	5:38 am	5:51 am	6:20 am
5:45 am	6:00 am	W	6:12 am	6:18 am	6:31 am	7:00 am
6:25 am	6:40 am	W	6:52 am	6:58 am	7:11 am	7:40 am
-	7:20 am	W	7:32 am	7:38 am	7:51 am	8:20 am
-	8:00 am	W	8:13 am	8:18 am	8:34 am	9:00 am

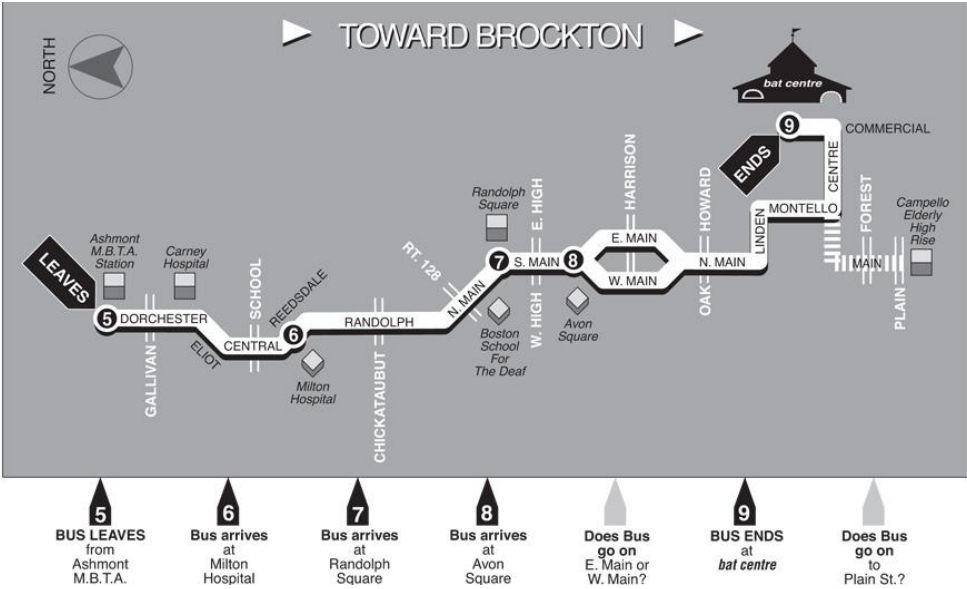
-	8:40 am	W	8:53 am	8:58 am	9:14 am	9:30 am
-	9:20 am	W	9:33 am	9:38 am	9:54 am	10:20 am
-	10:00 am	W	10:13 am	10:18 am	10:34 am	11:00 am
-	10:45 am	W	10:58 am	11:03 am	11:19 am	11:45 am
-	11:30 am	W	11:43 am	11:48 am	12:04 pm	12:20 pm
-	12:15 pm	W	12:28 pm	12:33 pm	12:49 pm	1:05 pm
-	1:00 pm	W	1:13 pm	1:19 pm	1:35 pm	2:00 pm
-	1:45 pm	W	1:58 pm	2:04 pm	2:20 pm	2:45 pm
-	2:30 pm	W	2:43 pm	2:49 pm	3:05 pm	3:30 pm
-	3:15 pm	W	3:30 pm	3:34 pm	3:50 pm	4:15 pm
-	4:00 pm	W	4:15 pm	4:19 pm	4:35 pm	5:00 pm
-	4:45 pm	W	5:00 pm	5:04 pm	5:20 pm	5:45 pm
-	5:15 pm	EXPRESS	-	-	-	-
-	5:30 pm	W	5:45 pm	5:49 pm	6:04 pm	6:30 pm
-	6:15 pm	W	6:29 pm	6:33 pm	6:48 pm	7:15 pm
-	7:45 pm	W	7:57 pm	8:03 pm	8:16 pm	8:35 pm
-	8:30 pm	W	8:41 pm	8:45 pm	8:56 pm	9:15 pm
10:00 pm	10:05 pm	W	10:17 pm	10:21 pm	10:32 pm	10:50 pm

Sunday Schedule

10:10 am	10:20 am	W	10:32 am	10:38 pm	10:51 am	11:10 am
-	11:40 am	W	11:52 am	11:58 pm	12:11 pm	12:30 pm
-	12:20 pm	W	12:32 pm	12:38 pm	12:51 pm	1:20 pm
-	1:40 pm	W	1:52 pm	1:58 pm	2:11 pm	2:30 pm
-	2:20 pm	W	2:32 pm	2:38 pm	2:51 pm	3:10 pm
-	3:40 pm	W	3:52 pm	3:58 pm	4:11 pm	4:30 pm
-	4:20 pm	W	4:32 pm	4:38 pm	4:51 pm	5:10 pm
-	5:40 pm	W	5:52 pm	5:58 pm	6:11 pm	6:30 pm

*Notes

* Denotes #1 Montello route is serviced via Route #12 Ashmont All buses are wheelchair accessible. The schedule shows when the bus is scheduled to arrive at sample bus stops along the route. Tip: Arrival times are estimated so please get to the bus stop a few minutes early, or visit the "NextBus" tab. Watch for holiday service announcements. Schedule subject to change without prior notice.



Weekday Schedule

5:45 am	EXPRESS	-	-	-	6:35 am	-
5:45 am	5:52 am	6:03 am	6:08 am	W	6:35 am	-
5:55 am	6:02 am	6:13 am	6:18 am	W	6:40 am	-
6:20 am	6:28 am	6:42 am	6:50 am	W	7:20 am	-
6:55 am	EXPRESS	-	-	-	7:40 am	-
6:55 am	7:03 am	7:17 am	7:25 am	W	7:55 am	-
7:20 am	7:28 am	7:42 am	7:50 am	W	8:20 am	-
7:20 am	EXPRESS	-	-	-	8:20 am	-
7:35 am	7:43 am	7:57 am	8:05 am	W	8:35 am	-
8:00 am	EXPRESS	-	-	-	8:55 am	-
8:00 am	8:08 am	8:23 am	8:30 am	W	9:00 am	-
8:20 am	8:28 am	8:42 am	8:50 am	W	9:20 am	-
8:40 am	8:48 am	9:02 am	9:10 am	W	9:40 am	-
9:00 am	9:08 am	9:22 am	9:30 am	W	10:00 am	-

9:20 am	9:28 am	9:42 am	9:49 am	W	10:15 am	-
9:45 am	9:53 am	10:07 am	10:15 am	W	10:45 am	-
10:00 am	10:08 am	10:22 am	10:30 am	W	10:45 am	-
10:30 am	10:38 am	10:52 am	11:00 am	W	11:30 am	-
10:50 am	10:58 am	11:12 am	11:20 am	W	11:50 am	-
11:15 am	11:23 am	11:37 am	11:45 am	W	12:15 pm	-
11:50 pm	11:58 pm	12:12 pm	12:20 pm	W	12:50 pm	-
12:35 pm	EXPRESS	-	-	-	1:25 pm	-
12:50 pm	12:58 pm	1:12 pm	1:20 pm	W	1:50 pm	-
1:25 pm	EXPRESS	-	-	-	2:15 pm	-
1:40 pm	1:48 pm	2:02 pm	2:10 pm	W	2:40 pm	-
2:05 pm	2:13 pm	2:27 pm	2:35 pm	W	3:05 pm	-
2:30 pm	2:39 pm	2:53 pm	3:00 pm	W	3:30 pm	-
2:55 pm	3:04 pm	3:18 pm	3:25 pm	W	3:55 pm	-
3:20 pm	3:29 pm	3:43 pm	3:50 pm	W	4:20 pm	-
3:45 pm	3:54 pm	4:08 pm	4:15 pm	W	4:45 pm	-
4:10 pm	4:19 pm	4:33 pm	4:40 pm	W	5:10 pm	-
4:20 pm	EXPRESS	-	-	-	5:15 pm	-
4:35 pm	4:45 pm	4:59 pm	5:05 pm	W	5:35 pm	-
5:00 pm	5:10 pm	5:24 pm	5:30 pm	W	6:00 pm	-
5:10 pm	EXPRESS	-	-	-	6:05 pm	-
5:25 pm	5:35 pm	5:49 pm	5:57 pm	W	6:25 pm	-
5:50 pm	6:00 pm	6:14 pm	6:20 pm	W	6:50 pm	-
6:00 pm	EXPRESS	-	-	-	6:50 pm	-
* 6:15 pm	6:24 pm	6:38 pm	6:45 pm	W	7:15 pm	-
6:25 pm	EXPRESS	-	-	-	7:15 pm	-
* 6:40 pm	6:48 pm	7:02 pm	7:07 pm	W	7:35 pm	-
* 7:05 pm	7:13 pm	7:27 pm	7:32 pm	W	7:55 pm	-

* 7:45 pm	7:53 pm	8:07 pm	8:12 pm	W	8:35 pm	-
* 8:25 pm	8:33 pm	8:47 pm	8:51 pm	W	9:10 pm	-
* 9:05 pm	9:13 pm	9:27 pm	9:31 pm	W	9:45 pm	9:50 pm
* 9:45 pm	9:53 pm	10:07 pm	10:11 pm	W	10:25 pm	10:30 pm
* 10:40 pm	10:47 pm	10:59 pm	11:03 pm	W	11:20 pm	11:25 pm
* 11:40 pm	11:47 pm	11:59 pm	12:03 am	W	12:20 am	12:25 am

Saturday Schedule

6:20 am	6:27 am	6:41 am	6:46 pm	W	7:20 am	-
7:00 am	7:07 am	7:21 am	7:26 am	W	8:00 am	-
7:40 am	7:48 am	8:01 am	8:06 am	W	8:40 am	-
8:20 am	8:28 am	8:41 am	8:46 am	W	9:20 am	-
9:00 am	9:09 am	9:22 am	9:26 am	W	10:00 am	-
9:40 am	9:50 am	10:02 am	10:06 am	W	10:40 am	-
10:20 am	10:30 am	10:42 am	10:47 am	W	11:20 am	-
11:00 am	11:10 am	11:22 am	11:27 am	W	12:00 pm	-
11:45 am	11:50 am	12:07 pm	12:12 pm	W	12:45 pm	-
12:20 pm	12:20 pm	12:42 pm	12:47 pm	W	1:20 pm	-
1:05 pm	1:15 pm	1:27 pm	1:32 pm	W	2:05 pm	-
2:00 pm	2:10 pm	2:22 pm	2:27 pm	W	3:00 pm	-
2:45 pm	2:55 pm	3:07 pm	3:12 pm	W	3:45 pm	-
3:30 pm	3:40 pm	3:52 pm	3:57 pm	W	4:30 pm	-
4:15 pm	4:25 pm	4:37 pm	4:42 pm	W	5:15 pm	-
5:00 pm	5:10 pm	5:22 pm	5:27 pm	W	6:00 pm	-
5:45 pm	5:54 pm	6:05 pm	6:11 pm	W	6:45 pm	-
6:00 pm	EXPRESS	-	-	-	-	-
6:30 pm	6:39 pm	6:49 pm	6:55 pm	W	7:20 pm	-
7:15 pm	7:24 pm	7:34 pm	7:40 pm	W	8:05 pm	-

8:35 pm	8:42 pm	8:52 pm	8:58 pm	W	9:30 pm	Yes
9:15 pm	9:22 pm	9:33 pm	9:38 pm	W	10:05 pm	Yes
10:50 pm	10:57 pm	11:08 pm	11:13 pm	W	11:40 pm	Yes

Sunday Schedule

11:20 am	11:30 am	11:42 am	11:47 am	W	12:20 pm	-
12:40 pm	12:50 pm	1:02 pm	1:07 pm	W	1:40 pm	-
1:20 pm	1:30 pm	1:42 pm	1:47 pm	W	2:20 pm	-
2:40 pm	2:50 pm	3:02 pm	3:07 pm	W	3:40 pm	-
3:20 pm	3:30 pm	3:42 pm	3:47 pm	W	4:20 pm	-
4:40 pm	4:50 pm	5:02 pm	5:07 pm	W	5:40 pm	-
5:20 pm	5:30 pm	5:45 pm	5:47 pm	W	6:20 pm	-
6:30 pm	6:40 pm	7:02 pm	7:07 pm	W	7:30 pm	-

*Notes

* Denotes #1 Montello route is serviced via Route #12 Ashmont No Sunday service. All buses are wheelchair accessible. The schedule shows when the bus is scheduled to arrive at sample bus stops along the route. Tip: Arrival times are estimated so please get to the bus stop a few minutes early, or visit the "NextBus" tab. Watch for holiday service announcements. Schedule subject to change without prior notice.

My NextBus

Find out when a BAT bus will arrive at your stop, in real time. Sign up for text alerts to notify you when your bus will arrive via your mobile device.

Ashmont Route 12 Fares

	Adult	Elderly & Disabled & Children Under 12	Children Under 5
Brockton-Ashmont	\$2.25	\$1.10	Free
Brockton-Milton	\$1.75	\$0.85	Free
Brockton-Randolph	\$1.75	\$0.85	Free
Avon-Ashmont	\$1.75	\$0.85	Free
Avon-Randolph	\$1.75	\$0.85	Free

Avon-Milton	\$1.75	\$0.85	Free
S.Randolph- Ashmont	\$1.75	\$0.85	Free

Transfers: Free transfers good for 1 hour in BAT Centre (located at 155 Centre Street in Brockton), but not valid for return trip.

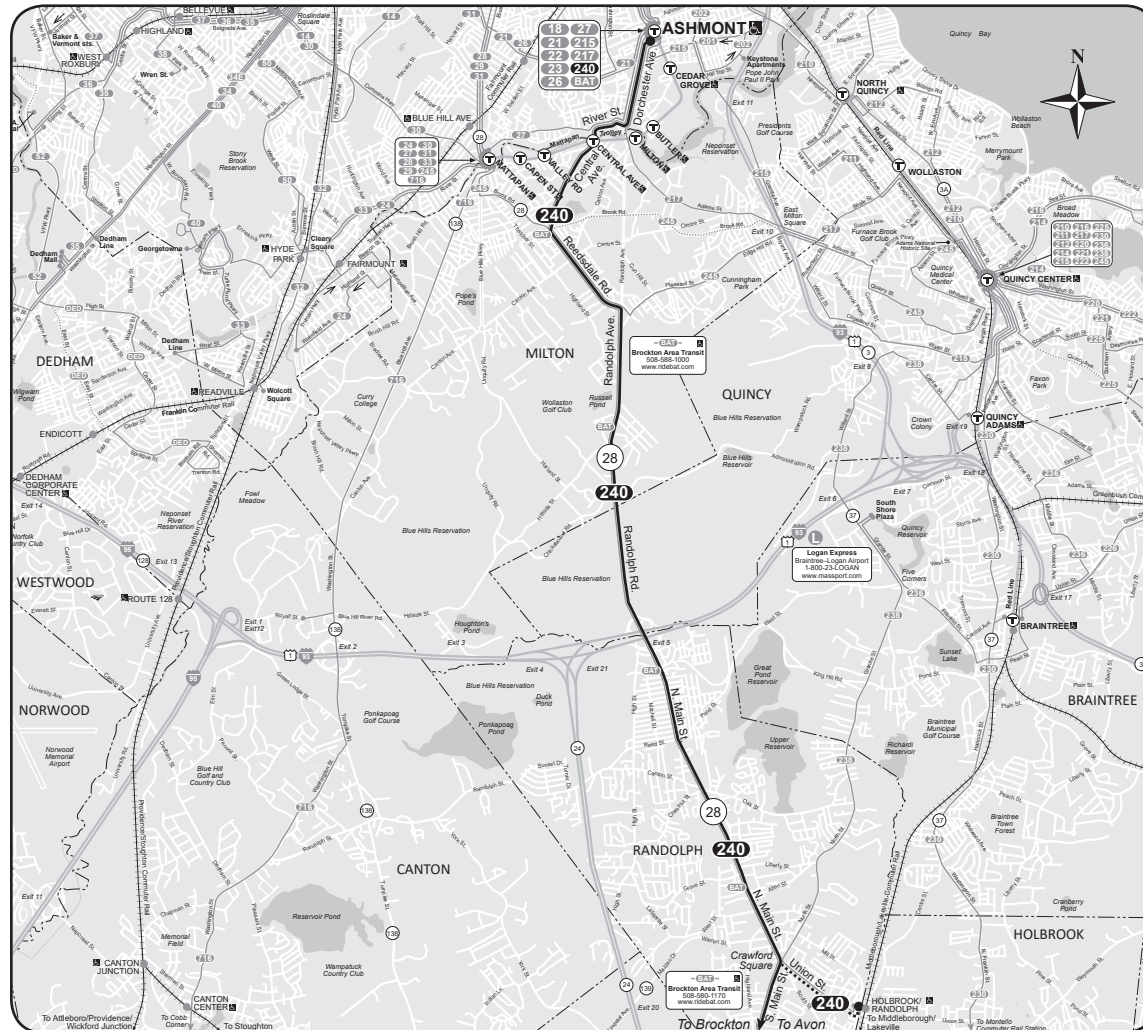
Charlie Cards: Local Charlie Card allows passengers to ride local buses at a discounted rate on a convenient Stored Value Card. For more information, visit the Charlie Card page.

BAT Riders' Club Discount Passes: Discounts available for 7 day and 31 day passes. For more information, visit the Discount Passes page.

Disability Pass: Valid Medicare cards are accepted as proof of eligibility for BAT's half-fare program. For information on BAT's disability pass program, please call (508) 588-2240

For TDD: Telecommunication Device for the Deaf, please call (508) 586-0009.

Route 240 Avon Square or Holbrook/Randolph Commuter Rail Station - Ashmont Station



240

Effective March 15, 2020

Avon Square or Holbrook/ Randolph Commuter Rail Station - Ashmont Station

Serving

- Pierce Square
- North Main Street
- Crawford Square
- Milton Hospital
- Mattapan High Speed Line
- Red Line



T Massachusetts Bay Transportation Authority **massDOT**
Massachusetts Department of Transportation

Information 617-222-3200 • 1-800-392-6100
(TTY) 617-222-5146 • www.mbta.com

240 Weekday							
Inbound		Outbound					
Leave Avon Square	Leave Holb/Rand Commuter Rail	Lv/Arrive Crawford Square	Arrive Ashmont Station	Leave Ashmont Station	Arrive Crawford Square	Lv/Arrive Holb/Rand Commuter Rail	Arrive Avon Square
.....	.....	4:55A	5:36A	5:41A	6:05A	6:08A	.....
.....	.....	5:15	5:56	6:05	6:29	.....	.....
5:20A	.....	5:25	6:06	6:18	6:46	6:49A	.....
.....	.....	5:40	6:21	6:30	7:01	.....	7:06A
.....	.....	5:55	6:36	6:45	7:16	7:19	.....
6:00	.....	6:05	6:46	7:10	7:41	7:44	.....
.....	.....	6:15	6:56	7:42	8:13	8:16	.....
6:25	.....	6:30	7:16	8:00	8:31	.....	8:36
.....	.....	6:40	7:28	8:15	8:46	.....	8:51
6:46	.....	6:51	7:46	8:50	9:21	9:24	.....
.....	6:59A	7:02	8:02	9:25	9:56	.....	10:01
7:13	.....	7:18	8:18	10:20	10:51	.....	10:56
.....	7:25	7:28	8:28	10:54	11:25	11:28	.....
.....	7:50	7:53	8:53	11:35	12:06P	12:09P	.....
8:05	.....	8:10	9:06	.....	.....	.....	.....
.....	8:25	8:28	9:17	12:10P	12:41P	.....	12:46P
8:40	.....	8:45	9:26	12:54	1:25	1:28P	.....
9:00	.....	9:05	9:41	1:20	1:51	.....	1:56
.....	9:35	9:37	10:13	1:50	2:21	2:24	.....
10:05	.....	10:10	10:46	2:20	2:57	.....	3:04
.....	10:50	10:52	11:28	2:44	3:24	3:27	.....
11:15	.....	11:20	11:52	3:15	3:55	.....	4:02
.....	12:15P	12:18P	12:48P	3:45	4:25	4:28	.....
12:52P	.....	12:56	1:26	4:15	5:01	.....	5:08
.....	1:34	1:37	2:07	4:38	5:25	5:30	.....
2:04	.....	2:08	2:38	4:58	5:45	.....	5:50
.....	s 2:30	3:00	.....	5:16	6:02	6:07	.....
.....	2:46	2:49	3:23	5:34	6:19	.....	6:24
3:10	.....	3:15	3:57	5:50	6:35	6:38	.....
.....	3:36	3:39	4:21	6:00	6:44	.....	6:49
.....	.....	3:59	4:35	6:15	6:56	6:59	.....
4:10	.....	4:14	4:50	6:30	7:09	.....	7:14
.....	4:40	4:43	5:19	7:00	7:38	.....	7:43
.....	5:05	5:08	5:44	7:35	8:06	.....	.....
5:20	.....	5:24	6:00	8:04	8:33	.....	8:38
.....	5:45	5:48	6:24	8:30	8:57	.....	.....
6:00	.....	6:06	n 6:30	9:20	9:47	.....	9:52
.....	6:16	6:19	n 6:37	10:32	10:59	.....	11:04
6:34	.....	6:38	7:12	11:45	12:11A	.....	12:16A
.....	6:50	6:53	n 7:11	12:50A	1:16	.....	.....
6:55	.....	6:59	7:28	.....	.....	.....	.....
.....	7:08	7:11	n 7:29	.....	.....	.....	.....
7:23	.....	7:27	7:56	.....	.....	.....	.....
7:50	.....	7:54	8:23	.....	.....	.....	.....
.....	.....	8:13	n 8:32	.....	.....	.....	.....
8:41	.....	8:45	9:14	.....	.....	.....	.....
9:57	.....	10:01	10:24	.....	.....	.....	.....
11:10	.....	11:13	11:36	.....	.....	.....	.....
12:19A	.....	12:22A	12:45A	.....	.....	.....	.....

240 Saturday							
Inbound		Outbound					
Leave Avon Square	Lv/Arrive Crawford Square	Arrive Ashmont Station	Leave Ashmont Station	Arrive Crawford Square	Arrive Avon Square		
.....	5:50A	6:16A	6:30A	6:50A	6:56A		
.....	6:55	7:23	7:30	7:57	8:05		
7:10A	7:17	7:45	7:55	8:22	.....		
.....	8:00	8:28	8:35	9:02	9:10		
8:15	8:22	8:50	9:00	9:27	.....		
.....	9:05	9:33	9:40	10:07	10:16		
9:20	9:27	9:56	10:05	10:32	.....		
.....	10:10	10:39	10:45	11:12	11:21		
10:25	10:32	11:02	11:10	11:40	.....		
.....	11:10	11:44	11:50	12:21P	12:30P		
11:30	11:37	12:11P	.....	12:15P	12:46P		
.....	12:15P	12:49P	12:55	1:26	1:35P		
12:35P	12:42	1:16	1:20	1:51	.....		
.....	1:20	1:54	2:00	2:31	2:40		
1:40	1:47	2:21	2:25	2:56	.....		
.....	n 1:48	n 2:08	3:05	3:36	3:45		
.....	2:25	2:57	3:30	4:01	.....		
2:45	2:50	3:21	4:10	4:40	4:49		
.....	3:30	4:01	4:35	5:03	.....		
3:50	3:55	4:26	5:15	5:43	5:52		
.....	4:35	5:06	5:40	6:08	.....		
4:55	5:00	5:31	6:20	6:48	6:57		
.....	5:40	6:10	6:45	7:13	.....		
6:00	6:05	6:35	7:25	7:53	8:02		
.....	6:45	7:15	8:30	8:55	9:04		
7:05	7:10	7:39	9:35	10:00	10:09		
8:10	8:15	8:44	10:45	11:08	11:16		
9:10	9:15	9:44	11:40	12:03A	12:11A		
10:15	10:19	10:48	12:53A	1:16	.....		
11:20	11:24	11:50	.....	.....	.....		
12:15A	12:19A	12:45A	.....	.....	.....		

n - To Quincy Center Station via North Randolph, express via I-93. Arrival time shown is at Quincy Center Station
s - Does NOT run during school vacation

Route 240
Avon Square or
Holbrook/Randolph
Commuter Rail Station-
Ashmont Station

240 Sunday							
Inbound		Outbound					
Leave Avon Square	Lv/Arrive Crawford Square	Arrive Ashmont Station	Leave Ashmont Station	Arrive Crawford Square	Arrive Avon Square		
.....	7:00A	7:27A	7:30A	7:57A	.....		
8:10A	8:15	8:44	8:50	9:17	.....		
9:25	9:30	10:02	10:05	10:32	.....		
10:40	10:45	11:18	11:20	11:47	.....		
11:55	12:00N	12:33P	.....	.....	.....		
.....	.....	.....	12:35P	1:02P	.....		
1:10P	1:15P	1:48P	1:55	2:22	.....		
.....	2:25	2:57	3:00	3:27	3:34P		
.....	3:45	4:15	4:20	4:47	4:54		
.....	5:00	5:30	5:35	6:04	6:10		
.....	6:20	6:47	6:50	7:16	7:22		
.....	7:40	8:07	8:10	8:37	8:43		
.....	9:00	9:24	9:30	9:54	10:00		
.....	10:05	10:26	10:30	10:53	10:59		
.....	11:10	11:31	11:35	11:58	12:04A		
.....	12:13A	12:35A	12:40A	1:00A	.....		

