



**TRAFFIC IMPACT STUDY  
PROPOSED COUNTRY STORE  
& FUEL STATION**

166 Commonwealth Avenue  
Concord, MA

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## Introduction

Bowman has completed a Traffic Impact Study (TIS) for the proposed country store and fuel station (herein referred to as the Project) to be located at 166 Commonwealth Avenue in Concord, Massachusetts, shown in Figure 1. This TIS is based on the Site Plan prepared by Bohler, dated November 6, 2025 for a proposed 2,162 square foot (sf) country store and two gasoline pumps (four fueling stations).

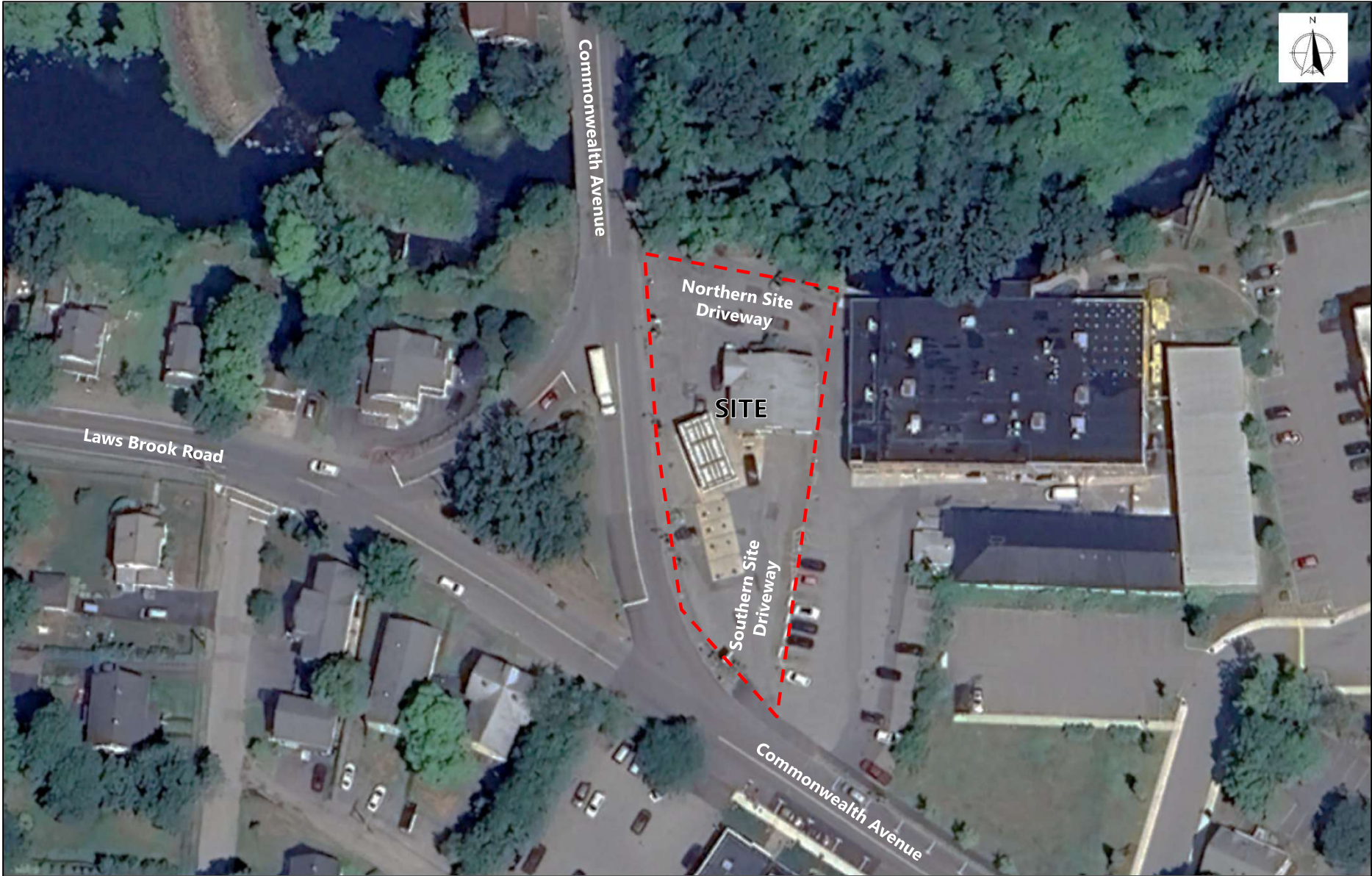
The TIS is based on a review of existing traffic volumes, recent crash data, and the anticipated traffic generating characteristics of the Project. The study examines existing and projected traffic operations (both with and without the Project) at key intersections in the vicinity of the Project site. This TIS contains a detailed analysis of traffic operations during the weekday morning and weekday afternoon peak hours, when the combination of adjacent roadway volumes and Project-related trips is expected to be the greatest.

Based on the analysis presented in this study, the Project is not expected to have a noticeable impact on the safety and operations of the surrounding roadway network. The findings of this study are documented below.

## Project Description

The existing site consists of two gasoline pumps (four fueling stations) and an approximately 2,200 sf auto body shop with four garage bays. During a site visit, the auto body shop was operating but the gasoline pumps were observed to be out of service. The site is currently accessed via two full-access curb cuts, one located on the north side of the site intersecting Commonwealth Avenue from the east (herein referred to as Northern Site Driveway) and one located on the south side of the site intersecting Commonwealth Avenue from the north (herein referred to as Southern Site Driveway). The curb cuts for both existing site driveways are shared with the adjacent office and commercial building located at 152 Commonwealth Avenue. Primary access for the adjacent 152 Commonwealth Avenue is provided via the curb cut located at the Southern Site Driveway, while the Northern Site Driveway operates as a secondary access for the adjacent building but is primarily utilized by vehicles accessing the Project site. Although the curb cut for the Southern Site Driveway is shared with 152 Commonwealth Avenue, it was observed to operate as two separate driveways. The Project site is bounded by Nashoba Brook to the north, Commonwealth Avenue to the south and west, and commercial properties to the east.

The Project would include the demolition of the existing auto body shop, and the construction of a new 2,162 sf country store with two gasoline pumps (four fueling stations). The proposed building would be located in the same area as the current building, and the gasoline pumps would be shifted slightly north to improve internal circulation. Access to the Project site would continue to be provided via the two existing full-access driveways. Shared access with the adjacent 152 Commonwealth Avenue via the Northern Site Driveway would be closed. The Southern Site Driveway would be modified as part of the Project to provide a 20-foot wide driveway to accommodate turning movements in and out of the Project site and provide a planting strip for improved separation between the access for the Project and the adjacent building at 152 Commonwealth Avenue. As part of the Project, 11 parking spaces would be constructed, including one accessible space adjacent to the country store and two electric vehicle charging spaces. A crosswalk would be provided to connect the site to the existing sidewalk network on Laws Brook Road along Kenny Dunn Square.



**Bowman**

Figure 1  
Site Location Map  
Proposed Country Store & Fuel Station  
Concord, MA

## Study Methodology

This traffic impact study evaluates existing and projected traffic operations within the study area for the weekday morning and weekday afternoon peak hour traffic conditions, when the combination of the adjacent roadway volumes and estimated additional Project trips would be expected to be the greatest.

The study was conducted in three steps. The first step consisted of an inventory of existing traffic conditions within the Project study area. As part of this inventory, manual turning movement counts (TMCs) were conducted at the existing study area intersections during the weekday morning and weekday afternoon peak periods. A field visit was also completed to document intersection and roadway geometries. Crash data at the study area intersections was obtained from MassDOT to determine if there are existing traffic safety deficiencies at the study area intersections.

The second step of the study builds on the data collected in the first step to establish the basis for evaluating potential transportation impacts associated with the projected future conditions. During the second step, the projected traffic demands associated with any planned future developments that could influence traffic volumes at the study area intersections were assessed. Consistent with MassDOT traffic study guidelines, 2025 Existing traffic volumes were forecasted to the future year 2032 to establish 2032 No Build (without Project) conditions and 2032 Build (with Project) conditions.

The third step of this study determined if measures were necessary to improve existing or future traffic operations and safety, minimize potential traffic impacts, and provide safe and efficient access to the Project site.

## Study Area Intersections

The following study area intersections were identified for analysis:

- Commonwealth Avenue at Northern Site Driveway (Kenny Dunn Square North Intersection)
- Commonwealth Avenue at Laws Brook Road (Kenny Dunn Square East Intersection)
- Commonwealth Avenue at Southern Site Driveway/Parking Lot
- Commonwealth Avenue at Laws Brook Road (Kenny Dunn Square West Intersection)

The traffic impact study documents existing and future traffic conditions for the study area intersections noted above.

## Existing Conditions

The existing conditions assessment included in this study consists of an inventory of intersection and roadway geometries, an inventory of traffic control devices, the collection of peak period traffic volumes, and a review of recent crash data. The existing conditions in the vicinity of the Project site are summarized below.

### Roadway Network

#### Commonwealth Avenue

Commonwealth Avenue generally runs in a north-south direction north of the Project site and shifts to an east-west direction south of the Project site between Laws Brook Road and Main Street (Route 62). Commonwealth Avenue is classified as an urban major collector under Town of Concord jurisdiction and generally provides access to residential and commercial land uses. Commonwealth Avenue is generally a two-lane roadway, consisting of approximately 12-foot-wide lanes with no marked shoulders. On-street parking is provided on both sides of the roadway between Laws Brook Road and Main Street (Route 62). The posted speed limit on Commonwealth Avenue is 30 miles per hour (mph) north of the Project site and 25 mph south of the Project site.

#### Laws Brook Road

Laws Brook Road generally extends in an east-west direction through Concord and is classified as an urban major collector under the Town of Concord jurisdiction. Laws Brook Road provides access to residential land uses and provides one approximately 12-foot-wide travel lane in each direction with approximately 2-foot-wide marked shoulders on both sides. Laws Brook Road has a posted speed limit of 20 mph in the vicinity of the study area.

### Unsignalized Intersections

The Kenneth Dunn Memorial Park (Kenny Dunn Square) is located to the west of the Project site. The roadway network circulated around Kenny Dunn Square to create three unsignalized intersections. A description of the unsignalized study area intersections is provided below.

#### Commonwealth Avenue at Northern Site Driveway (Kenny Dunn Square North intersection)

The unsignalized intersection of Commonwealth Avenue at Northern Site Driveway (Kenny Dunn Square North Intersection) consists of Commonwealth Avenue forming the north, south and west legs and the Northern Site Driveway forming the east leg. All approaches to the intersection consist of a single multipurpose lane. The Commonwealth Avenue eastbound approach and Northern Site Driveway westbound approach operate under STOP-control.

#### Commonwealth Avenue at Laws Brook Road (Kenny Dunn Square West Intersection)

The unsignalized intersection of Commonwealth Avenue at Laws Brook Road (Kenny Dunn Square West Intersection) consists of Commonwealth Avenue forming the north leg and Laws Brook Road forming the east and west legs. All approaches to the intersection consist of a single multipurpose lane. The Commonwealth Avenue southbound approach operates under STOP-control.

## **Commonwealth Avenue at Laws Brook Road (Kenny Dunn Square East Intersection)**

The unsignalized intersection of Commonwealth Avenue at Laws Brook Road (Kenny Dunn Square East Intersection) consists of Commonwealth Avenue forming the north and east legs and Laws Brook Road forming the west leg. All approaches to the intersection consist of a single multipurpose lane. The Commonwealth Avenue southbound approach operates under STOP-control.

## **Area Transit Services**

Public transportation in Concord is provided by the Massachusetts Bay Transportation Authority (MBTA). The MBTA commuter rail Fitchburg Line provides service between Wachusett and North Station in Boston. The West Concord commuter rail station is located approximately 0.2 miles west of the Project site off of Commonwealth Avenue.

## **Pedestrian & Bicycle Facilities**

Sidewalks are provided on both sides of Commonwealth Avenue with the exception of the west side of Commonwealth Avenue at Kenny Dunn Square. Sidewalks are provided on both sides of Laws Brook Road. Bike facilities are not provided within the study area.

## **Existing Traffic Volumes**

To assess peak hour traffic conditions, turning movement counts (TMCs) were conducted at the study area intersections during the weekday morning and weekday afternoon peak periods.

## **Turning Movement Count Data**

TMCs were conducted at the study area intersections during the weekday morning and weekday afternoon peak periods. TMCs were conducted on Tuesday, April 8, 2025 from 7:00 AM to 9:00 AM and from 4:00 PM to 6:00 PM. The results of the TMCs are tabulated by 15-minute periods and are provided in Appendix A. The four highest consecutive 15-minute intervals during each of these count periods constitute the peak hours that are the basis of the traffic analysis provided in this report. Based on a review of the peak period traffic data, the weekday morning peak hour occurs between 8:00 AM and 9:00 AM and the weekday afternoon peak hour occurs between 4:00 PM and 5:00 PM.

## **Seasonal Variation**

Based on MassDOT's 2023 Weekday Seasonal Factors, April traffic volumes are higher than during an average month. This is consistent with traffic count data available at the nearby MassDOT continuous count station on Route 2 in Concord (Station ID 403), approximately one mile north of the Project site. Therefore, to provide a conservative analysis, the counted volumes were not seasonally adjusted downward to reflect an average month. The MassDOT weekday seasonal factors are provided in Appendix B.

The resulting 2025 Existing weekday morning and weekday afternoon peak hour traffic volumes are presented in the traffic projection model provided in Appendix C and are presented in Figure 2 and Figure 3, respectively.

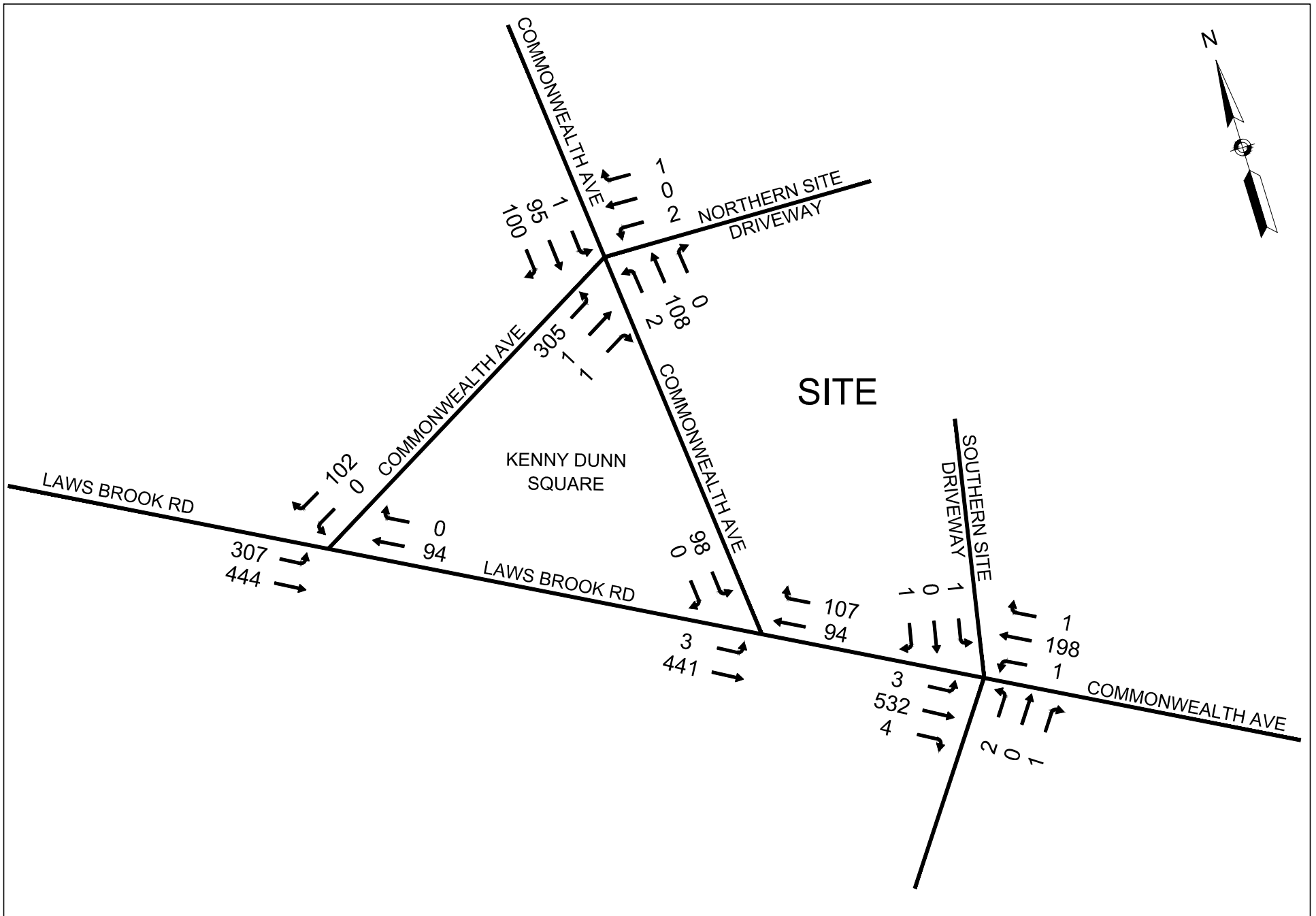


FIGURE 2  
2025 EXISTING TRAFFIC VOLUMES  
WEEKDAY MORNING PEAK HOUR

PROPOSED COUNTRY STORE & FUEL STATION  
CONCORD, MA



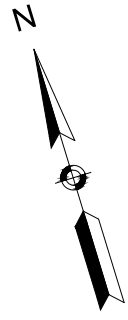
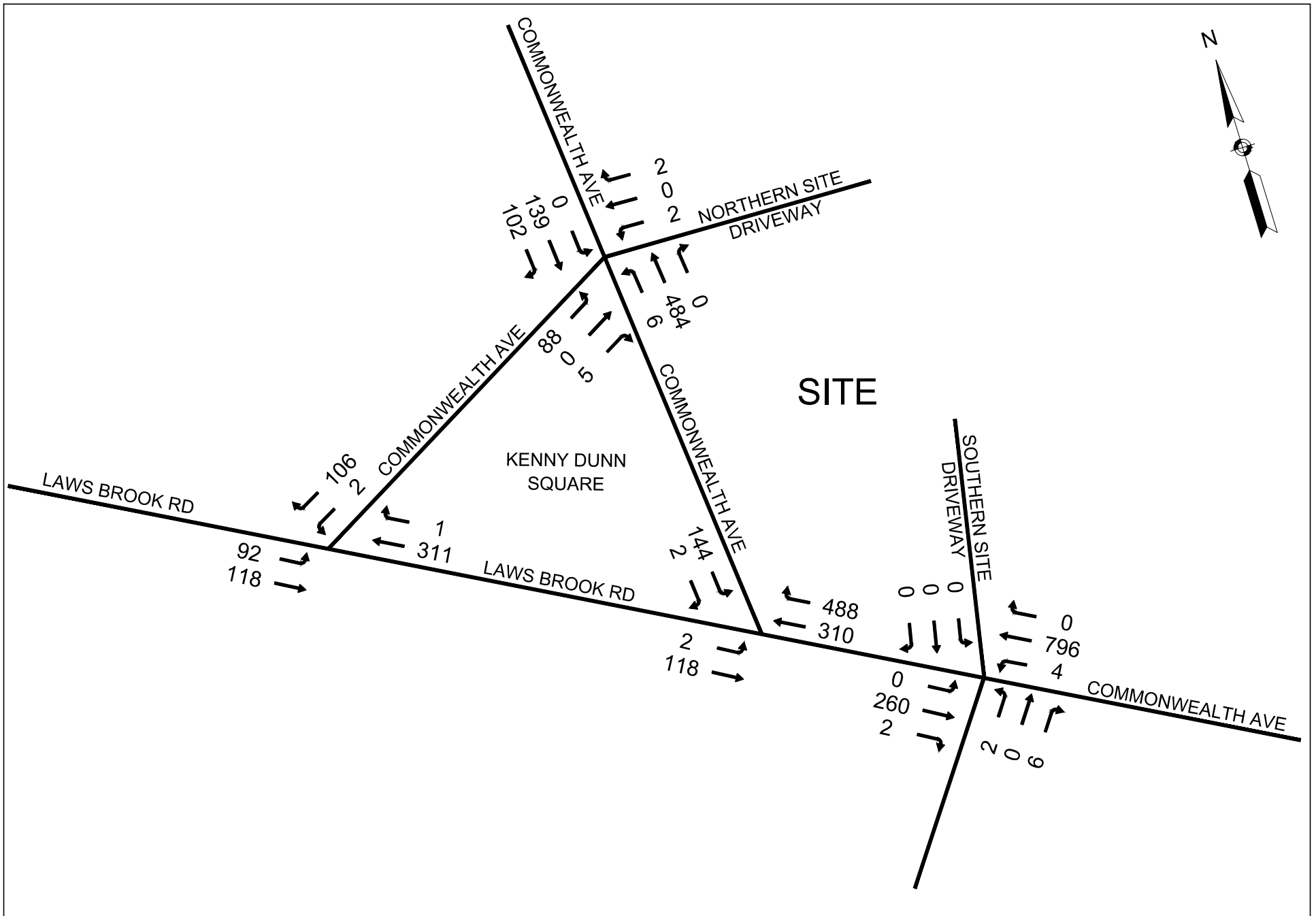


FIGURE 3  
2025 EXISTING TRAFFIC VOLUMES  
WEEKDAY AFTERNOON PEAK HOUR

PROPOSED COUNTRY STORE & FUEL STATION  
CONCORD, MA



## Crash Summary

Crash data at the study area intersections was obtained from MassDOT for the most recent five-year period available. This data includes complete yearly crash summaries for the years 2018 through 2022. A detailed summary of the crash data is provided in Appendix D.

The MassDOT Crash Rate Worksheet calculations were used to determine whether the crash frequencies at the study area intersections were unusually high given the travel demands at each location. The MassDOT Crash Rate Worksheet calculates a crash rate expressed in crashes per million entering vehicles (MEV). The calculated rate is then compared to the average rate for signalized and unsignalized intersections statewide and within MassDOT District 4. For unsignalized intersections, the statewide and the MassDOT District 4 average crash rates are both 0.57 crashes per MEV.

The unsignalized intersection of Commonwealth Avenue at Laws Brook Road (Kenny Dunn Square West Intersection) is reported to have experienced a total of four crashes during the five-year period analyzed, resulting in a crash rate of 0.31 crashes per MEV, which is lower than the statewide and District 4 crash rates for unsignalized intersections. Of the four reported crashes at the intersection, one crash was a rear-end collision, one crash was a sideswipe collision, and two crashes were single vehicle collisions. One of the four crashes resulted in personal injury and the remaining three crashes resulted in property damage only.

The unsignalized intersection of Commonwealth Avenue at Laws Brook Road (Kenny Dunn Square East Intersection) is reported to have experienced a total of three crashes during the five-year period analyzed, resulting in a crash rate of 0.14 crashes per MEV, which is lower than the statewide and District 4 crash rates for unsignalized intersections. Of the three reported crashes at the intersection, one crash was a rear-end collision, one crash was a sideswipe collision, and one crash was a head-on collision. One of the three crashes resulted in personal injury and the remaining two crashes resulted in property damage only.

No crashes were reported at the unsignalized intersections of Commonwealth Avenue at Northern Site Driveway (Kenny Dunn Square North Intersection) and Commonwealth Avenue at Southern Site Driveway/Parking Lot during the five-year period analyzed.

None of the study area intersections have been identified as high crash locations under the Highway Safety Improvement Plan (HSIP). Based on a review of the crash data, the existing study area intersections are not considered to have existing safety deficiencies.

## Future Conditions

To determine future traffic demands on the study area roadways and intersections, the 2025 Existing traffic volumes were projected to the future-year 2032, in accordance with MassDOT guidelines. Traffic volumes on the study area roadways in 2032 are considered to include existing traffic, as well as new traffic resulting from general growth in the study area and from other planned development projects, independent of the Project. The potential background traffic growth, unrelated to the Project, was considered in the development of the 2032 No Build (without Project) peak hour traffic volumes. The estimated traffic increases associated with the Project were then added to the 2032 No Build volumes to reflect the 2032 Build (with Project) traffic conditions. A more detailed description of the development of the 2032 No Build and 2032 Build traffic volume networks is presented below.

### Planned Roadway Improvements

Planned roadway improvement projects can impact travel patterns and future traffic operations. The Town of Concord was consulted, and the MassDOT Project Portal was reviewed to identify improvement projects in the vicinity of the site. There are two current intersection improvement projects in the vicinity of the project site, including improvements to the Route 2/Route 2A rotary (MassDOT Project # 602091) located approximately one mile north of the Project site, and improvements to the signalized intersection of Main Street (Route 62) at Baker Ave/Olde Bridge Road/Cottage Street, located approximately 0.5 miles east of the Project site. Both projects are in the design phase and would not be anticipated to impact future travel patterns within the study area.