FARE NOTE: Travel on Route 238 requires a separate fare or valid transfer.

 All buses are accessible to persons with disabilities

				
Fare	Local Bus	Bus + Bus	Rapid Transit	Bus + Rapid Transit
CharlieCard	\$1.70	\$1.70	\$2.40	\$2.40
CharlieTicket	\$2.00	\$2.00	\$2.90	\$4.90
Cash-on-Board	\$2.00	\$4.00	\$2.90	\$4.90
Student/Youth*	\$0.85	\$0.85	\$1.10	\$1.10
Senior/TAP**	\$0.85	\$0.85	\$1.10	\$1.10

VALID PASSES: LinkPass (\$90.00/mo.); Local Bus (\$55/mo.); *Student/Youth LinkPass (\$30.00/mo.); **Senior/TAP LinkPass (\$30/mo.); and express bus, commuter rail, and boat passes.
FREE FARES: Children 11 and under ride free when accompanied by an adult; Blind Access CharlieCard holders ride free and if using a guide, the guide rides free.
* Requires Student CharlieCard or Youth CharlieCard. Student CharlieCards are available to students through participating middle schools and high schools. Youth CharlieCards are available through community partners in the Boston metro area. Visit www.mbta.com/youthpass for details.
** Requires Senior/TAP CharlieCard, available to Medicare cardholders, seniors 65+, and persons with disabilities.

Spring & Summer 2020 Holidays
4/20: see Weekday; 5/25 see Sunday
7/3: see Saturday; 7/4: see Sunday



HOWARD STEIN HUDSON

Engineers + Planners

Appendix E

Crash Data

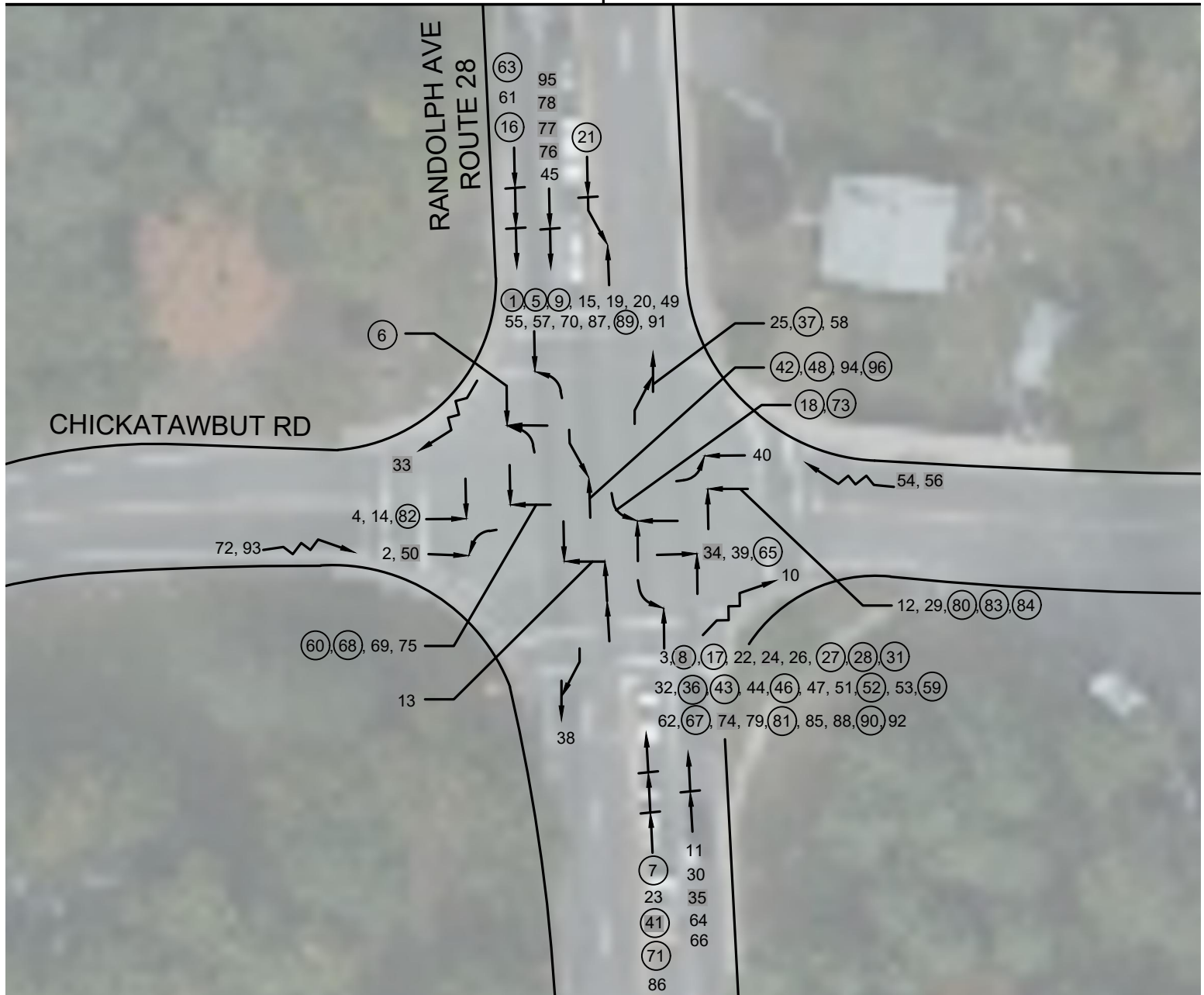


HOWARD STEIN HUDSON

MILTON, MA
RANDOLPH AVE (ROUTE 28) AT CHICKATAWBUT RD
MASSDOT

COLLISION DIAGRAM

TIME PERIOD ANALYZED: 2016 - 2019
SOURCE OF CRASH DATA: MILTON POLICE DEPARTMENT
DATE PREPARED: 03/19/2020
PREPARED BY: EJE



SYMBOLS

- Moving Vehicle
- ← Backing Vehicle
- Non-Involved Vehicle
- 🚶 Pedestrian
- 🚲 Bicycle
- 🐾 Animal
- 🚗 Parked Vehicle
- Fixed Object

TYPES OF CRASH

- ⊥ Rear End
- ⊥ Head On
- ↘ Angle
- ↪ Turning Movement
- ↘ Sideswipe
- ⚡ Out of Control
- Night Time Crash

SEVERITY

- Injury
- ⦿ Fatal



NOT TO SCALE

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Milton COUNT DATE : 1/31/2019

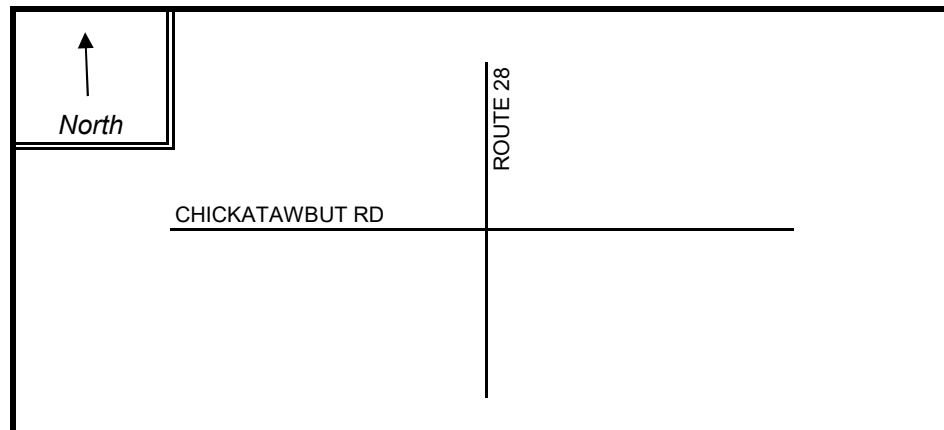
DISTRICT : 6 UNSIGNALIZED : ☐ SIGNALIZED : ☒

~ INTERSECTION DATA ~

MAJOR STREET : Randolph Ave (Route 28)

MINOR STREET(S) : Chickatawbut Rd

**INTERSECTION
DIAGRAM**
(Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	EB	WB	NB	SB		
PEAK HOURLY VOLUMES (PM) :	336	372	651	1,059		2,418

" K " FACTOR :

0.084

INTERSECTION ADT (V) = TOTAL DAILY
APPROACH VOLUME :

28,632

TOTAL # OF CRASHES :

156

OF
YEARS :

8

AVERAGE # OF
CRASHES PER YEAR (A) :

19.50

CRASH RATE CALCULATION :

1.87

$$\text{RATE} = \frac{(A * 1,000,000)}{(V * 365)}$$

Comments : The average crash rate for a signalized intersection in District 6 is 0.70.

Project Title & Date : Route 28/Chickatawbut Road, 03/10/2020

COLLISION DIAGRAM

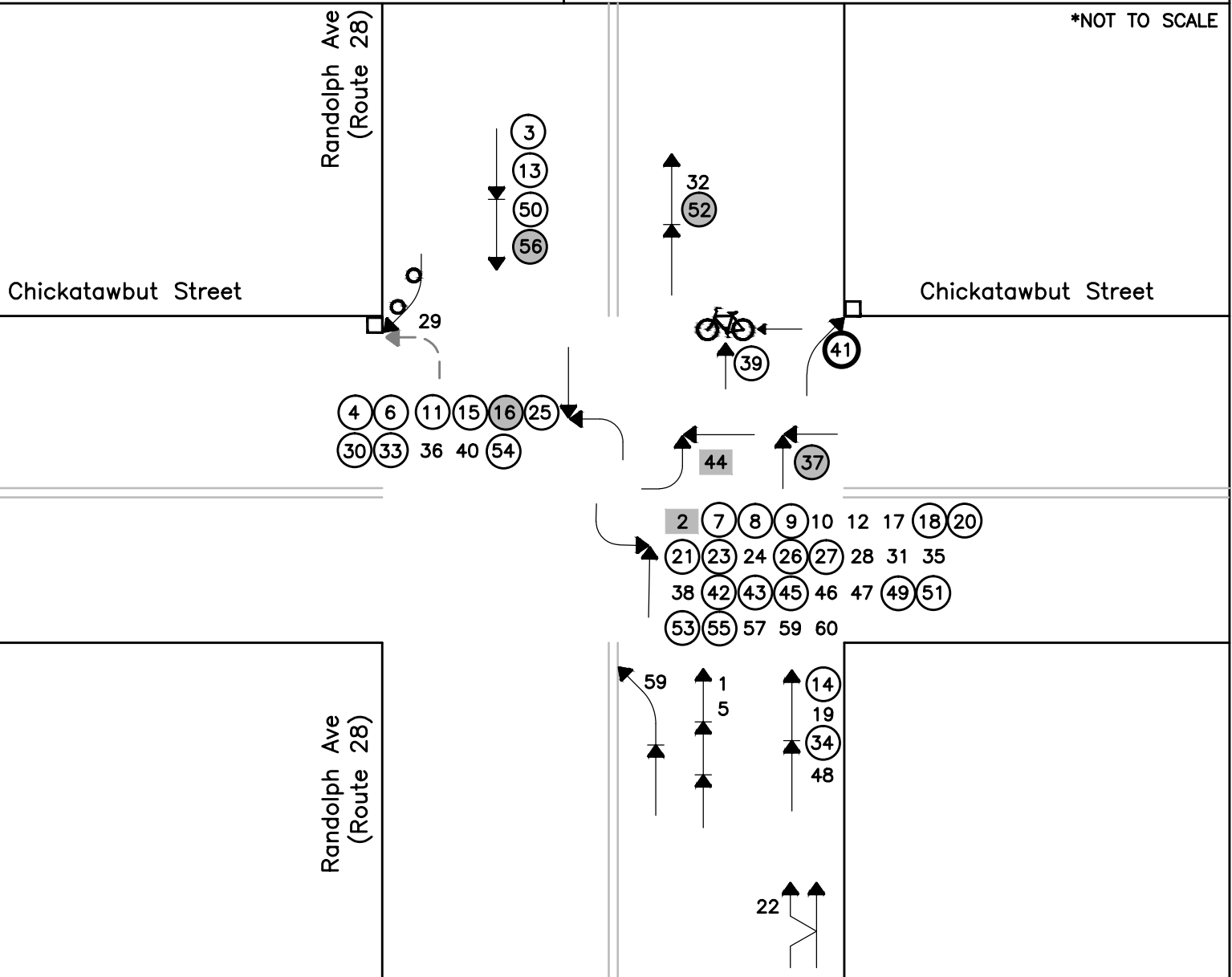
TIME PERIOD ANALYZED: 2012-2015

SOURCE OF CRASH REPORTS: STATE/LOCAL POLICE

DATE PREPARED: 8/12/2016

PREPARED BY: Jinkun Yuan

*NOT TO SCALE



SYMBOLS

TYPES OF CRASH

SEVERITY

→ Moving Vehicle
 ← Backing Vehicle
 - - - Non-Involved Vehicle

Involved

Non-Involved



Pedestrian

Bicycle



Animal

Direction of Motion



Parked Vehicle

Fixed Object

→ Head on
 → Rear End
 → Angle
 → Turning Movement
 → Sideswipe
 → Out of Control
 ■ Night Time Crash



Injury



Fatal



Property Damage Only



Crash Data Summary Table

Randolph Avenue (Route 28) at Chikatawbut Street, Milton, MA
2012-2015

Crash Diagram Ref #	Crash Date	Crash Day	Time of Day	Manner of Collision	Light Condition	Weather Condition	Road Surface	Driver Contributing Code	Ages			Comments
	m/d/y			Type	Type	Type	Type	Type	D1	D2	D3	
1	1/14/12	Saturday	11:34 AM	Rear-end	Daylight	Clear	Dry	Unknown	43	18	UNK	Unknown vehicle rear-ended MV 2 which caused it to crash into MV 1
2	4/20/12	Friday	9:28 PM	Angle	Dark - lighted roadway	Clear	Dry	Failed to yield right of way	26	38		
3	4/23/12	Monday	7:57 AM	Rear-end	Daylight	Rain	Wet	Inattention	42	26		MV 1 slid due to wet surface
4	6/5/12	Tuesday	8:43 AM	Angle	Daylight	Rain	Wet	Failed to yield right of way	25	53		
5	6/8/12	Friday	4:06 PM	Rear-end	Daylight	Cloudy	Dry	Unknown	UNK	UNK	UNK	
6	7/5/12	Thursday	5:41 PM	Sideswipe, opposite direction	Daylight	Clear	Dry	No Improper Driving	48	37		MV 2 did not see MV 1 while turning left
7	7/9/12	Monday	2:25 PM	Angle	Daylight	Clear	Dry	Failed to yield right of way	26	58		
8	7/15/12	Sunday	4:15 PM	Angle	Daylight	Clear	Dry	Failed to yield right of way	28	41		
9	7/22/12	Sunday	1:25 PM	Angle	Daylight	Clear	Dry	Failed to yield right of way	20	64		
10	8/30/12	Thursday	7:54 AM	Angle	Daylight	Clear	Dry	Unknown	25	23		MV 2 did not see MV 1 while turning left
11	9/6/12	Thursday	12:52 PM	Angle	Daylight	Clear	Dry	Failed to yield right of way	68	51		
12	10/12/12	Friday	9:38 AM	Angle	Daylight	Cloudy	Dry	Visibility Obstructed	20	36		Large box truck was in the intersection which blocked the visibility
13	10/15/12	Monday	2:33 PM	Rear-end	Daylight	Clear	Dry	No Improper Driving	37			
14	11/14/12	Wednesday	4:59 PM	Rear-end	Dark - lighted roadway	Clear	Dry	Inattention	54	72	39	MV 2 rear ended MV 1 and continue to drive and rear ended MV 3
15	12/9/12	Sunday	4:09 PM	Sideswipe, opposite direction	Daylight	Clear	Dry	No Improper Driving	73	38		
16	12/15/12	Saturday	10:09 PM	Angle	Dark - lighted roadway	Clear	Dry	Failed to yield right of way	35	48		
17	12/25/12	Tuesday	12:20 PM	Angle	Daylight	Snow	Wet	No Improper Driving	67	44		
18	1/29/13	Tuesday	11:26 AM	Angle	Daylight	Cloudy	Wet	Failed to yield right of way	50	50		
19	1/31/13	Thursday	8:46 AM	Rear-end	Daylight	Unknown	Wet	Followed too closely	66	28		
20	2/13/13	Wednesday	11:53 AM	Angle	Daylight	Clear	Dry	Failed to yield right of way	37	49		
21	5/15/13	Wednesday	7:30 AM	Angle	Daylight	Clear	Dry	Unknown	54	39		Operator of MV 1 states he has the "green left turn arrow", and MV 2 states he was trying to beat the light
22	5/21/13	Tuesday	8:37 AM	Sideswipe, same direction	Daylight	Clear	Dry	Failure to keep in proper lane or running off road	54	30		Misjudged the distance while changing lanes
23	6/6/13	Thursday	1:04 PM	Angle	Daylight	Clear	Dry	Failed to yield right of way	19	48		
24	7/7/13	Sunday	1:22 PM	Angle	Daylight	Clear	Dry	Unknown	33	60		MV 2 did not see MV 1 because there were 2 vehicles ahead of MV 1 and they all turned left and right
25	7/12/13	Friday	2:42 PM	Angle	Daylight	Cloudy	Dry	Failed to yield right of way	24	39		
26	8/2/13	Friday	11:41 AM	Angle	Daylight	Clear	Dry	Failed to yield right of way	23	28		
27	8/9/13	Friday	6:36 PM	Head on	Daylight	Clear	Dry	Unknown	20	24		MV 2 was turning left and did not see MV 1
28	8/16/13	Friday	11:17 AM	Angle	Daylight	Clear	Dry	Failed to yield right of way	43	23		
29	9/4/13	Wednesday	7:04 AM	Single Vehicle Crash	Daylight	Clear	Dry	Other improper action	34			Unknown vehicle cut off in front.
30	11/19/13	Tuesday	6:45 AM	Head on	Daylight	Clear	Dry	Unknown	61	22		
31	1/26/14	Sunday	4:58 PM	Head on	Dusk	Clear	Dry	Unknown	59	56		
32	3/27/14	Thursday	9:12 AM	Rear-end	Daylight	Clear	Dry	Unknown	31	34		
33	4/1/14	Tuesday	7:10 AM	Angle	Daylight	Clear	Dry	Failed to yield right of way	45	23		
34	4/3/14	Thursday	8:50 AM	Rear-end	Daylight	Clear	Dry	Followed too closely	UNK	44		
35	4/11/14	Friday	7:06 PM	Sideswipe, opposite direction	Dusk	Cloudy	Dry	Unknown	49	UNK		
36	4/22/14	Tuesday	3:41 PM	Angle	Daylight	Clear	Dry	Failed to yield right of way	36	19		
37	4/25/14	Friday	7:38 PM	Angle	Dusk	Clear	Dry	Unknown	29	52		Improper approach to emergency vehicle and ran red light
38	5/21/14	Wednesday	10:22 AM	Angle	Daylight	Clear	Dry	No Improper Driving	30	20		
39	5/24/14	Saturday	8:54 AM	Angle	Daylight	Cloudy	Dry	Disregarded traffic signs, signals, road markings	73	46		MV 1 ran red light (NB)
40	5/24/14	Saturday	4:55 PM	Angle	Daylight	Clear	Dry	Unknown	75	33		Both operator stated they have the right of way
41	5/31/14	Saturday	1:49 AM	Single Vehicle Crash	Dark - lighted roadway	Clear	Wet	Unknown	62			Fatal crash due to vehicle went off the road and hit the traffic control pole
42	6/13/14	Friday	6:21 AM	Angle	Daylight	Cloudy	Dry	Failed to yield right of way	33	65		
43	8/14/14	Thursday	7:01 PM	Angle	Daylight	Clear	Dry	Failed to yield right of way	48	34		MV 1 was traveling on the left lane of Route 28 N, and MV 3 was on the right lane of route 28 North, When MV slowed down, MV 2 which was behind MV 1 tried to move to the right lane to avoid rear end, but It ended up rear end MV 1 and sideswiped MV
44	11/14/14	Friday	6:17 PM	Angle	Dark - lighted roadway	Clear	Dry	No Improper Driving	80	17		Vehicle turning left did not see vehicle coming straight ahead
45	11/17/14	Monday	2:53 PM	Angle	Daylight	Rain	Wet	No Improper Driving	35	39		
46	12/14/14	Sunday	9:49 AM	Angle	Daylight	Cloudy	Dry	Failed to yield right of way	21	75		
47	12/17/14	Wednesday	9:46 AM	Angle	Daylight	Rain	Wet	No Improper Driving	56	64		
48	3/7/15	Saturday	1:16 PM	Sideswipe, same direction	Daylight	Clear	Dry	Unknown	28	42		
49	3/11/15	Wednesday	10:21 AM	Angle	Daylight	Clear	Dry	Failed to yield right of way	31	44		
50	4/21/15	Tuesday	4:55 PM	Rear-end	Daylight	Clear	Dry	Followed too closely	48	34		
51	4/27/15	Monday	7:58 AM	Angle	Daylight	Cloudy	Dry	Unknown	53	36		

Crash Data Summary Table

Randolph Avenue (Route 28) at Chikatawbut Street, Milton, MA
2012-2015

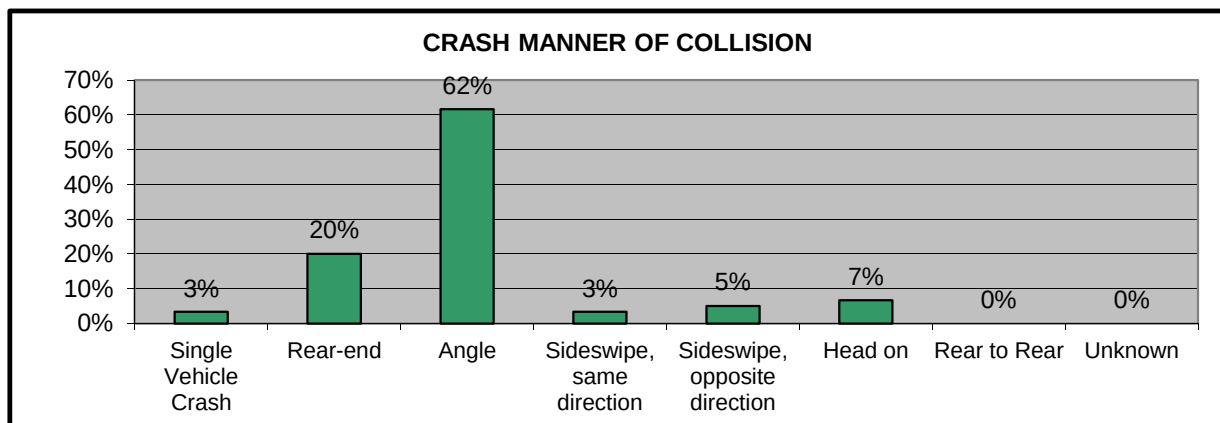
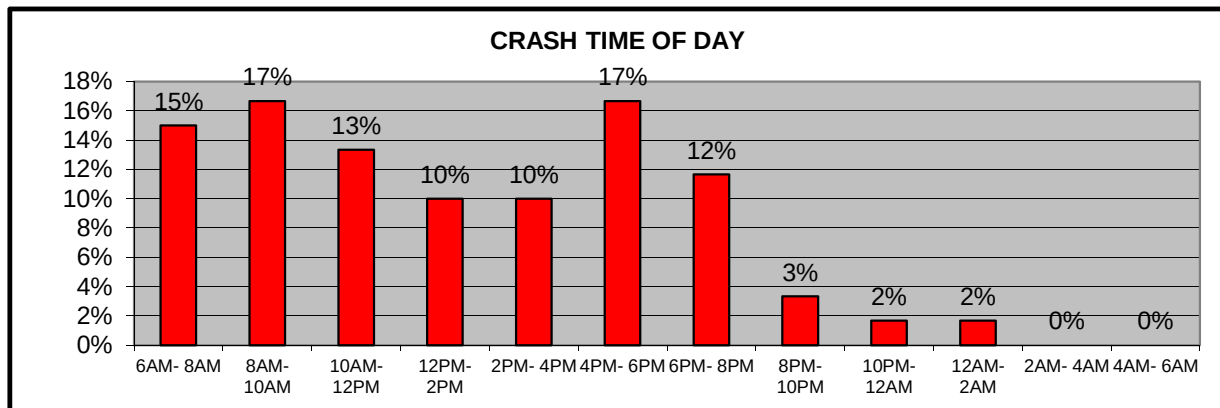
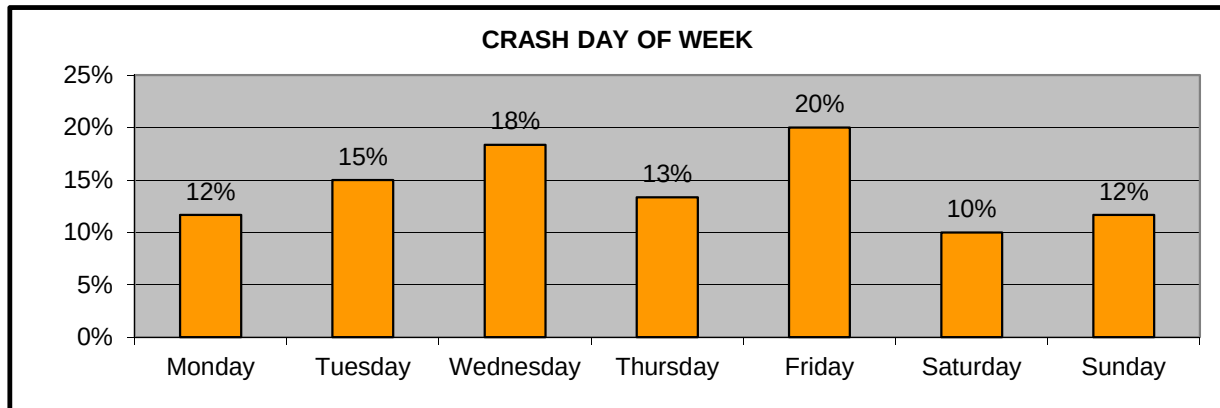
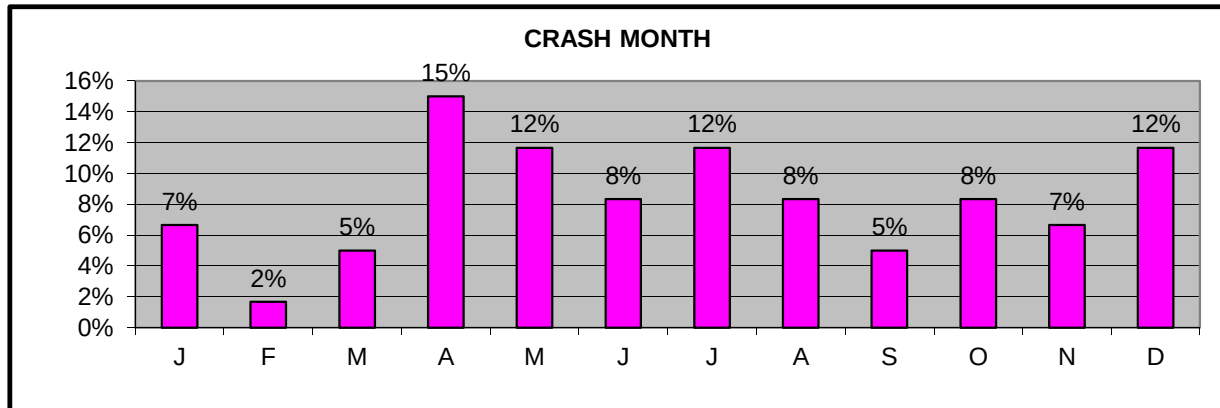
Crash Diagram Ref #	Crash Date	Crash Day	Time of Day	Manner of Collision	Light Condition	Weather Condition	Road Surface	Driver Contributing Code	Ages			Comments
	m/d/y			Type	Type	Type	Type	Type	D1	D2	D3	
52	5/4/15	Monday	9:37 PM	Rear-end	Dark - lighted roadway	Clear	Dry	Unknown	27	22		
53	6/8/15	Monday	8:17 AM	Angle	Daylight	Clear	Dry	Failed to yield right of way	30	44		
54	7/5/15	Sunday	4:31 PM	Angle	Daylight	Clear	Dry	Unknown	67	45		Both vehicles did not see each other
55	9/22/15	Tuesday	2:19 PM	Head on	Daylight	Cloudy	Dry	Failed to yield right of way	33	18		
56	10/7/15	Wednesday	6:23 PM	Rear-end	Dusk	Clear	Dry	Unknown	34	UNK		Hit and run
57	10/21/15	Wednesday	10:48 AM	Angle	Daylight	Rain	Wet	Failed to yield right of way	24	61		
58	10/28/15	Wednesday	7:02 PM	Rear-end	Dark - lighted roadway	Rain	Wet	Inattention	31	37		MV 1 making left turn
59	12/11/15	Friday	7:18 AM	Angle	Daylight	Cloudy	Wet	Failed to yield right of way	68	47		
60	12/16/15	Wednesday	4:45 PM	Angle	Dark - lighted roadway	Clear	Dry	No Improper Driving	27	29		

*Courtesy Crash - A term used to describe a crash that occurs subsequent to a non-involved mainline driver who gives the right of way, contrary to the rules of the road, to another driver.

Summary based on Crash Reports obtained from the Milton Police and State Police.

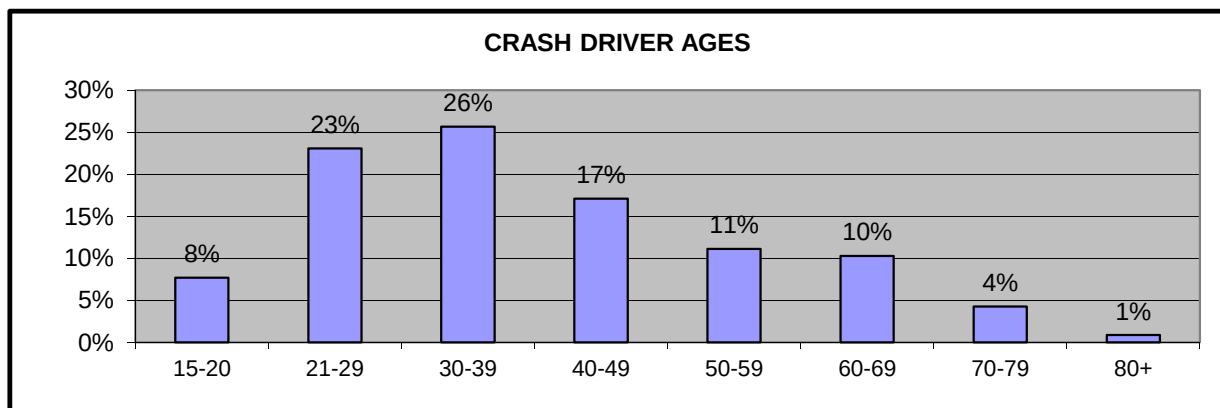
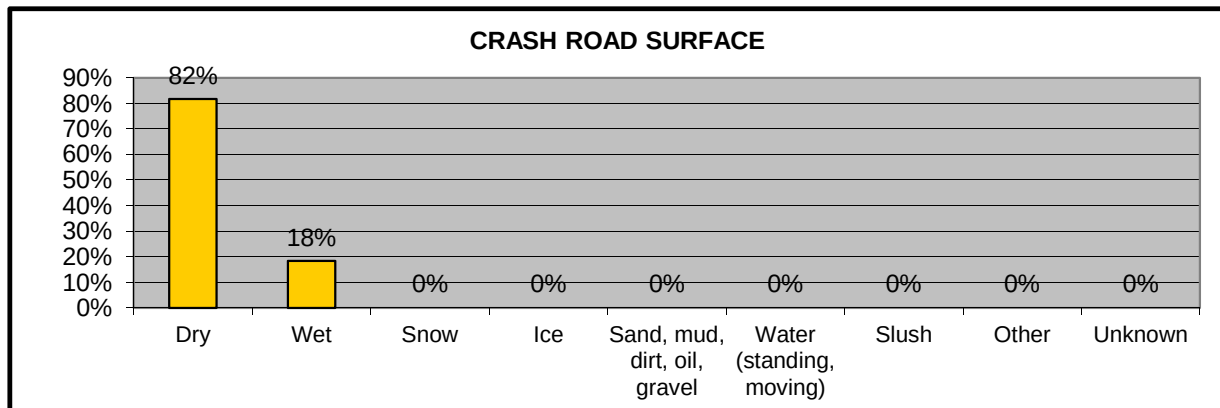
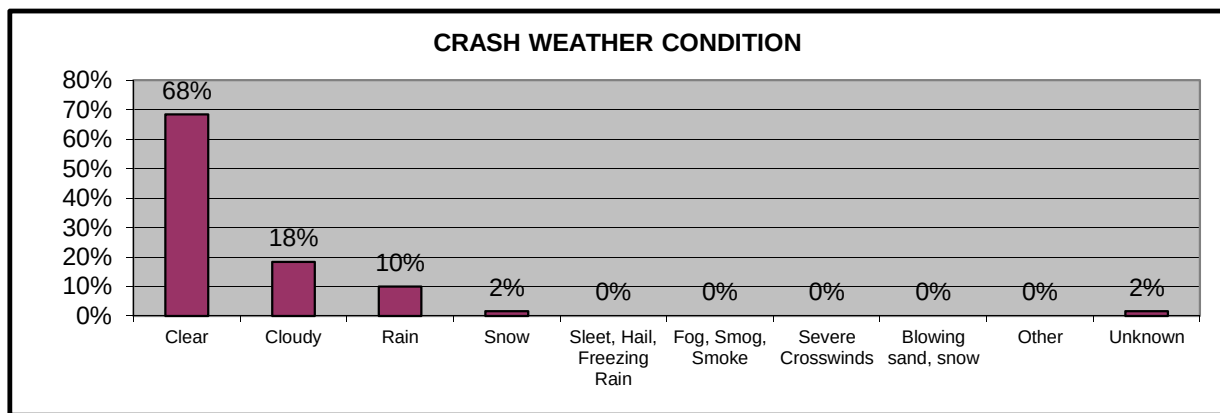
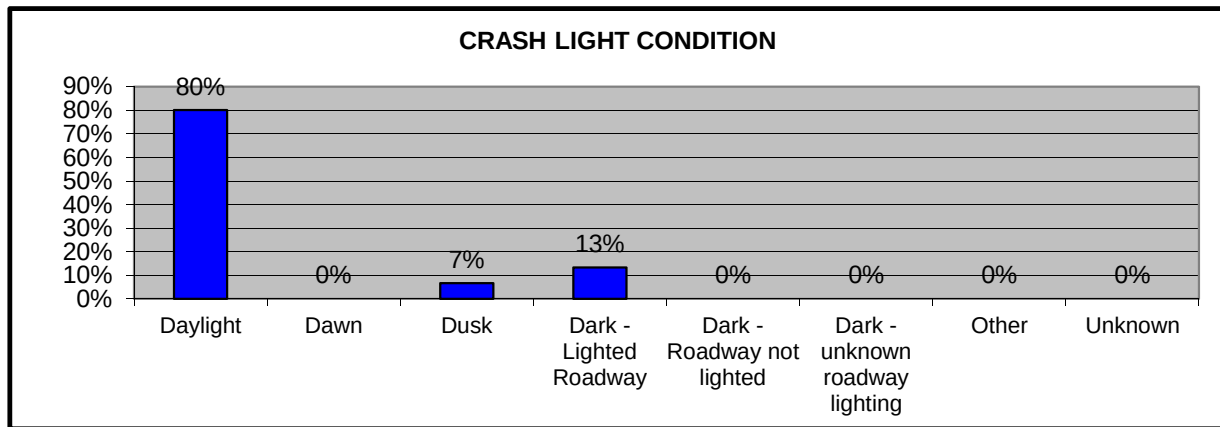
Crash Data Summary Tables and Charts

Randolph Avenue (Route 28) at Chikatawbut Street, Milton, MA



Crash Data Summary Tables and Charts

Randolph Avenue (Route 28) at Chikatawbut Street, Milton, MA





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Appendix F

2018 Alternatives Analysis



To: Michael Trepanier – MassDOT
Christopher Falcos – MassDOT

Date: September 11, 2018

Memorandum

Project #: 12529.57

From: Jeff Gooch - VHB
Tracie Lenhardt - VHB
Scott Himes - VHB

Re: Complete Streets Task 1: Highway Safety Manual Predictive
Methodology – Route 28 and Chickatawbut Intersection in Milton

VHB is pleased to submit this memorandum summarizing the analysis of the proposed changes to the intersection of Route 28 and Chickatawbut Road (heretofore referred to as “the intersection”) in Milton. Below is an overview the methodology used, the results of the analysis, and a discussion of the limitations.

Background and Methodology

The intersection is a four-leg signalized intersection in Milton. Route 28, called Randolph Ave in this section, runs North-South while Chickatawbut Road runs East-West. An Alternatives Analysis Memo (AAM) was prepared in May 2018 in which three alternatives were proposed (described below). These alternatives were all modeled and compared to the no-build condition using 2027 predicted traffic volumes; derived from 2018 traffic counts and an annual growth factor of 2.3% discussed in the AAM. The predicted Annual Average Daily Traffic (AADT) for the roadway, Route 28, is 34,019 vehicles per day and for the minor roadway, Chickatawbut Road, is 7,105 vehicles per day. Additionally, an estimated pedestrian volume of 50 pedestrians per day for the intersection was derived from the AAM.

The Empirical Bayes methodology was used to calculate expected crash frequency; observed crash data for the years 2012 through 2015 were combined with crash frequencies predicted for those years based on estimated traffic growth. Crash predictions were calculated using the MassDOT crash prediction spreadsheet tool. The predictive methodology for urban and suburban intersections predicts twelve combinations of crash types and severities, as shown in Table 1. The four alternatives and the no-build are described below.

Table 1 - Crash Type and Severity Combinations from the Predictive Methodology

	All Severities	Fatal and Injury	Property Damage Only
Multi-Vehicle Crashes	MV, All	MV, FI	MV, PDO
Single-Vehicle Crashes	SV, All	SV, FI	SV, PDO
Vehicle-Pedestrian Crashes	Ped, All	Ped, FI	Ped, PDO
Vehicle-Cyclist Crashes	Bike, All	Bike, FI	Bike, PDO

No-Build

The no-build scenario consists of existing design and signal conditions with project 2027 traffic volumes. Based on satellite imagery from Google Earth, the following conditions define the existing intersection with relation to inputs for the predictive methodology¹:

- Lighting: Present;
- Number of approaches with left-turn lanes: 0;
- Number of approaches with right-turn lanes: 0;
- Number of approaches with protected/permissive left-turn phasing: 2;
- Maximum number of lanes crossed by a pedestrian: 4;
- Number of bus stops within 1,000 feet of the intersection: 3; and
- Number of alcohol sales establishments within 1,000 feet of the intersection: 0.

Expected crash frequency for 2027 ($N_{Exp\ 2027}$) was calculated using observed and predicted data for 2012 through 2015, then grown to the design year, 2027, using predicted crash frequencies (N_{pred}) and the ratio ($Ratio_{2012-2015\ to\ 2027}$) in Equation 1.

$$Ratio_{2012-2015\ to\ 2027} = \frac{N_{pred\ 2027}}{N_{pred\ 2012} + N_{pred\ 2013} + N_{pred\ 2014} + N_{pred\ 2015}} \quad (1)$$

This expected crash frequency for 2027 serves as the baseline comparison for alternatives 1, 2, 3, and 4, which are summarized below. Specific details of the alternatives are available in the AAM. All three alternatives consist of a base set of improvements: updating traffic signal equipment and timing, improving pedestrian and bicycle accommodations, resurfacing the intersection, and updated signage and pavement markings. For the predictive methodology, these baseline improvements can be modeled using MassDOT's four-leg signalized intersection improvement CMFs, which are 0.830 for MV, All crashes and 0.720 for MV, FI crashes.

Alternative 1

In addition to the baseline improvements, Alternative 1 consists of modifying the lane usage on both Route 28 approaches by adding left-turn lanes. The northbound approach will have two through lanes and a left-turn lane with two receiving lanes; the southbound approach will have one through lane and one left-turn lane with one receiving lane. Left-turning vehicles will operate under protected phasing. The addition of the two left-turn lanes results in a CMF of 0.81 for MV, All and SV, All, while changing from two approaches operating under protected/permissive left-turn phasing to two operating under protected results in a CMF of 0.90 for MV, All and SV, All.

¹ Default values were used for all other inputs in the spreadsheets

Alternative 2

Alternative 2 consists of the same improvements to Alternative 1 with the addition of widening on Chickatawbut Road to provide a left-turn lane on the westbound approach. The two left-turn lanes on Route 28 will continue to operate under protected phasing; the left-turn lane from westbound Chickatawbut will operate under protected/permissive phasing. The CMF for left-turn lanes compared to build is 0.73 for MV, All and SV, All, while the CMF for the new left-turn phasing scheme is 0.89 for MV, All and SV, All.

Alternative 3

Alternative 3 includes one addition to Alternative 2. Route 28 is widened to provide two through lanes along with left-turn lane and two receiving lanes on both approaches. The CMFs for turn lanes and phasing are the same; the only additional CMF is a pedestrian CMF because the maximum number of lanes crossed by a pedestrian is now five; the pedestrian CMF, a value of 1.041, applied to all vehicle-pedestrian crashes.

Alternative 4

Alternative 4 is a proposed conversion of the signalized intersection to a roundabout. Rodegerdts et al. (2007)² calculated CMFs for converting a signalized intersection to a roundabout, finding a CMF of 0.52 for all crash types and severities and a CMF of 0.22 for all injury crashes.

Results

The individual results are summarized below in Table 2, where they are broken down by crash type and severity. Table 3 provides the predicted reduction in the number of and percent of expected crashes in the design year 2027 for each alternative. It is clear that Alternative 4 produces the largest reduction in total as well as fatal and injury crashes, while Alternatives 2 and 3 produce similar reductions and are the second-best improvement. Alternative 1 is predicted to produce the smallest crash reduction. Because Alternative 4 is expected to have significant costs compared to the other alternatives, the economic benefits of the additional crash reductions can be weighed against the additional costs to determine if the roundabout is economically justified. Additionally, the safety benefits should be weighed against operational and environmental impacts of the alternatives.

Limitations

This analysis was performed using the HSM predictive methodology and MassDOT's four-leg signalized intersection Safety Performance Function (SPF) tool. The alternatives included some improvements that were not able to be accounted for in this methodology, nor were there high-quality CMFs available to assist with the estimation. Specifically, the additional through lane for Alternative 3 is not accounted for in relation to single-vehicle and multi-vehicle crash frequency; there is no CMF for modifying through movement capacity at an intersection. However, this is somewhat captured using the MassDOT four-leg signalized intersection, which included projects with added capacity.

² Rodegerdts, L. A., Blogg, M., Wemple, E., Myers, E., Kyte, M., Dixon, M., List, G., Flannery, A., Troutbeck, R., Brilon, W., Wu, N., Persaud, B., Lyon, C., Harkey, D., and Carter, D., "NCHRP Report 572: Applying Roundabouts in the United States." Washington, D.C., Transportation Research Board, National Research Council, (2007)

Table 2 - Summary of Crash Reductions by Crash and Severity Type

Crash Type	Expected Crashes, 2012-2015	Expected Crashes, 2027 – No Build	CMF, Alt 1	Crashes Reduced, Alt 1	CMF, Alt 2	Crashes Reduced, Alt 2	CMF, Alt 3	Crashes Reduced, Alt 3	CMF, Alt 4	Crashes Reduced, Alt 4
MV, All	48.201	18.733	0.604	7.424	0.538	8.657	0.538	8.657	0.52	8.954
MV, FI	17.899	6.955	0.524	3.313	0.467	3.710	0.467	3.710	0.22	5.425
MV, PDO	22.075	8.579	N/A	0.913	N/A	1.748	N/A	1.748	N/A	0.331
SV, All	1.338	0.520	0.727	0.142	0.648	0.183	0.648	0.183	0.52	0.249
SV, FI	0.247	0.097	0.727	0.026	0.648	0.034	0.648	0.034	0.22	0.075
SV, PDO	1.018	0.399	0.727	0.109	0.648	0.141	0.648	0.141	N/A	0.149
Ped, All	2.422	0.941	1.000	0.000	1.000	0.000	1.041	-0.039	0.52	0.450
Ped, FI	2.422	0.941	1.000	0.000	1.000	0.000	1.041	-0.039	0.22	0.450
Ped, PDO	0.000	0.000	1.000	0.000	1.000	0.000	1.041	0.000	N/A	0.000
Bike, All	1.126	0.437	1.000	0.000	1.000	0.000	1.000	0.000	0.52	0.209
Bike, FI	1.126	0.437	1.000	0.000	1.000	0.000	1.000	0.000	0.22	0.209
Bike, PDO	0.000	0.000	1.000	0.000	1.000	0.000	1.000	0.000	N/A	0.000

Table 3 - Total and Percent Crash Reduction for Each Alternative Compared to the No-Build using 2027 Traffic Volumes

	Number of Crashes Reduced from No-Build			
	Alternative 1	Alternative 2	Alternative 3	Alternative 4
All Crashes	7.57	8.84	8.80	9.86
FI Crashes	3.34	3.74	3.71	6.16
PDO Crashes	4.23	5.10	5.10	3.70
	Percent of Crashes Reduced Compared to No-Build			
	Alternative 1	Alternative 2	Alternative 3	Alternative 4
All Crashes	37%	43%	43%	48%
FI Crashes	40%	44%	44%	73%
PDO Crashes	35%	42%	42%	30%

Economic Analysis

Reduced crashes can be converted to societal savings in dollars based on average severity distributions and comprehensive crash costs. Recently MassDOT's Traffic Engineering and Safety group developed a memorandum that summarized comprehensive crash costs for Massachusetts based on a white paper from FHWA. For a four-leg signalized intersection, the average comprehensive crash cost for an FI crash is \$447,100 and for a PDO crash if \$15,600. To estimate the benefits that can be derived from the project, a lifespan of twenty years is assumed with the crash reduction calculated for the design year 2027 assumed for the annual crash reduction. The method for calculating converting annual lifetime benefits to a lump sum is described in Equation 3, where i is the annual discount rate (assumed to be seven percent), t is the lifetime of the project in years, $\$_{\text{annual}}$ is the annual benefit, and $\$_{\text{lifetime}}$ is the lifetime benefit. Equation 4 describes how to convert reduced crashes taken from Table 3 ($N_{\text{Reduced, PDO}}$ and $N_{\text{Reduced, FI}}$) to an annual benefit using comprehensive costs ($\$_{\text{FI}}$ and $\$_{\text{PDO}}$). The expected benefits for Alternative 1, 2, 3, and 4 are summarized in Table 4.

$$\$_{\text{lifetime}} = \$_{\text{annual}} * \frac{(1+i)^t - 1}{i(1+i)^t} \quad (3)$$

$$\$_{\text{annual}} = N_{\text{Reduced, PDO}} * \$_{\text{Reduced, PDO}} + N_{\text{Reduced, FI}} * \$_{\text{Reduced, FI}} \quad (4)$$

Table 4 - Summary of Crash Reduction Benefits

	Annual Benefits of Reduced Crashes			
	Alternative 1	Alternative 2	Alternative 3	Alternative 4
All Crashes	\$ 1,558,939.34	\$ 1,753,453.46	\$ 1,736,200.33	\$ 2,811,749.10
FI Crashes	\$ 1,493,007.72	\$ 1,673,961.13	\$ 1,656,708.00	\$ 2,753,993.60
PDO Crashes	\$ 65,931.62	\$ 79,492.33	\$ 79,492.33	\$ 57,755.49
	Lifetime Benefits of Reduced Crashes			
	Alternative 1	Alternative 2	Alternative 3	Alternative 4
All Crashes	\$ 16,515,425.54	\$ 18,576,110.90	\$ 18,393,331.03	\$ 29,787,709.97
FI Crashes	\$ 15,816,945.03	\$ 17,733,968.04	\$ 17,551,188.17	\$ 29,175,847.44
PDO Crashes	\$ 698,480.51	\$ 842,142.86	\$ 842,142.86	\$ 611,862.53

A review of the results in Table 4 show Alternatives 1 thru 3 are expected to have lifetime benefits between \$16.5 million and \$18.5 million; while Alternative 4 is expected to return almost \$30 million in benefits. Combining these benefits with benefits derived from user delay improvements can give a total estimate of user benefits, which can be compared to all of the costs associated with each alternative to produce a benefit/cost ratio.