A Complete Streets project on Commonwealth Avenue was recently completed which included improvements to sidewalks and crosswalks along Commonwealth Avenue between the Project site and Main Street (Route 62). Construction for this project was completed in Fall 2024. Improvements completed as part of this project are captured in the existing conditions descriptions.

### Background Traffic Growth

Traffic growth is generally a function of changes in motor vehicle use and expected land development within the area. To establish the rate at which traffic on the study area roadways can be expected to grow during the seven-year forecast period (2025 to 2032), both historical traffic growth and planned area developments were reviewed.

### Historical Traffic Growth

Background traffic growth accounts for changes in traffic volumes associated with general changes in population and other developments that are not known at this time. An annual background traffic growth rate of less than 0.5 percent per year was determined based on coordination with Central Transportation Planning Staff (CTPS) at the Boston Region Metropolitan Planning Organization. To present a more conservative analysis and account for small developments and developments that have not yet been identified, a 1.0 percent per year background growth rate, compounded annually, was selected for this study. The 1.0 percent per year growth rate was used to grow the 2025 traffic volumes to 2032 future year conditions.

## Site-Specific Growth

The Town of Concord Planning Department was contacted to inquire about additional developments in the area that would be anticipated to impact future traffic volumes on the study area roadways. The Town of Concord mentioned five projects for consideration. These projects are outlined below.

- 292-294 Baker Avenue – This project consists of a 201-unit multifamily residential development located approximately 0.5 mile from the Project site. Trips for this project were added to the study area based on the Revised Traffic Impact Assessment prepared by VHB, dated January 2, 2024.
- 1422 Main Street – This project consists of 18 single family houses located approximately 0.5 miles from the Project site. Trips for this project were added to the study area based on Land Use Code (LUC) 210 (Single-Family Detached Housing) within the Institute of Transportation Engineers' (ITE) publication, *Trip Generation Manual, 11<sup>th</sup> Edition*.
- 1053 Main Street – This project consists of four single family houses located approximately 0.5 miles from the Project site. Trips for this project would be considered to be included within the 1.0 percent background growth rate.
- 768 Elm Street – This project consists of a mixed-use development located approximately 1.5 miles from the Project site. The mixed-use development is proposed to include a 2,400-sf coffee shop, a 2,400-sf restaurant, a 5,200-sf walk-in bank, and a 5,000-sf restaurant. Based on the Traffic Impact and Access Study prepared by Bayside Engineering, dated July 28, 2023 and the Traffic Memorandum prepared by Bayside Engineering, dated November 29, 2023, trips associated with this development are not anticipated to travel through the study area intersections. Therefore, trips associated with this project were not included in the background development.
- 275 Forest Ridge Road – This project consists of a 237-unit multifamily residential development located approximately three miles from the Project site. Based on the Traffic Impact and Access Study prepared by MDM Transportation Consultants, Inc, dated October 2024, trips associated with this development are not anticipated to travel through the study area intersections. Therefore, trips associated with this project were not included in the background development.

## 2032 No Build Traffic Volumes

The 2025 Existing peak hour traffic volumes were grown by 1.0 percent per year, compounded annually, over the seven-year study horizon and the background projects were added to establish the 2032 No Build volumes. The resulting 2032 No Build weekday morning and weekday afternoon peak hour traffic volumes are documented in the traffic projection model presented in Appendix C and illustrated in Figure 4 and Figure 5, respectively.

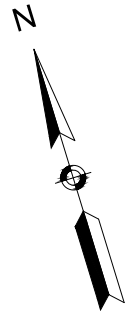
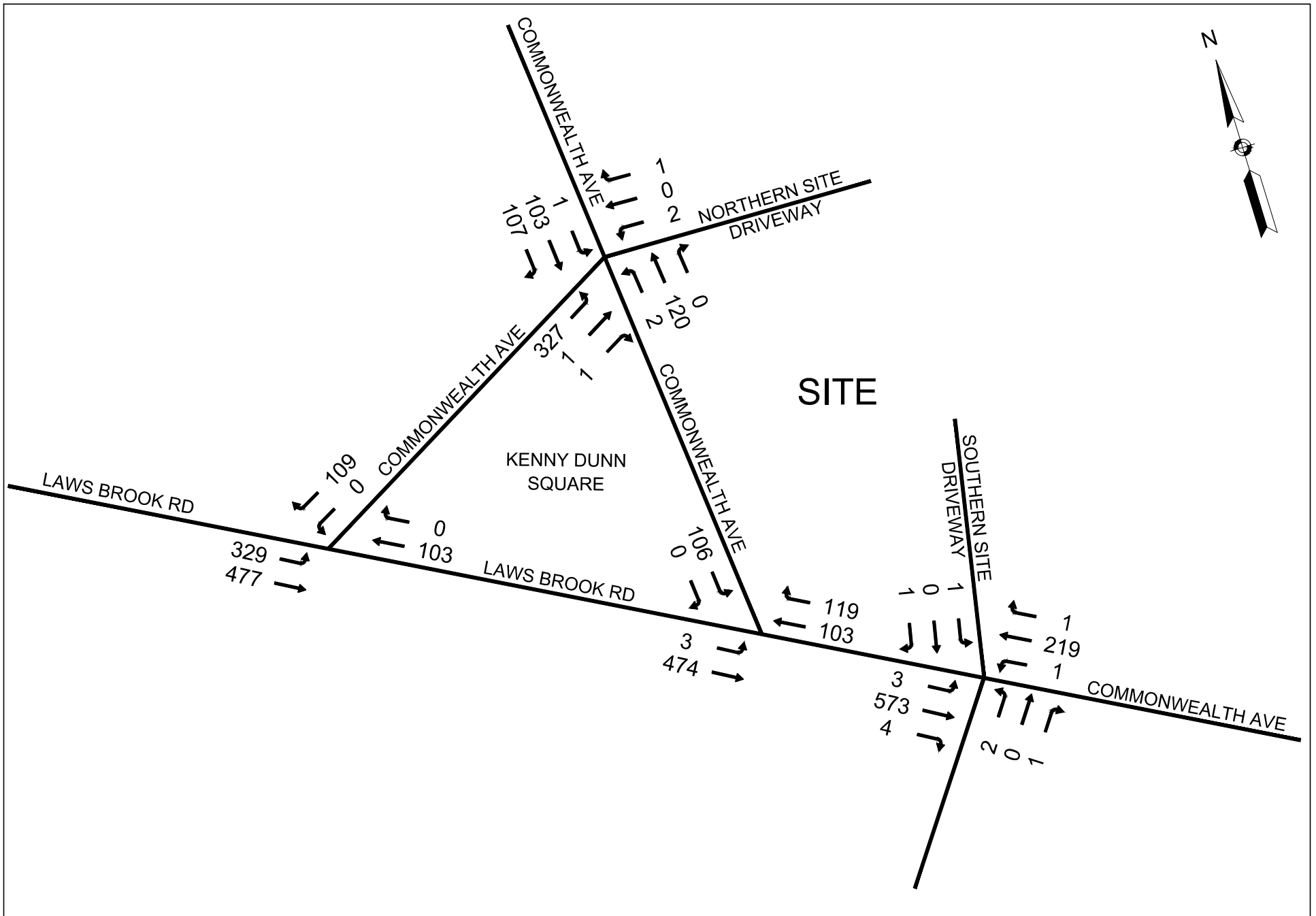


FIGURE 4  
2032 NO BUILD TRAFFIC VOLUMES  
WEEKDAY MORNING PEAK HOUR

PROPOSED COUNTRY STORE & FUEL STATION  
CONCORD, MA



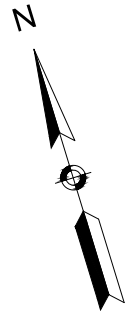
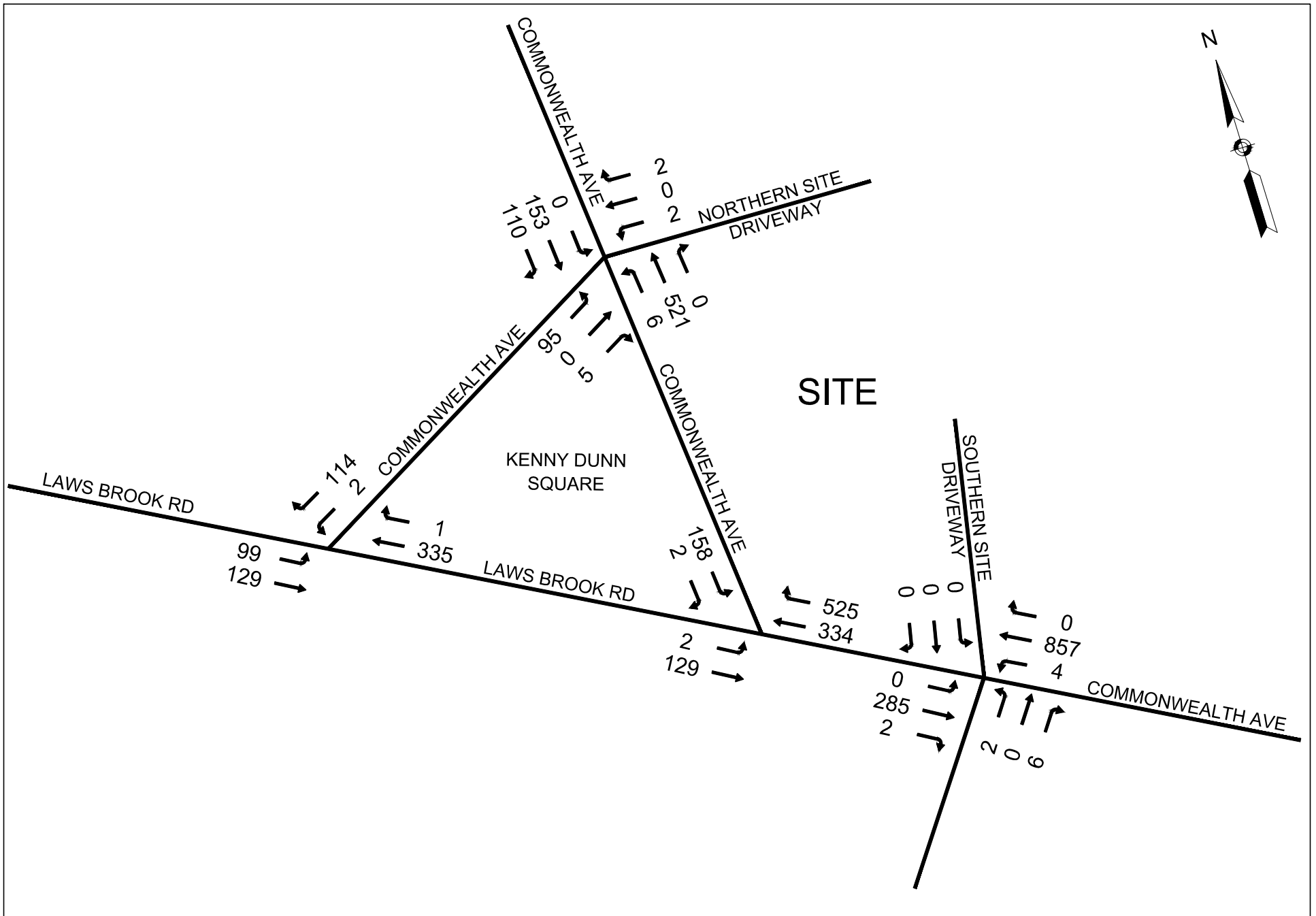


FIGURE 5  
2032 NO BUILD TRAFFIC VOLUMES  
WEEKDAY AFTERNOON PEAK HOUR

PROPOSED COUNTRY STORE & FUEL STATION  
CONCORD, MA



## Trip Generation

To estimate the number of vehicle trips associated with the Project, the ITE publication, *Trip Generation Manual, 11<sup>th</sup> Edition*, was referenced. ITE is a national research organization of transportation professionals, and the *Trip Generation Manual, 11<sup>th</sup> Edition* provides traffic generation information for various land uses compiled from studies conducted by members nationwide. For the purposes of reviewing the trip generating characteristics of the Project, the proposed country store is considered to operate in a manner similar to a convenience store, and therefore vehicle trip estimates for the Project were developed based on data presented as part of ITE land use code (LUC) 945 (Convenience Store/Gas Station). This reference establishes vehicle trip rates (in this case expressed in trips per square foot) based on actual traffic counts conducted at similar types of existing land uses. Trip generation estimates for the proposed 2,162 sf convenience store were based on a 2,200 sf building size to present a conservative analysis.

Trips associated with the existing site were not removed from the traffic counts collected at the site driveways to provide a conservative analysis. Vehicles accessing the adjacent 152 Commonwealth Avenue via the shared curb cut located at the Southern Site Driveway were removed from the driveway traffic counts as access to the adjacent building was observed to operate as a separate driveway. The 152 Commonwealth Avenue driveway would continue to operate as a separate access, independent of the Southern Site Driveway under the proposed conditions.

### Pass-by Trips

Not all trips to a land use like a convenience store and gas station are considered “new” trips. In fact, a significant portion of the total trips attracted to such a land use are “pass-by” trips which are already on the adjacent roadway network. The pass-by trip portion of the total development traffic is reflected in the existing, base traffic volumes, and does not represent new traffic on the roadway network. Therefore, the total traffic volume associated with the Project is reduced by the pass-by volume to estimate the “new” traffic generated by the Project.

According to ITE data for LUC 945, 60 percent of the weekday morning trips and 56 percent of the weekday afternoon trips can be attributed as pass-by trips. A summary of the peak hour trip generation estimates for the Project are shown in Table 1 below.

**Table 1: Vehicular Trip Generation**

Land Use	Weekday Morning Peak Hour			Weekday Afternoon Peak Hour		
	In	Out	Total	In	Out	Total
Proposed Convenience Store & Gas Station Trips <sup>1</sup>	45	45	90	53	53	106
<i>Pass-by Trips</i>	-27	-27	-54	-30	-30	-60
<b>Net New Trips</b>	<b>18</b>	<b>18</b>	<b>36</b>	<b>23</b>	<b>23</b>	<b>46</b>

1 ITE Land Use Code 945 (Convenience Store/Gas Station - VFP (2-8)) based on 2,200 sf.

2 Based on LUC 945, 60% of weekday AM and 56% of weekday PM peak hour trips are attributed to pass-by trips.

As shown in Table 1 above, the Project is estimated to result in approximately 36 new trips (18 entering vehicles and 18 exiting vehicles) during the weekday morning peak hour, and approximately 46 new trips (23 entering vehicles and 23 exiting vehicles) during the weekday afternoon peak hour.

### **Trip Distribution and Assignment**

The traffic estimated to be generated by the Project was distributed onto the study area roadways and intersections based on a review of the existing travel patterns of the adjacent roadways. The resulting arrival and departure patterns are presented in Figure 6 and are documented in the traffic projection model located in Appendix C.

The Project-related traffic was assigned to the surrounding roadway network based on the Project trip distribution patterns presented in Figure 6. The resulting distributed new Project trips are shown in Figure 7 and Figure 8 for the weekday morning and weekday afternoon peak hours, respectively.

### **2032 Build Traffic Volumes**

To establish the 2032 Build peak hour traffic volumes, the distributed Project trips shown in Figure 7 and Figure 8 were added to the 2032 No Build peak hour traffic volumes to establish the 2032 Build peak hour traffic volumes. The resulting 2032 Build weekday morning and weekday afternoon peak hour traffic volumes are documented in the traffic projection model presented in Appendix C and presented in Figure 9 and Figure 10, respectively.

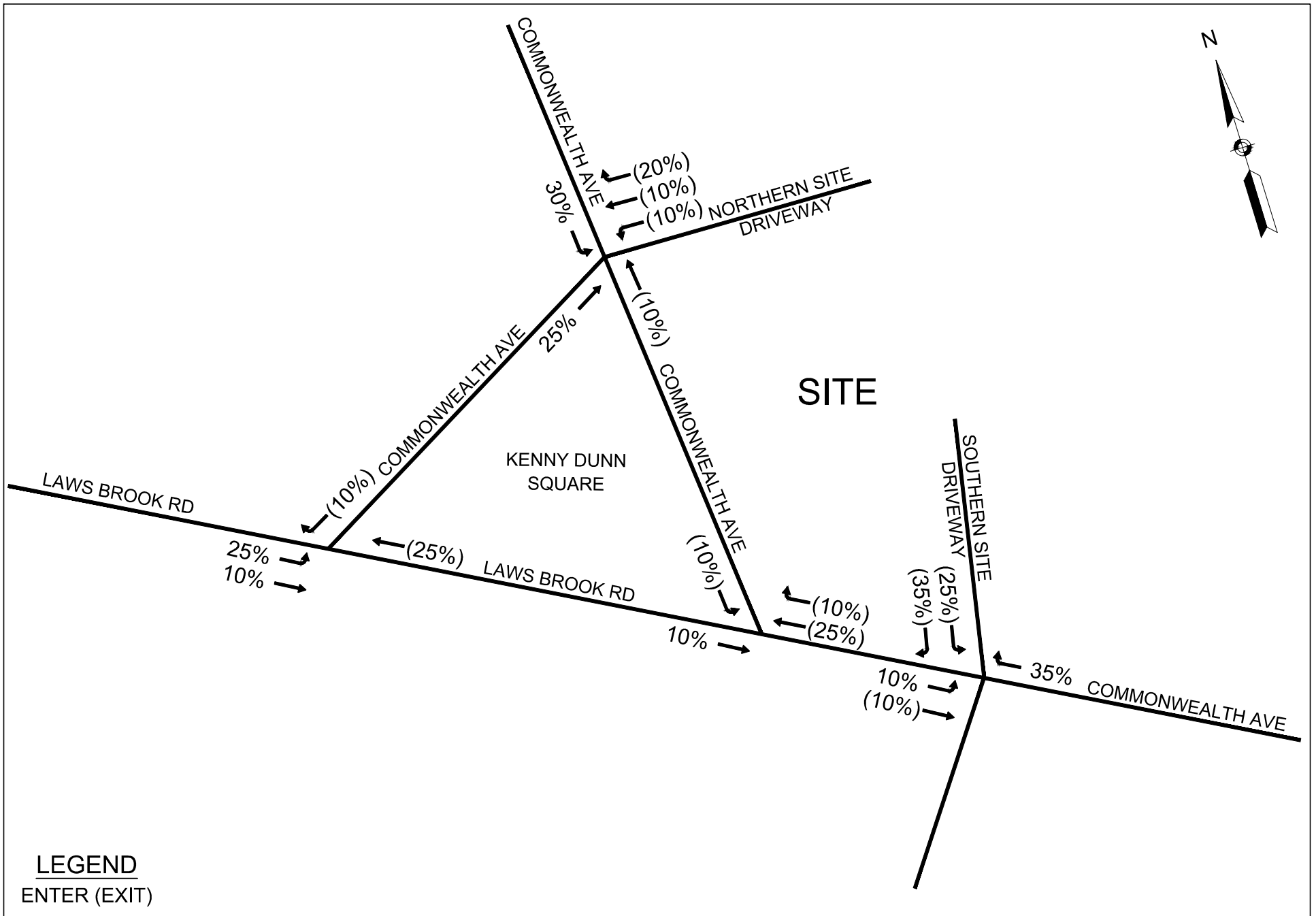
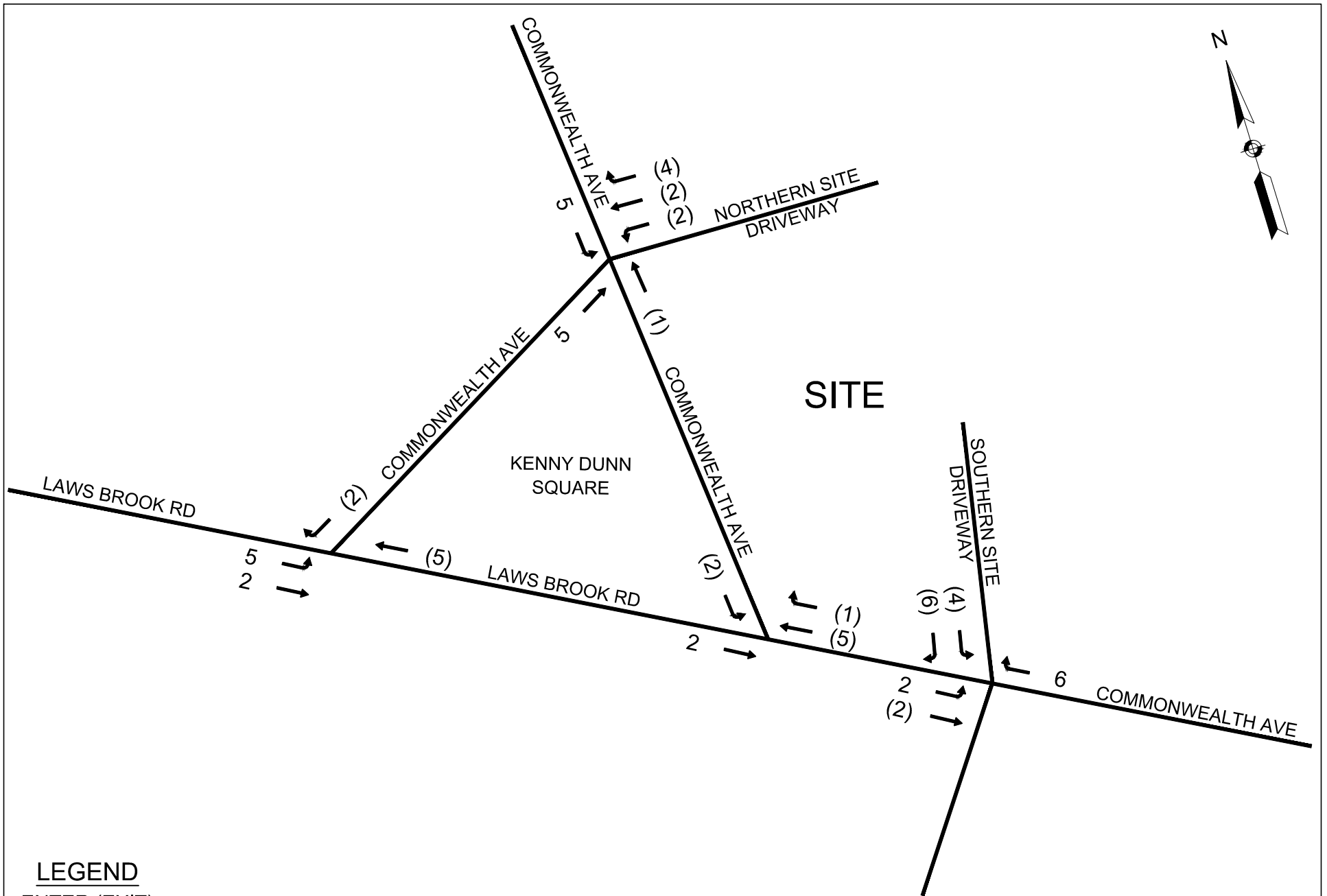