TO:	John Gendall	DATE:	May 23, 2018
FROM:	Jessica Lizza, EIT	HSH PROJECT NO.:	2013061.41
SUBJECT:	Milton – Route 28 at Chickatawbut Road Intersection Improvement Draft Alternatives Analysis		

Introduction

The Randolph Avenue (Route 28)/Chickatawbut Road intersection has been selected as a location needing improvements to enhance safety and operations. Improvements to this intersection are a high priority for the Town of Milton and the Massachusetts Department of Transportation (MassDOT) District 6 due to the extensive safety and congestion issues that have been noted along the Route 28 corridor which reinforces the need for intersection improvements.

The intersection is listed as a high crash location and the RSA that was done at this intersection in November 2016 showed the intersection experiences heavy congestion during both a.m. and p.m. peak hours. HSH evaluated the feasibility of up to three (3) alternatives which include lane assignment changes, roadway widening and traffic control equipment changes. The RSA recommendations, found in the RSA report submitted in January 2017, were short-term and mid-term and they will be included in the alternatives as well.

The standards used for design and analysis conform to the *Manual on Uniform Traffic Control Devices, 2009 Edition* (MUTCD 2009) with Massachusetts Amendments; the *2010 Highway Capacity Manual* (HCM 2010); the American Association of State Highway and Transportation Officials' (AASHTO's) *A Policy on Geometric Design of Highways and Streets*, 5th Edition; and MassDOT's *Project Development and Design Guide* (2006), and the *Federal Highway Administration's Separated Bike Lane Planning and Design Guide* (2015).

Study Area

The study area for this report will be the intersection of Route 28 (Randolph Avenue) and Chickatawbut Road in Milton, Massachusetts. A regional map of the area is provided in Error! Reference source not found. and a locus map is provided in **Figure 2**.



Figure 1. *Regional Map*





Figure 2. *Locus Map*





Existing Conditions

Existing study area roadway geometry, intersection conditions with existing traffic volumes and intersection geometry, average daily traffic levels, and peak hour vehicular volumes are discussed in the following section.

Existing Roadway Descriptions

Chickatawbut Road is classified by MassDOT as an urban minor arterial and is under the jurisdiction of the Department of Conservation and Recreation (DCR). Chickatawbut Road runs east-west between Granite Street in Braintree to the east and Unquity Road to the west. Chickatawbut Road generally runs with one travel lane in each direction. Sidewalks are not provided, and though shoulders are provided, they are typically too narrow to be considered dedicated bicycle accommodations. Chickatawbut Road has a posted speed limit of 30 mph.

Chickatawbut Road runs through the Blue Hills Reservation, and thus has few cross streets or driveways aside from trail entrances, lookout points, and Reservation-related sites, such as the Norman Smith Environmental Education Center. Signage indicates that the segment of the roadway between Route 28 and Granite Street closes at night between 8:00 p.m. and 7:00 a.m.; however, based on observations and statements from residents it seems the roadway now stays open throughout the night. The same segment is closed on Sundays during the summer and closes for several days in late autumn for controlled deer hunts.

Randolph Avenue (Route 28) runs north-south between Adams Street to the north and the I-93 interchange and the Blue Hill River in Randolph to the south, where it becomes North Main Street. Randolph Avenue is known as State Route 28 between Reedsdale Road to the north and the I-93 interchange to the south. Route 28 is classified by MassDOT as an urban principal arterial under the jurisdiction of MassDOT. It generally runs with two travel lanes in each direction north of Chickatawbut Road, and with one travel lane in each direction south of Chickatawbut Road. Sidewalks are provided along both sides of the roadway north of Chickatawbut Road but are not provided on either side of the roadway south of Chickatawbut Road. Dedicated bicycle accommodations are not provided north of Chickatawbut Road. An approximately 7-foot shoulder is provided on each side of Randolph Avenue south of Chickatawbut Road, which ends at the Milton Town Line about 500 feet south of the intersection. Route 28 has a posted speed limit of 40 mph approaching the study area intersection and the posted speed limit increases to 50 mph south of the intersection.



The Massachusetts Bay Transportation Authority (MBTA) #240 bus, which runs between the Avon Town Line and Ashmont Station, runs along Randolph Avenue, and the Brockton Area Transit (BAT) #12 bus, which runs between Ashmont Station and the Brockton MBTA Commuter Rail station, also runs along Randolph Avenue.

Intersection Description

The intersection of **Route 28/Chickatawbut Road** is a four-legged intersection with four approaches. The Chickatawbut Road eastbound and westbound approaches each consists of a single travel lane. The Route 28 northbound and southbound approaches each consists of two travel lanes, which function as a shared left-turn/through lane and a shared through/right-turn lane. The Route 28 northbound approach receives a leading protected left-turn phase during the morning peak period, while the southbound approach receives a leading protected left-turn phase in the evening peak period.

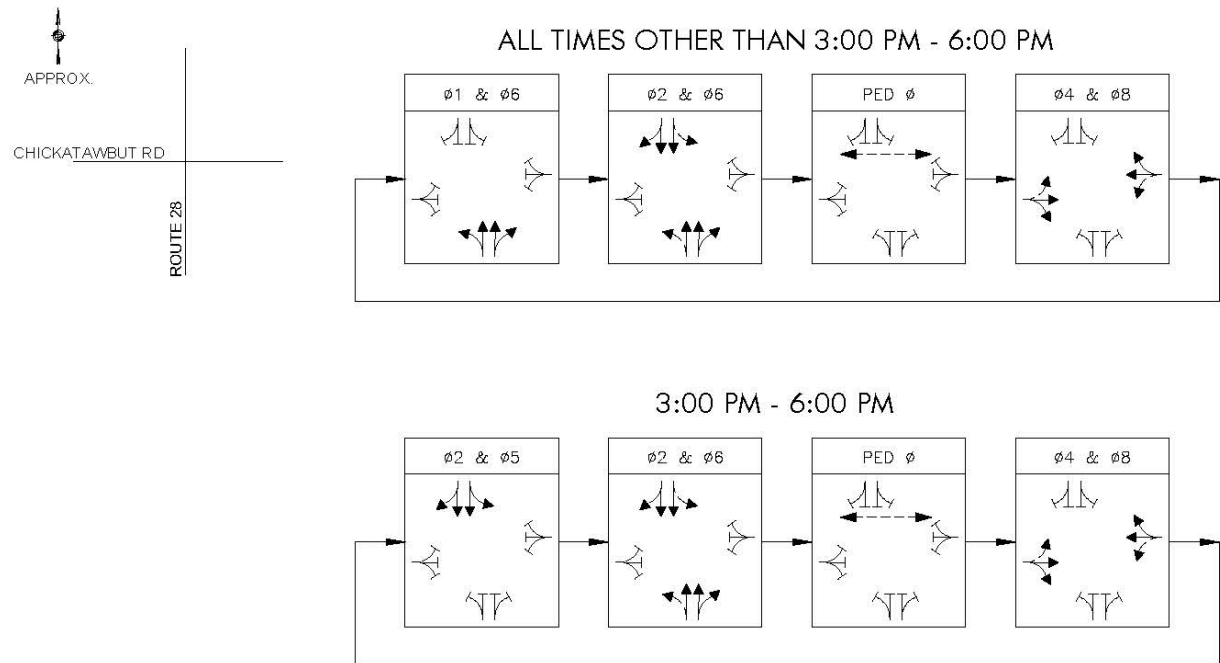
Crosswalks and pedestrian indications are provided across all legs of the intersection. Crosswalk pavement markings appear worn throughout the intersection. The pedestrian indications provided are all single-section indications lacking countdown timings apart from the countdown indication provided on the northeast corner of the intersection. Pedestrian ramps are provided at each corner of the intersection but do not appear to meet ADA-compliance. Concrete sidewalks are only provided along Route 28 north of the intersection and were observed to be in fair condition. The crosswalks are provided a push-button actuated exclusive pedestrian phase following the Route 28 northbound and southbound vehicle movements.

Traffic Signal Phasing

Existing traffic signal phasing for the study area intersection may be seen in **Figure 3**.



Figure 3. Existing Phasing Diagram





Traffic Volumes

DAILY TRAFFIC ESTIMATES

To estimate daily weekday traffic and hourly variations, Automatic Traffic Recorder (ATR) counts were taken for all legs of the intersection over a 72-hour period from Tuesday, December 12 to Thursday, December 14, 2017 as well as a 48-hour period from Saturday, May 12 to Sunday, May 13, 2018.

Table 1 summarizes existing traffic data including Average Daily Traffic (ADT), peak-hour Percentage (K), and the 85th percentile speed. Average daily traffic variations are shown in **Figure 4** through **Figure 11**. Raw traffic count data may be found in **Appendix A**.

Table 1. Average Daily Traffic Summary

Location	Average Daily Weekday Traffic Volume	Average Daily Weekend Traffic Volume	% Truck	K Factor	Directional Distribution	85 th ile Speed (mph)
Route 28, North of Chickatawbut Rd						
Northbound	14,278	11,899	4.5%	10.4%	-	46
Southbound	11,314	12,896	3.4%	5.1%	-	43
Total	25,592	24,795	-	8.0%	55.8%	-
Route 28, South of Chickatawbut Rd						
Northbound	16,425	12,667	2.5%	6.7%	-	40
Southbound	12,658	11,665	6.7%	10.2%	-	41
Total	29,083	24,322	-	8.2%	56.5%	-
Chickatawbut Rd, East of Route 28						
Eastbound	2,420	2,589	0.8%	9.1%	-	35
Westbound	3,505	2,864	2.5%	12.0%	-	30
Total	5,925	5,452	-	10.8%	59.2%	-
Chickatawbut Rd, West of Route 28						
Eastbound	2,681	2,003	3.3%	14.0%	-	29
Westbound	2,336	1,811	0.8%	6.6%	-	34
Total	5,017	3,814	-	10.6%	53.4%	-



Figure 4. *Route 28, North of Chickatawbut Road – Average Daily Weekday Traffic Variation*

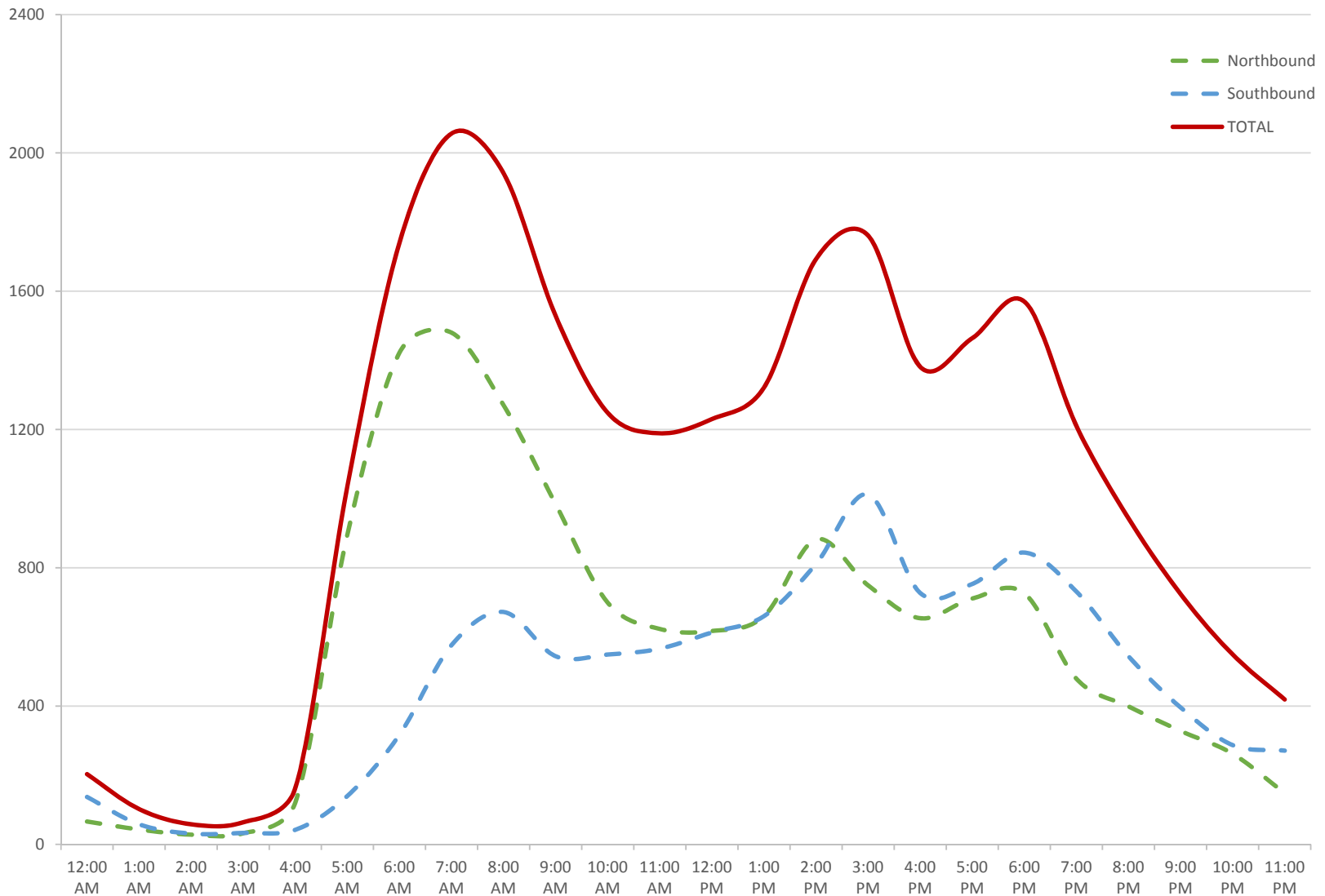




Figure 5. *Route 28, North of Chickatawbut Road – Average Daily Weekend Traffic Variation*

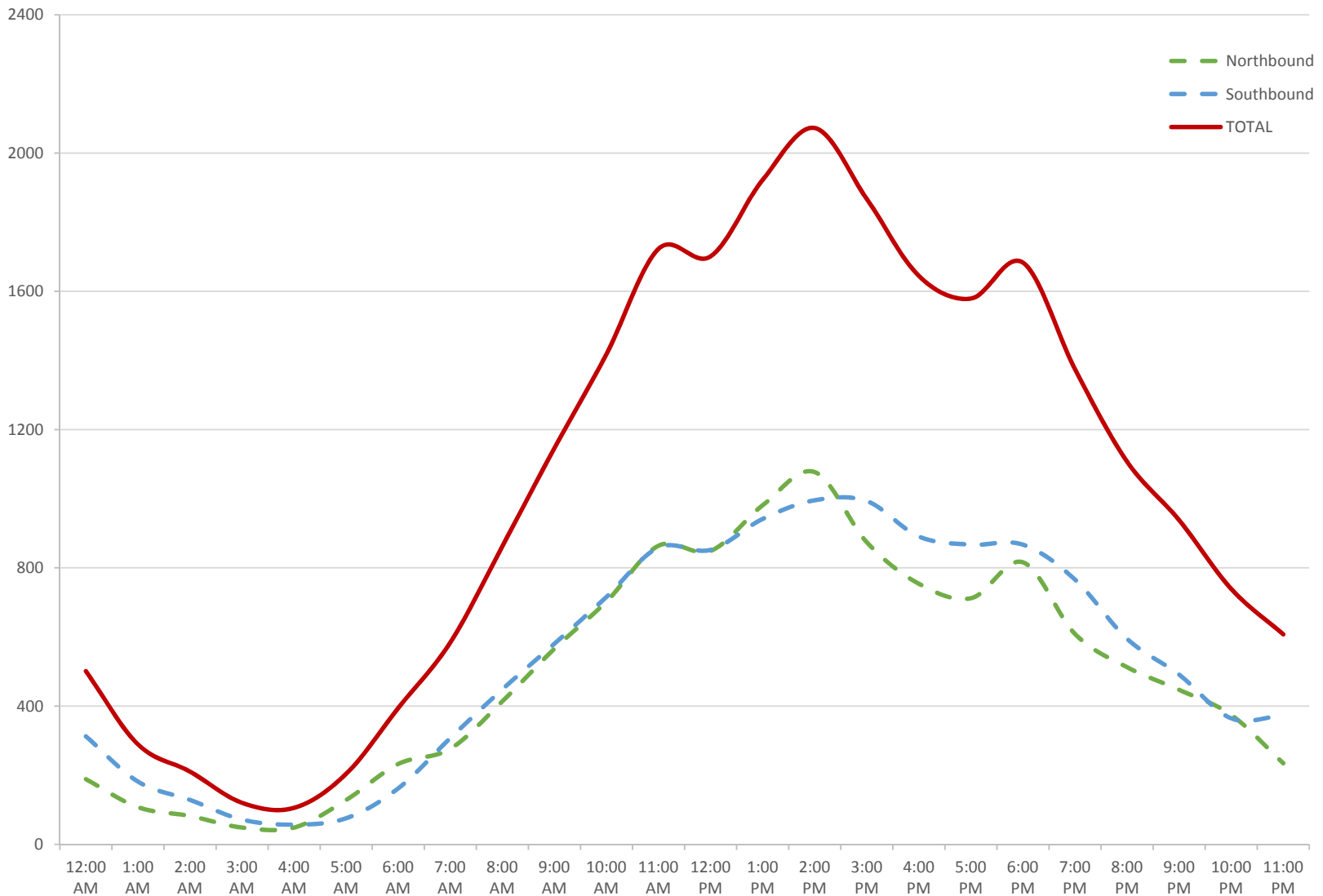




Figure 6. *Route 28, South of Chickatawbut Road – Average Daily Weekday Traffic Variation*

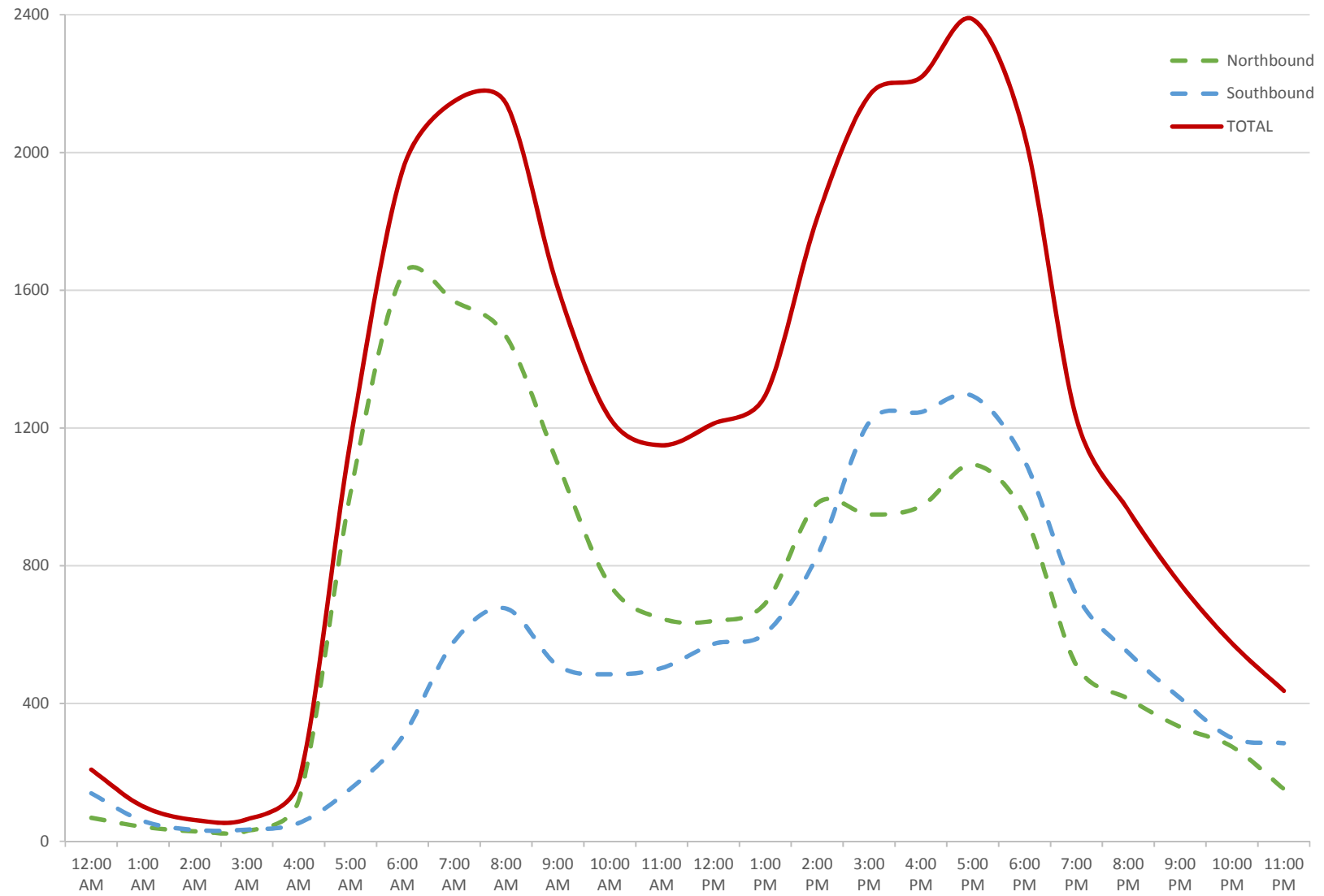




Figure 7. *Route 28, South of Chickatawbut Road – Average Daily Weekend Traffic Variation*

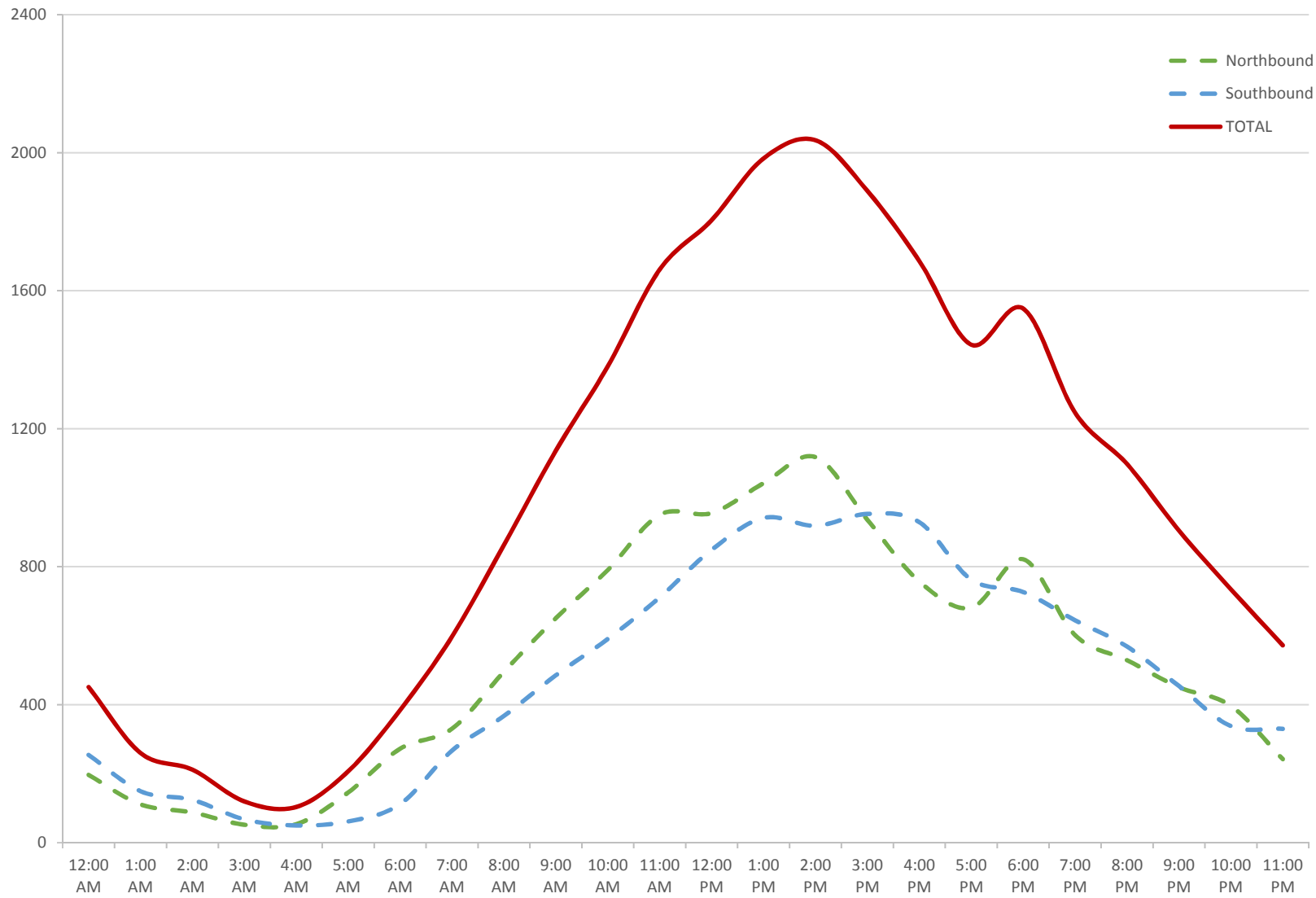




Figure 8. *Chickatawbut Road, East of Route 28 – Average Daily Weekday Traffic Variation*