FIGURE 6  
 ARRIVAL AND DEPARTURE PATTERNS

PROPOSED COUNTRY STORE & FUEL STATION  
 CONCORD, MA



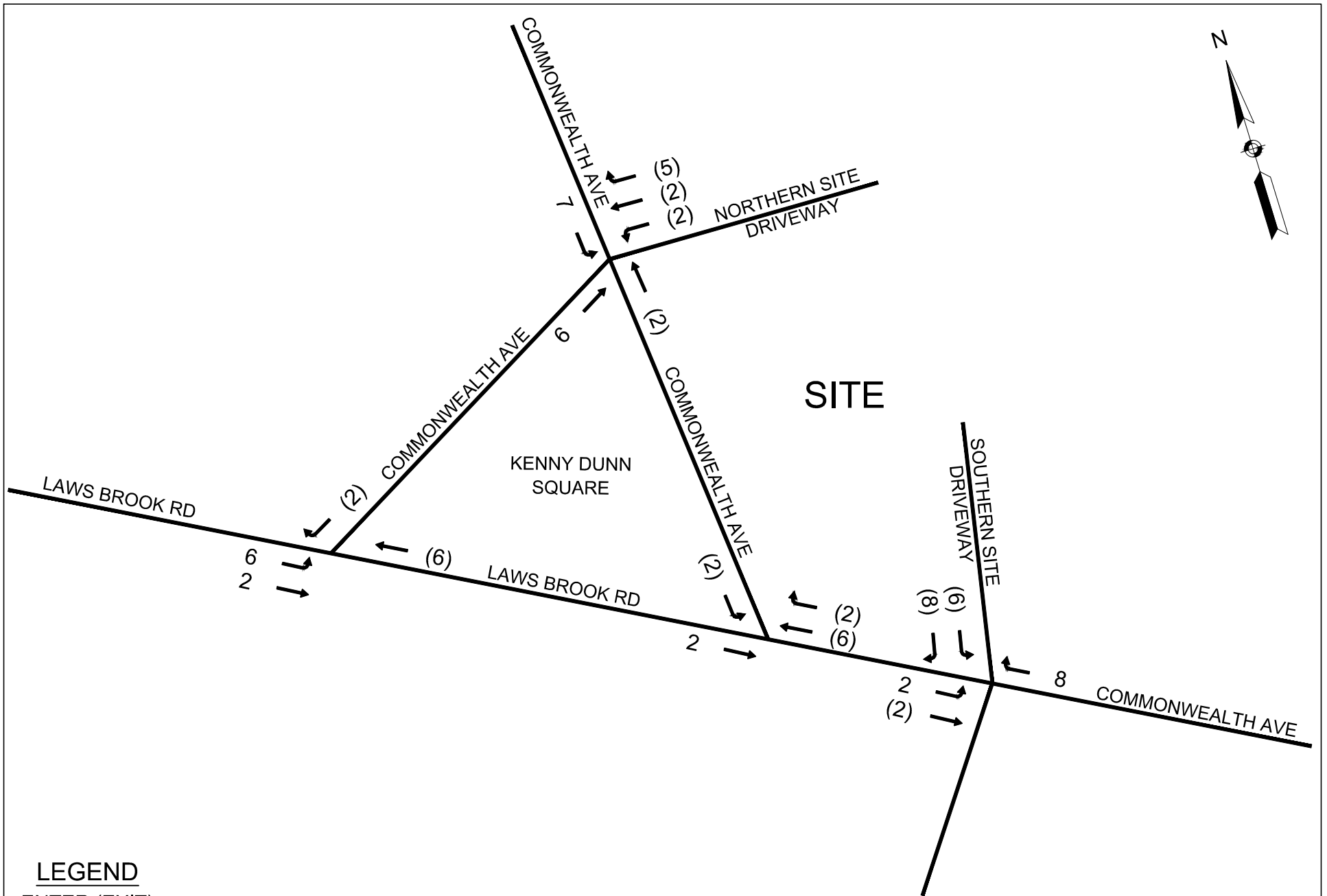


**LEGEND**  
 ENTER (EXIT)

FIGURE 7  
 NET NEW PROJECT TRIPS  
 WEEKDAY MORNING PEAK HOUR

PROPOSED COUNTRY STORE & FUEL STATION  
 CONCORD, MA





**LEGEND**  
 ENTER (EXIT)

FIGURE 8  
 NET NEW PROJECT TRIPS  
 WEEKDAY AFTERNOON PEAK HOUR

PROPOSED COUNTRY STORE & FUEL STATION  
 CONCORD, MA



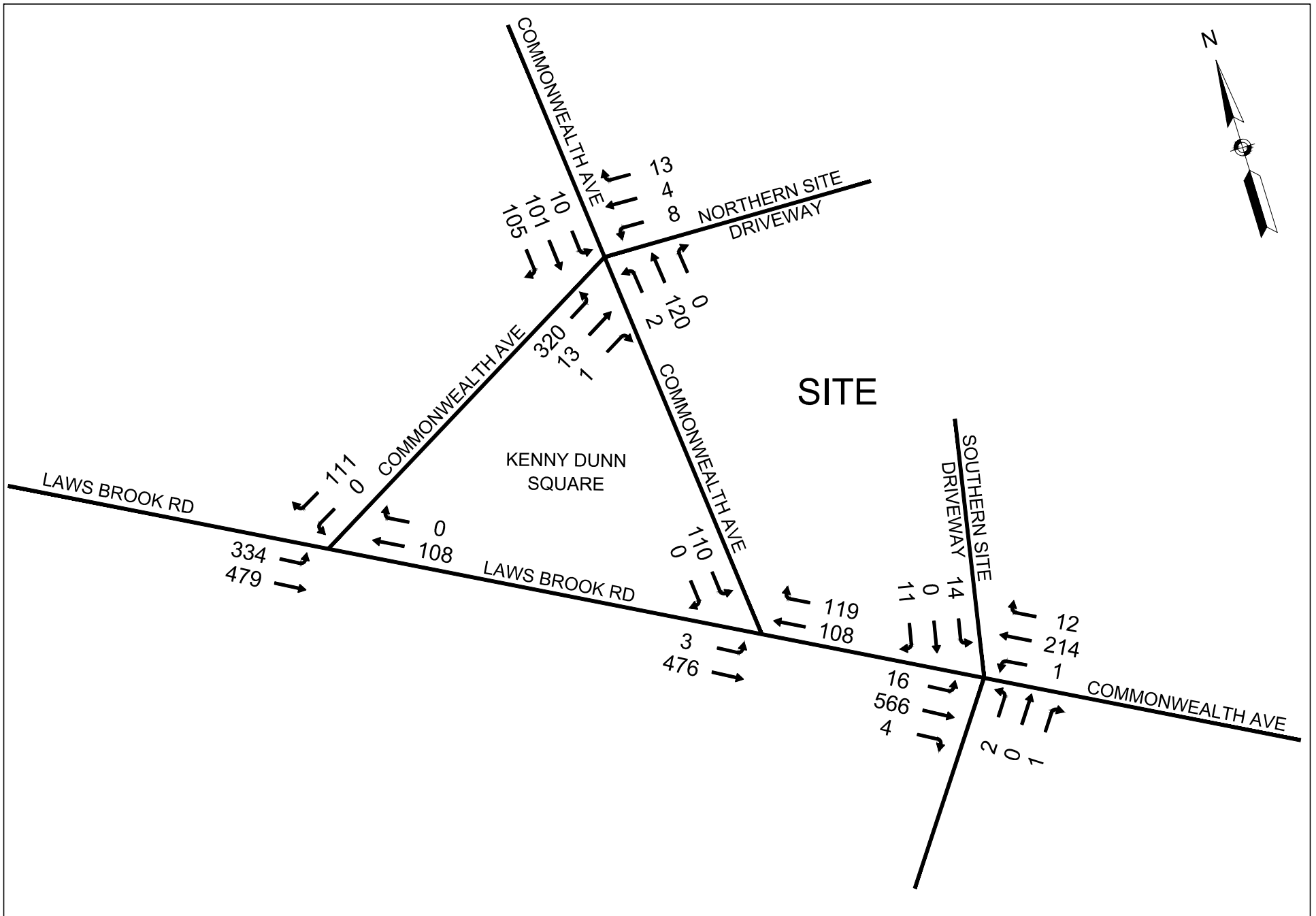


FIGURE 9  
2032 BUILD TRAFFIC VOLUMES  
WEEKDAY MORNING PEAK HOUR

PROPOSED COUNTRY STORE & FUEL STATION  
CONCORD, MA



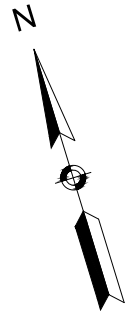
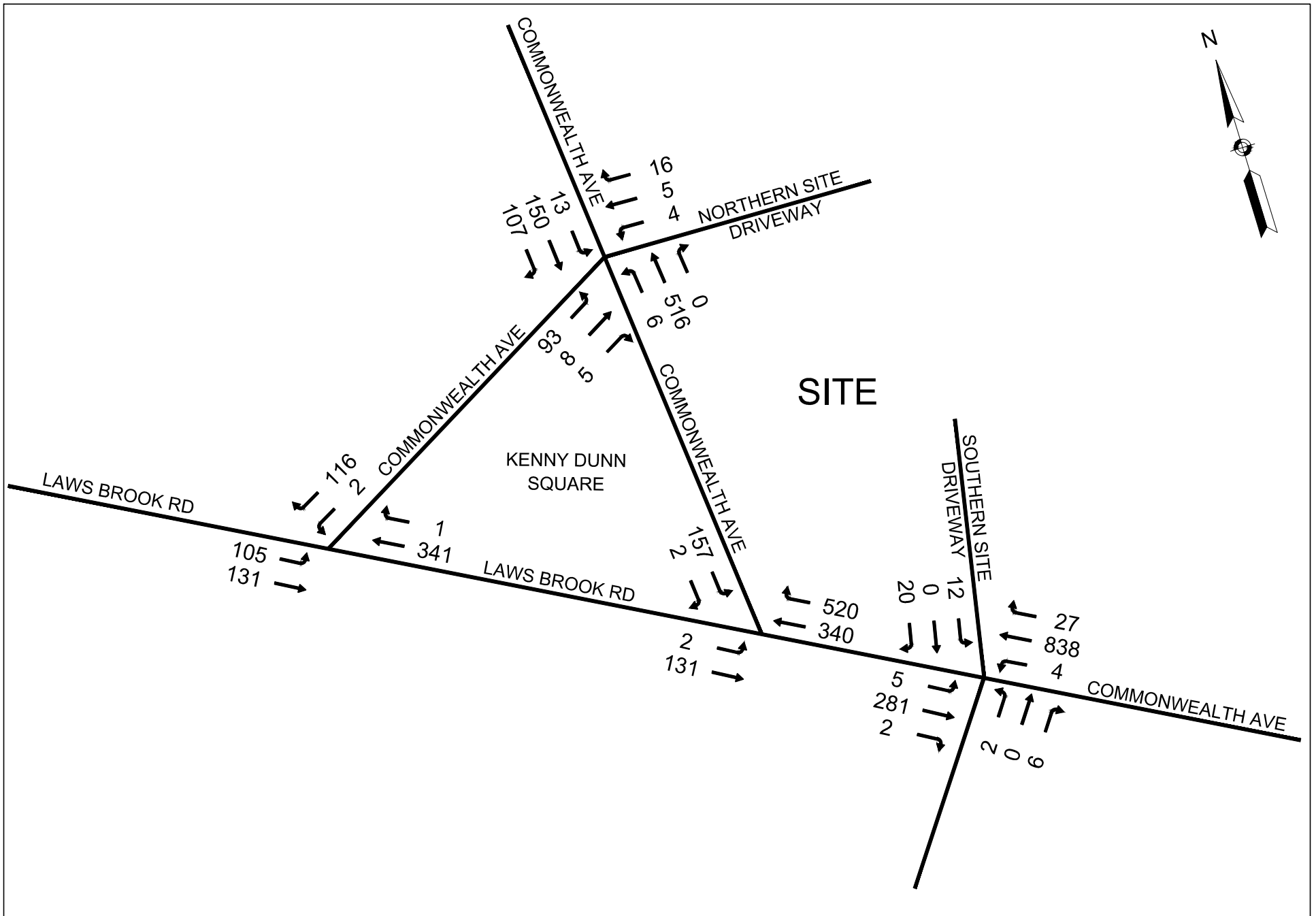


FIGURE 10  
2032 BUILD TRAFFIC VOLUMES  
WEEKDAY AFTERNOON PEAK HOUR

PROPOSED COUNTRY STORE & FUEL STATION  
CONCORD, MA



## Traffic Operations Analysis

In previous sections of this report, the quantity of traffic at the study area intersections has been discussed. This section describes the overall quality of the traffic flow at the study area intersections during the weekday morning and weekday afternoon peak hours. To complete this assessment, intersection capacity analysis was conducted using the Synchro capacity analysis software at the study area intersections under the 2025 Existing, 2032 No Build, and 2032 Build scenarios for the two peak hour traffic conditions. The analyses performed for this Project are based on capacity analysis methodologies and procedures contained in the *Highway Capacity Manual, 6th Edition* (HCM), which are summarized in Appendix E. A discussion of the evaluation criteria and a summary of the results of the capacity analysis are presented below.

### Level-of-Service Criteria

Average total vehicle delay is reported as level-of-service (LOS) on a scale of A to F. LOS A represents delays of 10 seconds or less, while LOS F represents delays in excess of 50 seconds for unsignalized intersections. A more detailed description of the LOS criteria is provided in Appendix E.

### Capacity Analysis Results

Intersection capacity analysis was conducted using the Synchro capacity analysis software for the study area intersections to evaluate the 2025 Existing, 2032 No Build, and 2032 Build traffic conditions during the weekday morning and weekday afternoon peak hours. The peak hour traffic volumes utilized as part of this analysis are provided in the traffic projection model, attached in Appendix C.

The Synchro capacity analysis results for the 2025 Existing, 2032 No Build, and 2032 Build traffic conditions are presented in Appendix F, Appendix G, and Appendix H, respectively. The capacity analysis results for the unsignalized study area intersections are presented in Table 2 below. The results of the specific capacity analysis at the study area intersections are discussed below, with a more detailed summary of the capacity analysis for the study area intersections provided in Appendix I.

**Table 2: Unsignalized Intersection Levels-of-Service**

Intersection	Period	Movement	2025 Existing			2032 No Build			2032 Build		
			LOS <sup>1</sup>	Delay <sup>2</sup>	V/C <sup>3</sup>	LOS	Delay	V/C	LOS	Delay	V/C
Commonwealth Avenue at Northern Site Driveway (Kenny Dunn Square North Intersection)	AM	EB - LTR	C	18.0	0.58	C	21.0	0.65	D	25.2	0.71
	PM		C	23.8	0.38	D	28.6	0.46	D	34.8	0.53
	AM	WB - LTR	B	10.0	0.01	B	10.2	0.01	B	10.4	0.05
	PM		B	14.7	0.01	C	15.6	0.02	C	15.8	0.09
Commonwealth Avenue at Laws Brook Road (Kenny Dunn Square East Intersection)	AM	SB - LR	C	18.7	0.32	C	21.1	0.37	C	21.7	0.39
	PM		C	21.2	0.41	D	25.0	0.49	D	25.2	0.49
Commonwealth Avenue at Laws Brook Road (Kenny Dunn Square West Intersection)	AM	SB - LR	A	9.5	0.14	A	9.7	0.15	A	9.7	0.15
	PM		B	11.8	0.20	B	12.3	0.23	B	12.4	0.23
Commonwealth Avenue at Southern Site Driveway/ Parking Lot	AM	NB - LTR	C	17.0	0.01	C	18.4	0.01	C	19.3	0.02
	PM		B	14.4	0.03	C	15.5	0.03	C	16.2	0.03
	AM	SB - LTR	B	14.3	0.01	C	15.2	0.01	C	17.6	0.10
	PM		A	0.0	0.00	A	0.0	0.00	D	25.8	0.19

1 Level-of-Service

2 Average vehicle delay, in seconds

3 Volume to capacity ratio

As summarized above, the Commonwealth Avenue eastbound approach and the Northern Site Driveway westbound approach at Kenny Dunn Square North Intersection are shown to currently operate at LOS C or better during the weekday morning and weekday afternoon peak hours. Under 2032 No Build and 2032 Build conditions, the eastbound and westbound approaches are projected to operate at LOS D or better and under capacity during the weekday morning and weekday afternoon peak hours.

The Commonwealth Avenue southbound approach to Laws Brook Road (Kenny Dunn Square East Intersection) is shown to currently operate at LOS C during both the weekday morning and weekday afternoon peak hours. Under 2032 No Build and 2032 Build conditions, the southbound approach is projected to operate at LOS C and under capacity during the weekday morning peak hour and at LOS D and under capacity during the weekday afternoon peak hour.

The Commonwealth Avenue southbound approach to Laws Brook Road (Kenny Dunn Square West Intersection) is shown to currently operate at LOS A during the weekday morning peak hour and at LOS B during the weekday afternoon peak hour. Under 2032 No Build and 2032 Build conditions, the southbound approach is projected to continue to operate at LOS A and under capacity during the weekday morning peak hour and at LOS B and under capacity during the weekday afternoon peak hour.

The Parking Lot northbound approach and Southern Site Driveway southbound approach are shown to currently operate at LOS C or better during the weekday morning and weekday afternoon peak hours. Under 2032 No Build and 2032 Build conditions, the northbound and southbound approaches are projected to continue to operate at LOS D or better and under capacity during the weekday morning and weekday afternoon peak hours.

### Site Access and Circulation

The Project would be accessed via the existing two full-access site driveways to Commonwealth Avenue. The Southern Site Driveway would be modified as part of the Project to provide a 30-foot curb cut to accommodate turning movements in and out of the site and provide a planting strip for improved separation between the access for the Project and the adjacent building at 152 Commonwealth Avenue. Shared access to 152 Commonwealth Avenue through the Northern Site Driveway would be closed as part of the Project.

As part of the Project, 11 parking spaces would be constructed. This includes seven parking spaces on the south side of the site, and four parking spaces on the north side of the site. The parking on the north side of the site would include one accessible space adjacent to the country store and two electric vehicle charging spaces. A crosswalk would be provided to connect the site the existing sidewalk network on Laws Brook Road along Kenny Dunn Square.

### Sight Distance

A field review of the available sight distance was conducted at the two site driveways on Commonwealth Avenue. The American Association of State Highway and Transportation Officials (AASHTO) publication, *A Policy on Geometric Design, 2018 Edition*, defines minimum and recommended sight distances at intersections and was used to conduct this review.

The minimum sight distance is based on the required stopping sight distance (SSD) for vehicles traveling along the main road. According to AASHTO, "If the available sight distance for an entering or crossing vehicle is at least equal to the appropriate stopping sight distance for the major road, then drivers have sufficient time to anticipate and avoid collisions."

The required SSD based on the posted speed limit and the corresponding field measured sight distance is reported below in Table 3.

**Table 3: Stopping Sight Distance Evaluation**

Site Driveway Location	Approaching	Speed Limit (mph)	SSD <sup>1</sup> Required	SSD Measured	Meets Required SSD?
Northern Site Driveway at Commonwealth Avenue	Northbound	25	155	280	Yes
Northern Site Driveway at Commonwealth Avenue	Southbound	30	200	500+	Yes
Southern Site Driveway at Commonwealth Avenue	Westbound	25	155	500+	Yes
Southern Site Driveway at Commonwealth Avenue	Eastbound	20	115	420	Yes

<sup>1</sup> Stopping sight distance (see AASHTO equations 3-2 and 3-3) for the posted speed limits.

As shown in Table 3, the available SSD for vehicles approaching each of the site driveways from both directions exceeds the minimum SSD requirements based on the posted speed limits on Commonwealth Avenue.

The AASHTO-recommended sight distance allows vehicles to enter the main street traffic flow without requiring the mainline traffic to slow to less than 70% of their speed and is referred to as intersection sight distance (ISD). The recommended ISD for vehicles exiting the site driveways and the field measured ISD is reported in Table 4, below.

**Table 4: Intersection Sight Distance Evaluation**

<b>Site Driveway Location</b>	<b>Looking</b>	<b>Speed Limit (mph)</b>	<b>ISD<sup>1</sup> Recommended</b>	<b>ISD Measured</b>	<b>Meets Recommended ISD?</b>
Northern Site Driveway at Commonwealth Avenue	Left (South) Right (North)	25 30	240 335	305 500+	Yes Yes
Southern Site Driveway at Commonwealth Avenue	Left (East) Right (West)	25 20	240 225	500+ 500	Yes Yes

<sup>1</sup> Intersection sight distance (see AASHTO equations 9-1 and 9-2) for for the posted speed limits.

As shown in Table 4, the available ISD for vehicles exiting each of the site driveways looking in both directions is shown to exceed the recommended AASHTO ISD based on the posted speed limits on Commonwealth Avenue.

Overall, sight distances to and from the site driveways are expected to allow for efficient access and egress for the Project.

## Conclusion

The existing site currently consists of two gasoline pumps (four fueling stations) and an approximately 2,200 sf auto body shop with four garage bays. The gasoline pumps are currently out of service, however the auto body shop is in operation. The site is currently access via two full-access curb cuts, one intersecting Commonwealth Avenue from the east and one intersecting Commonwealth Avenue from the north.

The Project would include a partial demolition of the existing auto body shop building, and the construction of a new 2,162 sf country store with two gasoline pumps (four fueling stations). The proposed would be located in the same area as it is currently located, while the gasoline pumps would be shifted slightly north to improve internal circulation. Access to the Project site would continue to be provided via the two existing full-access driveways. The Southern Site Driveway would be modified as part of the Project to provide a 30-foot curb cut to accommodate turning movements in and out of the site and provide a planting strip for improved separation between the access for the Project and the adjacent building at 152 Commonwealth Avenue. Shared access to 152 Commonwealth Avenue through the Northern Site Driveway would be closed as part of the Project. A total of 11 parking spaces would be provided on site, including one accessible space adjacent to the country store and two electric vehicle charging spaces. As part of the Project a crosswalk would be provided to connect the site the existing sidewalk network on Laws Brook Road along Kenny Dunn Square.

Based on a review of the crash data, there are no existing safety deficiencies at the existing study area intersections.

Based on a review of available ITE trip generation data, the Project is projected to generate approximately 36 new trips (18 entering vehicles and 18 exiting vehicles) during the weekday morning peak hour, and approximately 46 new trips (23 entering vehicles and 23 exiting vehicles) during the weekday afternoon peak hour.

The capacity analysis completed as part of this study indicates that the Project would not be expected to result in a significant change to intersection operations.

Sight distances at the two Project site driveways are expected to allow for safe and efficient access and egress for the Project.

Based on a review of the analysis contained within this traffic impact study, the Project is not shown to have a noticeable impact on the traffic operations of the surrounding roadway network.



# APPENDIX FOR TRAFFIC IMPACT STUDY PROPOSED COUNTRY STORE & FUEL STATION

166 Commonwealth Avenue  
Concord, MA

Prepared by  
**Bowman Consulting Group, Ltd.**  
20 Winthrop Square, 3<sup>rd</sup> Floor  
Boston, MA 02110  
617.556.0020

Prepared for  
**The Meehan Group**

December 2025

The top of the page features a dark green triangular shape on the left containing the word "Bowman" in white. To the right, there are two overlapping aerial photographs of traffic scenes: one showing a residential street intersection and another showing a roundabout with a central tree island.