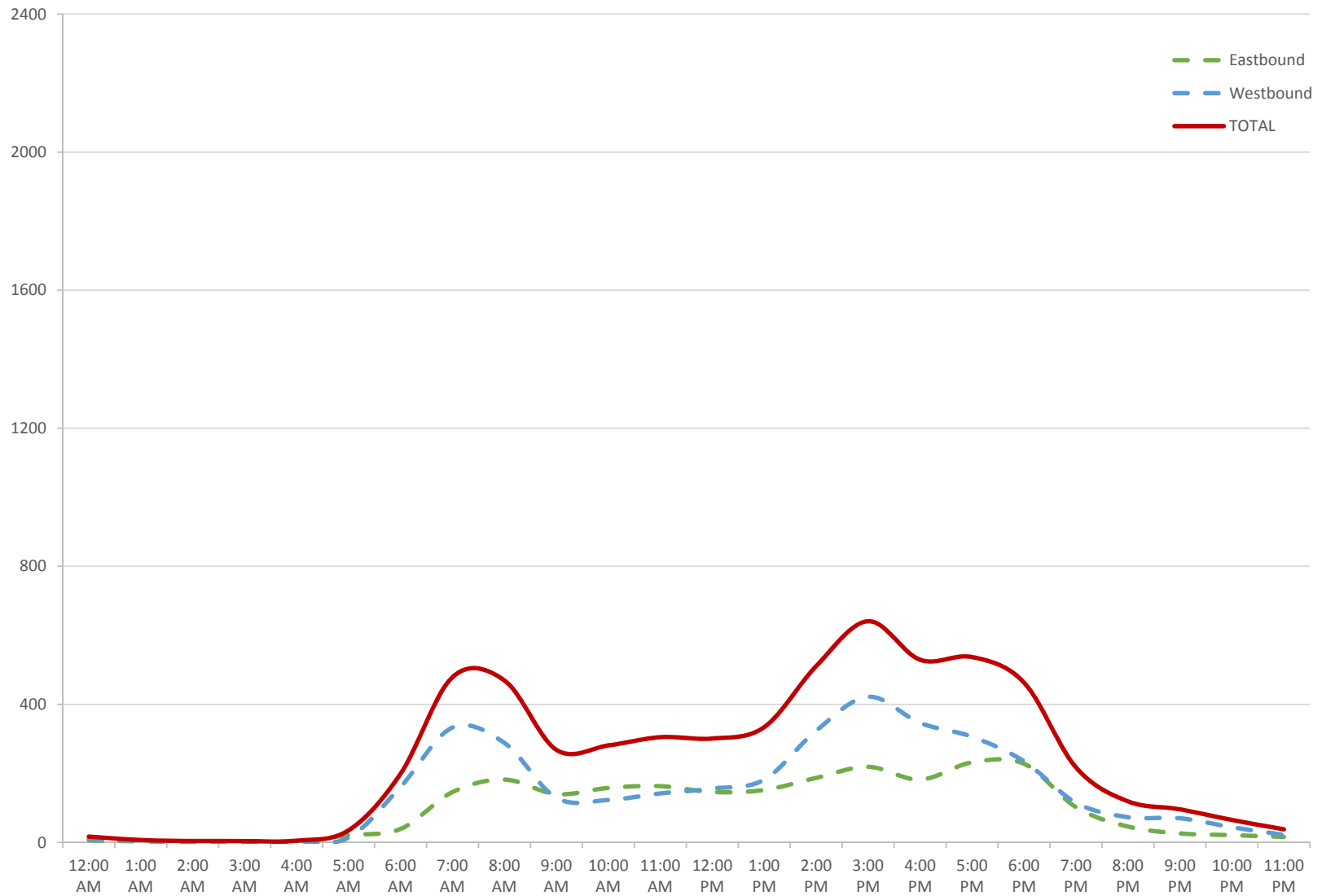




Figure 9. *Chickatawbut Road, East of Route 28 – Average Daily Weekend Traffic Variation*

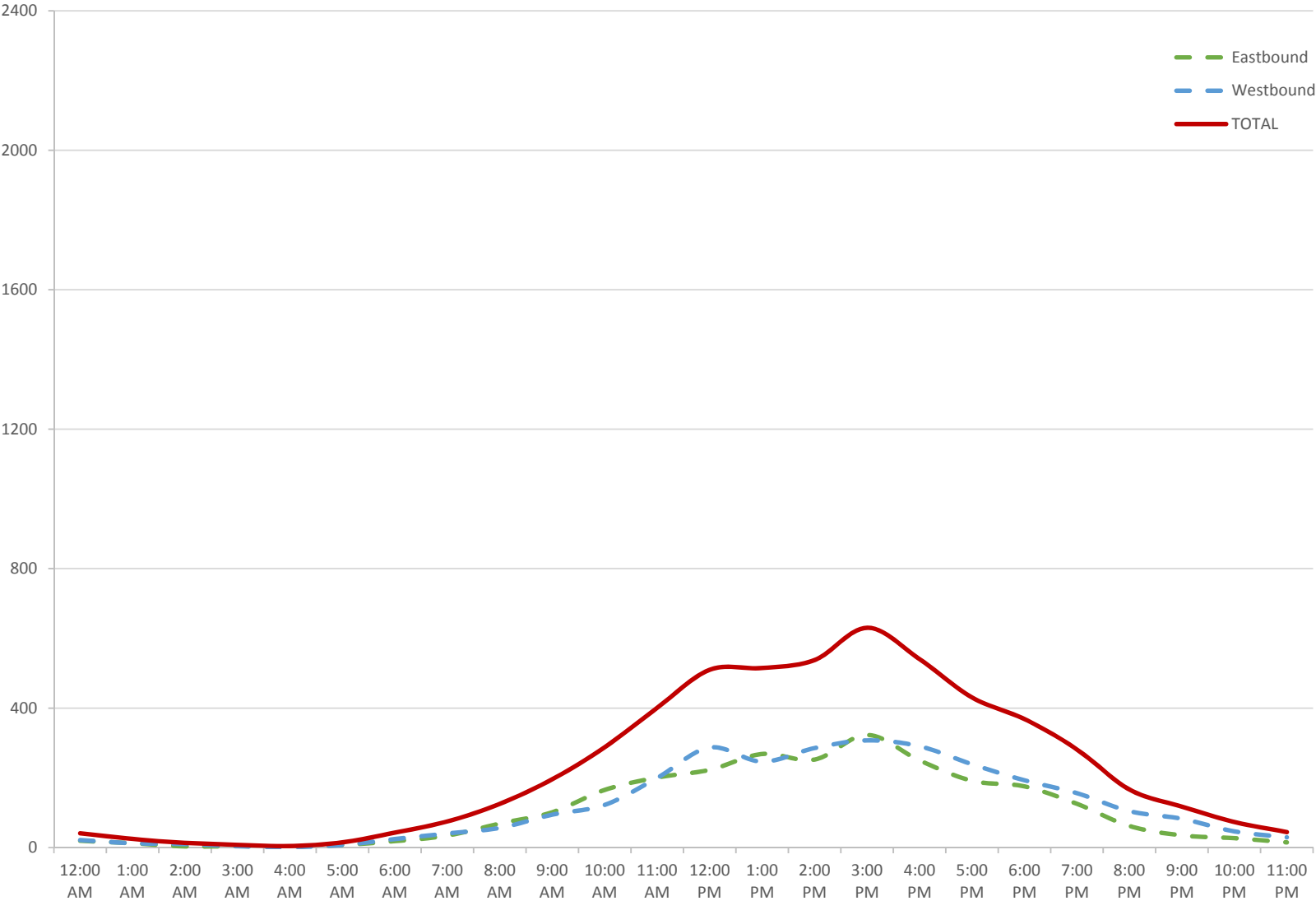




Figure 10. *Chickatawbut Road, West of Route 28 – Average Daily Weekday Traffic Variation*

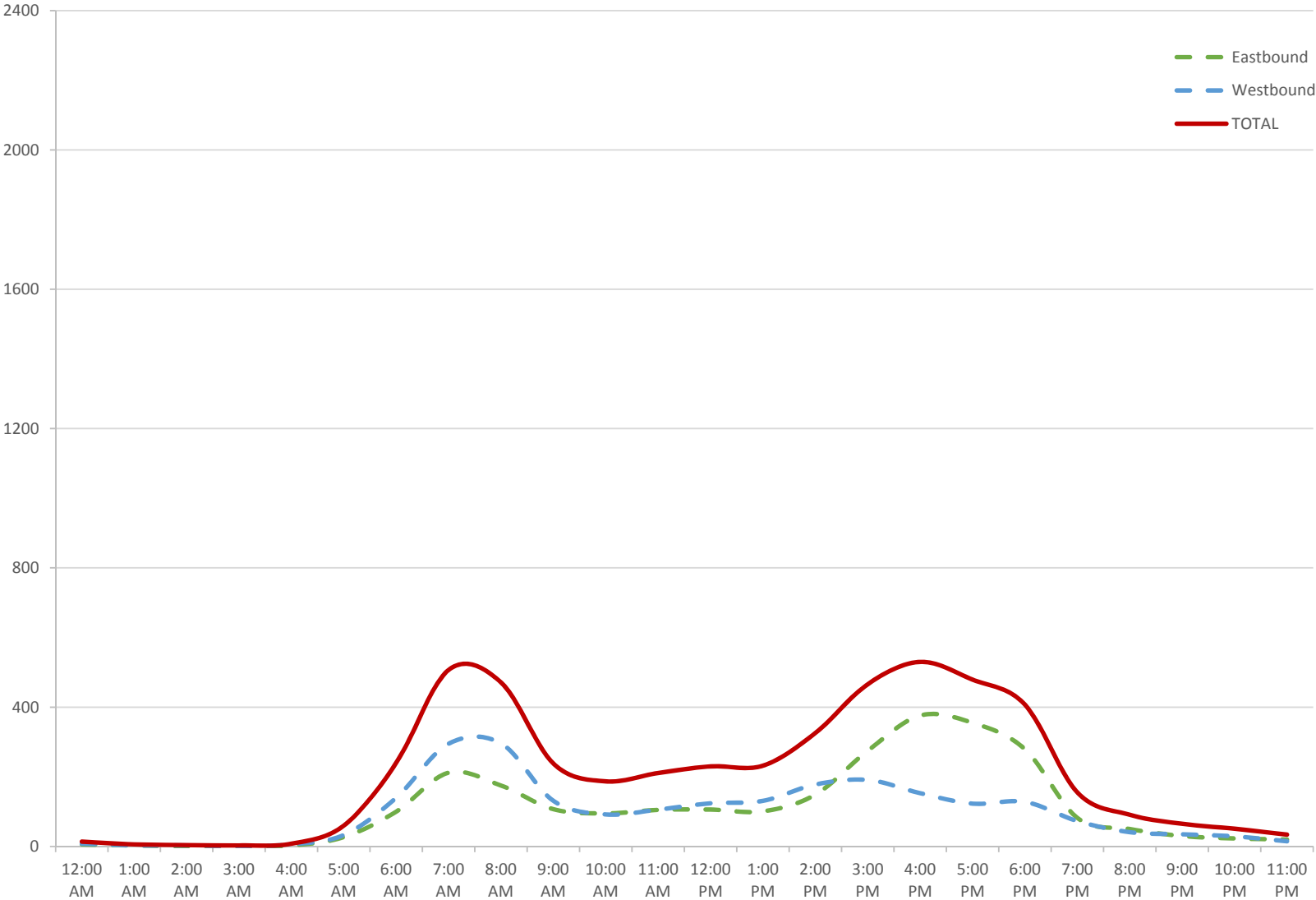
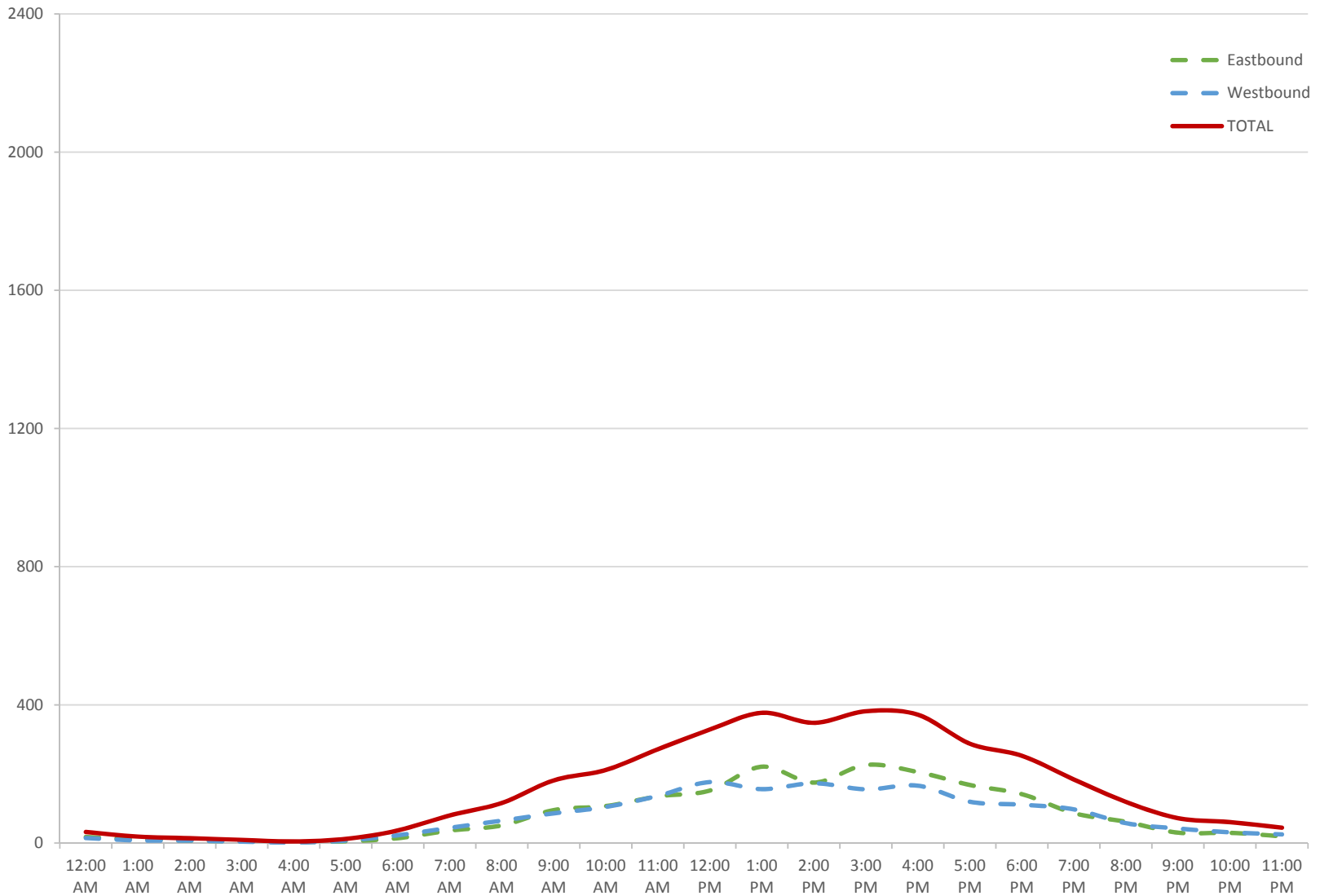




Figure 11. *Chickatawbut Road, West of Route 28 – Average Daily Weekend Traffic Variation*





PEAK-HOUR INTERSECTION TURNING MOVEMENTS

Manual Turning Movement Counts (TMCs) to determine weekday morning and evening peak hours were recorded on Thursday, December 14, 2017 from 7:00 – 9:00 a.m. and 4:00 – 6:00 p.m. TMCs to determine the Saturday peak hour were recorded on Saturday, December 16, 2017 from 10:00 a.m. – 2:00 p.m. The TMCs included vehicular, bicycle, and pedestrian counts at the study area intersections. The results of the counts indicate that the morning peak hour occurs from 7:30 – 8:30 a.m., the evening peak hour occurs from 4:15 – 5:15 p.m., and the Saturday peak hour occurs from 12:45 – 1:45 p.m. The existing traffic and pedestrian peak-hour volumes are shown in **Figure 12**.

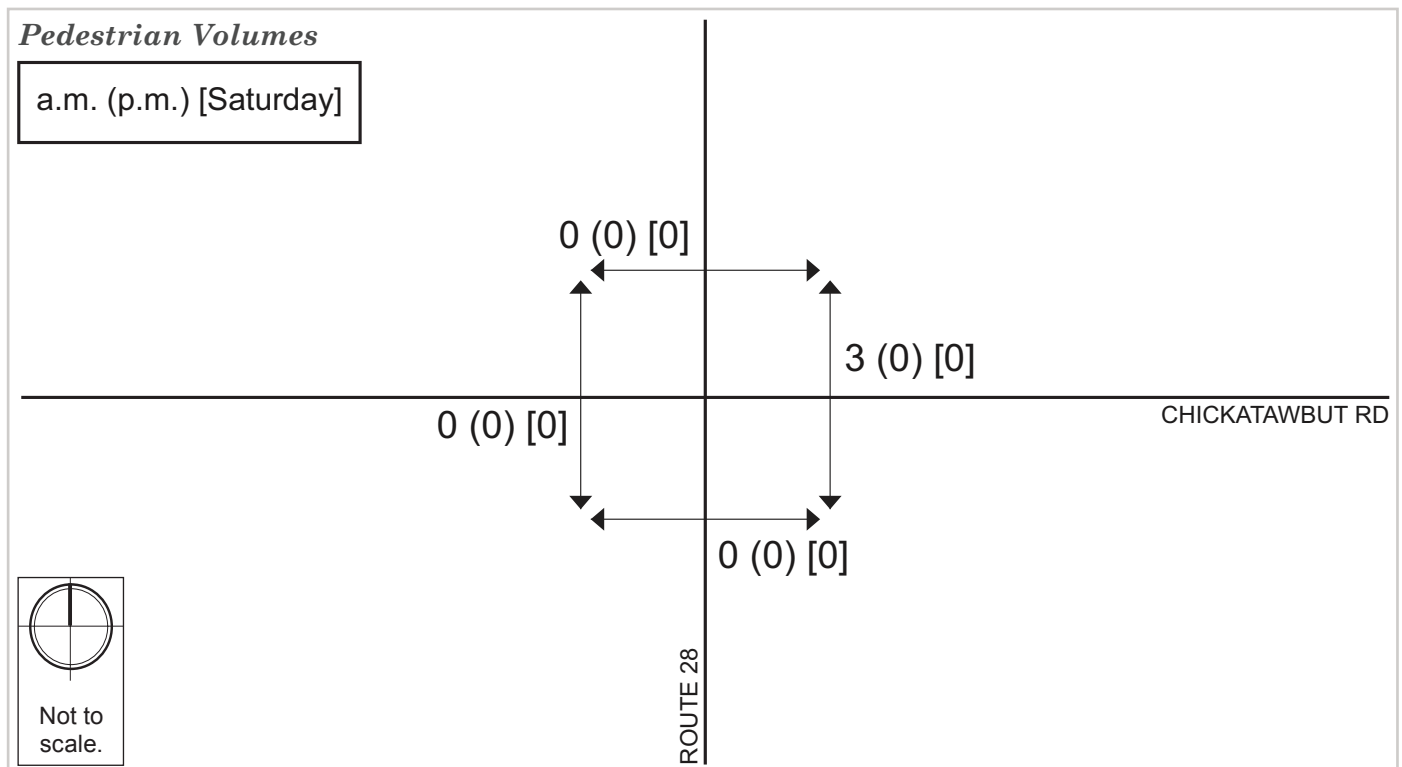
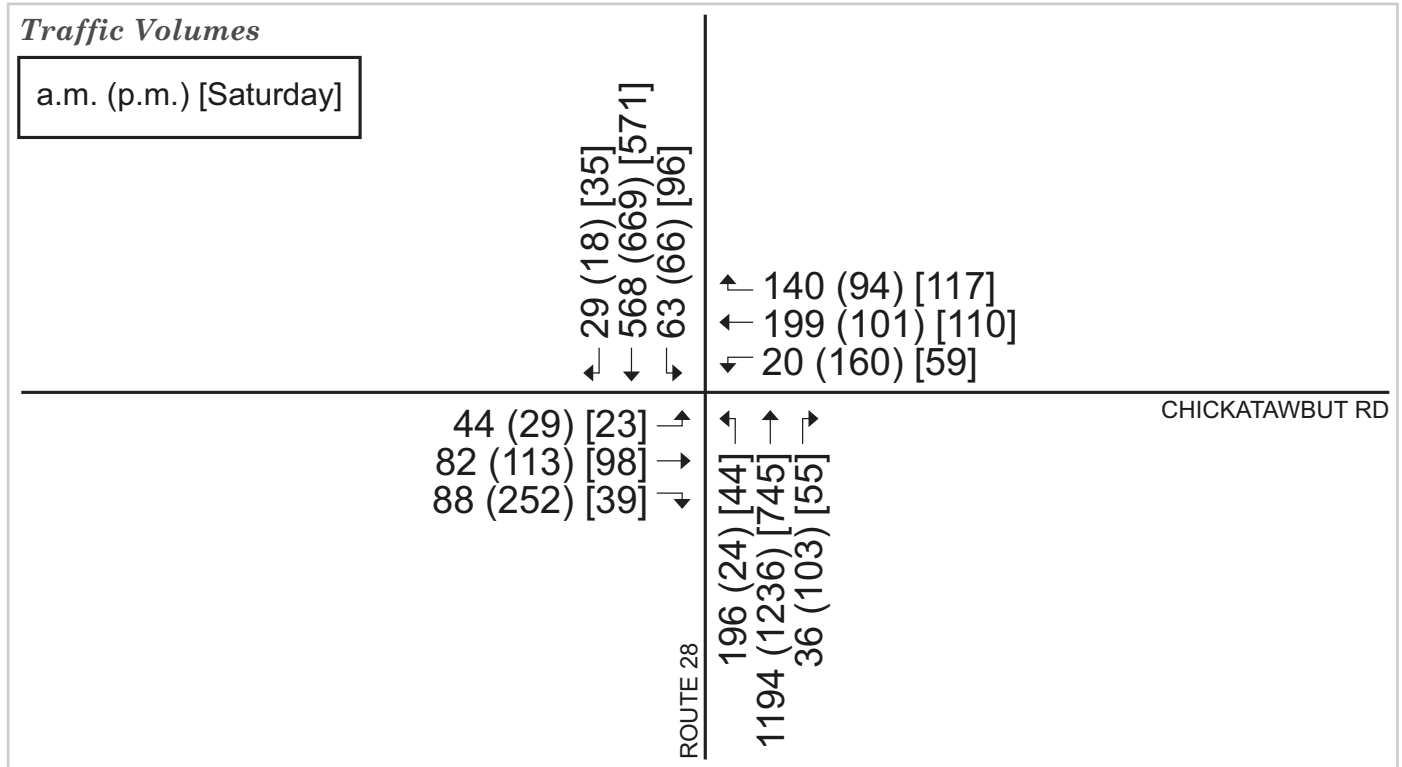
No bicycles were observed at the intersection during any of the peak hours, however the counts were conducted in December. It is expected that with the nearby Blue Hills Reservation there will be recreational seasonal bicycle demand through the area.

SEASONAL FACTOR ADJUSTMENTS

In accordance with MassDOT procedures, a nearby permanent count station along I-93 (Location ID H8487) in Quincy was used to compare monthly ADTS for 2017. Based on the data it was determined that a seasonal factor was unnecessary as December was found to be higher than the annual average was therefore not adjusted.



Figure 12. *Existing (2017) Condition Volumes, a.m., p.m., and Saturday Peak Hours*





Existing Operations Analysis

Traffic operations are determined through an analysis of intersection Level of Service (LOS) calculations. LOS at the intersection was calculated using Synchro 9.0, which is based on the traffic operational analysis methodology of the Transportation Research Board's 2000 Highway Capacity Manual (HCM). The LOS and delay (in seconds) are based on intersection geometry and traffic volumes. **Table 2** is an excerpt from the HCM, providing LOS criteria for signalized intersections. LOS A defines the most favorable condition, with minimum traffic delay. LOS F represents the worst condition, with significant traffic delay. LOS D is generally considered acceptable.

Table 2. *Level of Service Criteria, Signalized Intersections*

Level of Service	Average Stopped Delay (sec.)
A	0.0–10.0
B	10.1–20.0
C	20.1–35.0
D	35.1–55.0
E	55.1–80.0
F	>80.0

In accordance with MassDOT guidelines, the peak 15 minutes of data collected during the peak hour were isolated to calculate the peak-hour factors (PHFs) for each approach. The percentage of heavy vehicles was noted for each approach as well. All capacity analyses were checked against actual conditions in the field.

Field observations showed that during the evening peak hours, all approaches to the intersection were operating above capacity with extensive queuing and delay. The bottleneck which currently exists along Route 28 exacerbates delay along the corridor and at the study area intersection. As a result of the delay along the corridor, vehicles cannot be processed through the signal and there is significant green time wasted. It was observed that from the back of the queue it would take vehicles approximately 3 cycles to make it through the intersection of Route 28 at Chickatawbut Road.

The saturated flow for all approaches was calibrated in the Synchro model to reflect the field observations of the intersection. Synchro reports are provided in **Appendix B**.



Table 3 summarizes the existing LOS, delay, volume to capacity ratio, and queue analysis for all signalized intersections during the morning, evening, and Saturday peak hours.

Table 3. Summary of Intersection Operations, Existing Conditions

Intersection/Movement	LOS	Delay (Seconds)	V/C Ratio	50% Queue Length (ft)	95% Queue Length (ft)
AM Peak Hour					
Rt 28/Chickatawbut Rd	F	95.1	-	-	-
Chickatawbut EB left/thru/right	D	45.4	0.77	148	#299
Chickatawbut WB left/thru/right	D	43.2	0.78	217	#476
Rt 28 NB left/thru | thru/right	F	149.7	1.27	~617	#1019
Rt 28 SB left*	E	71.0	0.85	29	#149
Rt 28 SB thru/right	B	16.7	0.63	225	531
PM Peak Hour					
Rt 28/Chickatawbut Rd	F	207.7	-	-	-
Chickatawbut EB left/thru/right	F	112.1	1.09	~258	#599
Chickatawbut WB left/thru/right	F	420.3	1.80	~338	#649
Rt 28 NB left/thru | thru/right	F	204.3	1.38	~643	#1062
Rt 28 SB left*	C	21.8	0.39	16	53
Rt 28 SB thru/right	F	177.2	1.31	~554	#1018
Saturday Peak Hour					
Rt 28/Chickatawbut Rd	B	17.0	-	-	-
Chickatawbut EB left/thru/right	B	16.5	0.29	36	151
Chickatawbut WB left/thru/right	B	19.0	0.57	73	281
Rt 28 NB left/thru | thru/right	B	15.5	0.67	96	311
Rt 28 SB left/thru | thru/right	B	18.0	0.75	85	289

~ = Volume exceeds capacity, queue is theoretically infinite.

= 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after 2 cycles.

* = Due to high traffic volumes and difficulty finding gaps to turn left, Rt 28 SB left/thru lane was operating as a de facto left turn lane during AM and PM peak hours.

With existing volumes and existing geometry, the study area intersection operates at an overall LOS F during a.m. and p.m. peak hours, and at an overall LOS B during Saturday peak hour.



During the a.m. peak hour, the Route 28 northbound approach operates at a LOS F due to the high volume of vehicles as well as difficulties for left-turning vehicles to find gaps in opposing traffic. The Route 28 southbound de facto left-turn lane operates at a LOS E during a.m. peak hour also due to difficulties finding a gap in opposing traffic.

During the p.m. peak hour, all movements except for Route 28 southbound left operate at a LOS F due to the high volume of vehicles attempting to travel through the intersection.

During the Saturday peak hour, all movements operate at an acceptable LOS B.

Pedestrian and Bicycle Accommodations

Pedestrians are provided wheelchair ramps at all four corners of the intersection. Crosswalks are provided across each leg. However, there is only sidewalk connectivity to the north of the intersection on both sides of Route 28. Pedestrian demand is generated by the commercial and residential area to the north of the intersection as well as an access point to Blue Hills Reservation hiking trails located directly east of the intersection on Chickatawbut Road.

No bicycle accommodations are currently provided at this intersection.

Blue Hills Reservation

The intersection of Route 28 at Chickatawbut Road is located adjacent to the Blue Hills Reservation. Access points to Blue Hills Reservation Trails are located to the east, west, and south of the intersection. There is a parking lot located at the southeast corner of the intersection that also acts as a trailhead for the Braintree Pass Path. The Headquarters Path is located to the east with the Pipe Line can be accessed to the south. A Blue Hills Reservation trail map can be found in **Appendix C**.

Public Transportation

MBTA bus 240 and BAT bus 12 stop at the intersection of Route 28 and Chickatawbut Road.

BAT Bus Route 12 runs from the BAT Centre in Brockton to the Ashmont MBTA station. BAT Bus 12 stops at the intersection approximately every half hour before 8pm on weekdays. The inbound bus services Randolph Square from 6:03am-11:59pm on weekdays, 6:41am-11:08pm on Saturdays, and 11:42am-7:02pm on Sundays. The outbound bus services Randolph Square from 5:16am-11:01pm on weekdays, 5:38am-10:21pm on Saturdays, and 10:38am-5:58pm on Sundays.



MBTA Bus Route 240 runs service between Ashmont MBTA station and Avon Square or Randolph Commuter Rail Station. The MBTA Bus Route 240 stops at the intersection approximately every 15 minutes during peak hours and generally arrives around every half hour at other times. The inbound bus services Randolph Square from 5:10am-12:25am on weekdays, 6am-12:29am on Saturdays, and 7:10am-12:23am on Sundays. The outbound bus services the intersection from 6am-1am on weekdays, 6:40am-1am on Saturdays, and 7:40am-12:55am on Sundays.

Safety Analysis

The intersection of Route 28/Chickatawbut Road is a high crash location, with an Equivalent Property Damage Only (EPDO) score of 157 from 2012-2014, including 25 injury crashes and one fatal crash. The intersection was also listed at #31 on the list of the 2012-2014 Statewide Top 200 Crash Locations. As a result, a Road Safety Audit was conducted on Monday, November 14, 2016. Using the same MassDOT method, the EPDO score is 205 from 2012-2015.

Crash rates are determined based on the number of crashes per million entering vehicles (MEV) at the intersection. The average crash rate of 1.21 crashes per MEV at this intersection is above the MassDOT District 6 average for signalized intersections of 0.70 crashes per MEV.

From 2012 to 2015, 60 crashes occurred at the intersection, including 34 crashes (or 57%) that resulted in personal injury and one fatal crash. Of the 60 crashes, 37 (or 62%) were angle crashes; 12 (or 20%) were rear-end crashes, five (or 8%) were sideswipe crashes, four (or 7%) were head-on crashes, and two (3%) were single-vehicle crashes. Most crashes occurred during the morning or evening peak periods, with 32% of crashes occurring between 6:00-10:00 a.m. and 29% of crashes occurring between 4:00-8:00 p.m. One crash involved a bicyclist. No crashes involving pedestrians were reported.

Of the 60 crashes that occurred at the intersection from 2012-2015, 41 (or 68%) of the crashes involved left-turning northbound and southbound vehicles colliding with vehicles traveling through the intersection in the opposite direction. Thirty crashes involved southbound left-turning vehicles and northbound through vehicles, while 11 crashes involved northbound left-turning vehicles and southbound through vehicles. Twenty-five of the crashes resulted in personal injury. One single-vehicle crash in 2014 involved a vehicle running off the road and hitting a traffic signal pole and resulted in a fatality.

Left-turning vehicles on Route 28 must turn against two lanes of traffic. A leading left-turn phase is given in the northbound direction at all times except in the evening peak hours of 3:00-6:00 p.m., when the southbound direction is given the leading left-turn phase. As the corridor is congested at



peak hours, left-turning vehicles have difficulty finding gaps in opposing traffic for permissive left turns, which leads to driver frustration and dangerous maneuvers.

The crash rate worksheet and the RSA for Route 28 at Chickatawbut Road complete with the crash data and collision diagram are provided in **Appendix D**.

Table 4 shows the type and severity of each of the crashes recorded from 2012-2015.

Table 4. MassDOT Crash Data Summary

Scenario	Route 28/Chickatawbut Road
Year	
2012	17
2013	13
2014	17
2015	13
Total	60
Type	
Angle	37
Rear-end	12
Sideswipe	5
Head-on	4
Single Vehicle	2
Unknown/Other	0
Total	60
Severity	
Property Damage	25
Personal injury	34
Fatality	1
Unknown	0
Total	60
Crash Rate²	1.21
District Average Rate	0.70

1. Source: Milton Police Department and Massachusetts State Police, crash data from 2012 through 2015.

2. Crash rate per million vehicles entering the intersection.



During the RSA, several safety concerns were noted in detail and are briefly summarized below:

- Safety concerns for permissive left-turning movements
 - High vehicle speeds observed
 - Stopping short for left-turning vehicles waiting for gaps
 - No pavement marking showing drivers you can turn left from inside lane
- Solar glare obscuring visibility of signals
- Emergency preemption either blocked by mast-arm signage or malfunctioning
- Congestion and driver frustration
 - Red light running
 - Traffic volume and queuing increased significantly over past 10 year
- Existing sidewalk at intersection does not connect to exiting Blue Hills trail parking
- Pedestrian crossing times insufficient
- No lane use signs on Route 28 approaching intersection
- Can't easily see street name signs when approaching intersection

The following enhancements were proposed for future consideration to help resolve the above safety concerns:

- Consider designating the left lanes on both Route 28 northbound and southbound as left-turn-only lanes and limiting left turns at the intersection to protected left turns only.
- Consider converting one Route 28 southbound receiving lane into a Route 28 northbound left-turn pocket, while designating the left travel lane on Route 28 southbound as a left-turn lane.
- Consider the safety benefits of widening the Route 28 northbound and southbound approaches to the intersection to include exclusive left-turn lanes while maintaining two through lanes.
- If left-turn lanes are implemented on the Route 28 northbound and/or southbound approaches, consider installing a flashing left arrow indication for vehicles in the left-turn lane(s).
- Consider implementing lead-lag left-turn phasing at the intersection to allow both Route 28 northbound and southbound to receive protected left turn phases.
- Replace the missing lights in the (Red) Signal Ahead sign on Route 28 northbound and consider replacing the sign with an upgraded sign with LED lights for added visibility and durability. Consider providing a (Red) Signal Ahead sign on Route 28 southbound.
- Ensure that emergency vehicle preemption is functional at the intersection. If necessary, relocate the "Left Turn Yield on Green" sign to elsewhere on the mast arm so that it does not



inhibit the preemption receiver. Ensure that future signage on the mast arm does not inhibit the receiver.

- Consider equipping traffic signal indications with retroreflective backplates.
- Consider restricting left turns onto Chickatawbut Road, either entirely or during peak hours only, to reduce cut-through traffic and the number of crashes involving left turns onto Chickatawbut Road.
- Check yellow and all-red clearance intervals at the intersection to ensure that motorists have sufficient time to clear the intersection.
- Consider placing speed feedback signs on Route 28 northbound and southbound to reduce speeding along the roadway.
- Consider providing a sidewalk connecting the southwest corner of the intersection to the existing parking area and trail entrance.
- Consider allotting more time to the “Walk” and “Flashing Don’t Walk” phases of the traffic. Consider a “Flashing Don’t Walk” phase of at least 19 seconds, which accommodates pedestrians walking at 3.0 feet per second.
- Consider striping high-visibility continental crosswalks.
- Consider providing countdown pedestrian indications at the intersection.
- Consider adding video detection sensors to dynamically increase the length of the “Walk” phase when needed for larger groups.
- Consider placing lane use signage in advance of the intersection on Route 28 northbound and southbound and on the mast arms at the intersection. Consider supplementing with pavement markings approaching the intersection.
- Consider placing street name signage for Randolph Avenue and Chickatawbut Road on the mast arms.



Future Conditions

Future traffic volumes were estimated and analyzed to determine the number of travel lanes and lane usage required for the intersection Route 28 at Chickatawbut Road. Using these estimated volumes, two conditions were analyzed:

- No Build – Future traffic volumes with the existing geometry
- Build – Future traffic volumes under proposed intersection improvements

These future conditions are discussed in more detail in the sections below.

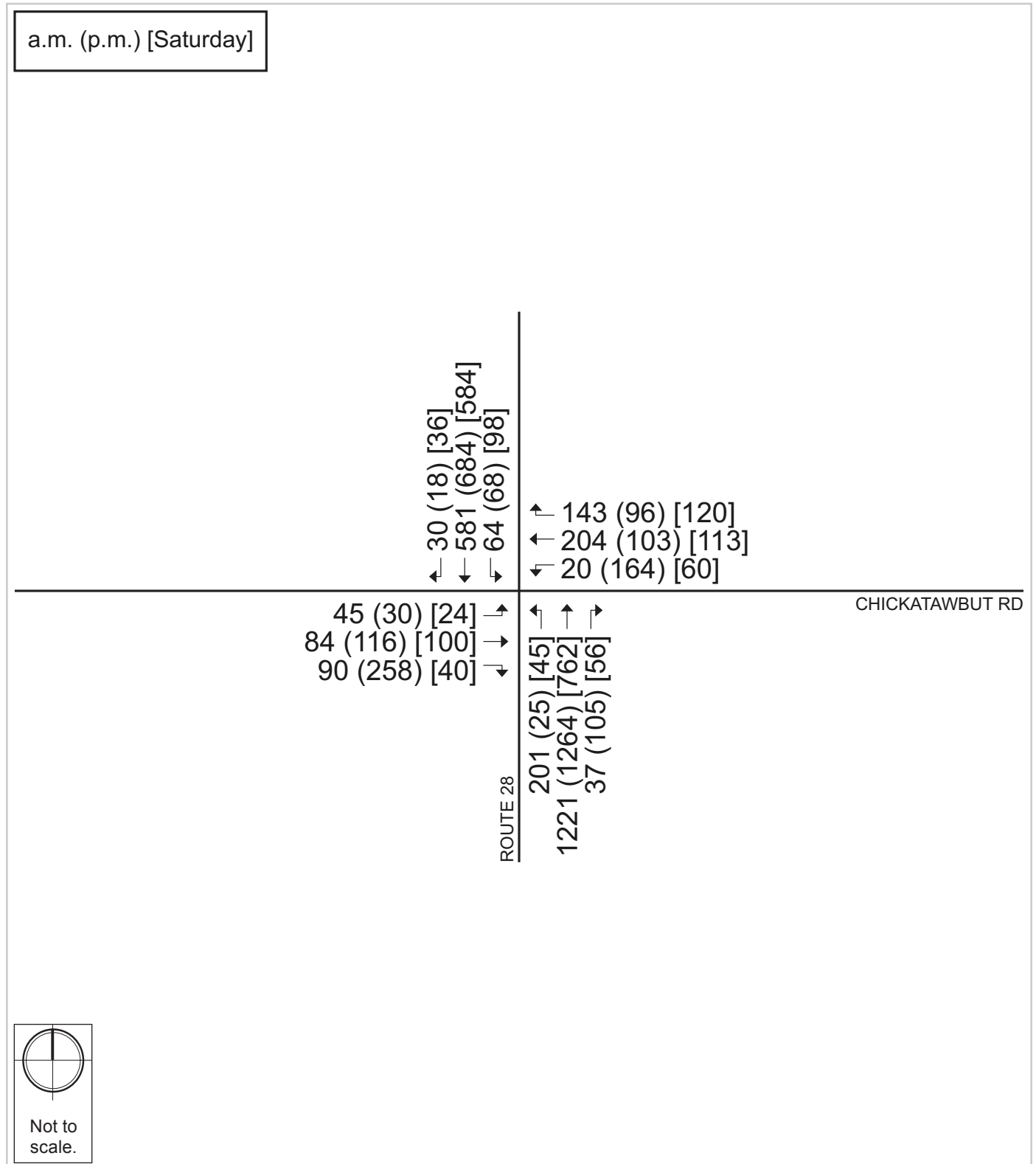
No Build Analysis

ESTIMATION OF FUTURE VOLUMES

The future (2027) traffic volumes are based on a 10-year design horizon, as per MassDOT guidance. Future volumes for the 2027 design year were established by increasing the Existing (2017) Condition traffic volumes by a background growth rate of 2.3%. The growth rate was supplied by the Central Transportation Planning Staff (CTPS) based on their future traffic demand model for the area. The future peak-hour traffic volumes are shown in **Figure 13**.



Figure 13. *Future (2027) Condition Traffic Volumes, a.m., p.m., and Saturday Peak Hours*





INTERSECTION OPERATIONS ANALYSIS

An analysis was performed to evaluate the effect of accommodating estimated 2027 future traffic volumes with the existing intersection geometry, as shown in **Table 5**. The future traffic growth is expected to increase the delay, v/c ratio and queue lengths of the No Build Condition due to the higher demand on the intersection with no proposed improvements.

With future volumes and existing geometry, the overall intersection operates at an overall LOS F during a.m. and p.m. peak hours, and at an overall LOS B during Saturday peak hour.

During the a.m. peak hour, the Route 28 northbound approach continues to operate at a LOS F due to the high volume of vehicles as well as difficulties for left-turning vehicles to find gaps in opposing traffic, although the delays increase. The Route 28 southbound de facto left-turn lane worsens from LOS E to LOS F during a.m. peak hour due to difficulties finding a gap in the even higher volume of opposing traffic, adding 36 seconds to the delay.

During the p.m. peak hour, all movements except for Route 28 southbound left continue to operate at a LOS F due to the high volume of vehicles attempting to travel through the intersection. While the delay increases for all approaches, the Chickatawbut westbound approach delay notably increases by 42 seconds.

During the Saturday peak hour, all movements continue to operate at an acceptable LOS B with approximately the same delays as existing conditions.



Table 5. Summary of Intersection Operations, No Build Conditions

Intersection/Movement	LOS	Delay (Seconds)	V/C Ratio	50% Queue Length (feet)	95% Queue Length (feet)
AM Peak Hour					
Route 28/Chickatawbut Rd	F	106.5	-	-	-
Chickatawbut EB left/thru/right	D	42.3	0.74	143	#309
Chickatawbut WB left/thru/right	D	44.2	0.80	223	#489
Route 28 NB left/thru | thru/right	F	169.2	1.31	~647	#1055
Route 28 SB left*	F	107.3	0.94	33	#57
Route 28 SB thru/right	B	17.1	0.65	233	550
PM Peak Hour					
Route 28/Chickatawbut Rd	F	220.9	-	-	-
Chickatawbut EB left/thru/right	F	121.2	1.12	~283	#617
Chickatawbut WB left/thru/right	F	462.4	1.90	~352	#665
Route 28 NB left/thru | thru/right	F	212.7	1.40	~657	#1078
Route 28 SB left*	B	22.3	0.40	16	54
Route 28 SB thru/right	F	189.1	1.34	~574	#1044
Saturday Peak Hour					
Route 28/Chickatawbut Rd	B	16.7	-	-	-
Chickatawbut EB left/thru/right	B	16.5	0.30	38	155
Chickatawbut WB left/thru/right	B	19.1	0.58	78	289
Route 28 NB left/thru | thru/right	B	15.1	0.66	103	315
Route 28 SB left/thru | thru/right	B	17.6	0.75	92	293

~ = Volume exceeds capacity, queue is theoretically infinite.

= 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after 2 cycles.

* = Due to high traffic volumes and difficulty finding gaps to turn left, Rt 28 SB left/thru lane was operating as a de facto left turn lane during AM and PM peak hours.



Build Conditions

This section discusses the proposed intersection improvements and alternative designs considered for the intersection of Route 28 at Chickatawbut Road. The main goal of the intersection improvements proposed are to address the safety concerns discussed under the Existing Conditions section of this memorandum.

Improvements are also proposed to help reduce the congestion experienced at the intersection; however, it should be noted that the corridor-wide bottleneck and congestion experienced will not be resolved through intersection improvements at Route 28 and Chickatawbut Road and will still impact the operations of the intersection if traffic flow along Route 28 is impeded.

Three different design alternatives are considered for the signalized intersection and are shown in **Figure 14** through **Figure 16**. In addition, a fourth alternative which would convert the signalized intersection into a roundabout was explored. All alternatives are discussed in further detail below and are ranked from low to high for both cost, impacts, and improvements to traffic and safety.

Existing and future cross sections of the intersection approaches may be found in **Appendix E**. Clearance calculations performed for all three signalized alternatives may be found in **Appendix F**.