**Bowman**

# **APPENDIX A**

## TRAFFIC COUNT DATA

PDI File #: 250541 A  
 Location: N: Commonwealth Avenue S: Parking Lot NE: Gas Station Driveway  
 Location: E: Commonwealth Avenue W: Laws Brook Road  
 City, State: Concord, MA  
 Client: Bowman/L. Fall  
 Site Code: 314420-01-002  
 Count Date: Tuesday, April 8, 2025  
 Start Time: 7:00 AM  
 End Time: 9:00 AM  
 Class:



**Cars and Heavy Vehicles (Combined)**

	Commonwealth Avenue						Gas Station Driveway						Commonwealth Avenue						Parking Lot						Laws Brook Road						Total
	from North						from Northeast						from East						from South						from West						
	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	
7:00 AM	0	0	15	0	0	15	2	0	0	0	0	2	0	16	13	0	0	29	0	0	0	0	0	0	0	139	0	4	0	143	189
7:15 AM	0	0	13	0	0	13	0	0	0	1	0	1	1	17	14	0	0	32	0	0	1	0	0	1	1	106	0	2	0	109	156
7:30 AM	2	0	12	1	0	15	2	0	0	0	0	2	0	23	10	0	0	33	1	0	0	0	0	1	1	123	0	1	0	125	176
7:45 AM	2	0	18	1	0	21	0	0	0	0	0	0	0	16	12	1	0	29	2	0	0	0	0	2	0	137	0	1	0	138	190
<b>Total</b>	4	0	58	2	0	64	4	0	0	1	0	5	1	72	49	1	0	123	3	0	1	0	0	4	2	505	0	8	0	515	711
8:00 AM	0	0	18	0	0	18	0	0	0	0	0	0	0	30	23	0	0	53	0	0	0	0	0	0	1	111	2	0	0	114	185
8:15 AM	0	0	21	1	0	22	1	1	0	1	0	3	0	21	26	1	0	48	1	0	0	1	0	2	0	101	1	0	0	102	177
8:30 AM	0	2	29	1	0	32	3	1	0	1	0	5	1	28	17	0	0	46	0	0	0	0	0	0	0	78	1	1	0	80	163
8:45 AM	0	0	24	1	0	25	3	0	0	0	0	3	0	21	21	0	0	42	0	0	0	1	0	1	1	143	2	2	0	148	219
<b>Total</b>	0	2	92	3	0	97	7	2	0	2	0	11	1	100	87	1	0	189	1	0	0	2	0	3	2	433	6	3	0	444	744
Grand Total	4	2	150	5	0	161	11	2	0	3	0	16	2	172	136	2	0	312	4	0	1	2	0	7	4	938	6	11	0	959	1455
Approach %	2.5	1.2	93.2	3.1	0.0		68.8	12.5	0.0	18.8	0.0		0.6	55.1	43.6	0.6	0.0		57.1	0.0	14.3	28.6	0.0		0.4	97.8	0.6	1.1	0.0		
Total %	0.3	0.1	10.3	0.3	0.0	11.1	0.8	0.1	0.0	0.2	0.0	1.1	0.1	11.8	9.3	0.1	0.0	21.4	0.3	0.0	0.1	0.1	0.0	0.5	0.3	64.5	0.4	0.8	0.0	65.9	
Exiting Leg Total	195						13						1095						8						144						1455
Cars	4	1	145	5	0	155	11	2	0	3	0	16	2	169	127	2	0	300	4	0	1	2	0	7	4	919	5	11	0	939	1417
% Cars	100.0	50.0	96.7	100.0	0.0	96.3	100.0	100.0	0.0	100.0	0.0	100.0	100.0	98.3	93.4	100.0	0.0	96.2	100.0	0.0	100.0	100.0	0.0	100.0	100.0	98.0	83.3	100.0	0.0	97.9	97.4
Exiting Leg Total	192						12						7						7						135						1417
Heavy Vehicles	0	1	5	0	0	6	0	0	0	0	0	0	0	3	9	0	0	12	0	0	0	0	0	0	0	19	1	0	0	20	38
% Heavy Vehicles	0.0	50.0	3.3	0.0	0.0	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	6.6	0.0	0.0	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	16.7	0.0	0.0	2.1	2.6
Exiting Leg Total	3						1						24						1						9						38

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Commonwealth Avenue						Gas Station Driveway						Commonwealth Avenue						Parking Lot						Laws Brook Road						Total
	from North						from Northeast						from East						from South						from West						
	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	
8:00 AM	0	0	18	0	0	18	0	0	0	0	0	0	0	30	23	0	0	53	0	0	0	0	0	0	1	111	2	0	0	114	185
8:15 AM	0	0	21	1	0	22	1	1	0	1	0	3	0	21	26	1	0	48	1	0	0	1	0	2	0	101	1	0	0	102	177
8:30 AM	0	2	29	1	0	32	3	1	0	1	0	5	1	28	17	0	0	46	0	0	0	0	0	0	0	78	1	1	0	80	163
8:45 AM	0	0	24	1	0	25	3	0	0	0	0	3	0	21	21	0	0	42	0	0	0	1	0	1	1	143	2	2	0	148	219
<b>Total Volume</b>	0	2	92	3	0	97	7	2	0	2	0	11	1	100	87	1	0	189	1	0	0	2	0	3	2	433	6	3	0	444	744
% Approach Total	0.0	2.1	94.8	3.1	0.0	97.8	63.6	18.2	0.0	18.2	0.0	0.550	0.5	52.9	46.0	0.5	0.0	0.892	33.3	0.0	0.0	66.7	0.0	0.375	0.5	97.5	1.4	0.7	0.0	0.849	
PHF	0.000	0.250	0.793	0.750	0.000	0.758	0.583	0.500	0.000	0.500	0.000	0.550	0.250	0.833	0.837	0.250	0.000	0.892	0.250	0.000	0.000	0.500	0.000	0.375	0.500	0.757	0.750	0.375	0.000	0.750	0.849
Cars	0	1	88	3	0	92	7	2	0	2	0	11	1	99	80	1	0	181	1	0	0	2	0	3	2	421	5	3	0	431	718
Cars %	0.0	50.0	95.7	100.0	0.0	94.8	100.0	100.0	0.0	100.0	0.0	100.0	100.0	99.0	92.0	100.0	0.0	95.8	100.0	0.0	0.0	100.0	0.0	100.0	100.0	97.2	83.3	100.0	0.0	97.1	96.5
Heavy Vehicles	0	1	4	0	0	5	0	0	0	0	0	0	0	1	7	0	0	8	0	0	0	0	0	0	0	12	1	0	0	13	26
Heavy Vehicles %	0.0	50.0	4.3	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	8.0	0.0	0.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	16.7	0.0	0.0	2.9	3.5
Cars Enter Leg	0	1	88	3	0	92	7	2	0	2	0	11	1	99	80	1	0	181	1	0	0	2	0	3	2	421	5	3	0	431	718
Heavy Enter Leg	0	1	4	0	0	5	0	0	0	0	0	0	0	1	7	0	0	8	0	0	0	0	0	0	0	12	1	0	0	13	26
Total Entering Leg	0	2	92	3	0	97	7	2	0	2	0	11	1	100	87	1	0	189	1	0	0	2	0	3	2	433	6	3	0	444	744
Cars Exiting Leg	109						9						512						4						84						718
Heavy Exiting Leg	1						1						16						1						7						26
Total Exiting Leg	110						10						528						5						91						744

PDI File #: 250541 A  
 Location: N: Commonwealth Avenue S: Parking Lot NE: Gas Station Driveway  
 Location: E: Commonwealth Avenue W: Laws Brook Road  
 City, State: Concord, MA  
 Client: Bowman/L. Fall  
 Site Code: 314420-01-002  
 Count Date: Tuesday, April 8, 2025  
 Start Time: 7:00 AM  
 End Time: 9:00 AM  
 Class:



**Cars**

	Commonwealth Avenue						Gas Station Driveway						Commonwealth Avenue						Parking Lot						Laws Brook Road						Total
	from North						from Northeast						from East						from South						from West						
	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	
7:00 AM	0	0	15	0	0	15	2	0	0	0	0	2	0	16	11	0	0	27	0	0	0	0	0	0	0	137	0	4	0	141	185
7:15 AM	0	0	12	0	0	12	0	0	0	1	0	1	1	16	14	0	0	31	0	0	1	0	0	1	1	105	0	2	0	108	153
7:30 AM	2	0	12	1	0	15	2	0	0	0	0	2	0	22	10	0	0	32	1	0	0	0	0	1	1	121	0	1	0	123	173
7:45 AM	2	0	18	1	0	21	0	0	0	0	0	0	0	16	12	1	0	29	2	0	0	0	0	2	0	135	0	1	0	136	188
<b>Total</b>	<b>4</b>	<b>0</b>	<b>57</b>	<b>2</b>	<b>0</b>	<b>63</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>5</b>	<b>1</b>	<b>70</b>	<b>47</b>	<b>1</b>	<b>0</b>	<b>119</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>2</b>	<b>498</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>508</b>	<b>699</b>
8:00 AM	0	0	17	0	0	17	0	0	0	0	0	0	0	29	20	0	0	49	0	0	0	0	0	0	1	109	2	0	0	112	178
8:15 AM	0	0	19	1	0	20	1	1	0	1	0	3	0	21	23	1	0	45	1	0	0	1	0	2	0	97	1	0	0	98	168
8:30 AM	0	1	28	1	0	30	3	1	0	1	0	5	1	28	16	0	0	45	0	0	0	0	0	0	0	75	1	1	0	77	157
8:45 AM	0	0	24	1	0	25	3	0	0	0	0	3	0	21	21	0	0	42	0	0	0	1	0	1	1	140	1	2	0	144	215
<b>Total</b>	<b>0</b>	<b>1</b>	<b>88</b>	<b>3</b>	<b>0</b>	<b>92</b>	<b>7</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>11</b>	<b>1</b>	<b>99</b>	<b>80</b>	<b>1</b>	<b>0</b>	<b>181</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>421</b>	<b>5</b>	<b>3</b>	<b>0</b>	<b>431</b>	<b>718</b>
Grand Total	4	1	145	5	0	155	11	2	0	3	0	16	2	169	127	2	0	300	4	0	1	2	0	7	4	919	5	11	0	939	1417
Approach %	2.6	0.6	93.5	3.2	0.0		68.8	12.5	0.0	18.8	0.0		0.7	56.3	42.3	0.7	0.0		57.1	0.0	14.3	28.6	0.0		0.4	97.9	0.5	1.2	0.0		
Total %	0.3	0.1	10.2	0.4	0.0	10.9	0.8	0.1	0.0	0.2	0.0	1.1	0.1	11.9	9.0	0.1	0.0	21.2	0.3	0.0	0.1	0.1	0.0	0.5	0.3	64.9	0.4	0.8	0.0	66.3	
Exiting Leg Total	192						12						1071						7						135						1417

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Commonwealth Avenue						Gas Station Driveway						Commonwealth Avenue						Parking Lot						Laws Brook Road						Total
	from North						from Northeast						from East						from South						from West						
	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	
8:00 AM	0	0	17	0	0	17	0	0	0	0	0	0	0	29	20	0	0	49	0	0	0	0	0	0	1	109	2	0	0	112	178
8:15 AM	0	0	19	1	0	20	1	1	0	1	0	3	0	21	23	1	0	45	1	0	0	1	0	2	0	97	1	0	0	98	168
8:30 AM	0	1	28	1	0	30	3	1	0	1	0	5	1	28	16	0	0	45	0	0	0	0	0	0	0	75	1	1	0	77	157
8:45 AM	0	0	24	1	0	25	3	0	0	0	0	3	0	21	21	0	0	42	0	0	0	1	0	1	1	140	1	2	0	144	215
<b>Total Volume</b>	<b>0</b>	<b>1</b>	<b>88</b>	<b>3</b>	<b>0</b>	<b>92</b>	<b>7</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>11</b>	<b>1</b>	<b>99</b>	<b>80</b>	<b>1</b>	<b>0</b>	<b>181</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>421</b>	<b>5</b>	<b>3</b>	<b>0</b>	<b>431</b>	<b>718</b>
% Approach Total	0.0	1.1	95.7	3.3	0.0		63.6	18.2	0.0	18.2	0.0		0.6	54.7	44.2	0.6	0.0		33.3	0.0	0.0	66.7	0.0		0.5	97.7	1.2	0.7	0.0		
PHF	0.000	0.250	0.786	0.750	0.000	0.767	0.583	0.500	0.000	0.500	0.000	0.550	0.250	0.853	0.870	0.250	0.000	0.923	0.250	0.000	0.000	0.500	0.000	0.375	0.500	0.752	0.625	0.375	0.000	0.748	0.835
Entering Leg	0	1	88	3	0	92	7	2	0	2	0	11	1	99	80	1	0	181	1	0	0	2	0	3	2	421	5	3	0	431	718
Exiting Leg	109						9						512						4						84						718
<b>Total</b>	201						20						693						7						515						1436



PDI File #: 250541 A  
 Location: N: Commonwealth Avenue S: Parking Lot NE: Gas Station Driveway  
 Location: E: Commonwealth Avenue W: Laws Brook Road  
 City, State: Concord, MA  
 Client: Bowman/L. Fall  
 Site Code: 314420-01-002  
 Count Date: Tuesday, April 8, 2025  
 Start Time: 7:00 AM  
 End Time: 9:00 AM  
 Class:



**Buses**

	Commonwealth Avenue						Gas Station Driveway						Commonwealth Avenue						Parking Lot						Laws Brook Road						Total	
	from North						from Northeast						from East						from South						from West							
	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Total</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2
8:00 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
8:30 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Total</b>	0	0	2	0	0	2	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
Grand Total	0	0	2	0	0	2	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0	0	0	2	5	
Approach %	0.0	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0			
Total %	0.0	0.0	40.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	20.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	40.0	0.0	0.0	0.0	40.0		
Exiting Leg Total	0						0						4						0						1						5	

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:45 AM	Commonwealth Avenue						Gas Station Driveway						Commonwealth Avenue						Parking Lot						Laws Brook Road						Total
	from North						from Northeast						from East						from South						from West						
	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	2	0	0	2	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
% Approach Total	0.0	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000		0.000	0.000	0.250	0.000	0.000		0.000	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.750	
Entering Leg	0	0	2	0	0	2	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
Exiting Leg	0						0						2						0						1						3
<b>Total</b>	2						0						3						0						1						6

PDI File #: 250541 A  
 Location: N: Commonwealth Avenue S: Parking Lot NE: Gas Station Driveway  
 Location: E: Commonwealth Avenue W: Laws Brook Road  
 City, State: Concord, MA  
 Client: Bowman/L. Fall  
 Site Code: 314420-01-002  
 Count Date: Tuesday, April 8, 2025  
 Start Time: 7:00 AM  
 End Time: 9:00 AM  
 Class:



**Single-Unit Trucks**

	Commonwealth Avenue						Gas Station Driveway						Commonwealth Avenue						Parking Lot						Laws Brook Road						
	from North						from Northeast						from East						from South						from West						
	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7:15 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	3	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2	
<b>Total</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>6</b>	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	3	0	0	0	0	0	0	2	0	0	0	2	5
8:15 AM	0	0	2	0	0	2	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	4	0	0	0	4	8
8:30 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	1	3
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2	
<b>Total</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>18</b>
Grand Total	0	1	3	0	0	4	0	0	0	0	0	0	0	3	5	0	0	8	0	0	0	0	0	0	0	12	0	0	0	12	24
Approach %	0.0	25.0	75.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	37.5	62.5	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0		
Total %	0.0	4.2	12.5	0.0	0.0	16.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.5	20.8	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0	50.0	
Exiting Leg Total	3						0						15						1						5						24

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:45 AM	Commonwealth Avenue						Gas Station Driveway						Commonwealth Avenue						Parking Lot						Laws Brook Road						
	from North						from Northeast						from East						from South						from West						
	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Total
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	2	0	0	0	2	5	
8:15 AM	0	0	2	0	0	2	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	4	0	0	0	4	8	
8:30 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	0	1	3	
Total Volume	0	1	2	0	0	3	0	0	0	0	0	0	0	1	5	0	0	6	0	0	0	0	0	0	9	0	0	0	9	18	
% Approach Total	0.0	33.3	66.7	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	16.7	83.3	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0		
PHF	0.000	0.250	0.250	0.000	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.625	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.563	0.000	0.000	0.000	0.563	0.563	
Entering Leg	0	1	2	0	0	3	0	0	0	0	0	0	0	1	5	0	0	6	0	0	0	0	0	0	9	0	0	0	9	18	
Exiting Leg	1						0						11						1						5						18
<b>Total</b>	<b>4</b>						<b>0</b>						<b>17</b>						<b>1</b>						<b>14</b>						<b>36</b>

PDI File #: 250541 A  
 Location: N: Commonwealth Avenue S: Parking Lot NE: Gas Station Driveway  
 Location: E: Commonwealth Avenue W: Laws Brook Road  
 City, State: Concord, MA  
 Client: Bowman/L. Fall  
 Site Code: 314420-01-002  
 Count Date: Tuesday, April 8, 2025  
 Start Time: 7:00 AM  
 End Time: 9:00 AM  
 Class:



**Articulated Trucks**

	Commonwealth Avenue						Gas Station Driveway						Commonwealth Avenue						Parking Lot						Laws Brook Road						Total
	from North						from Northeast						from East						from South						from West						
	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0	0	2	0	0	0	2	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Total</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	2	0	0	0	2	4
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	2	
<b>Total</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	3	1	0	0	4	5	
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	5	1	0	0	6	9	
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	83.3	16.7	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	0.0	55.6	11.1	0.0	0.0	66.7	9		
Exiting Leg Total	0						1						5						0						3						9

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Commonwealth Avenue						Gas Station Driveway						Commonwealth Avenue						Parking Lot						Laws Brook Road						Total
	from North						from Northeast						from East						from South						from West						
	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	2	
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	3	1	0	0	4	5	
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	0.0	75.0	25.0	0.0	0.0	0.0	0.625		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.375	0.250	0.000	0.000	0.500	0.625		
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	3	1	0	0	4	5	
Exiting Leg	0						1						3						0						1						5
<b>Total</b>	0						1						4						0						5						10



PDI File #: 250541 A  
 Location: N: Commonwealth Avenue S: Parking Lot NE: Gas Station Driveway  
 Location: E: Commonwealth Avenue W: Laws Brook Road  
 City, State: Concord, MA  
 Client: Bowman/L. Fall  
 Site Code: 314420-01-002  
 Count Date: Tuesday, April 8, 2025  
 Start Time: 7:00 AM  
 End Time: 9:00 AM  
 Class:



**Pedestrians**

	Commonwealth Avenue								Gas Station Driveway								Commonwealth Avenue								Parking Lot								Laws Brook Road								Total								
	from North								from Northeast								from East								from South								from West																
	Right	Thru	Left	Hard Left	U-Turn	CW-EB	CW-WB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-SEB	CW-NWB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Bear Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Bear Left	Left	U-Turn	CW-NB	CW-SB	Total									
7:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	4									
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1											
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1											
7:45 AM	0	0	0	0	0	1	2	3	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	6											
<b>Total</b>	0	0	0	0	0	2	2	4	0	0	0	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0	1	3	4	0	0	0	0	0	0	1	1	12											
8:00 AM	0	0	0	0	0	1	1	2	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	4											
8:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	5											
8:30 AM	0	0	0	0	0	1	1	2	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3											
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0											
<b>Total</b>	0	0	0	0	0	3	2	5	0	0	0	0	0	5	0	5	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	12												
<b>Grand Total</b>	0	0	0	0	0	5	4	9	0	0	0	0	0	6	2	8	0	0	0	0	0	0	0	0	0	0	1	4	5	0	0	0	0	0	0	2	2	24											
Approach %	0	0	0	0	0	56	44	0	0	0	0	0	75	25	0	0	0	0	0	0	0	0	0	0	20	80	0	0	0	0	0	0	100																
Total %	0	0	0	0	0	21	17	38	0	0	0	0	0	25	8.3	33	0	0	0	0	0	0	0	0	0	4.2	17	21	0	0	0	0	0	0	8.3	8.3													
Exiting Leg Total									9								8								0								5								2								24

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

	Commonwealth Avenue								Gas Station Driveway								Commonwealth Avenue								Parking Lot								Laws Brook Road								Total								
	from North								from Northeast								from East								from South								from West																
	Right	Thru	Left	Hard Left	U-Turn	CW-EB	CW-WB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-SEB	CW-NWB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Bear Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Bear Left	Left	U-Turn	CW-NB	CW-SB	Total									
7:45 AM	0	0	0	0	0	1	2	3	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	6									
8:00 AM	0	0	0	0	0	1	1	2	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	4										
8:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	5											
8:30 AM	0	0	0	0	0	1	1	2	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3											
Total Volume	0	0	0	0	0	4	4	8	0	0	0	0	0	5	1	6	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	2	2	18											
% Approach Total	0.0	0.0	0.0	0.0	0.0	50.0	50.0	0.0	0.0	0.0	0.0	0.0	83.3	16.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0														
PHF	0.000	0.000	0.000	0.000	0.000	1.000	0.500	0.667	0.000	0.000	0.000	0.000	0.000	0.417	0.250	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.500	0.750												
Entering Leg	0	0	0	0	0	4	4	8	0	0	0	0	0	5	1	6	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	2	2	18												
Exiting Leg									8								6								0								2								2								
<b>Total</b>									16								12								0								4								4								36

PDI File #: 250541 A  
 Location: N: Commonwealth Avenue S: Parking Lot NE: Gas Station Driveway  
 Location: E: Commonwealth Avenue W: Laws Brook Road  
 City, State: Concord, MA  
 Client: Bowman/L. Fall  
 Site Code: 314420-01-002  
 Count Date: Tuesday, April 8, 2025  
 Start Time: 4:00 PM  
 End Time: 6:00 PM  
 Class:



**Cars and Heavy Vehicles (Combined)**

	Commonwealth Avenue						Gas Station Driveway						Commonwealth Avenue						Parking Lot						Laws Brook Road						Total
	from North						from Northeast						from East						from South						from West						
	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	
4:00 PM	0	0	37	0	0	37	1	1	0	4	0	6	0	144	78	1	0	223	1	0	0	0	0	1	0	23	1	1	0	25	292
4:15 PM	2	0	34	2	0	38	1	0	0	0	0	1	0	107	55	2	0	164	2	0	0	0	0	2	1	27	1	1	0	30	235
4:30 PM	0	0	34	1	0	35	0	0	0	1	0	1	0	107	87	0	0	194	0	0	1	0	0	1	1	30	0	0	0	31	262
4:45 PM	0	0	35	1	0	36	2	0	0	1	0	3	0	121	89	1	0	211	3	0	1	0	0	4	0	32	0	0	0	32	286
<b>Total</b>	2	0	140	4	0	146	4	1	0	6	0	11	0	479	309	4	0	792	6	0	2	0	0	8	2	112	2	2	0	118	1075
5:00 PM	0	0	37	1	0	38	0	1	0	0	0	1	0	105	90	1	1	197	1	0	1	0	0	2	0	27	0	1	0	28	266
5:15 PM	0	0	31	1	0	32	0	0	0	0	0	0	0	97	98	0	0	195	1	0	0	0	0	1	0	23	0	1	0	24	252
5:30 PM	0	0	32	0	0	32	2	1	0	1	1	5	0	64	97	1	0	162	0	0	0	0	0	0	0	27	0	0	0	27	226
5:45 PM	0	0	38	0	0	38	0	0	0	1	0	1	0	54	71	1	0	126	1	0	0	0	0	1	0	19	0	0	0	19	185
<b>Total</b>	0	0	138	2	0	140	2	2	0	2	1	7	0	320	356	3	1	680	3	0	1	0	0	4	0	96	0	2	0	98	929
Grand Total	2	0	278	6	0	286	6	3	0	8	1	18	0	799	665	7	1	1472	9	0	3	0	0	12	2	208	2	4	0	216	2004
Approach %	0.7	0.0	97.2	2.1	0.0		33.3	16.7	0.0	44.4	5.6		0.0	54.3	45.2	0.5	0.1		75.0	0.0	25.0	0.0	0.0		0.9	96.3	0.9	1.9	0.0		
Total %	0.1	0.0	13.9	0.3	0.0	14.3	0.3	0.1	0.0	0.4	0.0	0.9	0.0	39.9	33.2	0.3	0.0	73.5	0.4	0.0	0.1	0.0	0.0	0.6	0.1	10.4	0.1	0.2	0.0	10.8	
Exiting Leg Total	812						9						504						9						670						2004
Cars	2	0	275	6	0	283	6	3	0	8	1	18	0	792	662	7	1	1462	8	0	3	0	0	11	1	207	2	4	0	214	1988
% Cars	100.0	0.0	98.9	100.0	0.0	99.0	100.0	100.0	0.0	100.0	100.0	100.0	0.0	99.1	99.5	100.0	100.0	99.3	88.9	0.0	100.0	0.0	0.0	91.7	50.0	99.5	100.0	100.0	0.0	99.1	99.2
Exiting Leg Total	805						9						499						8						667						1988
Heavy Vehicles	0	0	3	0	0	3	0	0	0	0	0	0	0	7	3	0	0	10	1	0	0	0	0	1	1	1	0	0	0	2	16
% Heavy Vehicles	0.0	0.0	1.1	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.5	0.0	0.0	0.7	11.1	0.0	0.0	0.0	0.0	8.3	50.0	0.5	0.0	0.0	0.0	0.9	0.8
Exiting Leg Total	7						0						5						1						3						16

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Commonwealth Avenue						Gas Station Driveway						Commonwealth Avenue						Parking Lot						Laws Brook Road						Total
	from North						from Northeast						from East						from South						from West						
	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	
4:00 PM	0	0	37	0	0	37	1	1	0	4	0	6	0	144	78	1	0	223	1	0	0	0	0	1	0	23	1	1	0	25	292
4:15 PM	2	0	34	2	0	38	1	0	0	0	0	1	0	107	55	2	0	164	2	0	0	0	0	2	1	27	1	1	0	30	235
4:30 PM	0	0	34	1	0	35	0	0	0	1	0	1	0	107	87	0	0	194	0	0	1	0	0	1	1	30	0	0	0	31	262
4:45 PM	0	0	35	1	0	36	2	0	0	1	0	3	0	121	89	1	0	211	3	0	1	0	0	4	0	32	0	0	0	32	286
<b>Total Volume</b>	2	0	140	4	0	146	4	1	0	6	0	11	0	479	309	4	0	792	6	0	2	0	0	8	2	112	2	2	0	118	1075
% Approach Total	1.4	0.0	95.9	2.7	0.0		36.4	9.1	0.0	54.5	0.0		0.0	60.5	39.0	0.5	0.0		75.0	0.0	25.0	0.0	0.0		1.7	94.9	1.7	1.7	0.0		
PHF	0.250	0.000	0.946	0.500	0.000	0.961	0.500	0.250	0.000	0.375	0.000	0.458	0.000	0.832	0.868	0.500	0.000	0.888	0.500	0.000	0.500	0.000	0.000	0.500	0.500	0.875	0.500	0.500	0.000	0.922	0.920
Cars	2	0	137	4	0	143	4	1	0	6	0	11	0	475	307	4	0	786	5	0	2	0	0	7	1	111	2	2	0	116	1063
Cars %	100.0	0.0	97.9	100.0	0.0	97.9	100.0	100.0	0.0	100.0	0.0	100.0	0.0	99.2	99.4	100.0	0.0	99.2	83.3	0.0	100.0	0.0	0.0	87.5	50.0	99.1	100.0	100.0	0.0	98.3	98.9
Heavy Vehicles	0	0	3	0	0	3	0	0	0	0	0	0	0	4	2	0	0	6	1	0	0	0	0	1	1	1	0	0	0	2	12
Heavy Vehicles %	0.0	0.0	2.1	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.6	0.0	0.0	0.8	16.7	0.0	0.0	0.0	0.0	12.5	50.0	0.9	0.0	0.0	0.0	1.7	1.1
Cars Enter Leg	2	0	137	4	0	143	4	1	0	6	0	11	0	475	307	4	0	786	5	0	2	0	0	7	1	111	2	2	0	116	1063
Heavy Enter Leg	0	0	3	0	0	3	0	0	0	0	0	0	0	4	2	0	0	6	1	0	0	0	0	1	1	1	0	0	0	2	12
Total Entering Leg	2	0	140	4	0	146	4	1	0	6	0	11	0	479	309	4	0	792	6	0	2	0	0	8	2	112	2	2	0	118	1075
Cars Exiting Leg	483						6						259						5						310						1063
Heavy Exiting Leg	4						0						5						1						2						12
Total Exiting Leg	487						6						264						6						312						1075