Figure 15. *Alternative 2 Concept Design*

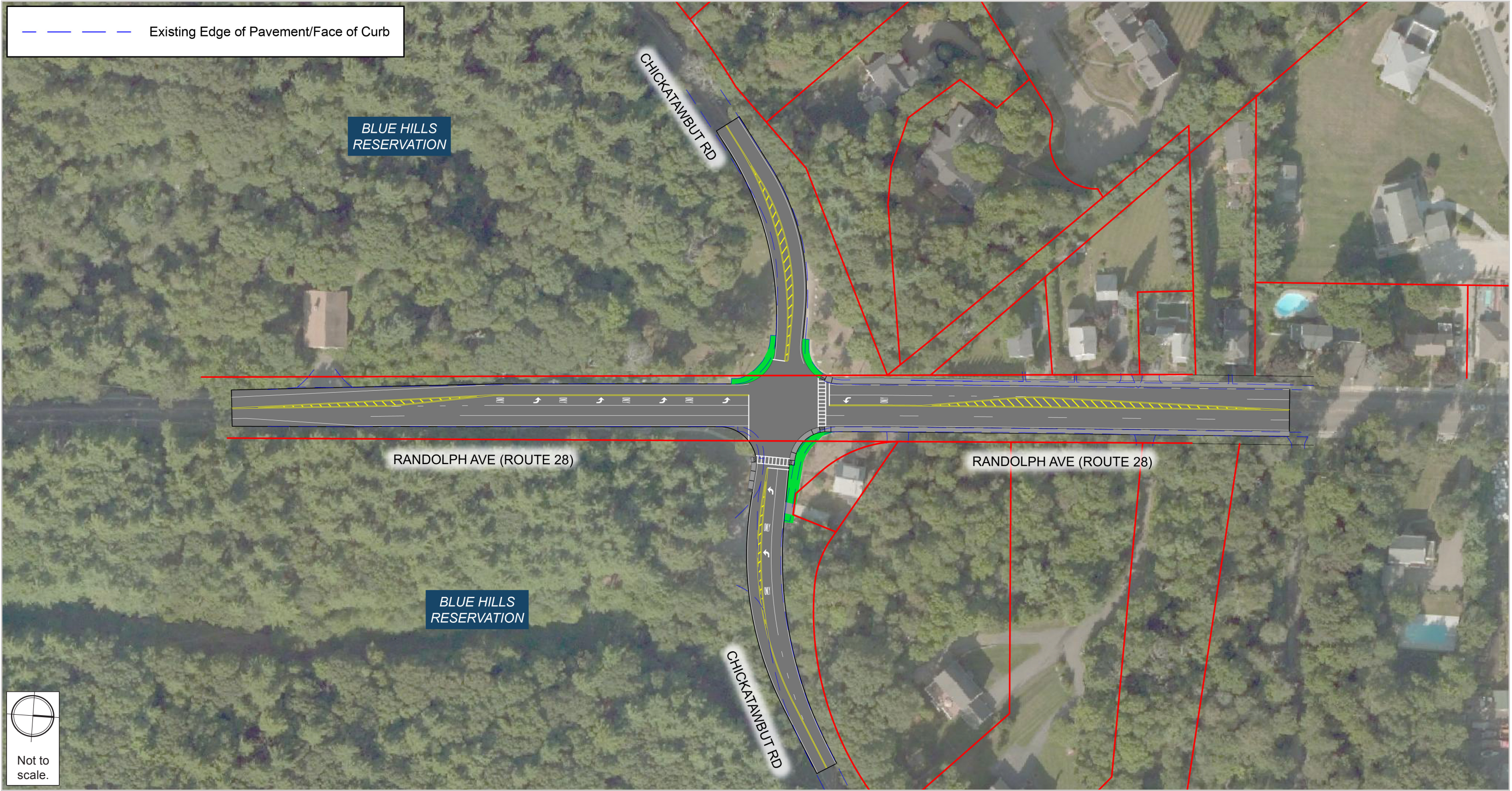


Figure 14. *Alternative 1 Concept Design*

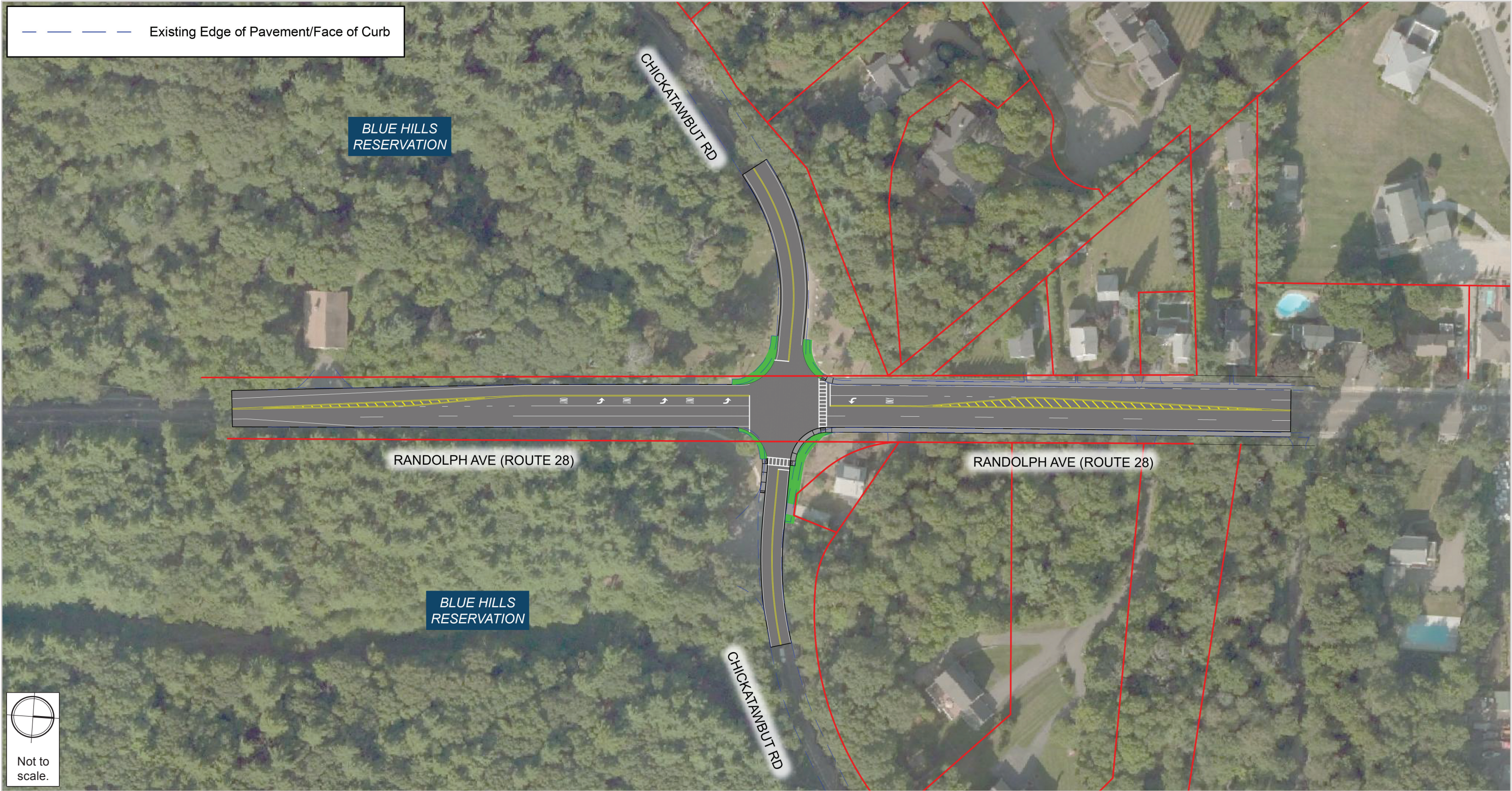
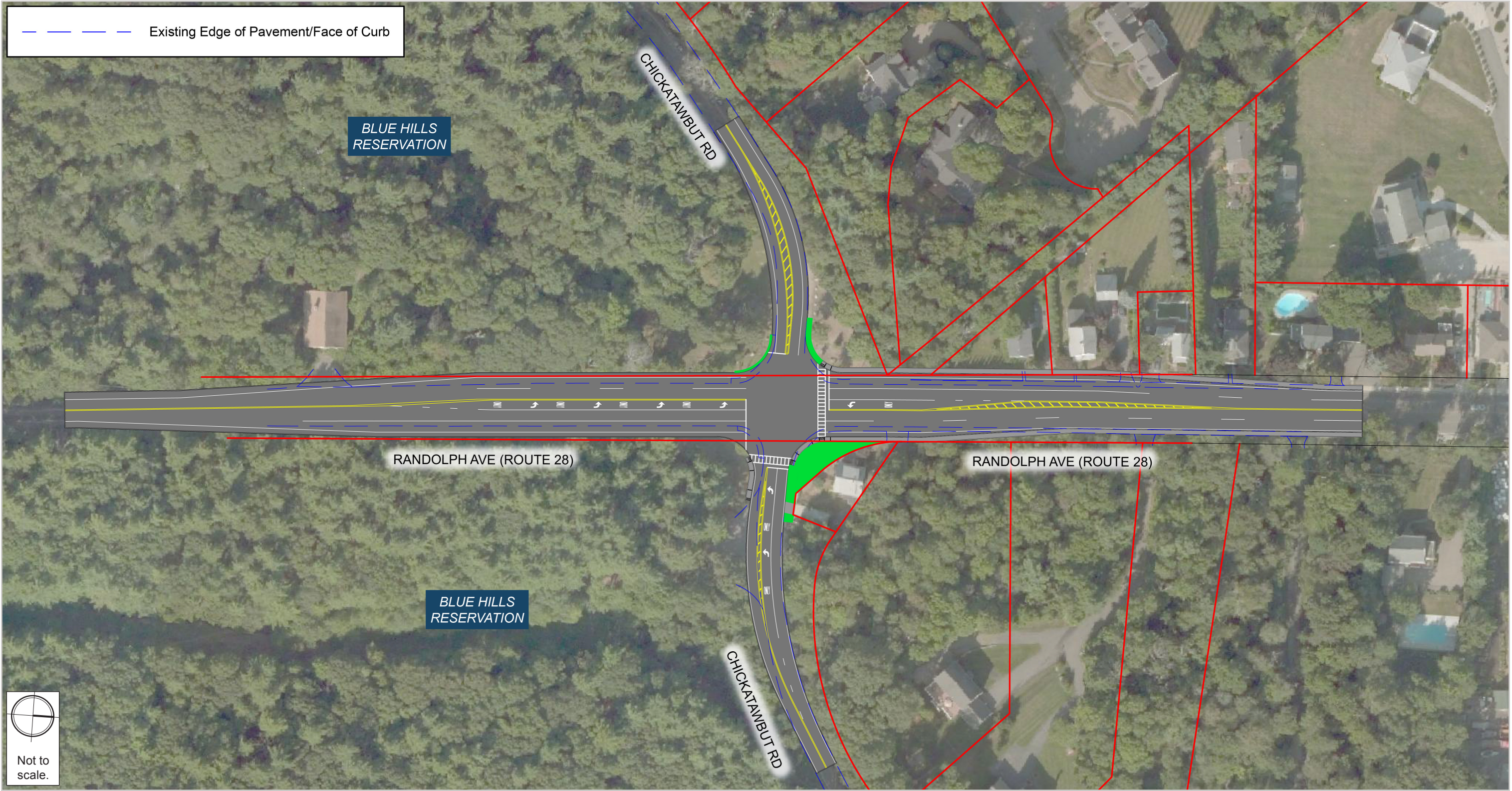


Figure 16. *Alternative 3 Concept Design*





ALTERNATIVE 1

Alternative 1 provides exclusive left turn lanes on the Route 28 northbound and southbound approaches by merging the two southbound through lanes into one lane before the intersection (instead of shortly after the intersection). Merging the two Route 28 southbound through lanes into one lane along the intersection approach allows there to be only one receiving lane. The extra space from the second receiving lane may now be used for a northbound left-turn pocket with approximately 230 feet of storage. The Route 28 southbound left-turn lane will have approximately 100 feet of storage.

Providing exclusive left turn lanes increases the capacity for left-turning vehicles on Route 28 and allows them to receive protected-only phasing. While this formally decreases the capacity for the southbound through movement to one travel lane, as noted in the summaries of intersection operations, the southbound shared left-turn/through lane was already operating as a de facto left turn lane during weekday a.m. and p.m. peak hours. This is because under the existing phasing and lane configuration, the vehicles waiting to turn left have difficulties finding gaps in the fast-moving on-coming traffic and block the through vehicles from proceeding through the intersection.

Providing exclusive left-turn lanes on Route 28 increases the capacity of the northbound through movement by allowing protect-eliminating delay from left-turning vehicles blocking through vehicles as they wait to make a permitted turn across opposing traffic.

Additionally, providing exclusive left-turn lanes along the northbound and southbound approaches allows for protected-only phasing of the left-turns. This phasing will increase safety for left-turning and through vehicles and eliminate the potential for angle collisions along these approaches. Crashes involving left-turning vehicles along Route 28 currently account for 68% of the overall intersection crashes recorded from 2012 to 2015.

While traffic operations are expected to improve above No Build Conditions, the Route 28 northbound and southbound queue are still expected to be long and will most likely block vehicles access to enter the left-turn storage lane until they are closer to the intersection.

PEDESTRIAN AND BICYCLE ACCOMMODATIONS

Currently, crosswalks are provided across all legs of the intersection. However, there are no sidewalks along the west leg of Chickatawbut Road or the southern leg of Route 28. It is proposed to remove the crosswalk across the west leg of Chickatawbut Road and the southern leg of Route 28 as there are no sidewalk connections or known desire lines that they are providing. The crossings across the north and east legs of the intersections will be maintained for the connections from the MBTA bus stop and the Blue Hills parking. The sidewalk on the southeast corner will also be



extended to the Blue Hills parking area/trail entrance. Near handicapped-accessible ramps, accessible pushbuttons, and countdown pedestrian signal indications will be provided. As this design maintains the existing roadway width, it is expected that the crossing distances will remain approximately the same as under existing conditions.

Per recommendations from the RSA, the pedestrian crossing times have been re-timed to accommodate pedestrian walking at 3.0 feet per second. The crosswalks have also been marking with high visibility striping to increase awareness of the potential presence of pedestrians at the intersection.

Bicycle detection will be provided along all approaches however cyclists will still be required to ride within the vehicle travel lanes under this alternative. No shared lane markings will be provided as they are not appropriate on streets with speeds above 35 mph.

TRAFFIC SIGNAL PHASING

The proposed traffic signal phasing for Alternative 1 at Route 28 and Chickatawbut Road may be seen in **Figure 17**.

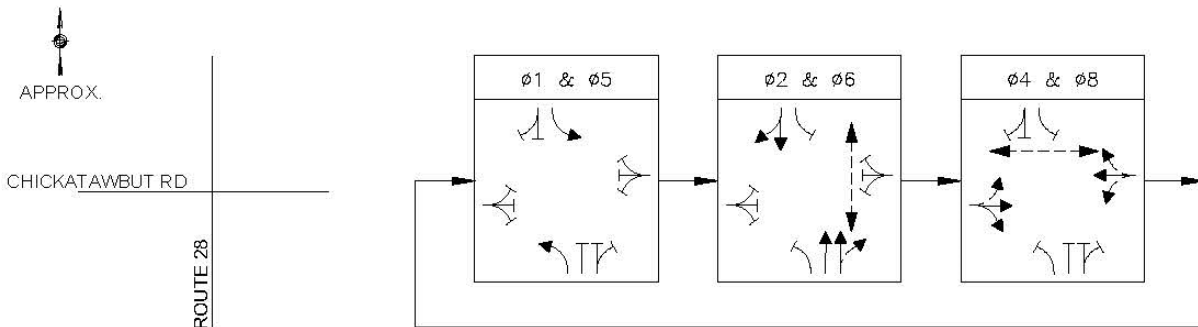
With the proposed design and exclusive left-turn phasing, the pedestrian phasing is proposed to be changed from an exclusive phase to concurrent phasing which will help reduce the overall cycle length of the traffic signal. Concurrent pedestrian phasing typically also helps to reduce pedestrian delay.

Under Alternative 1, phases 1 and 5 would provide actuated, protected leading left-turns for the Route 28 northbound and southbound left-turn lanes. Phases 2 and 6 would follow and allow the Route 28 northbound and southbound through lanes to proceed through the intersection with the east concurrent pedestrian crossing across Chickatawbut Road and the left-turns shut off. Lastly, phases 4 and 8 would allow the eastbound and westbound Chickatawbut Road approaches to proceed with permissive turns and the north concurrent pedestrian crossing across Route 28.

The traffic signal is proposed to have a 90 second cycle length during the morning peak period, a 120-second cycle length during the evening peak period, and an 80-second cycle length during the off-peak periods.



Figure 17. Alternative 1 Traffic Signal Phasing



ADDITIONAL INTERSECTION IMPROVEMENTS

Traffic signal clearance intervals have also been reviewed and adjusted to meet current MUTCD and MassDOT standards based on the observed traffic speeds of the roadways and the intersection grades. Adjusting the clearance intervals should help to reduce the number of rear-end collisions occurring at the intersection.

All traffic signal equipment, detection, and traffic signal controller and cabinet will be provided at the intersection. It is assumed that mast-arms will be provided for each approach with overhead LED traffic signal heads equipped with retroreflective backplates for added visibility at night and during periods of solar glare.

The intersection will also be equipped with new and functioning emergency pre-emption. Other short-term recommendations made in the RSA will also be provided such as the red signal ahead sign on the Route 28 northbound approach and a new warning sign provided on the Route 28 southbound approach. Speed feedback signs will also be installed along Route 28 to help reduce the frequent speeding along the corridor.

New lane use pavement markings and signage will be provided along the intersection approaches and street name signage will be evaluated and provided for the preferred alternative.

SAFETY ANALYSIS OF PROPOSED TREATMENTS

A brief safety analysis was performed to predict the impact of the proposed intersection treatments on the general safety of the intersection.

Chapter 14 of the 2010 Highway Safety Manual (HSM 2010) provides crash modification factors (CMFs) for intersection treatments. CMFs may be multiplied to existing crash frequencies to predict



the impact of specific intersection treatments. A CMF of greater than one will increase crashes and a CMF of less than one is expected to decrease crashes.

When comparing the base condition (four-leg intersection without left-turn lanes on the major-road approaches) to the proposed condition (left-turn lanes on two approaches to four-leg intersection) Table 14-12 states that installing left-turn lanes could reduce all severities by 9-29% (CMF of 0.81 with a standard deviation of 0.1) and injury crashes by 15-19% (CMF of 0.83 with standard deviation of 0.02). It should be noted however that the side street AADT shown in Table 14-12 is lower than the ADT obtained from counts along Chickatawbut Road.

In addition, the Route 28 left-turns are currently provided a mixture of protected-permissive or permissive depending on the time of day. The crash effect of changing the left-turn phasing was calculated following the steps laid out on pages 14-36 and 14-37 of the HSM. The existing left-turn phasing CMFs would be multiplied together (0.99 for each permissive/protected movement and 1.00 for permissive phasing) to equal 0.99 for the intersection. The future conditions CMF would be calculated using 0.94 for each protected left-turn approach which would equal 0.88 for the entire intersection. To calculate the CMF for the treatment, you would divide the future CMF by the exiting CMF to get 0.89 which means the crashes would be expected to decrease by approximately 11%.

Section 14.7.2.7 of the HSM discussed the impact of modifying clearance intervals to meet the recommended practice has a CMF for crashes of all severities of 0.92 with a standard deviation of 0.07 which means it is expected to reduce crashes of all severities by 1-15% (when accounting for standard deviation).

While not provided in the HSM, the FHWA Crash Modification Factors Clearance house presented a CMF of 0.85 for adding 3-inch yellow retroreflective sheeting to signal backplates.

Table 6. *Alternative 1 Proposed Intersection Treatment CMFs*

Treatment	CMF (All levels of severities)
Left-turn lanes	0.81
Protected phasing	0.89
Clearance Intervals	0.92
Adding yellow retroreflective sheet to backplates	0.85



Treatment	CMF (All levels of severities)
Total CMF	0.56
Reduction in Crashes based on CMFS (This does not account for standard deviation)	44%

Not accounted for within these calculations are the impact of converting the exclusive pedestrian phase to a concurrent pedestrian phase or the impact of the two travel lanes merging to one lane north of the intersection along the Route 28 southbound approach.

ALTERNATIVE 2

Alternative 2 provides the same design along Route 28 as in Alternative 1 but the Route 28 northbound left-turn lane is proposed to have approximately 275 feet of storage and a left-turn lane with approximately 175 feet of storage is proposed to be added along the Chickatawbut Road westbound approach, which experiences high left-turn demand during the evening peak hours.

The Chickatawbut Road approach will no longer fit within the existing roadway footprint. The roadway and adjacent parkland are all property of DCR. The new left-turn lane will require a change in land-use as it is expected to take approximately 3,400 square feet of DCR parkland.

While traffic operations are expected to improve above No Build Conditions, the Route 28 northbound and southbound queue are still expected to be long and will most likely block vehicles access to enter the left-turn storage lane until they are closer to the intersection.

PEDESTRIAN AND BICYCLE ACCOMMODATIONS

Currently, crosswalks are provided across all legs of the intersection. However, there are no sidewalks along the west leg of Chickatawbut Road or the southern leg of Route 28. It is proposed to remove the crosswalk across the west leg of Chickatawbut Road and the southern leg of Route 28 as there are no sidewalk connections or known desire lines that they are providing. The crossings across the north and east legs of the intersections will be maintained for the connections from the MBTA bus stop and the Blue Hills parking. The sidewalk on the southeast corner will also be extended to the Blue Hills parking area/trail entrance. Near handicapped-accessible ramps, accessible pushbuttons, and countdown pedestrian signal indications will be provided. As this design maintains the existing roadway width along Route 28, it is expected that the crossing distances will remain approximately the same across Route 28 but the crossing across Chickatawbut Road will be slightly longer due to the proposed left-turn storage lane.



Per recommendations from the RSA, the pedestrian crossing times have been re-timed to accommodate pedestrian walking at 3.0 feet per second. The crosswalks have also been marking with high visibility striping to increase awareness of the potential presence of pedestrians at the intersection.

Bicycle detection will be provided along all approaches however cyclists will still be required to ride within the vehicle travel lanes under this alternative. No shared lane markings will be provided as they are not appropriate on streets with speeds above 35 mph.

TRAFFIC SIGNAL PHASING

The proposed traffic signal phasing for Alternative 2 at Route 28 and Chickatawbut Road may be seen in **Figure 18**.

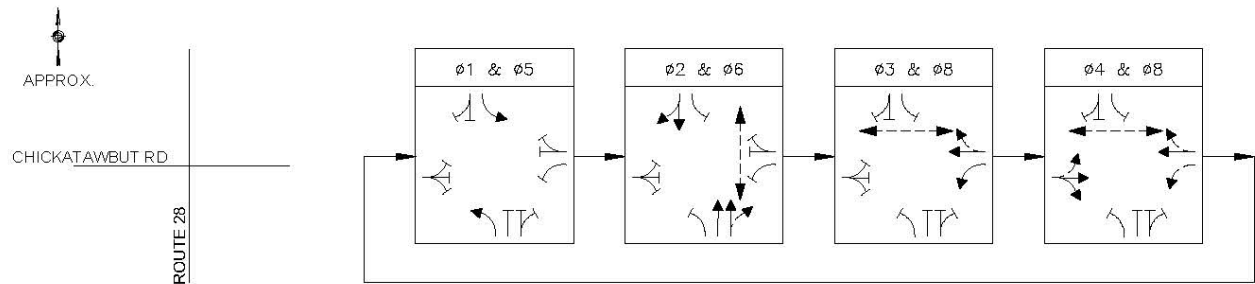
As in Alternative 1, the pedestrian phasing is proposed to be changed from an exclusive phase to concurrent phasing which will help reduce the overall cycle length of the traffic signal. Concurrent pedestrian phasing typically also helps to reduce pedestrian delay.

Under Alternative 1, phases 1 and 5 would provide actuated, protected leading left-turns for the Route 28 northbound and southbound left-turn lanes. Phases 2 and 6 would follow and allow the Route 28 northbound and southbound through lanes to proceed through the intersection with the east concurrent pedestrian crossing across Chickatawbut Road and the left-turns shut off. The Chickatawbut Road westbound left-turn lane would then be provided a short, actuated leading left-turn phase with phases 4 and 8 following to allow the eastbound and westbound Chickatawbut Road approaches to proceed with permissive turns and the north concurrent pedestrian crossing across Route 28.

The traffic signal is proposed to have a 100 second cycle length during the morning peak period, a 120-second cycle length during the evening peak period, and an 80-second cycle length during the off-peak periods.



Figure 18. Alternative 2 Traffic Signal Phasing





ADDITIONAL INTERSECTION IMPROVEMENTS

Traffic signal clearance intervals have also been reviewed and adjusted to meet current MUTCD and MassDOT standards based on the observed traffic speeds of the roadways and the intersection grades. Adjusting the clearance intervals should help to reduce the number of rear-end collisions occurring at the intersection.

All traffic signal equipment, detection, and traffic signal controller and cabinet will be provided at the intersection. It is assumed that mast-arms will be provided for each approach with overhead LED traffic signal heads equipped with retroreflective backplates for added visibility at night and during periods of solar glare. A flashing yellow arrow indication will be proposed for the Chickatawbut Road westbound protected-permissive left-turn phasing.

The intersection will also be equipped with new and functioning emergency pre-emption. Other short-term recommendations made in the RSA will also be provided such as the red signal ahead sign on the Route 28 northbound approach and a new warning sign provided on the Route 28 southbound approach. Speed feedback signs will also be installed along Route 28 to help reduce the frequent speeding along the corridor.

New lane use pavement markings and signage will be provided along the intersection approaches and street name signage will be evaluated and provided for the preferred alternative.

SAFETY ANALYSIS OF PROPOSED TREATMENTS

A safety analysis was performed to predict the impact of the proposed treatments for this alternative, similar to what was conducted for Alternative 1.

Page 14-23 of the HSM 2010 states that the CMF for installing left-turn lanes on three approaches to a four-leg signalized intersection is equal to the CMF for installing left-turn lanes on one approach, from Table 14-11, raised to the third power. As a result, the CMF for adding the three left-turn lanes in Alternative 2 is 0.73. It should be noted however that the side street AADT shown in Table 14-12 is lower than the ADT obtained from counts along Chickatawbut Road.

In addition, the Route 28 left-turns are currently provided a mixture of protected-permissive or permissive depending on the time of day. The crash effect of changing the left-turn phasing was calculated following the steps laid out on pages 14-36 and 14-37 of the HSM. The existing left-turn phasing CMFs would be multiplied together (0.99 for each permissive/protected movement and 1.00 for permissive phasing) to equal 0.99 for the intersection. The future conditions CMF would be calculated using 0.94 for each protected left-turn approach which would equal 0.87 for the entire intersection. To calculate the CMF for the treatment, you would divide the future CMF by the



exiting CMF to get 0.88 which means the crashes would be expected to decrease by approximately 12%.

Section 14.7.2.7 of the HSM discussed the impact of modifying clearance intervals to meet the recommended practice has a CMF for crashes of all severities of 0.92 with a standard deviation of 0.07 which means it is expected to reduce crashes of all severities by 1-15% (when accounting for standard deviation).

While not provided in the HSM, the FHWA Crash Modification Factors Clearance house presented a CMF of 0.85 for adding 3-inch yellow retroreflective sheeting to signal backplates.

Table 7. Alternative 2 Proposed Intersection Treatment CMFs

Treatment	CMF (All levels of severities)
Left-turn lanes	0.73
Protected phasing	0.88
Clearance Intervals	0.92
Adding yellow retroreflective sheet to backplates	0.85
Total	0.50
Reduction in Crashes based on CMFS (This does not account for standard deviation)	50%

Not accounted for within these calculations are the impact of converting the exclusive pedestrian phase to a concurrent pedestrian phase or the impact of the two travel lanes merging to one lane north of the intersection along the Route 28 southbound approach.

ALTERNATIVE 3

Alternative 3 maintains two through lanes along the Route 28 northbound and southbound approaches and proposes to widen the roadway to add exclusive left-turn lanes on both approaches. The Route 28 northbound left-turn lane will have approximately 275 feet of storage and the southbound left-turn lane will have 100 feet of storage. As in Alternative 2, a left-turn lane with approximately 175 feet of storage will be provided on the Chickatawbut Road westbound approach.

The addition of exclusive left-turn lanes while maintaining two through lanes on Route 28 will help increase the capacity for these approaches. The exclusive left-turn lanes will eliminate the delay on



the through lanes creating by left-turning vehicles waiting for gaps and will allow for protected-only phasing.

As noted in Alternative 2, the exclusive left turn lane on the Chickatawbut Road westbound approach is expected to increase capacity and safety by providing a protected left-turn phase and to help reduce the delay from left-turning vehicles blocking the through traffic on that approach.