PDI File #: 250541 A  
 Location: N: Commonwealth Avenue S: Parking Lot NE: Gas Station Driveway  
 Location: E: Commonwealth Avenue W: Laws Brook Road  
 City, State: Concord, MA  
 Client: Bowman/L. Fall  
 Site Code: 314420-01-002  
 Count Date: Tuesday, April 8, 2025  
 Start Time: 4:00 PM  
 End Time: 6:00 PM  
 Class:



**Cars**

	Commonwealth Avenue						Gas Station Driveway						Commonwealth Avenue						Parking Lot						Laws Brook Road						Total
	from North						from Northeast						from East						from South						from West						
	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	
4:00 PM	0	0	36	0	0	36	1	1	0	4	0	6	0	142	77	1	0	220	1	0	0	0	0	1	0	23	1	1	0	25	288
4:15 PM	2	0	33	2	0	37	1	0	0	0	0	1	0	106	55	2	0	163	1	0	0	0	0	1	0	27	1	1	0	29	231
4:30 PM	0	0	34	1	0	35	0	0	0	1	0	1	0	106	86	0	0	192	0	0	1	0	0	1	1	29	0	0	0	30	259
4:45 PM	0	0	34	1	0	35	2	0	0	1	0	3	0	121	89	1	0	211	3	0	1	0	0	4	0	32	0	0	0	32	285
<b>Total</b>	<b>2</b>	<b>0</b>	<b>137</b>	<b>4</b>	<b>0</b>	<b>143</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>475</b>	<b>307</b>	<b>4</b>	<b>0</b>	<b>786</b>	<b>5</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>1</b>	<b>111</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>116</b>	<b>1063</b>
5:00 PM	0	0	37	1	0	38	0	1	0	0	0	1	0	103	90	1	1	195	1	0	1	0	0	2	0	27	0	1	0	28	264
5:15 PM	0	0	31	1	0	32	0	0	0	0	0	0	0	97	98	0	0	195	1	0	0	0	0	1	0	23	0	1	0	24	252
5:30 PM	0	0	32	0	0	32	2	1	0	1	1	5	0	63	97	1	0	161	0	0	0	0	0	0	0	27	0	0	0	27	225
5:45 PM	0	0	38	0	0	38	0	0	0	1	0	1	0	54	70	1	0	125	1	0	0	0	0	1	0	19	0	0	0	19	184
<b>Total</b>	<b>0</b>	<b>0</b>	<b>138</b>	<b>2</b>	<b>0</b>	<b>140</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>7</b>	<b>0</b>	<b>317</b>	<b>355</b>	<b>3</b>	<b>1</b>	<b>676</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>96</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>98</b>	<b>925</b>
Grand Total	2	0	275	6	0	283	6	3	0	8	1	18	0	792	662	7	1	1462	8	0	3	0	0	11	1	207	2	4	0	214	1988
Approach %	0.7	0.0	97.2	2.1	0.0		33.3	16.7	0.0	44.4	5.6		0.0	54.2	45.3	0.5	0.1		72.7	0.0	27.3	0.0	0.0		0.5	96.7	0.9	1.9	0.0		
Total %	0.1	0.0	13.8	0.3	0.0	14.2	0.3	0.2	0.0	0.4	0.1	0.9	0.0	39.8	33.3	0.4	0.1	73.5	0.4	0.0	0.2	0.0	0.0	0.6	0.1	10.4	0.1	0.2	0.0	10.8	
Exiting Leg Total	805						9						499						8						667						1988

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Commonwealth Avenue						Gas Station Driveway						Commonwealth Avenue						Parking Lot						Laws Brook Road						Total
	from North						from Northeast						from East						from South						from West						
	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	
4:00 PM	0	0	36	0	0	36	1	1	0	4	0	6	0	142	77	1	0	220	1	0	0	0	0	1	0	23	1	1	0	25	288
4:15 PM	2	0	33	2	0	37	1	0	0	0	0	1	0	106	55	2	0	163	1	0	0	0	0	1	0	27	1	1	0	29	231
4:30 PM	0	0	34	1	0	35	0	0	0	1	0	1	0	106	86	0	0	192	0	0	1	0	0	1	1	29	0	0	0	30	259
4:45 PM	0	0	34	1	0	35	2	0	0	1	0	3	0	121	89	1	0	211	3	0	1	0	0	4	0	32	0	0	0	32	285
Total Volume	2	0	137	4	0	143	4	1	0	6	0	11	0	475	307	4	0	786	5	0	2	0	0	7	1	111	2	2	0	116	1063
% Approach Total	1.4	0.0	95.8	2.8	0.0		36.4	9.1	0.0	54.5	0.0		0.0	60.4	39.1	0.5	0.0		71.4	0.0	28.6	0.0	0.0		0.9	95.7	1.7	1.7	0.0		
PHF	0.250	0.000	0.951	0.500	0.000	0.966	0.500	0.250	0.000	0.375	0.000	0.458	0.000	0.836	0.862	0.500	0.000	0.893	0.417	0.000	0.500	0.000	0.000	0.438	0.250	0.867	0.500	0.500	0.000	0.906	0.923
Entering Leg	2	0	137	4	0	143	4	1	0	6	0	11	0	475	307	4	0	786	5	0	2	0	0	7	1	111	2	2	0	116	1063
Exiting Leg	483						6						259						5						310						1063
<b>Total</b>	<b>626</b>						<b>17</b>						<b>1045</b>						<b>12</b>						<b>426</b>						<b>2126</b>

PDI File #: 250541 A  
 Location: N: Commonwealth Avenue S: Parking Lot NE: Gas Station Driveway  
 Location: E: Commonwealth Avenue W: Laws Brook Road  
 City, State: Concord, MA  
 Client: Bowman/L. Fall  
 Site Code: 314420-01-002  
 Count Date: Tuesday, April 8, 2025  
 Start Time: 4:00 PM  
 End Time: 6:00 PM  
 Class:



**Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Commonwealth Avenue						Gas Station Driveway						Commonwealth Avenue						Parking Lot						Laws Brook Road						Total						
	from North						from Northeast						from East						from South						from West												
	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total							
4:00 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
4:15 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	4		
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	0	0	0	0	0	0	1	0	0	0	0	0	1	3				
4:45 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1			
<b>Total</b>	0	0	3	0	0	3	0	0	0	0	0	0	0	4	2	0	0	0	6	1	0	0	0	0	1	1	1	0	0	0	0	0	2	12			
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2			
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1			
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1			
<b>Total</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4			
<b>Grand Total</b>	0	0	3	0	0	3	0	0	0	0	0	0	0	7	3	0	0	10	1	0	0	0	0	1	1	1	0	0	0	0	0	2	16				
<b>Approach %</b>	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	70.0	30.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	50.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
<b>Total %</b>	0.0	0.0	18.8	0.0	0.0	18.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	43.8	18.8	0.0	0.0	62.5	6.3	0.0	0.0	0.0	0.0	6.3	6.3	6.3	0.0	0.0	0.0	0.0	12.5	0.0					
<b>Exiting Leg Total</b>	7						0						5						1						3						16						
<b>Buses</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1				
<b>% Buses</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.3	0.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3				
<b>Exiting Leg Total</b>	1						0						5						1						3						16						
<b>Single-Unit Trucks</b>	0	0	3	0	0	3	0	0	0	0	0	0	0	6	3	0	0	9	1	0	0	0	0	1	1	1	0	0	0	0	2	15					
<b>% Single-Unit</b>	0.0	0.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	85.7	100.0	0.0	0.0	90.0	100.0	0.0	0.0	0.0	0.0	100.0	100.0	100.0	0.0	0.0	0.0	100.0	0.0	93.8					
<b>Exiting Leg Total</b>	6						0						5						1						3						15						
<b>Articulated Trucks</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
<b>% Articulated</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
<b>Exiting Leg Total</b>	0						0						0						0						0						0						

**Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:**

	Commonwealth Avenue						Gas Station Driveway						Commonwealth Avenue						Parking Lot						Laws Brook Road						Total		
	from North						from Northeast						from East						from South						from West								
	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total			
4:00 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	2	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
4:15 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	1	1	0	0	0	0	0	1	4	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	1	0	0	0	0	1	3		
4:45 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
<b>Total Volume</b>	0	0	3	0	0	3	0	0	0	0	0	0	0	4	2	0	0	6	1	0	0	0	0	1	1	1	0	0	0	2	12		
<b>% Approach Total</b>	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66.7	33.3	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	50.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0		
<b>PHF</b>	0.000	0.000	0.750	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.500	0.000	0.000	0.500	0.250	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.500	0.750			
<b>Buses</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Buses %</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
<b>Single-Unit Trucks</b>	0	0	3	0	0	3	0	0	0	0	0	0	0	4	2	0	0	6	1	0	0	0	0	1	1	1	0	0	0	2	12		
<b>Single-Unit %</b>	0.0	0.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	0.0	0.0	100.0	100.0	0.0	0.0	0.0	100.0	100.0	100.0	0.0	0.0	0.0	100.0	0.0	100.0		
<b>Articulated Trucks</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Articulated %</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
<b>Buses</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Single-Unit Trucks</b>	0	0	3	0	0	3	0	0	0	0	0	0	0	4	2	0	0	6	1	0	0	0	0	1	1	1	0	0	0	2	12		
<b>Articulated Trucks</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Total Entering Leg</b>	0	0	3	0	0	3	0	0	0	0	0	0	0	4	2	0	0	6	1	0	0	0	0	1	1	1	0	0	0	2	12		
<b>Buses</b>	0						0						0						0						0								
<b>Single-Unit Trucks</b>	4						0						5						1						2								
<b>Articulated Trucks</b>	0						0						0						0						0								
<b>Total Exiting Leg</b>	4						0						5						1						2								

PDI File #: 250541 A  
 Location: N: Commonwealth Avenue S: Parking Lot NE: Gas Station Driveway  
 Location: E: Commonwealth Avenue W: Laws Brook Road  
 City, State: Concord, MA  
 Client: Bowman/L. Fall  
 Site Code: 314420-01-002  
 Count Date: Tuesday, April 8, 2025  
 Start Time: 4:00 PM  
 End Time: 6:00 PM  
 Class:



**Buses**

	Commonwealth Avenue						Gas Station Driveway						Commonwealth Avenue						Parking Lot						Laws Brook Road						
	from North						from Northeast						from East						from South						from West						
	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	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	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	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	0	0	0	0	0	0	0	0	0	0	0	0	0		
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	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	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1		
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	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	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	0	0	0	0	0	0	0	0	0	0	0	0	0		
Total	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1		
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1		
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Exiting Leg Total	1						0						0						0						0						1

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:15 PM	Commonwealth Avenue						Gas Station Driveway						Commonwealth Avenue						Parking Lot						Laws Brook Road						
	from North						from Northeast						from East						from South						from West						
	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Total
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	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	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	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	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1		
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1		
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250		
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1		
Exiting Leg	1						0						0						0						0						1
Total	1						0						1						0						0						2

PDI File #: 250541 A  
 Location: N: Commonwealth Avenue S: Parking Lot NE: Gas Station Driveway  
 Location: E: Commonwealth Avenue W: Laws Brook Road  
 City, State: Concord, MA  
 Client: Bowman/L. Fall  
 Site Code: 314420-01-002  
 Count Date: Tuesday, April 8, 2025  
 Start Time: 4:00 PM  
 End Time: 6:00 PM  
 Class:



**Single-Unit Trucks**

	Commonwealth Avenue						Gas Station Driveway						Commonwealth Avenue						Parking Lot						Laws Brook Road						Total						
	from North						from Northeast						from East						from South						from West												
	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total							
4:00 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	2	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
4:15 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	4
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	3
4:45 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<b>Total</b>	0	0	3	0	0	3	0	0	0	0	0	0	0	4	2	0	0	6	1	0	0	0	0	0	1	1	1	0	0	0	2	1	0	0	0	0	12
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<b>Total</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
<b>Grand Total</b>	0	0	3	0	0	3	0	0	0	0	0	0	0	6	3	0	0	9	1	0	0	0	0	0	1	1	1	0	0	0	2	1	0	0	0	0	15
Approach %	0.0	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	66.7	33.3	0.0	0.0		100.0	0.0	0.0	0.0	0.0		50.0	50.0	0.0	0.0	0.0								
Total %	0.0	0.0	20.0	0.0	0.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40.0	20.0	0.0	0.0	60.0	6.7	0.0	0.0	0.0	0.0	0.0	6.7	6.7	0.0	0.0	0.0	0.0	13.3						
Exiting Leg Total	6						0						5						1						3		15										

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Commonwealth Avenue						Gas Station Driveway						Commonwealth Avenue						Parking Lot						Laws Brook Road						Total						
	from North						from Northeast						from East						from South						from West												
	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total							
4:00 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	2	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
4:15 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	4
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	3
4:45 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<b>Total Volume</b>	0	0	3	0	0	3	0	0	0	0	0	0	0	4	2	0	0	6	1	0	0	0	0	0	1	1	1	0	0	0	2	1	0	0	0	0	12
% Approach Total	0.0	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	66.7	33.3	0.0	0.0		100.0	0.0	0.0	0.0	0.0		50.0	50.0	0.0	0.0	0.0								
PHF	0.000	0.000	0.750	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.500	0.000	0.000	0.500	0.250	0.000	0.000	0.000	0.000	0.250	0.250	0.250	0.000	0.000	0.000	0.500	0.750						
Entering Leg	0	0	3	0	0	3	0	0	0	0	0	0	0	4	2	0	0	6	1	0	0	0	0	0	1	1	1	0	0	0	2	1	0	0	0	0	12
Exiting Leg	4						0						5						1						2		12										
<b>Total</b>	7						0						11						2						4		24										







PDI File #: **250541 B**  
 Location: **N: Commonwealth Avenue S: Commonwealth Avenue**  
 Location: **E: Gas Station Driveway W: to Law Brooks Road**  
 City, State: **Concord, MA**  
 Client: **Bowman/L. Fall**  
 Site Code: **314420-01-002**  
 Count Date: **Tuesday, April 8, 2025**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**



**PRECISION  
D A T A  
INDUSTRIES, LLC**  
 157 Washington Street, Suite 2  
 Hudson, MA 01749  
 508-875-0100 datarequests@pdillc.com

**Cars and Heavy Vehicles (Combined)**

	Commonwealth Avenue					Gas Station Driveway					Commonwealth Avenue					to Law Brooks Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	12	15	0	0	27	0	0	0	0	0	0	23	0	0	23	0	0	75	0	75	125
7:15 AM	12	14	0	0	26	1	0	0	0	1	0	21	0	0	21	0	0	90	0	90	138
7:30 AM	14	15	0	0	29	0	0	0	0	0	0	28	0	0	28	0	0	91	0	91	148
7:45 AM	18	19	0	0	37	0	0	0	0	0	0	16	0	0	16	0	0	91	0	91	144
<b>Total</b>	<b>56</b>	<b>63</b>	<b>0</b>	<b>0</b>	<b>119</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>88</b>	<b>0</b>	<b>0</b>	<b>88</b>	<b>0</b>	<b>0</b>	<b>347</b>	<b>0</b>	<b>347</b>	<b>555</b>
8:00 AM	15	19	0	0	34	0	0	0	0	0	0	30	0	0	30	0	0	69	0	69	133
8:15 AM	31	22	0	0	53	0	0	0	0	0	0	21	1	0	22	0	0	70	0	70	145
8:30 AM	20	32	0	0	52	1	0	0	0	1	0	32	0	0	32	1	1	92	0	94	179
8:45 AM	34	22	1	0	57	0	0	2	0	2	0	25	1	0	26	0	0	71	0	71	156
<b>Total</b>	<b>100</b>	<b>95</b>	<b>1</b>	<b>0</b>	<b>196</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>108</b>	<b>2</b>	<b>0</b>	<b>110</b>	<b>1</b>	<b>1</b>	<b>302</b>	<b>0</b>	<b>304</b>	<b>613</b>
Grand Total	156	158	1	0	315	2	0	2	0	4	0	196	2	0	198	1	1	649	0	651	1168
Approach %	49.5	50.2	0.3	0.0		50.0	0.0	50.0	0.0		0.0	99.0	1.0	0.0		0.2	0.2	99.7	0.0		
Total %	13.4	13.5	0.1	0.0	27.0	0.2	0.0	0.2	0.0	0.3	0.0	16.8	0.2	0.0	17.0	0.1	0.1	55.6	0.0	55.7	
Exiting Leg Total	847					2					161					158					1168
Cars	139	150	1	0	290	2	0	2	0	4	0	193	2	0	195	1	1	639	0	641	1130
% Cars	89.1	94.9	100.0	0.0	92.1	100.0	0.0	100.0	0.0	100.0	0.0	98.5	100.0	0.0	98.5	100.0	100.0	98.5	0.0	98.5	96.7
Exiting Leg Total	834					2					153					141					1130
Heavy Vehicles	17	8	0	0	25	0	0	0	0	0	0	3	0	0	3	0	0	10	0	10	38
% Heavy Vehicles	10.9	5.1	0.0	0.0	7.9	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	1.5	0.0	0.0	1.5	0.0	1.5	3.3
Exiting Leg Total	13					0					8					17					38

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Commonwealth Avenue					Gas Station Driveway					Commonwealth Avenue					to Law Brooks Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
8:00 AM	15	19	0	0	34	0	0	0	0	0	0	30	0	0	30	0	0	69	0	69	133
8:15 AM	31	22	0	0	53	0	0	0	0	0	0	21	1	0	22	0	0	70	0	70	145
8:30 AM	20	32	0	0	52	1	0	0	0	1	0	32	0	0	32	1	1	92	0	94	179
8:45 AM	34	22	1	0	57	0	0	2	0	2	0	25	1	0	26	0	0	71	0	71	156
Total Volume	100	95	1	0	196	1	0	2	0	3	0	108	2	0	110	1	1	302	0	304	613
% Approach Total	51.0	48.5	0.5	0.0		33.3	0.0	66.7	0.0		0.0	98.2	1.8	0.0		0.3	0.3	99.3	0.0		
PHF	0.735	0.742	0.250	0.000	0.860	0.250	0.000	0.250	0.000	0.375	0.000	0.844	0.500	0.000	0.859	0.250	0.250	0.821	0.000	0.809	0.856
Cars	92	89	1	0	182	1	0	2	0	3	0	107	2	0	109	1	1	298	0	300	594
Cars %	92.0	93.7	100.0	0.0	92.9	100.0	0.0	100.0	0.0	100.0	0.0	99.1	100.0	0.0	99.1	100.0	100.0	98.7	0.0	98.7	96.9
Heavy Vehicles	8	6	0	0	14	0	0	0	0	0	0	1	0	0	1	0	0	4	0	4	19
Heavy Vehicles %	8.0	6.3	0.0	0.0	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.9	0.0	0.0	1.3	0.0	1.3	3.1
Cars Enter Leg	92	89	1	0	182	1	0	2	0	3	0	107	2	0	109	1	1	298	0	300	594
Heavy Enter Leg	8	6	0	0	14	0	0	0	0	0	0	1	0	0	1	0	0	4	0	4	19
Total Entering Leg	100	95	1	0	196	1	0	2	0	3	0	108	2	0	110	1	1	302	0	304	613
Cars Exiting Leg	406					2					92					94					594
Heavy Exiting Leg	5					0					6					8					19
Total Exiting Leg	411					2					98					102					613

PDI File #: **250541 B**  
 Location: **N: Commonwealth Avenue S: Commonwealth Avenue**  
 Location: **E: Gas Station Driveway W: to Law Brooks Road**  
 City, State: **Concord, MA**  
 Client: **Bowman/L. Fall**  
 Site Code: **314420-01-002**  
 Count Date: **Tuesday, April 8, 2025**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



PRECISION  
 D A T A  
 INDUSTRIES, LLC

157 Washington Street, Suite 2  
 Hudson, MA 01749  
 508-875-0100 datarequests@pdillc.com

**Cars**

	Commonwealth Avenue					Gas Station Driveway					Commonwealth Avenue					to Law Brooks Road					Total					
	from North					from East					from South					from West										
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total						
7:00 AM	10	15	0	0	25	0	0	0	0	0	0	23	0	0	23	0	0	71	0	71	119					
7:15 AM	9	12	0	0	21	1	0	0	0	1	0	20	0	0	20	0	0	90	0	90	132					
7:30 AM	12	15	0	0	27	0	0	0	0	0	0	27	0	0	27	0	0	91	0	91	145					
7:45 AM	16	19	0	0	35	0	0	0	0	0	0	16	0	0	16	0	0	89	0	89	140					
<b>Total</b>	<b>47</b>	<b>61</b>	<b>0</b>	<b>0</b>	<b>108</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>86</b>	<b>0</b>	<b>0</b>	<b>86</b>	<b>0</b>	<b>0</b>	<b>341</b>	<b>0</b>	<b>341</b>	<b>536</b>					
8:00 AM	13	18	0	0	31	0	0	0	0	0	0	29	0	0	29	0	0	69	0	69	129					
8:15 AM	29	20	0	0	49	0	0	0	0	0	0	21	1	0	22	0	0	70	0	70	141					
8:30 AM	19	29	0	0	48	1	0	0	0	1	0	32	0	0	32	1	1	89	0	91	172					
8:45 AM	31	22	1	0	54	0	0	2	0	2	0	25	1	0	26	0	0	70	0	70	152					
<b>Total</b>	<b>92</b>	<b>89</b>	<b>1</b>	<b>0</b>	<b>182</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>107</b>	<b>2</b>	<b>0</b>	<b>109</b>	<b>1</b>	<b>1</b>	<b>298</b>	<b>0</b>	<b>300</b>	<b>594</b>					
Grand Total	139	150	1	0	290	2	0	2	0	4	0	193	2	0	195	1	1	639	0	641	1130					
Approach %	47.9	51.7	0.3	0.0		50.0	0.0	50.0	0.0		0.0	99.0	1.0	0.0		0.2	0.2	99.7	0.0							
Total %	12.3	13.3	0.1	0.0	25.7	0.2	0.0	0.2	0.0	0.4	0.0	17.1	0.2	0.0	17.3	0.1	0.1	56.5	0.0	56.7						
Exiting Leg Total						834					2					153					141					1130

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

	Commonwealth Avenue					Gas Station Driveway					Commonwealth Avenue					to Law Brooks Road					Total					
	from North					from East					from South					from West										
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total						
8:00 AM	13	18	0	0	31	0	0	0	0	0	0	29	0	0	29	0	0	69	0	69	129					
8:15 AM	29	20	0	0	49	0	0	0	0	0	0	21	1	0	22	0	0	70	0	70	141					
8:30 AM	19	29	0	0	48	1	0	0	0	1	0	32	0	0	32	1	1	89	0	91	172					
8:45 AM	31	22	1	0	54	0	0	2	0	2	0	25	1	0	26	0	0	70	0	70	152					
<b>Total Volume</b>	<b>92</b>	<b>89</b>	<b>1</b>	<b>0</b>	<b>182</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>107</b>	<b>2</b>	<b>0</b>	<b>109</b>	<b>1</b>	<b>1</b>	<b>298</b>	<b>0</b>	<b>300</b>	<b>594</b>					
% Approach Total	50.5	48.9	0.5	0.0		33.3	0.0	66.7	0.0		0.0	98.2	1.8	0.0		0.3	0.3	99.3	0.0							
PHF	0.742	0.767	0.250	0.000	0.843	0.250	0.000	0.250	0.000	0.375	0.000	0.836	0.500	0.000	0.852	0.250	0.250	0.837	0.000	0.824	0.863					
Entering Leg	92	89	1	0	182	1	0	2	0	3	0	107	2	0	109	1	1	298	0	300	594					
Exiting Leg						406					2					92					94					594
<b>Total</b>						588					5					201					394					1188

PDI File #: **250541 B**  
 Location: **N: Commonwealth Avenue S: Commonwealth Avenue**  
 Location: **E: Gas Station Driveway W: to Law Brooks Road**  
 City, State: **Concord, MA**  
 Client: **Bowman/L. Fall**  
 Site Code: **314420-01-002**  
 Count Date: **Tuesday, April 8, 2025**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**



PRECISION  
 D A T A  
 INDUSTRIES, LLC  
 157 Washington Street, Suite 2  
 Hudson, MA 01749  
 508-875-0100 datarequests@pdillc.com

Class:

**Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Commonwealth Avenue					Gas Station Driveway					Commonwealth Avenue					to Law Brooks Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	6
7:15 AM	3	2	0	0	5	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	6
7:30 AM	2	0	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
7:45 AM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	4
<b>Total</b>	<b>9</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>6</b>	<b>19</b>
8:00 AM	2	1	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	4
8:15 AM	2	2	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
8:30 AM	1	3	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	7
8:45 AM	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	4
<b>Total</b>	<b>8</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>4</b>	<b>19</b>
Grand Total	17	8	0	0	25	0	0	0	0	0	0	3	0	0	3	0	0	10	0	10	38
Approach %	68.0	32.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		
Total %	44.7	21.1	0.0	0.0	65.8	0.0	0.0	0.0	0.0	0.0	0.0	7.9	0.0	0.0	7.9	0.0	0.0	26.3	0.0	26.3	
Exiting Leg Total	13					0					8					17					38
Buses	6	2	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	12
% Buses	35.3	25.0	0.0	0.0	32.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40.0	0.0	40.0	31.6
Exiting Leg Total	4					0					2					6					12
Single-Unit Trucks	10	6	0	0	16	0	0	0	0	0	0	3	0	0	3	0	0	6	0	6	25
% Single-Unit	58.8	75.0	0.0	0.0	64.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0	0.0	0.0	60.0	0.0	60.0	65.8
Exiting Leg Total	9					0					6					10					25
Articulated Trucks	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Articulated	5.9	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6
Exiting Leg Total	0					0					0					1					1

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

	Commonwealth Avenue					Gas Station Driveway					Commonwealth Avenue					to Law Brooks Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	6
7:15 AM	3	2	0	0	5	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	6
7:30 AM	2	0	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
7:45 AM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	4
<b>Total Volume</b>	<b>9</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>6</b>	<b>19</b>
% Approach Total	81.8	18.2	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		
PHF	0.750	0.250	0.000	0.000	0.550	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.500	0.000	0.000	0.375	0.000	0.375	0.792
Buses	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	4
Buses %	22.2	0.0	0.0	0.0	18.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	33.3	21.1
Single-Unit Trucks	7	2	0	0	9	0	0	0	0	0	0	2	0	0	2	0	0	4	0	4	15
Single-Unit %	77.8	100.0	0.0	0.0	81.8	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0	0.0	0.0	66.7	0.0	66.7	78.9
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Buses	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	4
Single-Unit Trucks	7	2	0	0	9	0	0	0	0	0	0	2	0	0	2	0	0	4	0	4	15
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Entering Leg</b>	<b>9</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>6</b>	<b>19</b>
Buses	2					0					0					2					4
Single-Unit Trucks	6					0					2					7					15
Articulated Trucks	0					0					0					0					0
<b>Total Exiting Leg</b>	<b>8</b>					<b>0</b>					<b>2</b>					<b>9</b>					<b>19</b>

PDI File #: **250541 B**  
 Location: **N: Commonwealth Avenue S: Commonwealth Avenue**  
 Location: **E: Gas Station Driveway W: to Law Brooks Road**  
 City, State: **Concord, MA**  
 Client: **Bowman/L. Fall**  
 Site Code: **314420-01-002**  
 Count Date: **Tuesday, April 8, 2025**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



PRECISION  
 D A T A  
 INDUSTRIES, LLC

157 Washington Street, Suite 2  
 Hudson, MA 01749  
 508-875-0100 datarequests@pdillc.com

**Buses**

	Commonwealth Avenue					Gas Station Driveway					Commonwealth Avenue					to Law Brooks Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
7:15 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>4</b>
8:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3
8:45 AM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3
<b>Total</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>8</b>
Grand Total	6	2	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	12
Approach %	75.0	25.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		
Total %	50.0	16.7	0.0	0.0	66.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	33.3	
Exiting Leg Total	4					0					2					6					12

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Commonwealth Avenue					Gas Station Driveway					Commonwealth Avenue					to Law Brooks Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
8:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3
8:45 AM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3
Total Volume	4	2	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	8
% Approach Total	66.7	33.3	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		
PHF	0.500	0.500	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.500	0.667
Entering Leg	4	2	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	8
Exiting Leg	2					0					2					4					8
Total	8					0					2					6					16

PDI File #: **250541 B**  
 Location: **N: Commonwealth Avenue S: Commonwealth Avenue**  
 Location: **E: Gas Station Driveway W: to Law Brooks Road**  
 City, State: **Concord, MA**  
 Client: **Bowman/L. Fall**  
 Site Code: **314420-01-002**  
 Count Date: **Tuesday, April 8, 2025**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



PRECISION  
 D A T A  
 INDUSTRIES, LLC

157 Washington Street, Suite 2  
 Hudson, MA 01749  
 508-875-0100 datarequests@pdillc.com

**Single-Unit Trucks**

	Commonwealth Avenue					Gas Station Driveway					Commonwealth Avenue					to Law Brooks Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	4
7:15 AM	2	2	0	0	4	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	5
7:30 AM	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
7:45 AM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	4
<b>Total</b>	<b>7</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>4</b>	<b>15</b>
8:00 AM	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
8:15 AM	1	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
8:30 AM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	4
8:45 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<b>Total</b>	<b>3</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>10</b>
Grand Total	10	6	0	0	16	0	0	0	0	0	0	3	0	0	3	0	0	6	0	6	25
Approach %	62.5	37.5	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		
Total %	40.0	24.0	0.0	0.0	64.0	0.0	0.0	0.0	0.0	0.0	0.0	12.0	0.0	0.0	12.0	0.0	0.0	24.0	0.0	24.0	
Exiting Leg Total	9					0					6					10					25

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

	Commonwealth Avenue					Gas Station Driveway					Commonwealth Avenue					to Law Brooks Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	4
7:15 AM	2	2	0	0	4	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	5
7:30 AM	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
7:45 AM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	4
Total Volume	7	2	0	0	9	0	0	0	0	0	0	2	0	0	2	0	0	4	0	4	15
% Approach Total	77.8	22.2	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		
PHF	0.875	0.250	0.000	0.000	0.563	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.500	0.000	0.000	0.500	0.000	0.500	0.750
Entering Leg	7	2	0	0	9	0	0	0	0	0	0	2	0	0	2	0	0	4	0	4	15
Exiting Leg	6					0					2					7					15
Total	15					0					4					11					30

PDI File #: **250541 B**  
 Location: **N: Commonwealth Avenue S: Commonwealth Avenue**  
 Location: **E: Gas Station Driveway W: to Law Brooks Road**  
 City, State: **Concord, MA**  
 Client: **Bowman/L. Fall**  
 Site Code: **314420-01-002**  
 Count Date: **Tuesday, April 8, 2025**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



PRECISION  
 D A T A  
 INDUSTRIES, LLC

157 Washington Street, Suite 2  
 Hudson, MA 01749  
 508-875-0100 datarequests@pdillc.com

**Articulated Trucks**

	Commonwealth Avenue					Gas Station Driveway					Commonwealth Avenue					to Law Brooks Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	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	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Approach %	100.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	100.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0					0					0					1					1

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	Commonwealth Avenue					Gas Station Driveway					Commonwealth Avenue					to Law Brooks Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	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	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Approach Total	100.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250
Entering Leg	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Exiting Leg	0					0					0					1					1
Total	1					0					0					1					2



PDI File #: **250541 B**  
 Location: **N: Commonwealth Avenue S: Commonwealth Avenue**  
 Location: **E: Gas Station Driveway W: to Law Brooks Road**  
 City, State: **Concord, MA**  
 Client: **Bowman/L. Fall**  
 Site Code: **314420-01-002**  
 Count Date: **Tuesday, April 8, 2025**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



PRECISION  
 D A T A  
 INDUSTRIES, LLC

157 Washington Street, Suite 2  
 Hudson, MA 01749  
 508-875-0100 datarequests@pdillc.com

**Pedestrians**

	Commonwealth Avenue								Gas Station Driveway								Commonwealth Avenue								to Law Brooks Road								Total
	from North								from East								from South								from West								
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total		Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total		Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total		Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1			
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:30 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2			
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>				
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	3			
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1			
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>4</b>				
<b>Grand Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>7</b>			
Approach %	0	0	0	0	0	0	100		0	0	0	0	60	40		0	0	0	0	0	0	0	0	0	0	0	0	100					
Total %	0	0	0	0	0	0	14.3	14.3	0	0	0	0	42.9	28.6	71.4	0	0	0	0	0	0	0	0	0	0	0	0	14.3	14.3				
Exiting Leg Total	1								5								0								1								7

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

	Commonwealth Avenue								Gas Station Driveway								Commonwealth Avenue								to Law Brooks Road								Total
	from North								from East								from South								from West								
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total		Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total		Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total		Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:30 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2			
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	3			
<b>Total Volume</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>5</b>				
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	66.7	33.3		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0					
PHF	0.000	0.000	0.000	0.000	0.000	0.250	0.250		0.000	0.000	0.000	0.000	0.250	0.250	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.417				
Entering Leg	0	0	0	0	0	0	1	1	0	0	0	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	1	1	5			
Exiting Leg	1								3								0								1								5
<b>Total</b>	<b>2</b>								<b>6</b>								<b>0</b>								<b>2</b>								<b>10</b>

PDI File #: **250541 B**  
 Location: **N: Commonwealth Avenue S: Commonwealth Avenue**  
 Location: **E: Gas Station Driveway W: to Law Brooks Road**  
 City, State: **Concord, MA**  
 Client: **Bowman/L. Fall**  
 Site Code: **314420-01-002**  
 Count Date: **Tuesday, April 8, 2025**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



PRECISION  
D A T A  
INDUSTRIES, LLC

157 Washington Street, Suite 2  
Hudson, MA 01749  
508-875-0100 datarequests@pdillc.com

**Cars and Heavy Vehicles (Combined)**

	Commonwealth Avenue					Gas Station Driveway					Commonwealth Avenue					to Law Brooks Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	24	35	0	0	59	2	0	0	0	2	0	144	2	0	146	3	0	23	0	26	233
4:15 PM	26	34	0	0	60	0	0	2	0	2	0	106	3	0	109	1	0	28	0	29	200
4:30 PM	19	33	0	0	52	0	0	0	0	0	0	109	0	0	109	1	0	11	0	12	173
4:45 PM	33	35	0	0	68	0	0	0	0	0	0	125	1	0	126	0	0	26	0	26	220
<b>Total</b>	<b>102</b>	<b>137</b>	<b>0</b>	<b>0</b>	<b>239</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>484</b>	<b>6</b>	<b>0</b>	<b>490</b>	<b>5</b>	<b>0</b>	<b>88</b>	<b>0</b>	<b>93</b>	<b>826</b>
5:00 PM	22	37	0	0	59	0	1	0	0	1	1	102	5	0	108	0	0	31	0	31	199
5:15 PM	26	31	0	0	57	0	0	2	0	2	2	94	2	0	98	0	0	24	0	24	181
5:30 PM	22	32	0	0	54	0	0	0	0	0	0	69	0	0	69	0	0	21	0	21	144
5:45 PM	25	38	0	0	63	0	0	0	0	0	0	54	0	0	54	0	0	27	0	27	144
<b>Total</b>	<b>95</b>	<b>138</b>	<b>0</b>	<b>0</b>	<b>233</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>3</b>	<b>319</b>	<b>7</b>	<b>0</b>	<b>329</b>	<b>0</b>	<b>0</b>	<b>103</b>	<b>0</b>	<b>103</b>	<b>668</b>
Grand Total	197	275	0	0	472	2	1	4	0	7	3	803	13	0	819	5	0	191	0	196	1494
Approach %	41.7	58.3	0.0	0.0		28.6	14.3	57.1	0.0		0.4	98.0	1.6	0.0		2.6	0.0	97.4	0.0		
Total %	13.2	18.4	0.0	0.0	31.6	0.1	0.1	0.3	0.0	0.5	0.2	53.7	0.9	0.0	54.8	0.3	0.0	12.8	0.0	13.1	
Exiting Leg Total	996					3					284					211					1494
Cars	192	272	0	0	464	2	1	4	0	7	3	796	13	0	812	5	0	188	0	193	1476
% Cars	97.5	98.9	0.0	0.0	98.3	100.0	100.0	100.0	0.0	100.0	100.0	99.1	100.0	0.0	99.1	100.0	0.0	98.4	0.0	98.5	98.8
Exiting Leg Total	986					3					281					206					1476
Heavy Vehicles	5	3	0	0	8	0	0	0	0	0	0	7	0	0	7	0	0	3	0	3	18
% Heavy Vehicles	2.5	1.1	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.9	0.0	0.0	1.6	0.0	1.5	1.2
Exiting Leg Total	10					0					3					5					18

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Commonwealth Avenue					Gas Station Driveway					Commonwealth Avenue					to Law Brooks Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	24	35	0	0	59	2	0	0	0	2	0	144	2	0	146	3	0	23	0	26	233
4:15 PM	26	34	0	0	60	0	0	2	0	2	0	106	3	0	109	1	0	28	0	29	200
4:30 PM	19	33	0	0	52	0	0	0	0	0	0	109	0	0	109	1	0	11	0	12	173
4:45 PM	33	35	0	0	68	0	0	0	0	0	0	125	1	0	126	0	0	26	0	26	220
Total Volume	102	137	0	0	239	2	0	2	0	4	0	484	6	0	490	5	0	88	0	93	826
% Approach Total	42.7	57.3	0.0	0.0		50.0	0.0	50.0	0.0		0.0	98.8	1.2	0.0		5.4	0.0	94.6	0.0		
PHF	0.773	0.979	0.000	0.000	0.879	0.250	0.000	0.250	0.000	0.500	0.000	0.840	0.500	0.000	0.839	0.417	0.000	0.786	0.000	0.802	0.886
Cars	97	134	0	0	231	2	0	2	0	4	0	481	6	0	487	5	0	85	0	90	812
Cars %	95.1	97.8	0.0	0.0	96.7	100.0	0.0	100.0	0.0	100.0	0.0	99.4	100.0	0.0	99.4	100.0	0.0	96.6	0.0	96.8	98.3
Heavy Vehicles	5	3	0	0	8	0	0	0	0	0	0	3	0	0	3	0	0	3	0	3	14
Heavy Vehicles %	4.9	2.2	0.0	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.6	0.0	0.0	3.4	0.0	3.2	1.7
Cars Enter Leg	97	134	0	0	231	2	0	2	0	4	0	481	6	0	487	5	0	85	0	90	812
Heavy Enter Leg	5	3	0	0	8	0	0	0	0	0	0	3	0	0	3	0	0	3	0	3	14
Total Entering Leg	102	137	0	0	239	2	0	2	0	4	0	484	6	0	490	5	0	88	0	93	826
Cars Exiting Leg	568					0					141					103					812
Heavy Exiting Leg	6					0					3					5					14
Total Exiting Leg	574					0					144					108					826

PDI File #: **250541 B**  
 Location: **N: Commonwealth Avenue S: Commonwealth Avenue**  
 Location: **E: Gas Station Driveway W: to Law Brooks Road**  
 City, State: **Concord, MA**  
 Client: **Bowman/L. Fall**  
 Site Code: **314420-01-002**  
 Count Date: **Tuesday, April 8, 2025**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



PRECISION  
 D A T A  
 INDUSTRIES, LLC  
 157 Washington Street, Suite 2  
 Hudson, MA 01749  
 508-875-0100 datarequests@pdillc.com

**Cars**

	Commonwealth Avenue					Gas Station Driveway					Commonwealth Avenue					to Law Brooks Road					Total					
	from North					from East					from South					from West										
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total						
4:00 PM	22	34	0	0	56	2	0	0	0	2	0	143	2	0	145	3	0	22	0	25	228					
4:15 PM	24	33	0	0	57	0	0	2	0	2	0	105	3	0	108	1	0	27	0	28	195					
4:30 PM	18	33	0	0	51	0	0	0	0	0	0	108	0	0	108	1	0	11	0	12	171					
4:45 PM	33	34	0	0	67	0	0	0	0	0	0	125	1	0	126	0	0	25	0	25	218					
<b>Total</b>	<b>97</b>	<b>134</b>	<b>0</b>	<b>0</b>	<b>231</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>481</b>	<b>6</b>	<b>0</b>	<b>487</b>	<b>5</b>	<b>0</b>	<b>85</b>	<b>0</b>	<b>90</b>	<b>812</b>					
5:00 PM	22	37	0	0	59	0	1	0	0	1	1	100	5	0	106	0	0	31	0	31	197					
5:15 PM	26	31	0	0	57	0	0	2	0	2	2	93	2	0	97	0	0	24	0	24	180					
5:30 PM	22	32	0	0	54	0	0	0	0	0	0	68	0	0	68	0	0	21	0	21	143					
5:45 PM	25	38	0	0	63	0	0	0	0	0	0	54	0	0	54	0	0	27	0	27	144					
<b>Total</b>	<b>95</b>	<b>138</b>	<b>0</b>	<b>0</b>	<b>233</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>3</b>	<b>315</b>	<b>7</b>	<b>0</b>	<b>325</b>	<b>0</b>	<b>0</b>	<b>103</b>	<b>0</b>	<b>103</b>	<b>664</b>					
Grand Total	192	272	0	0	464	2	1	4	0	7	3	796	13	0	812	5	0	188	0	193	1476					
Approach %	41.4	58.6	0.0	0.0		28.6	14.3	57.1	0.0		0.4	98.0	1.6	0.0		2.6	0.0	97.4	0.0							
Total %	13.0	18.4	0.0	0.0	31.4	0.1	0.1	0.3	0.0	0.5	0.2	53.9	0.9	0.0	55.0	0.3	0.0	12.7	0.0	13.1						
Exiting Leg Total						986					3					281					206					1476

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

	Commonwealth Avenue					Gas Station Driveway					Commonwealth Avenue					to Law Brooks Road					Total					
	from North					from East					from South					from West										
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total						
4:00 PM	22	34	0	0	56	2	0	0	0	2	0	143	2	0	145	3	0	22	0	25	228					
4:15 PM	24	33	0	0	57	0	0	2	0	2	0	105	3	0	108	1	0	27	0	28	195					
4:30 PM	18	33	0	0	51	0	0	0	0	0	0	108	0	0	108	1	0	11	0	12	171					
4:45 PM	33	34	0	0	67	0	0	0	0	0	0	125	1	0	126	0	0	25	0	25	218					
<b>Total Volume</b>	<b>97</b>	<b>134</b>	<b>0</b>	<b>0</b>	<b>231</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>481</b>	<b>6</b>	<b>0</b>	<b>487</b>	<b>5</b>	<b>0</b>	<b>85</b>	<b>0</b>	<b>90</b>	<b>812</b>					
% Approach Total	42.0	58.0	0.0	0.0		50.0	0.0	50.0	0.0		0.0	98.8	1.2	0.0		5.6	0.0	94.4	0.0							
PHF	0.735	0.985	0.000	0.000	0.862	0.250	0.000	0.250	0.000	0.500	0.000	0.841	0.500	0.000	0.840	0.417	0.000	0.787	0.000	0.804	0.890					
Entering Leg	97	134	0	0	231	2	0	2	0	4	0	481	6	0	487	5	0	85	0	90	812					
Exiting Leg						568					0					141					103					812
<b>Total</b>						799					4					628					193					1624

PDI File #: 250541 B  
 Location: N: Commonwealth Avenue S: Commonwealth Avenue  
 Location: E: Gas Station Driveway W: to Law Brooks Road  
 City, State: Concord, MA  
 Client: Bowman/L. Fall  
 Site Code: 314420-01-002  
 Count Date: Tuesday, April 8, 2025  
 Start Time: 4:00 PM  
 End Time: 6:00 PM



**Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Commonwealth Avenue					Gas Station Driveway					Commonwealth Avenue					to Law Brooks Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	2	1	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	5
4:15 PM	2	1	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	5
4:30 PM	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
4:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
<b>Total</b>	<b>5</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>14</b>
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>
Grand Total	5	3	0	0	8	0	0	0	0	0	0	7	0	0	7	0	0	3	0	3	18
Approach %	62.5	37.5	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		
Total %	27.8	16.7	0.0	0.0	44.4	0.0	0.0	0.0	0.0	0.0	0.0	38.9	0.0	0.0	38.9	0.0	0.0	16.7	0.0	16.7	
Exiting Leg Total	10					0					3					5					18
Buses	3	0	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	5
% Buses	60.0	0.0	0.0	0.0	37.5	0.0	0.0	0.0	0.0	0.0	0.0	14.3	0.0	0.0	14.3	0.0	0.0	33.3	0.0	33.3	27.8
Exiting Leg Total	2					0					0					3					5
Single-Unit Trucks	2	3	0	0	5	0	0	0	0	0	0	6	0	0	6	0	0	2	0	2	13
% Single-Unit	40.0	100.0	0.0	0.0	62.5	0.0	0.0	0.0	0.0	0.0	0.0	85.7	0.0	0.0	85.7	0.0	0.0	66.7	0.0	66.7	72.2
Exiting Leg Total	8					0					3					2					13
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total	0					0					0					0					0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

	Commonwealth Avenue					Gas Station Driveway					Commonwealth Avenue					to Law Brooks Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	2	1	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	5
4:15 PM	2	1	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	5
4:30 PM	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
4:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
Total Volume	5	3	0	0	8	0	0	0	0	0	0	3	0	0	3	0	0	3	0	3	14
% Approach Total	62.5	37.5	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		
PHF	0.625	0.750	0.000	0.000	0.667	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.000	0.750	0.000	0.000	0.750	0.000	0.750	0.700
Buses	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	4
Buses %	60.0	0.0	0.0	0.0	37.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	33.3	28.6
Single-Unit Trucks	2	3	0	0	5	0	0	0	0	0	0	3	0	0	3	0	0	2	0	2	10
Single-Unit %	40.0	100.0	0.0	0.0	62.5	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0	0.0	0.0	66.7	0.0	66.7	71.4
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Buses	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	4
Single-Unit Trucks	2	3	0	0	5	0	0	0	0	0	0	3	0	0	3	0	0	2	0	2	10
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Entering Leg	5	3	0	0	8	0	0	0	0	0	0	3	0	0	3	0	0	3	0	3	14
Buses	1					0					0					3					4
Single-Unit Trucks	5					0					3					2					10
Articulated Trucks	0					0					0					0					0
Total Exiting Leg	6					0					3					5					14

PDI File #: **250541 B**  
 Location: **N: Commonwealth Avenue S: Commonwealth Avenue**  
 Location: **E: Gas Station Driveway W: to Law Brooks Road**  
 City, State: **Concord, MA**  
 Client: **Bowman/L. Fall**  
 Site Code: **314420-01-002**  
 Count Date: **Tuesday, April 8, 2025**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



PRECISION  
 D A T A  
 INDUSTRIES, LLC

157 Washington Street, Suite 2  
 Hudson, MA 01749  
 508-875-0100 datarequests@pdillc.com

**Buses**

	Commonwealth Avenue					Gas Station Driveway					Commonwealth Avenue					to Law Brooks Road					Total	
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
4:00 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
4:15 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
4:30 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	
<b>Total</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>4</b>	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	
5:15 PM	0	0	0	0	0	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	0	0	0	0	0	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	
<b>Grand Total</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>5</b>	
Approach %	100.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0			
Total %	60.0	0.0	0.0	0.0	60.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	0.0	0.0	20.0	0.0	0.0	20.0	0.0	20.0		
Exiting Leg Total						2					0					0					3	5

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Commonwealth Avenue					Gas Station Driveway					Commonwealth Avenue					to Law Brooks Road					Total	
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
4:00 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
4:15 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
4:30 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	
<b>Total Volume</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>4</b>	
% Approach Total	100.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0			
PHF	0.750	0.000	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	1.000	
Entering Leg	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	4	
Exiting Leg						1					0					0					3	4
<b>Total</b>						4					0					0					4	8

PDI File #: **250541 B**  
 Location: **N: Commonwealth Avenue S: Commonwealth Avenue**  
 Location: **E: Gas Station Driveway W: to Law Brooks Road**  
 City, State: **Concord, MA**  
 Client: **Bowman/L. Fall**  
 Site Code: **314420-01-002**  
 Count Date: **Tuesday, April 8, 2025**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