In addition, the two through lanes along Route 28 are expected to have improved through operations over Alternatives 1 and 2 which will help driver frustration and congestion. The shorter queue lengths along Route 28 southbound will help vehicles better enter the left-turn storage lane, which is more likely to be blocking by queuing vehicles under Alternatives 1 and 2.

The proposed roadway widening along Route 28 will have private property right-of-way impacts of approximately 1,700 square feet and approximately 2,400 square feet of right-of-way impacts to DCR parkland. The proposed changes to Chickatawbut Road will require land-use change for approximately 5,100 square feet of DCR parkland.

PEDESTRIAN AND BICYCLE ACCOMMODATIONS

Currently, crosswalks are provided across all legs of the intersection. However, there are no sidewalks along the west leg of Chickatawbut Road or the southern leg of Route 28. It is proposed to remove the crosswalk across the west leg of Chickatawbut Road and the southern leg of Route 28 as there are no sidewalk connections or known desire lines that they are providing. The crossings across the north and east legs of the intersections will be maintained for the connections from the MBTA bus stop and the Blue Hills parking. The sidewalk on the southeast corner will also be extended to the Blue Hills parking area/trail entrance. Near handicapped-accessible ramps, accessible pushbuttons, and countdown pedestrian signal indications will be provided. As this design maintains the existing roadway width along Route 28, it is expected that the crossing distances will remain approximately the same across Route 28 but the crossing across Chickatawbut Road will be slightly longer due to the proposed left-turn storage lane.

Per recommendations from the RSA, the pedestrian crossing times have been re-timed to accommodate pedestrian walking at 3.0 feet per second. The crosswalks have also been marking with high visibility striping to increase awareness of the potential presence of pedestrians at the intersection.

Five-foot shoulders which may accommodate bicycle travel are proposed along both sides of Route 28 through the intersection which will eventually taper to match into existing conditions. In addition, six-foot shoulders will be provided on the north side and five-foot shoulder will be provided on the



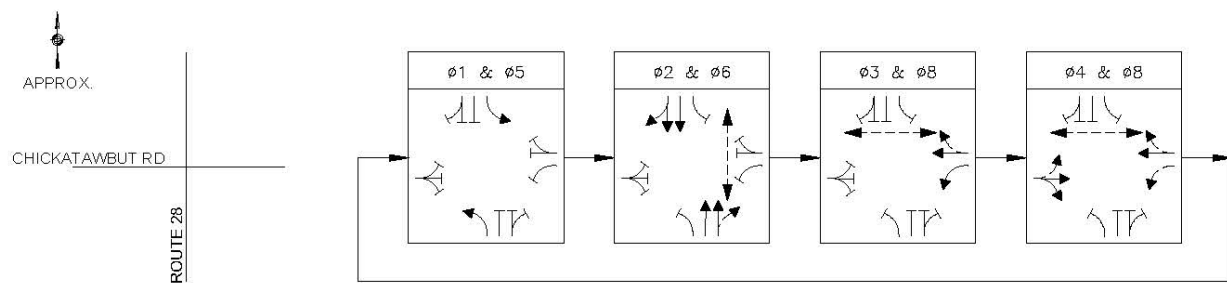
south side of the west leg of Chickatawbut Road which will be able to accommodate bicycle travel prior to matching into existing conditions.

TRAFFIC SIGNAL PHASING

The proposed traffic signal phasing for Alternative 3 at Route 28 and Chickatawbut Road may be seen in **Figure 19**.

The traffic signal phasing for Alternative 3 would be the same as described in Alternative 2. The traffic signal is proposed to have a 100 second cycle length during the morning peak period, a 120-second cycle length during the evening peak period, and an 80-second cycle length during the off-peak periods.

Figure 19. *Alternative 3 Traffic Signal Phasing*



ADDITIONAL INTERSECTION IMPROVEMENTS

Traffic signal clearance intervals have also been reviewed and adjusted to meet current MUTCD and MassDOT standards based on the observed traffic speeds of the roadways and the intersection grades. Adjusting the clearance intervals should help to reduce the number of rear-end collisions occurring at the intersection.

All traffic signal equipment, detection, and traffic signal controller and cabinet will be provided at the intersection. It is assumed that mast-arms will be provided for each approach with overhead LED traffic signal heads equipped with retroreflective backplates for added visibility at night and during periods of solar glare. A flashing yellow arrow indication will be proposed for the Chickatawbut Road westbound protected-permissive left-turn phasing.

The intersection will also be equipped with new and functioning emergency pre-emption. Other short-term recommendations made in the RSA will also be provided such as m the red signal ahead sign on the Route 28 northbound approach and a new warning sign provided on the Route 28



southbound approach. Speed feedback signs will also be installed along Route 28 to help reduce the frequent speeding along the corridor.

New lane use pavement markings and signage will be provided along the intersection approaches and street name signage will be evaluated and provided for the preferred alternative.

SAFETY ANALYSIS OF PROPOSED TREATMENTS

A safety analysis was performed to predict the impact of the proposed treatments for this alternative, similar to what was conducted for Alternatives 1 and 2. The CMFs analyzed for Alternative 3 were found to be the same as under Alternative 2.

However, Alternative 3 will have a wider cross-section which allows the Route 28 southbound approach to continue through the intersection in two lanes and then merge south of the intersection. This will most likely be safer than the vehicles merging ahead of the intersection as there are less decisions for the driver along the receiving lanes than when approaching an intersection which may present an easier driving task. However, the wider cross-section could encourage faster vehicle speeds through the intersection during off-peak periods and create a longer crossing for pedestrians.

In addition, while no CMF is provided, reducing delay and congestion at the intersection will lead to less driver frustration and aggression which would help positively impact safety, as the more frustrated drivers are the more risky and aggressive maneuvers they typically take. As this alternative provides the best operations of the three alternatives and has the same phasing and equipment improvements as the other alternatives, it will most likely have the most safety benefit.

ROUNDAABOUT ALTERNATIVE

In addition to the three signalized intersection alternatives, a roundabout was also analyzed to determine feasibility. For this design, the roundabout would require two circulating lanes to accommodate the two travel lanes along Route 28. Both Chickatawbut Road approaches would remain one-lane in each direction.

TRAFFIC OPERATIONS ANALYSIS

The traffic analysis was conducted for this alternative under future traffic volumes using SIDRA, which is a software package used to analyze roundabout based on the 2010 Highway Capacity Manual (HCM 2010). The LOS and delay (in seconds) are based on geometry and traffic volume. **Table 8**, an excerpt from the HCM, provide LOS criteria for unsignalized intersections. LOS A defines the most favorable condition, with minimum traffic delay. LOS F represents the worst condition, with significant traffic delay.



The Federal Highway Administration (FHWA) recently commissioned a study (TOPR 34) to collect new U.S. roundabout capacity data to update the HCM 2010 models. As requested by MassDOT, the TOPR 34 models were incorporated into the SIDRA software by overriding several default HCM 2010 values. By overriding the default values for critical headway and follow-up headway, the analyses reflect the newly recalibrated HCM model.

Table 8. Level of Service Criteria

Level of Service	Average Stopped Delay (Seconds)
A	0.0-10.0
B	10.1-15.0
C	15.1-25.0
D	25.1-35.0
E	35.1-50.0
F	>50.0

In accordance with MassDOT guidelines, the peak 15 minutes of data collected during the peak hour were isolated to calculate the peak-hour factors (PHFs) for each approach. The percentage of heavy vehicles was noted for each approach as well.

As this analysis was conducted for a condition which does not currently exist, there was no way to calibrate the SIDRA analysis against observed field conditions. A summary of the future roundabout traffic operations is presented under the Future Alternatives Comparison.

Future roundabout traffic operations are expected to provide the best traffic operations during the evening and Saturday peak hours, with worse operations than the signalized intersection alternatives during the morning peak hour.

SIDRA reports are provided in **Appendix G**.

HORIZONTAL GEOMETRY

It is anticipated that the horizontal geometry of the roundabout would fit within the existing ROW provided for the intersection. However, roadway alignments would need to be shifted to provide the necessary approach deflection when entering the roundabout. Land use would also be altered within the parkland as a larger impervious intersection footprint would be required to accommodate the two-lane roundabout.



VERTICAL GEOMETRY AND CONSTRUCTABILITY

The Route 28 at Chickatawbut Road intersection approach grades will present a challenge when designing and constructing the roundabout. For the alternative it was assumed the center of the roundabout could not exceed a four percent slope and the approaches could not exceed five percent. It was also developed so that the crown of the roadway would slope away from the center island.

Based on vertical curve requirements, to construct the roundabout, the existing roadway would need to be cut approximately 5-feet for the Route 28 south leg, which will likely require walls along both sides of the roadway due to the slope of the outside edges. The north leg of Route 28 would need to be filled to help improve the approach grading.

Underground utilities will also need to be relocated through the intersection due to the significant cut. The construction of the roundabout would likely require a staged construction to perform the grading and utility relocation along one half of the roadway, and then another stage to construct the remaining half of the roadway. This would likely restrict travel to one lane in each direction through construction which is anticipated to cause significant impacts to traffic operations along the corridor.

The vertical profile design of the roundabout alternative is shown in **Figure 20**.

PEDESTRIAN AND BICYCLE ACCOMMODATIONS

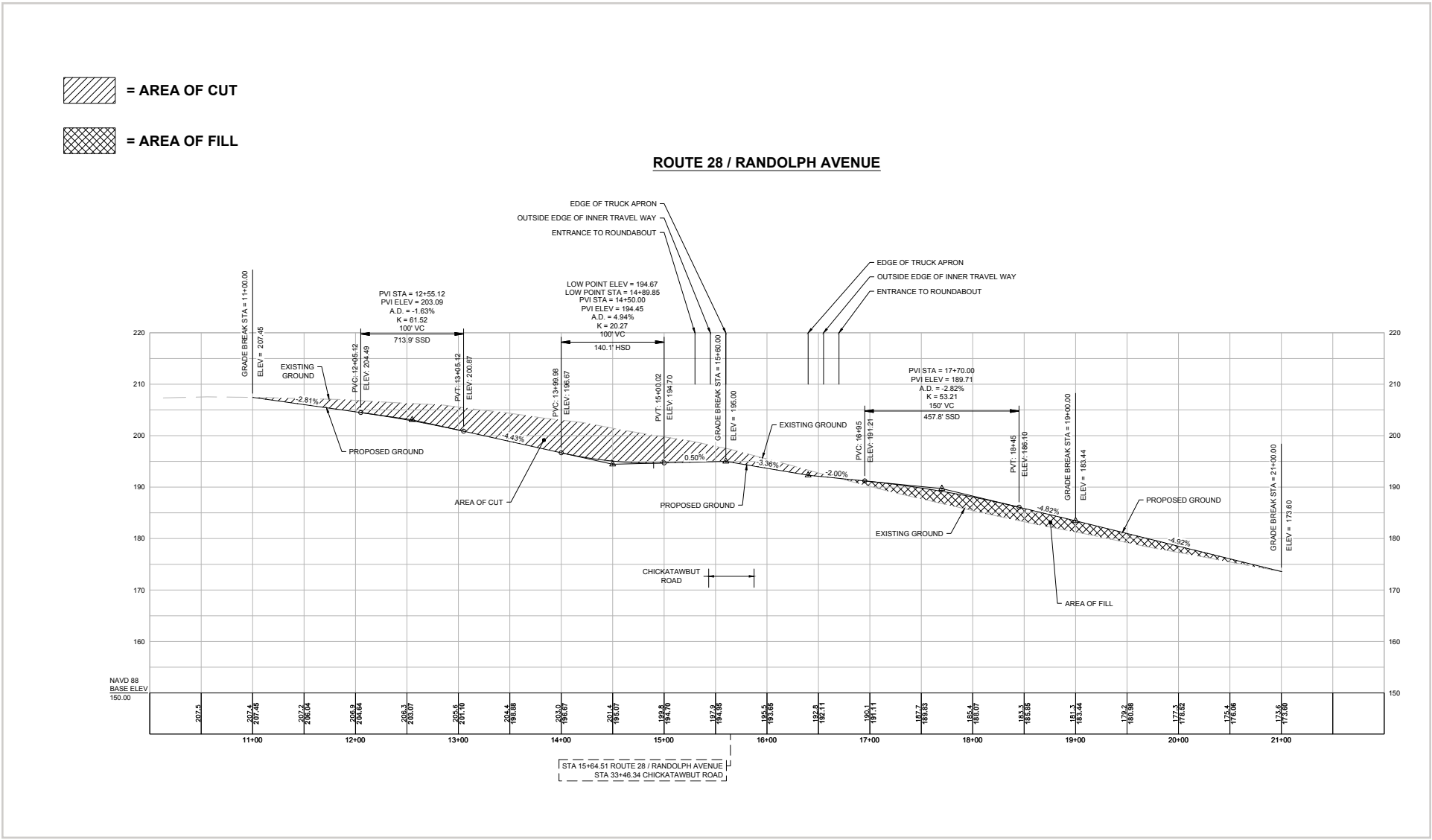
Currently, crosswalks are provided across all legs of the intersection. If a roundabout option is advanced these same amenities would be provided along with off road bicycle facilities since the roundabout would have two circulating travel lanes.

SAFETY ANALYSIS OF PROPOSED TREATMENTS

While a roundabout is expected to be costly and difficult to construct, the conversion from a signalized intersection to a roundabout would increase the safety at the intersection. While the research for the impact to overall crashes when converting to a roundabout seems to be mixed, according to Table 14-3 of the HSM 2010, converting an urban signalized intersection into a modern roundabout would reduce the injury crashes experiences by approximately 50-70% (CMF of 0.40 with standard deviation of 0.1 for injury crashes). Reduced vehicle speeds and conflict points contribute to the reduction in crashes and severity experienced. In addition, roundabouts help to reduce left-turning conflicts, which are the most common crash currently experienced at the intersection.



Figure 20. *Roundabout Alternative Analysis*





Future Alternatives Comparison

All alternatives considered provide valuable safety and operational improvements over the No Build Condition. However, each alternative provides varying levels of improvements, impacts, and cost. Comparisons of traffic operations for the alternatives during a.m., p.m., and Saturday peak hours are shown in **Table 9**, **Table 10**, and **Table 11**.

Alternative 1 provides the least improvements to safety and traffic of the alternatives. However, since the alternative is staying within the existing intersection footprint, it will also have the lowest cost and impacts associated with it.

The Alternative 2 traffic operations perform similar to Alternative 1 during the morning and Saturday peak hours. During the evening peak hour, the Chickatawbut Road eastbound approach is expected to worsen due to time being taken away to provide the leading protected westbound left-turn. However, providing the leading protected left-turn phase on the Chickatawbut Road westbound approach should improve safety and operations for that approach. Adding the left-turn lane on Chickatawbut Road also introduces parkland impacts.

Alternative 3 provides the highest levels of safety and operational improvements of the three signalized alternatives as it eliminates left-turning conflicts along Route 28 and is still able to provide two through lanes along Route 28. The wider shoulders proposed will allow bicycles to travel within the shoulder width however it can also encourage higher vehicle speeds, which is already an issue along Route 28. Alternative 3 provides the highest impacts to ROW/land-use and cost for the three signalized alternatives.

The roundabout alternative is expected to provide better traffic operations at the intersection than the signalized alternatives and would provide significant safety improvements by reducing left-turn conflicts and the severity of crashes. The right-of-way impacts for a roundabout will most likely be less than those shown under Alternative 3. However, it will also be the most costly and difficult to construct, with large impacts to operations likely during the staged construction. It should also be noted that the roundabout was not able to be calibrated to field conditions the way the traffic signal analysis was.

As the improvements are being limited to the intersection of Route 28 at Chickatawbut Road, exceptions to the Healthy Transportation Engineering Directive will be needed since sidewalks are not provided along the south leg of Route 28 or the west leg of Chickatawbut Road. In addition, all alternatives considered apart from Alternative 3, will not provide five-foot shoulders for bicycles as



they are meant to stay within the existing roadway footprint which currently has narrow shoulders at the intersection.



Table 9. Future Alternatives Comparison Summary, Weekday a.m. Peak Hour

Intersection/Movement	LOS	Delay (Seconds)	V/C Ratio	50% Queue (ft)	95% Queue (ft)
Alternative 1					
Route 28/Chickatawbut Rd	D	36.0	-	-	-
Chickatawbut EB left/thru/right	C	34.6	0.71	115	196
Chickatawbut WB left/thru/right	D	46.2	0.87	201	#332
Route 28 NB left	D	54.2	0.83	115	#238
Route 28 NB thru | thru/right	C	27.7	0.88	371	#564
Route 28 SB left	D	40.8	0.50	35	79
Route 28 SB thru/right	D	41.3	0.92	344	#606
Alternative 2					
Route 28/Chickatawbut Rd	D	40.7	-	-	-
Chickatawbut EB left/thru/right	D	51.0	0.82	120	#250
Chickatawbut WB left	C	24.6	0.08	9	25
Chickatawbut WB thru/right	C	33.5	0.72	196	291
Route 28 NB left	D	54.9	0.82	115	#251
Route 28 NB thru | thru/right	C	31.9	0.90	362	#678
Route 28 SB left	D	48.8	0.57	36	90
Route 28 SB thru/right	D	54.4	0.96	345	#758
Alternative 3					
Route 28/Chickatawbut Rd	D	35.2	-	-	-
Chickatawbut EB left/thru/right	D	45.2	0.79	115	#248
Chickatawbut WB left	C	23.2	0.08	9	24
Chickatawbut WB thru/right	C	31.4	0.71	189	285
Route 28 NB left	D	54.3	0.82	113	#269
Route 28 NB thru | thru/right	C	32.9	0.91	350	#641
Route 28 SB left	D	47.9	0.59	35	87
Route 28 SB thru | thru/right	C	31.1	0.79	158	#311
Roundabout Alternative					
Route 28/Chickatawbut Rd	D	25.8	-	-	-
Chickatawbut EB approach	A	8.3	0.31	13	31
Chickatawbut WB approach	F	110.3	1.10	198	493
Route 28 NB approach	B	14.7	0.72	82	205
Route 28 SB approach	A	9.6	0.50	32	80

= 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after 2 cycles.



Table 10. Future Alternatives Comparison Summary, Weekday p.m. Peak Hour

Intersection/Movement	LOS	Delay (Seconds)	V/C Ratio	50% Queue (ft)	95% Queue (ft)
Alternative 1					
Route 28/Chickatawbut Rd	F	165.4	-	-	-
Chickatawbut EB left/thru/right	F	91.1	1.02	~349	#549
Chickatawbut WB left/thru/right	F	294.5	1.52	~410	#604
Route 28 NB left	E	59.6	0.40	20	51
Route 28 NB thru | thru/right	F	128.1	1.20	~751	#901
Route 28 SB left	E	63.0	0.61	53	101
Route 28 SB thru/right	F	231.9	1.43	~781	#1019
Alternative 2					
Route 28/Chickatawbut Rd	F	170.5	-	-	-
Chickatawbut EB left/thru/right	F	247.2	1.40	~439	#639
Chickatawbut WB left	E	63.9	0.86	97	#184
Chickatawbut WB thru/right	C	31.8	0.37	125	195
Route 28 NB left	E	59.3	0.39	20	51
Route 28 NB thru | thru/right	F	146.1	1.24	~769	#911
Route 28 SB left	E	69.7	0.67	53	103
Route 28 SB thru/right	F	254.8	1.48	~795	#1036
Alternative 3					
Route 28/Chickatawbut Rd	F	117.5	-	-	-
Chickatawbut EB left/thru/right	F	201.4	1.30	~420	#620
Chickatawbut WB left	D	48.9	0.78	94	#182
Chickatawbut WB thru/right	C	30.3	0.35	121	190
Route 28 NB left	E	59.3	0.39	20	51
Route 28 NB thru | thru/right	F	158.2	1.26	~778	#920
Route 28 SB left	E	74.4	0.70	53	103
Route 28 SB thru | thru/right	C	32.6	0.82	257	#381
Roundabout Alternative					
Route 28/Chickatawbut Rd	C	19.8	-	-	-
Chickatawbut EB approach	C	19.7	0.67	42	105
Chickatawbut WB approach	F	64.3	0.94	92	229
Route 28 NB approach	B	14.9	0.72	80	198
Route 28 SB approach	A	8.2	0.48	30	73

~ = Volume exceeds capacity, queue is theoretically infinite.

= 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after 2 cycles.



Table 11. Future Alternatives Comparison Summary, Saturday Peak Hour

Intersection/Movement	LOS	Delay (Seconds)	V/C Ratio	50% Queue (ft)	95% Queue (ft)
Alternative 1					
Route 28/Chickatawbut Rd	C	22.8	-	-	-
Chickatawbut EB left/thru/right	C	20.3	0.38	62	112
Chickatawbut WB left/thru/right	C	28.0	0.73	128	212
Route 28 NB left	C	31.1	0.42	19	52
Route 28 NB thru | thru/right	B	18.8	0.65	155	248
Route 28 SB left	C	34.6	0.60	42	96
Route 28 SB thru/right	C	23.7	0.82	248	#510
Alternative 2					
Route 28/Chickatawbut Rd	C	24.4	-	-	-
Chickatawbut EB left/thru/right	C	28.9	0.58	77	141
Chickatawbut WB left	B	19.5	0.19	20	45
Chickatawbut WB thru/right	C	21.9	0.53	104	176
Route 28 NB left	C	33.7	0.44	21	52
Route 28 NB thru | thru/right	C	21.8	0.68	184	264
Route 28 SB left	C	34.2	0.56	46	92
Route 28 SB thru/right	C	25.9	0.83	288	#517
Alternative 3					
Route 28/Chickatawbut Rd	C	19.6	-	-	-
Chickatawbut EB left/thru/right	C	27.1	0.55	72	131
Chickatawbut WB left	B	18.5	0.19	19	43
Chickatawbut WB thru/right	C	20.3	0.47	87	148
Route 28 NB left	D	36.7	0.55	20	53
Route 28 NB thru | thru/right	C	21.3	0.68	177	#276
Route 28 SB left	D	37.9	0.62	43	95
Route 28 SB thru | thru/right	B	15.9	0.45	117	186
Roundabout Alternative					
Route 28/Chickatawbut Rd	A	7.8	-	-	-
Chickatawbut EB approach	A	7.4	0.23	9	21
Chickatawbut WB approach	B	11.5	0.44	21	53
Route 28 NB approach	A	7.4	0.40	24	59
Route 28 SB approach	A	6.9	0.41	24	60

= 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after 2 cycles.



Under Alternative 1, the intersection is expected to operate at an overall LOS D during the morning peak hour, LOS F during the evening peak hour, and LOS C during the Saturday peak hour. During the morning and Saturday peak hour, all approaches are expected to operate at LOS D or better. During the evening peak hour, while the overall intersection is expected to remain operating at LOS F, the delay is expected to decrease. The Chickatawbut Road westbound approach is expected to continue to operate at LOS F, but the delay is expected to decrease. While the Route 28 southbound left-turn is expected to improve from LOS F to LOS E, the Route 28 southbound through and right-turn movements are expected to experience increased delay with the reduction in through lanes.

Under Alternative 2, the intersection is expected to operate at an overall LOS D during the morning peak hour, LOS F during the evening peak hour, and LOS C during the Saturday peak hour. During the morning and Saturday peak hours, all approaches are expected to operate at LOS D or better. During the evening peak hour, while the overall intersection is expected to remain operating at LOS F, the overall intersection delay is expected to decrease. While the Chickatawbut Road eastbound approach is expected to experience increased delay, the westbound approach is expected to improve from LOS F to LOS E for the left-turn and LOS C for the through and right-turn movements. While the Route 28 southbound left-turn is expected to improve from LOS F to LOS E, the Route 28 southbound through and right-turn movements are expected to experience increased delay with the reduction in through lanes.

Under Alternative 3, the intersection is expected to operate at an overall LOS D during the morning peak hour, LOS F during the evening peak hour, and LOS C during the Saturday peak hour. During the morning and Saturday peak hours, all approaches are expected to operate at LOS D or better. During the evening peak hour, the delay for all approaches is expected to improve apart from the Chickatawbut Road eastbound approach which is expected to worsen in delay due heavier traffic movements requiring more time within the signal cycle.



Conclusion

The intersection of Route 28 at Chickatawbut Road currently experiences significant congestion during peak hours and has a higher than average history of crashes at the intersection. The improvements presented in this report are aimed at improving operations and safety at the intersection. Four alternatives were analyzed for traffic operations, safety, and impacts. Based on the alternatives analysis performed, Alternative 3 and the roundabout provide the highest levels of traffic and safety improvements for the intersection.

Alternative 3 is recommended over the roundabout as the cost and constructability of the roundabout will present challenges for the project moving forward. Should MassDOT wish to further pursue the roundabout alternative, further discussion and design will be necessary.



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