PRECISION  
 D A T A  
 INDUSTRIES, LLC

157 Washington Street, Suite 2  
 Hudson, MA 01749  
 508-875-0100 datarequests@pdillc.com

**Single-Unit Trucks**

	Commonwealth Avenue					Gas Station Driveway					Commonwealth Avenue					to Law Brooks Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	1	1	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	4
4:15 PM	1	1	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	4
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
4:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<b>Total</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>10</b>
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>
<b>Grand Total</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>13</b>
Approach %	40.0	60.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		
Total %	15.4	23.1	0.0	0.0	38.5	0.0	0.0	0.0	0.0	0.0	0.0	46.2	0.0	0.0	46.2	0.0	0.0	15.4	0.0	15.4	
Exiting Leg Total	8					0					3					2					13

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Commonwealth Avenue					Gas Station Driveway					Commonwealth Avenue					to Law Brooks Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	1	1	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	4
4:15 PM	1	1	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	4
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
4:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<b>Total Volume</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>10</b>
% Approach Total	40.0	60.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		
PHF	0.500	0.750	0.000	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.000	0.750	0.000	0.000	0.500	0.000	0.500	0.625
Entering Leg	2	3	0	0	5	0	0	0	0	0	0	3	0	0	3	0	0	2	0	2	10
Exiting Leg	5					0					3					2					10
<b>Total</b>	<b>10</b>					<b>0</b>					<b>6</b>					<b>4</b>					<b>20</b>

PDI File #: **250541 B**  
 Location: **N: Commonwealth Avenue S: Commonwealth Avenue**  
 Location: **E: Gas Station Driveway W: to Law Brooks Road**  
 City, State: **Concord, MA**  
 Client: **Bowman/L. Fall**  
 Site Code: **314420-01-002**  
 Count Date: **Tuesday, April 8, 2025**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



PRECISION  
 D A T A  
 INDUSTRIES, LLC

157 Washington Street, Suite 2  
 Hudson, MA 01749  
 508-875-0100 datarequests@pdillc.com

**Articulated Trucks**

	Commonwealth Avenue					Gas Station Driveway					Commonwealth Avenue					to Law Brooks Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	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	0	0	0	0	0
4:30 PM	0	0	0	0	0	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	0	0	0	0	0
<b>Total</b>	0	0	0	0	0	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	0	0	0	0	0
5:15 PM	0	0	0	0	0	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	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total	0					0					0					0					0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Commonwealth Avenue					Gas Station Driveway					Commonwealth Avenue					to Law Brooks Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	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	0	0	0	0	0
4:30 PM	0	0	0	0	0	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	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0					0					0					0					0
Total	0					0					0					0					0



PDI File #: 250541 B  
 Location: N: Commonwealth Avenue S: Commonwealth Avenue  
 Location: E: Gas Station Driveway W: to Law Brooks Road  
 City, State: Concord, MA  
 Client: Bowman/L. Fall  
 Site Code: 314420-01-002  
 Count Date: Tuesday, April 8, 2025  
 Start Time: 4:00 PM  
 End Time: 6:00 PM  
 Class:



157 Washington Street, Suite 2  
 Hudson, MA 01749  
 508-875-0100 datarequests@pdillc.com

**Pedestrians**

	Commonwealth Avenue								Gas Station Driveway								Commonwealth Avenue								to Law Brooks Road								Total
	from North								from East								from South								from West								
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total		Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total		Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total		Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	1		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	2		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	1	1		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
<b>Total</b>	0	0	0	0	0	0	0	0	0	0	0	3	1	4		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	1	0	1		0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	3	3		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	1		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
<b>Total</b>	0	0	0	0	0	0	0	0	0	0	0	2	3	5		0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	6	
Grand Total	0	0	0	0	0	0	0	0	0	0	0	5	4	9		0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	10	
Approach %	0	0	0	0	0	0	0	0	0	0	0	55.6	44.4		0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0			
Total %	0	0	0	0	0	0	0	0	0	0	0	50	40	90		0	0	0	0	10	0	10	0	0	0	0	0	0	0	0	0		
Exiting Leg Total	0							9							1							0											

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

	Commonwealth Avenue								Gas Station Driveway								Commonwealth Avenue								to Law Brooks Road								Total
	from North								from East								from South								from West								
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total		Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total		Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total		Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	1		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	1	0	1		0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	3	3		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
Total Volume	0	0	0	0	0	0	0	0	0	0	0	1	4	5		0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	6	
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	80.0		0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.333	0.417	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500			
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	1	4	5		0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	6	
Exiting Leg	0							5							1							0											
Total	0							10							2							0											

PDI File #: **250541 C**  
 Location: **N: Driveway S: Laws Brook Road**  
 Location: **E: to Commonwealth Avenue W: Laws Brook Road**  
 City, State: **Concord, MA**  
 Client: **Bowman/L. Fall**  
 Site Code: **314420-01-002**  
 Count Date: **Tuesday, April 8, 2025**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



PRECISION  
 D A T A  
 INDUSTRIES, LLC  
 157 Washington Street, Suite 2  
 Hudson, MA 01749  
 508-875-0100 datarequests@pdillc.com

**Cars and Heavy Vehicles (Combined)**

	Driveway					to Commonwealth Avenue					Laws Brook Road					Laws Brook Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	14	0	0	14	0	0	13	0	13	141	76	0	0	217	244
7:15 AM	0	0	0	0	0	0	12	0	0	12	0	0	13	0	13	110	90	0	0	200	225
7:30 AM	0	0	0	0	0	0	14	0	0	14	0	0	12	0	12	127	92	0	0	219	245
7:45 AM	0	0	1	0	1	0	18	0	0	18	0	0	11	0	11	142	89	0	0	231	261
<b>Total</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>58</b>	<b>0</b>	<b>0</b>	<b>58</b>	<b>0</b>	<b>0</b>	<b>49</b>	<b>0</b>	<b>49</b>	<b>520</b>	<b>347</b>	<b>0</b>	<b>0</b>	<b>867</b>	<b>975</b>
8:00 AM	0	0	0	0	0	0	16	0	0	16	0	0	24	0	24	109	70	0	0	179	219
8:15 AM	0	0	0	0	0	0	31	0	0	31	0	0	28	0	28	101	69	0	0	170	229
8:30 AM	0	1	0	0	1	0	20	0	0	20	0	1	19	0	20	80	94	0	0	174	215
8:45 AM	0	1	1	0	2	0	34	0	0	34	0	0	22	0	22	145	73	0	0	218	276
<b>Total</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>101</b>	<b>0</b>	<b>0</b>	<b>101</b>	<b>0</b>	<b>1</b>	<b>93</b>	<b>0</b>	<b>94</b>	<b>435</b>	<b>306</b>	<b>0</b>	<b>0</b>	<b>741</b>	<b>939</b>
Grand Total	0	2	2	0	4	0	159	0	0	159	0	1	142	0	143	955	653	0	0	1608	1914
Approach %	0.0	50.0	50.0	0.0		0.0	100.0	0.0	0.0		0.0	0.7	99.3	0.0		59.4	40.6	0.0	0.0		
Total %	0.0	0.1	0.1	0.0	0.2	0.0	8.3	0.0	0.0	8.3	0.0	0.1	7.4	0.0	7.5	49.9	34.1	0.0	0.0	84.0	
Exiting Leg Total	1					655					957					301					1914
Cars	0	2	2	0	4	0	145	0	0	145	0	1	132	0	133	934	640	0	0	1574	1856
% Cars	0.0	100.0	100.0	0.0	100.0	0.0	91.2	0.0	0.0	91.2	0.0	100.0	93.0	0.0	93.0	97.8	98.0	0.0	0.0	97.9	97.0
Exiting Leg Total	1					642					936					277					1856
Heavy Vehicles	0	0	0	0	0	0	14	0	0	14	0	0	10	0	10	21	13	0	0	34	58
% Heavy Vehicles	0.0	0.0	0.0	0.0	0.0	0.0	8.8	0.0	0.0	8.8	0.0	0.0	7.0	0.0	7.0	2.2	2.0	0.0	0.0	2.1	3.0
Exiting Leg Total	0					13					21					24					58

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Driveway					to Commonwealth Avenue					Laws Brook Road					Laws Brook Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	14	0	0	14	0	0	13	0	13	141	76	0	0	217	244
7:15 AM	0	0	0	0	0	0	12	0	0	12	0	0	13	0	13	110	90	0	0	200	225
7:30 AM	0	0	0	0	0	0	14	0	0	14	0	0	12	0	12	127	92	0	0	219	245
7:45 AM	0	0	1	0	1	0	18	0	0	18	0	0	11	0	11	142	89	0	0	231	261
Total Volume	0	0	1	0	1	0	58	0	0	58	0	0	49	0	49	520	347	0	0	867	975
% Approach Total	0.0	0.0	100.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		60.0	40.0	0.0	0.0		
PHF	0.000	0.000	0.250	0.000	0.250	0.000	0.806	0.000	0.000	0.806	0.000	0.000	0.942	0.000	0.942	0.915	0.943	0.000	0.000	0.938	0.934
Cars	0	0	1	0	1	0	52	0	0	52	0	0	47	0	47	511	340	0	0	851	951
Cars %	0.0	0.0	100.0	0.0	100.0	0.0	89.7	0.0	0.0	89.7	0.0	0.0	95.9	0.0	95.9	98.3	98.0	0.0	0.0	98.2	97.5
Heavy Vehicles	0	0	0	0	0	0	6	0	0	6	0	0	2	0	2	9	7	0	0	16	24
Heavy Vehicles %	0.0	0.0	0.0	0.0	0.0	0.0	10.3	0.0	0.0	10.3	0.0	0.0	4.1	0.0	4.1	1.7	2.0	0.0	0.0	1.8	2.5
Cars Enter Leg	0	0	1	0	1	0	52	0	0	52	0	0	47	0	47	511	340	0	0	851	951
Heavy Enter Leg	0	0	0	0	0	0	6	0	0	6	0	0	2	0	2	9	7	0	0	16	24
Total Entering Leg	0	0	1	0	1	0	58	0	0	58	0	0	49	0	49	520	347	0	0	867	975
Cars Exiting Leg	0					341					511					99					951
Heavy Exiting Leg	0					7					9					8					24
Total Exiting Leg	0					348					520					107					975

PDI File #: **250541 C**  
 Location: **N: Driveway S: Laws Brook Road**  
 Location: **E: to Commonwealth Avenue W: Laws Brook Road**  
 City, State: **Concord, MA**  
 Client: **Bowman/L. Fall**  
 Site Code: **314420-01-002**  
 Count Date: **Tuesday, April 8, 2025**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



PRECISION  
 D A T A  
 INDUSTRIES, LLC

157 Washington Street, Suite 2  
 Hudson, MA 01749  
 508-875-0100 datarequests@pdillc.com

**Cars**

	Driveway					to Commonwealth Avenue					Laws Brook Road					Laws Brook Road					Total					
	from North					from East					from South					from West										
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total						
7:00 AM	0	0	0	0	0	0	13	0	0	13	0	0	11	0	11	139	72	0	0	211	235					
7:15 AM	0	0	0	0	0	0	10	0	0	10	0	0	13	0	13	109	89	0	0	198	221					
7:30 AM	0	0	0	0	0	0	12	0	0	12	0	0	12	0	12	125	92	0	0	217	241					
7:45 AM	0	0	1	0	1	0	17	0	0	17	0	0	11	0	11	138	87	0	0	225	254					
<b>Total</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>52</b>	<b>0</b>	<b>0</b>	<b>52</b>	<b>0</b>	<b>0</b>	<b>47</b>	<b>0</b>	<b>47</b>	<b>511</b>	<b>340</b>	<b>0</b>	<b>0</b>	<b>851</b>	<b>951</b>					
8:00 AM	0	0	0	0	0	0	14	0	0	14	0	0	21	0	21	107	69	0	0	176	211					
8:15 AM	0	0	0	0	0	0	29	0	0	29	0	0	24	0	24	97	69	0	0	166	219					
8:30 AM	0	1	0	0	1	0	19	0	0	19	0	1	18	0	19	78	91	0	0	169	208					
8:45 AM	0	1	1	0	2	0	31	0	0	31	0	0	22	0	22	141	71	0	0	212	267					
<b>Total</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>93</b>	<b>0</b>	<b>0</b>	<b>93</b>	<b>0</b>	<b>1</b>	<b>85</b>	<b>0</b>	<b>86</b>	<b>423</b>	<b>300</b>	<b>0</b>	<b>0</b>	<b>723</b>	<b>905</b>					
Grand Total	0	2	2	0	4	0	145	0	0	145	0	1	132	0	133	934	640	0	0	1574	1856					
Approach %	0.0	50.0	50.0	0.0		0.0	100.0	0.0	0.0		0.0	0.8	99.2	0.0		59.3	40.7	0.0	0.0							
Total %	0.0	0.1	0.1	0.0	0.2	0.0	7.8	0.0	0.0	7.8	0.0	0.1	7.1	0.0	7.2	50.3	34.5	0.0	0.0	84.8						
Exiting Leg Total						1					642					936					277					1856

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

	Driveway					to Commonwealth Avenue					Laws Brook Road					Laws Brook Road					Total					
	from North					from East					from South					from West										
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total						
7:00 AM	0	0	0	0	0	0	13	0	0	13	0	0	11	0	11	139	72	0	0	211	235					
7:15 AM	0	0	0	0	0	0	10	0	0	10	0	0	13	0	13	109	89	0	0	198	221					
7:30 AM	0	0	0	0	0	0	12	0	0	12	0	0	12	0	12	125	92	0	0	217	241					
7:45 AM	0	0	1	0	1	0	17	0	0	17	0	0	11	0	11	138	87	0	0	225	254					
<b>Total Volume</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>52</b>	<b>0</b>	<b>0</b>	<b>52</b>	<b>0</b>	<b>0</b>	<b>47</b>	<b>0</b>	<b>47</b>	<b>511</b>	<b>340</b>	<b>0</b>	<b>0</b>	<b>851</b>	<b>951</b>					
% Approach Total	0.0	0.0	100.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		60.0	40.0	0.0	0.0							
PHF	0.000	0.000	0.250	0.000	0.250	0.000	0.765	0.000	0.000	0.765	0.000	0.000	0.904	0.000	0.904	0.919	0.924	0.000	0.000	0.946	0.936					
Entering Leg	0	0	1	0	1	0	52	0	0	52	0	0	47	0	47	511	340	0	0	851	951					
Exiting Leg						0					341					511					99	951				
<b>Total</b>						1					393					558					950					1902

PDI File #: 250541 C  
 Location: N: Driveway S: Laws Brook Road  
 Location: E: to Commonwealth Avenue W: Laws Brook Road  
 City, State: Concord, MA  
 Client: Bowman/L. Fall  
 Site Code: 314420-01-002  
 Count Date: Tuesday, April 8, 2025  
 Start Time: 7:00 AM  
 End Time: 9:00 AM



**Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Driveway					to Commonwealth Avenue					Laws Brook Road					Laws Brook Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	2	0	2	2	4	0	0	6	9
7:15 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	1	1	0	0	2	4
7:30 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2	0	0	0	2	4
7:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	4	2	0	0	6	7
<b>Total</b>	0	0	0	0	0	0	6	0	0	6	0	0	2	0	2	9	7	0	0	16	24
8:00 AM	0	0	0	0	0	0	2	0	0	2	0	0	3	0	3	2	1	0	0	3	8
8:15 AM	0	0	0	0	0	0	2	0	0	2	0	0	4	0	4	4	0	0	0	4	10
8:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	2	3	0	0	5	7
8:45 AM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	4	2	0	0	6	9
<b>Total</b>	0	0	0	0	0	0	8	0	0	8	0	0	8	0	8	12	6	0	0	18	34
Grand Total	0	0	0	0	0	0	14	0	0	14	0	0	10	0	10	21	13	0	0	34	58
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0	0.0	0.0	100.0	0.0	100.0	61.8	38.2	0.0	0.0	0.0	
Total %	0.0	0.0	0.0	0.0	0.0	0.0	24.1	0.0	0.0	24.1	0.0	0.0	17.2	0.0	17.2	36.2	22.4	0.0	0.0	58.6	
Exiting Leg Total	0					13					21					24					58
Buses	0	0	0	0	0	0	6	0	0	6	0	0	1	0	1	2	4	0	0	6	13
% Buses	0.0	0.0	0.0	0.0	0.0	0.0	42.9	0.0	0.0	42.9	0.0	0.0	10.0	0.0	10.0	9.5	30.8	0.0	0.0	17.6	22.4
Exiting Leg Total	0					4					2					7					13
Single-Unit Trucks	0	0	0	0	0	0	7	0	0	7	0	0	4	0	4	14	9	0	0	23	34
% Single-Unit	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	50.0	0.0	0.0	40.0	0.0	40.0	66.7	69.2	0.0	0.0	67.6	58.6
Exiting Leg Total	0					9					14					11					34
Articulated Trucks	0	0	0	0	0	0	1	0	0	1	0	0	5	0	5	5	0	0	0	5	11
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	7.1	0.0	0.0	7.1	0.0	0.0	50.0	0.0	50.0	23.8	0.0	0.0	0.0	14.7	19.0
Exiting Leg Total	0					0					5					6					11

**Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:**

	Driveway					to Commonwealth Avenue					Laws Brook Road					Laws Brook Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
8:00 AM	0	0	0	0	0	0	2	0	0	2	0	0	3	0	3	2	1	0	0	3	8
8:15 AM	0	0	0	0	0	0	2	0	0	2	0	0	4	0	4	4	0	0	0	4	10
8:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	2	3	0	0	5	7
8:45 AM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	4	2	0	0	6	9
<b>Total Volume</b>	0	0	0	0	0	0	8	0	0	8	0	0	8	0	8	12	6	0	0	18	34
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0	0.0	0.0	100.0	0.0	100.0	66.7	33.3	0.0	0.0	0.0	
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.667	0.000	0.000	0.667	0.000	0.000	0.500	0.000	0.500	0.750	0.500	0.000	0.000	0.750	0.850
Buses	0	0	0	0	0	0	4	0	0	4	0	0	1	0	1	0	2	0	0	2	7
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	50.0	0.0	0.0	12.5	0.0	12.5	0.0	33.3	0.0	0.0	11.1	20.6
Single-Unit Trucks	0	0	0	0	0	0	3	0	0	3	0	0	4	0	4	11	4	0	0	15	22
Single-Unit %	0.0	0.0	0.0	0.0	0.0	0.0	37.5	0.0	0.0	37.5	0.0	0.0	50.0	0.0	50.0	91.7	66.7	0.0	0.0	83.3	64.7
Articulated Trucks	0	0	0	0	0	0	1	0	0	1	0	0	3	0	3	1	0	0	0	1	5
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	12.5	0.0	0.0	12.5	0.0	0.0	37.5	0.0	37.5	8.3	0.0	0.0	0.0	5.6	14.7
Buses	0	0	0	0	0	0	4	0	0	4	0	0	1	0	1	0	2	0	0	2	7
Single-Unit Trucks	0	0	0	0	0	0	3	0	0	3	0	0	4	0	4	11	4	0	0	15	22
Articulated Trucks	0	0	0	0	0	0	1	0	0	1	0	0	3	0	3	1	0	0	0	1	5
<b>Total Entering Leg</b>	0	0	0	0	0	0	8	0	0	8	0	0	8	0	8	12	6	0	0	18	34
Buses	0					2					0					5					7
Single-Unit Trucks	0					4					11					7					22
Articulated Trucks	0					0					1					4					5
<b>Total Exiting Leg</b>	0					6					12					16					34

PDI File #: **250541 C**  
 Location: **N: Driveway S: Laws Brook Road**  
 Location: **E: to Commonwealth Avenue W: Laws Brook Road**  
 City, State: **Concord, MA**  
 Client: **Bowman/L. Fall**  
 Site Code: **314420-01-002**  
 Count Date: **Tuesday, April 8, 2025**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



157 Washington Street, Suite 2  
 Hudson, MA 01749  
 508-875-0100 datarequests@pdillc.com

**Buses**

	Driveway					to Commonwealth Avenue					Laws Brook Road					Laws Brook Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	4	4
7:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>6</b>
8:00 AM	0	0	0	0	0	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	1	0	0	1	0	0	1	0	1	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
8:45 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>7</b>
Grand Total	0	0	0	0	0	0	6	0	0	6	0	0	1	0	1	2	4	0	0	6	13
Approach %	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		33.3	66.7	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	46.2	0.0	0.0	46.2	0.0	0.0	7.7	0.0	7.7	15.4	30.8	0.0	0.0	46.2	
Exiting Leg Total	0					4					2					7					13

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Driveway					to Commonwealth Avenue					Laws Brook Road					Laws Brook Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
8:00 AM	0	0	0	0	0	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	1	0	0	1	0	0	1	0	1	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
8:45 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3
<b>Total Volume</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>7</b>
% Approach Total	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		0.0	100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.500	0.000	0.000	0.250	0.000	0.250	0.000	0.500	0.000	0.000	0.500	0.583
Entering Leg	0	0	0	0	0	0	4	0	0	4	0	0	1	0	1	0	2	0	0	2	7
Exiting Leg	0					2					0					5					7
<b>Total</b>	<b>0</b>					<b>6</b>					<b>1</b>					<b>7</b>					<b>14</b>

PDI File #: 250541 C  
 Location: N: Driveway S: Laws Brook Road  
 Location: E: to Commonwealth Avenue W: Laws Brook Road  
 City, State: Concord, MA  
 Client: Bowman/L. Fall  
 Site Code: 314420-01-002  
 Count Date: Tuesday, April 8, 2025  
 Start Time: 7:00 AM  
 End Time: 9:00 AM  
 Class:



PRECISION  
 D A T A  
 INDUSTRIES, LLC

157 Washington Street, Suite 2  
 Hudson, MA 01749  
 508-875-0100 datarequests@pdillc.com

**Single-Unit Trucks**

	Driveway					to Commonwealth Avenue					Laws Brook Road					Laws Brook Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3
7:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	1	0	0	2	3
7:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	2	0	0	4	5
<b>Total</b>	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	3	5	0	0	8	12
8:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	2	0	2	2	1	0	0	3	6
8:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	4	0	0	0	4	6
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2	2	0	0	4	5
8:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3	1	0	0	4	5
<b>Total</b>	0	0	0	0	0	0	3	0	0	3	0	0	4	0	4	11	4	0	0	15	22
Grand Total	0	0	0	0	0	0	7	0	0	7	0	0	4	0	4	14	9	0	0	23	34
Approach %	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		60.9	39.1	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	20.6	0.0	0.0	20.6	0.0	0.0	11.8	0.0	11.8	41.2	26.5	0.0	0.0	67.6	
Exiting Leg Total						9					14					11					34

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

	Driveway					to Commonwealth Avenue					Laws Brook Road					Laws Brook Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	2	0	0	4	5
7:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	2	0	2	2	1	0	0	3	6
8:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	4	0	0	0	4	6
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2	2	0	0	4	5
<b>Total Volume</b>	0	0	0	0	0	0	3	0	0	3	0	0	4	0	4	10	5	0	0	15	22
% Approach Total	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		66.7	33.3	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.000	0.750	0.000	0.000	0.500	0.000	0.500	0.625	0.625	0.000	0.000	0.938	0.917
Entering Leg	0	0	0	0	0	0	3	0	0	3	0	0	4	0	4	10	5	0	0	15	22
Exiting Leg						5					10					7					22
<b>Total</b>						8					14					22					44

PDI File #: **250541 C**  
 Location: **N: Driveway S: Laws Brook Road**  
 Location: **E: to Commonwealth Avenue W: Laws Brook Road**  
 City, State: **Concord, MA**  
 Client: **Bowman/L. Fall**  
 Site Code: **314420-01-002**  
 Count Date: **Tuesday, April 8, 2025**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



157 Washington Street, Suite 2  
 Hudson, MA 01749  
 508-875-0100 datarequests@pdillc.com

**Articulated Trucks**

	Driveway					to Commonwealth Avenue					Laws Brook Road					Laws Brook Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	2
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	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	2	0	0	0	0	2
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>
8:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>
Grand Total	0	0	0	0	0	0	1	0	0	1	0	0	5	0	5	5	0	0	0	0	11
Approach %	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		100.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	9.1	0.0	0.0	9.1	0.0	0.0	45.5	0.0	45.5	45.5	0.0	0.0	0.0	0.0	45.5
Exiting Leg Total	0					0					5					6					11

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

	Driveway					to Commonwealth Avenue					Laws Brook Road					Laws Brook Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
8:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	2
<b>Total Volume</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>
% Approach Total	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		100.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.375	0.000	0.375	0.500	0.000	0.000	0.000	0.500	1.000
Entering Leg	0	0	0	0	0	0	1	0	0	1	0	0	3	0	3	4	0	0	0	0	8
Exiting Leg	0					0					4					4					8
<b>Total</b>	<b>0</b>					<b>1</b>					<b>7</b>					<b>8</b>					<b>16</b>



PDI File #: **250541 C**  
 Location: **N: Driveway S: Laws Brook Road**  
 Location: **E: to Commonwealth Avenue W: Laws Brook Road**  
 City, State: **Concord, MA**  
 Client: **Bowman/L. Fall**  
 Site Code: **314420-01-002**  
 Count Date: **Tuesday, April 8, 2025**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



PRECISION  
D A T A  
INDUSTRIES, LLC

157 Washington Street, Suite 2  
Hudson, MA 01749  
508-875-0100 datarequests@pdillc.com

**Pedestrians**

	Driveway								to Commonwealth Avenue								Laws Brook Road								Laws Brook Road								Total
	from North								from East								from South								from West								
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total		Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total		Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total		Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2		
7:30 AM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2		
7:45 AM	0	0	0	0	1	1	2	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4		
<b>Total</b>	0	0	0	0	1	3	4	0	0	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	8		
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1		
8:15 AM	0	0	0	0	1	0	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2		
8:30 AM	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	2			
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<b>Total</b>	0	0	0	0	2	0	2	0	0	0	0	2	0	2	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	5			
Grand Total	0	0	0	0	3	3	6	0	0	0	0	3	2	5	0	0	0	0	1	0	1	0	0	0	0	0	1	1	13				
Approach %	0	0	0	0	50	50		0	0	0	0	60	40		0	0	0	0	100	0		0	0	0	0	0	100						
Total %	0	0	0	0	23.1	23.1	46.2	0	0	0	0	23.1	15.4	38.5	0	0	0	0	7.69	0	7.69	0	0	0	0	0	7.69	7.69					
Exiting Leg Total	6							5							1							13											

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

	Driveway								to Commonwealth Avenue								Laws Brook Road								Laws Brook Road								Total
	from North								from East								from South								from West								
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total		Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total		Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total		Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
7:15 AM	0	0	0	0	0	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2		
7:30 AM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2		
7:45 AM	0	0	0	0	1	1	2	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4		
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1		
Total Volume	0	0	0	0	1	3	4	0	0	0	0	2	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	9		
% Approach Total	0.0	0.0	0.0	0.0	25.0	75.0		0.0	0.0	0.0	0.0	50.0	50.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	100.0				
PHF	0.000	0.000	0.000	0.000	0.250	0.750	0.500	0.000	0.000	0.000	0.000	0.500	0.500	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.563			
Entering Leg	0	0	0	0	1	3	4	0	0	0	0	2	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	9		
Exiting Leg	4							4							0							9											
Total	8							8							0							18											

PDI File #: 250541 C  
 Location: N: Driveway S: Laws Brook Road  
 Location: E: to Commonwealth Avenue W: Laws Brook Road  
 City, State: Concord, MA  
 Client: Bowman/L. Fall  
 Site Code: 314420-01-002  
 Count Date: Tuesday, April 8, 2025  
 Start Time: 4:00 PM  
 End Time: 6:00 PM  
 Class:



PRECISION  
 D A T A  
 INDUSTRIES, LLC  
 157 Washington Street, Suite 2  
 Hudson, MA 01749  
 508-875-0100 datarequests@pdillc.com

**Cars and Heavy Vehicles (Combined)**

	Driveway					to Commonwealth Avenue					Laws Brook Road					Laws Brook Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	25	1	0	26	1	0	77	0	78	23	27	0	0	50	154
4:15 PM	0	0	0	0	0	0	28	1	0	29	0	0	57	0	57	29	28	0	0	57	143
4:30 PM	0	0	0	0	0	0	19	0	0	19	0	0	86	0	86	30	12	0	0	42	147
4:45 PM	0	0	0	0	0	0	33	0	0	33	0	0	91	0	91	36	25	0	0	61	185
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>105</b>	<b>2</b>	<b>0</b>	<b>107</b>	<b>1</b>	<b>0</b>	<b>311</b>	<b>0</b>	<b>312</b>	<b>118</b>	<b>92</b>	<b>0</b>	<b>0</b>	<b>210</b>	<b>629</b>
5:00 PM	0	0	0	0	0	0	28	1	0	29	1	0	91	0	92	25	29	0	0	54	175
5:15 PM	0	0	0	0	0	0	28	0	0	28	0	1	96	0	97	25	24	0	0	49	174
5:30 PM	0	1	1	0	2	0	21	0	0	21	0	0	98	0	98	27	20	1	0	48	169
5:45 PM	0	0	0	0	0	0	27	0	0	27	0	0	71	0	71	20	29	0	0	49	147
<b>Total</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>104</b>	<b>1</b>	<b>0</b>	<b>105</b>	<b>1</b>	<b>1</b>	<b>356</b>	<b>0</b>	<b>358</b>	<b>97</b>	<b>102</b>	<b>1</b>	<b>0</b>	<b>200</b>	<b>665</b>
Grand Total	0	1	1	0	2	0	209	3	0	212	2	1	667	0	670	215	194	1	0	410	1294
Approach %	0.0	50.0	50.0	0.0		0.0	98.6	1.4	0.0		0.3	0.1	99.6	0.0		52.4	47.3	0.2	0.0		
Total %	0.0	0.1	0.1	0.0	0.2	0.0	16.2	0.2	0.0	16.4	0.2	0.1	51.5	0.0	51.8	16.6	15.0	0.1	0.0	31.7	
Exiting Leg Total	2					197					219					876					1294
Cars	0	1	1	0	2	0	204	3	0	207	2	1	663	0	666	212	191	1	0	404	1279
% Cars	0.0	100.0	100.0	0.0	100.0	0.0	97.6	100.0	0.0	97.6	100.0	100.0	99.4	0.0	99.4	98.6	98.5	100.0	0.0	98.5	98.8
Exiting Leg Total	2					194					216					867					1279
Heavy Vehicles	0	0	0	0	0	0	5	0	0	5	0	0	4	0	4	3	3	0	0	6	15
% Heavy Vehicles	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	2.4	0.0	0.0	0.6	0.0	0.6	1.4	1.5	0.0	0.0	1.5	1.2
Exiting Leg Total	0					3					3					9					15

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:45 PM	Driveway					to Commonwealth Avenue					Laws Brook Road					Laws Brook Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:45 PM	0	0	0	0	0	0	33	0	0	33	0	0	91	0	91	36	25	0	0	61	185
5:00 PM	0	0	0	0	0	0	28	1	0	29	1	0	91	0	92	25	29	0	0	54	175
5:15 PM	0	0	0	0	0	0	28	0	0	28	0	1	96	0	97	25	24	0	0	49	174
5:30 PM	0	1	1	0	2	0	21	0	0	21	0	0	98	0	98	27	20	1	0	48	169
Total Volume	0	1	1	0	2	0	110	1	0	111	1	1	376	0	378	113	98	1	0	212	703
% Approach Total	0.0	50.0	50.0	0.0		0.0	99.1	0.9	0.0		0.3	0.3	99.5	0.0		53.3	46.2	0.5	0.0		
PHF	0.000	0.250	0.250	0.000	0.250	0.000	0.833	0.250	0.000	0.841	0.250	0.250	0.959	0.000	0.964	0.785	0.845	0.250	0.000	0.869	0.950
Cars	0	1	1	0	2	0	110	1	0	111	1	1	376	0	378	112	97	1	0	210	701
Cars %	0.0	100.0	100.0	0.0	100.0	0.0	100.0	100.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	99.1	99.0	100.0	0.0	99.1	99.7
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	2
Heavy Vehicles %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.0	0.0	0.0	0.9	0.3
Cars Enter Leg	0	1	1	0	2	0	110	1	0	111	1	1	376	0	378	112	97	1	0	210	701
Heavy Enter Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	2
Total Entering Leg	0	1	1	0	2	0	110	1	0	111	1	1	376	0	378	113	98	1	0	212	703
Cars Exiting Leg	2					99					114					486					701
Heavy Exiting Leg	0					1					1					0					2
Total Exiting Leg	2					100					115					486					703

PDI File #: **250541 C**  
 Location: **N: Driveway S: Laws Brook Road**  
 Location: **E: to Commonwealth Avenue W: Laws Brook Road**  
 City, State: **Concord, MA**  
 Client: **Bowman/L. Fall**  
 Site Code: **314420-01-002**  
 Count Date: **Tuesday, April 8, 2025**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



**Cars**

	Driveway					to Commonwealth Avenue					Laws Brook Road					Laws Brook Road					Total					
	from North					from East					from South					from West										
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total						
4:00 PM	0	0	0	0	0	0	23	1	0	24	1	0	76	0	77	23	26	0	0	49	150					
4:15 PM	0	0	0	0	0	0	26	1	0	27	0	0	57	0	57	28	27	0	0	55	139					
4:30 PM	0	0	0	0	0	0	18	0	0	18	0	0	84	0	84	29	12	0	0	41	143					
4:45 PM	0	0	0	0	0	0	33	0	0	33	0	0	91	0	91	36	24	0	0	60	184					
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>100</b>	<b>2</b>	<b>0</b>	<b>102</b>	<b>1</b>	<b>0</b>	<b>308</b>	<b>0</b>	<b>309</b>	<b>116</b>	<b>89</b>	<b>0</b>	<b>0</b>	<b>205</b>	<b>616</b>					
5:00 PM	0	0	0	0	0	0	28	1	0	29	1	0	91	0	92	24	29	0	0	53	174					
5:15 PM	0	0	0	0	0	0	28	0	0	28	0	1	96	0	97	25	24	0	0	49	174					
5:30 PM	0	1	1	0	2	0	21	0	0	21	0	0	98	0	98	27	20	1	0	48	169					
5:45 PM	0	0	0	0	0	0	27	0	0	27	0	0	70	0	70	20	29	0	0	49	146					
<b>Total</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>104</b>	<b>1</b>	<b>0</b>	<b>105</b>	<b>1</b>	<b>1</b>	<b>355</b>	<b>0</b>	<b>357</b>	<b>96</b>	<b>102</b>	<b>1</b>	<b>0</b>	<b>199</b>	<b>663</b>					
Grand Total	0	1	1	0	2	0	204	3	0	207	2	1	663	0	666	212	191	1	0	404	1279					
Approach %	0.0	50.0	50.0	0.0		0.0	98.6	1.4	0.0		0.3	0.2	99.5	0.0		52.5	47.3	0.2	0.0							
Total %	0.0	0.1	0.1	0.0	0.2	0.0	15.9	0.2	0.0	16.2	0.2	0.1	51.8	0.0	52.1	16.6	14.9	0.1	0.0	31.6						
Exiting Leg Total						2					194					216					867					1279

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

	Driveway					to Commonwealth Avenue					Laws Brook Road					Laws Brook Road					Total					
	from North					from East					from South					from West										
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total						
4:45 PM	0	0	0	0	0	0	33	0	0	33	0	0	91	0	91	36	24	0	0	60	184					
5:00 PM	0	0	0	0	0	0	28	1	0	29	1	0	91	0	92	24	29	0	0	53	174					
5:15 PM	0	0	0	0	0	0	28	0	0	28	0	1	96	0	97	25	24	0	0	49	174					
5:30 PM	0	1	1	0	2	0	21	0	0	21	0	0	98	0	98	27	20	1	0	48	169					
<b>Total Volume</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>110</b>	<b>1</b>	<b>0</b>	<b>111</b>	<b>1</b>	<b>1</b>	<b>376</b>	<b>0</b>	<b>378</b>	<b>112</b>	<b>97</b>	<b>1</b>	<b>0</b>	<b>210</b>	<b>701</b>					
% Approach Total	0.0	50.0	50.0	0.0		0.0	99.1	0.9	0.0		0.3	0.3	99.5	0.0		53.3	46.2	0.5	0.0							
PHF	0.000	0.250	0.250	0.000	0.250	0.000	0.833	0.250	0.000	0.841	0.250	0.250	0.959	0.000	0.964	0.778	0.836	0.250	0.000	0.875	0.952					
Entering Leg	0	1	1	0	2	0	110	1	0	111	1	1	376	0	378	112	97	1	0	210	701					
Exiting Leg						2					99					114					486					701
<b>Total</b>						4					210					492					696					1402

PDI File #: 250541 C  
 Location: N: Driveway S: Laws Brook Road  
 Location: E: to Commonwealth Avenue W: Laws Brook Road  
 City, State: Concord, MA  
 Client: Bowman/L. Fall  
 Site Code: 314420-01-002  
 Count Date: Tuesday, April 8, 2025  
 Start Time: 4:00 PM  
 End Time: 6:00 PM



**Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Driveway					to Commonwealth Avenue					Laws Brook Road					Laws Brook Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	0	1	0	0	1	4
4:15 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	1	1	0	0	2	4
4:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	2	0	2	1	0	0	0	1	4
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>13</b>
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
5:15 PM	0	0	0	0	0	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	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>
Grand Total	0	0	0	0	0	0	5	0	0	5	0	0	4	0	4	3	3	0	0	6	15
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	50.0	50.0	0.0	0.0	0.0	
Total %	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	0.0	33.3	0.0	0.0	26.7	0.0	26.7	20.0	20.0	0.0	0.0	40.0	
Exiting Leg Total	0					3					3					9					15
Buses	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	4
% Buses	0.0	0.0	0.0	0.0	0.0	0.0	60.0	0.0	0.0	60.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	0.0	16.7	26.7
Exiting Leg Total	0					1					0					3					4
Single-Unit Trucks	0	0	0	0	0	0	2	0	0	2	0	0	4	0	4	3	2	0	0	5	11
% Single-Unit	0.0	0.0	0.0	0.0	0.0	0.0	40.0	0.0	0.0	40.0	0.0	0.0	100.0	0.0	100.0	100.0	66.7	0.0	0.0	83.3	73.3
Exiting Leg Total	0					2					3					6					11
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total	0					0					0					0					0

**Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:**

	Driveway					to Commonwealth Avenue					Laws Brook Road					Laws Brook Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	0	1	0	0	1	4
4:15 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	1	1	0	0	2	4
4:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	2	0	2	1	0	0	0	1	4
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
<b>Total Volume</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>13</b>
<b>% Approach Total</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>100.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>100.0</b>	<b>0.0</b>	<b>0.0</b>	<b>40.0</b>	<b>60.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.625	0.000	0.000	0.625	0.000	0.000	0.375	0.000	0.375	0.500	0.750	0.000	0.000	0.625	0.813
Buses	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	4
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	60.0	0.0	0.0	60.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	0.0	20.0	30.8
Single-Unit Trucks	0	0	0	0	0	0	2	0	0	2	0	0	3	0	3	2	2	0	0	4	9
Single-Unit %	0.0	0.0	0.0	0.0	0.0	0.0	40.0	0.0	0.0	40.0	0.0	0.0	100.0	0.0	100.0	100.0	66.7	0.0	0.0	80.0	69.2
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Buses	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	4
Single-Unit Trucks	0	0	0	0	0	0	2	0	0	2	0	0	3	0	3	2	2	0	0	4	9
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Entering Leg</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>13</b>
Buses	0					1					0					3					4
Single-Unit Trucks	0					2					3					4					9
Articulated Trucks	0					0					0					0					0
<b>Total Exiting Leg</b>	<b>0</b>					<b>3</b>					<b>2</b>					<b>8</b>					<b>13</b>

PDI File #: **250541 C**  
 Location: **N: Driveway S: Laws Brook Road**  
 Location: **E: to Commonwealth Avenue W: Laws Brook Road**  
 City, State: **Concord, MA**  
 Client: **Bowman/L. Fall**  
 Site Code: **314420-01-002**  
 Count Date: **Tuesday, April 8, 2025**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



PRECISION  
 D A T A  
 INDUSTRIES, LLC

157 Washington Street, Suite 2  
 Hudson, MA 01749  
 508-875-0100 datarequests@pdillc.com

**Buses**

	Driveway					to Commonwealth Avenue					Laws Brook Road					Laws Brook Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
<b>Total</b>	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	4
5:00 PM	0	0	0	0	0	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	0	0	0	0	0
5:30 PM	0	0	0	0	0	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	0	0	0	0	0
<b>Total</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	4
Approach %	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	75.0	0.0	0.0	75.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	25.0	
Exiting Leg Total	0					1					0					3					4

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Driveway					to Commonwealth Avenue					Laws Brook Road					Laws Brook Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
<b>Total Volume</b>	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	4
% Approach Total	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250	1.000
Entering Leg	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	4
Exiting Leg	0					1					0					3					4
<b>Total</b>	0					4					0					4					8

PDI File #: 250541 C  
 Location: N: Driveway S: Laws Brook Road  
 Location: E: to Commonwealth Avenue W: Laws Brook Road  
 City, State: Concord, MA  
 Client: Bowman/L. Fall  
 Site Code: 314420-01-002  
 Count Date: Tuesday, April 8, 2025  
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 Class:



PRECISION  
 D A T A  
 INDUSTRIES, LLC

157 Washington Street, Suite 2  
 Hudson, MA 01749  
 508-875-0100 datarequests@pdillc.com

**Single-Unit Trucks**

	Driveway					to Commonwealth Avenue					Laws Brook Road					Laws Brook Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	1	0	0	1	3
4:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	1	0	0	2	3
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	1	0	0	0	1	3
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>9</b>
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
5:15 PM	0	0	0	0	0	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	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>
Grand Total	0	0	0	0	0	0	2	0	0	2	0	0	4	0	4	3	2	0	0	5	11
Approach %	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		60.0	40.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	18.2	0.0	0.0	18.2	0.0	0.0	36.4	0.0	36.4	27.3	18.2	0.0	0.0	45.5	
Exiting Leg Total	0					2					3					6					11

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Driveway					to Commonwealth Avenue					Laws Brook Road					Laws Brook Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	1	0	0	1	3
4:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	1	0	0	2	3
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	1	0	0	0	1	3
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Volume</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>9</b>
% Approach Total	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		50.0	50.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.500	0.000	0.000	0.375	0.000	0.375	0.500	0.500	0.000	0.000	0.500	0.750
Entering Leg	0	0	0	0	0	0	2	0	0	2	0	0	3	0	3	2	2	0	0	4	9
Exiting Leg	0					2					2					5					9
<b>Total</b>	<b>0</b>					<b>4</b>					<b>5</b>					<b>9</b>					<b>18</b>

PDI File #: **250541 C**  
 Location: **N: Driveway S: Laws Brook Road**  
 Location: **E: to Commonwealth Avenue W: Laws Brook Road**  
 City, State: **Concord, MA**  
 Client: **Bowman/L. Fall**  
 Site Code: **314420-01-002**  
 Count Date: **Tuesday, April 8, 2025**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



157 Washington Street, Suite 2  
 Hudson, MA 01749  
 508-875-0100 datarequests@pdillc.com

**Articulated Trucks**

	Driveway					to Commonwealth Avenue					Laws Brook Road					Laws Brook Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	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	0	0	0	0	0
4:30 PM	0	0	0	0	0	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	0	0	0	0	0
<b>Total</b>	0	0	0	0	0	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	0	0	0	0	0
5:15 PM	0	0	0	0	0	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	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total	0					0					0					0					0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Driveway					to Commonwealth Avenue					Laws Brook Road					Laws Brook Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	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	0	0	0	0	0
4:30 PM	0	0	0	0	0	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	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0					0					0					0					0
Total	0					0					0					0					0



PDI File #: 250541 C  
 Location: N: Driveway S: Laws Brook Road  
 Location: E: to Commonwealth Avenue W: Laws Brook Road  
 City, State: Concord, MA  
 Client: Bowman/L. Fall  
 Site Code: 314420-01-002  
 Count Date: Tuesday, April 8, 2025  
 Start Time: 4:00 PM  
 End Time: 6:00 PM  
 Class:



157 Washington Street, Suite 2  
 Hudson, MA 01749  
 508-875-0100 datarequests@pdillc.com

**Pedestrians**

	Driveway								to Commonwealth Avenue								Laws Brook Road								Laws Brook Road								Total
	from North								from East								from South								from West								
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total		Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total		Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total		Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
4:00 PM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1			
4:15 PM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1			
4:30 PM	0	0	0	0	1	1	2	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4			
4:45 PM	0	0	0	0	1	0	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2			
<b>Total</b>	0	0	0	0	2	3	5	0	0	0	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8			
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
5:15 PM	0	0	0	0	0	2	2	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4			
5:30 PM	0	0	0	0	0	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2			
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
<b>Total</b>	0	0	0	0	0	3	3	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6			
<b>Grand Total</b>	0	0	0	0	2	6	8	0	0	0	0	2	4	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14			
Approach %	0	0	0	0	25	75		0	0	0	0	33.3	66.7		0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Total %	0	0	0	0	14.3	42.9	57.1	0	0	0	0	14.3	28.6	42.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Exiting Leg Total	8							6							0							0							14				

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:30 PM	Driveway								to Commonwealth Avenue								Laws Brook Road								Laws Brook Road								Total
	from North								from East								from South								from West								
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total		Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total		Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total		Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
4:30 PM	0	0	0	0	1	1	2	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4			
4:45 PM	0	0	0	0	1	0	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2			
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
5:15 PM	0	0	0	0	0	2	2	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4			
<b>Total Volume</b>	0	0	0	0	2	3	5	0	0	0	0	2	3	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10			
<b>% Approach Total</b>	0.0	0.0	0.0	0.0	40.0	60.0		0.0	0.0	0.0	0.0	40.0	60.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
<b>PHF</b>	0.000	0.000	0.000	0.000	0.500	0.375	0.625	0.000	0.000	0.000	0.000	0.500	0.375	0.625	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.625				
Entering Leg	0	0	0	0	2	3	5	0	0	0	0	2	3	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10				
Exiting Leg	5							5							0							0							10				
<b>Total</b>	10							10							0							0							20				

The top of the page features a dark green triangular shape on the left containing the word "Bowman" in white. To the right, a white-bordered collage of images is visible, including a large stone archway, a roundabout with a central tree, and a residential street with houses.

**Bowman**

# **APPENDIX B**

## SEASONAL ADJUSTMENT DATA

Massachusetts Highway Department  
Statewide Traffic Data Collection  
2023 Weekday Seasonal Factors

Factor Group	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Axle Factor
<b>R1</b>	1.23	1.14	1.11	1.06	1.01	0.96	0.93	0.91	1.00	0.97	1.04	1.08	0.77
<b>R3</b>	1.11	1.07	1.02	0.95	0.90	0.89	0.87	0.87	0.92	0.89	0.95	0.99	0.98
<b>R4-R7</b>	1.19	1.16	1.10	1.00	0.92	0.91	0.87	0.88	0.93	0.93	1.01	1.06	0.98
<b>U1-Boston</b>	1.07	1.05	1.00	0.95	0.93	0.92	0.92	0.92	0.94	0.93	0.96	0.99	0.94
<b>U1-Essex</b>	1.14	1.11	1.06	1.00	0.95	0.91	0.87	0.87	0.94	0.95	1.00	1.03	0.96
<b>U1-Southeast</b>	1.12	1.09	1.04	0.96	0.91	0.87	0.84	0.86	0.92	0.94	0.98	1.03	0.96
<b>U1-West</b>	1.05	1.02	0.98	0.96	0.94	0.93	0.94	0.94	0.95	0.92	0.96	0.98	0.81
<b>U1-Worcester</b>	1.06	1.04	0.97	0.93	0.92	0.90	0.92	0.92	0.93	0.92	0.94	0.97	0.88
<b>U3</b>	1.05	1.02	0.96	0.92	0.89	0.89	0.91	0.92	0.91	0.90	0.94	0.96	0.98
<b>U4-U7</b>	1.02	1.00	0.94	0.89	0.86	0.88	0.91	0.92	0.89	0.88	0.91	0.91	0.99
<b>UR2</b>	1.05	1.01	0.97	0.92	0.90	0.90	0.91	0.91	0.91	0.90	0.94	0.97	0.98
<b>Rec - East</b>	1.17	1.16	1.09	1.04	0.92	0.84	0.76	0.80	0.93	1.00	1.03	1.06	0.98
<b>Rec - West</b>	1.46	1.38	1.32	1.06	0.94	0.79	0.59	0.69	0.97	0.99	1.18	1.28	0.98

Round off:

0-999 = 10

>1000 = 100

U = Urban

R = Rural

1 - Interstate

2 - Freeway and Expressway

3 - Other Principal Arterial

4 - Minor Arterial

5 - Major Collector

6 - Minor Collector

7 - Local Road and Street

**UR2 Group** - Combination of Urban Freeways and Expressways and Rural Freeways and Expressways.

**Recreational - East Group** - Cape Cod (all towns) including the town of Plymouth south of Route 3A (stations 7014,7079,7080,7090,7091,7092,7093,7094,7095,7096,7097,7108 and 7178), Martha's Vineyard and Nantucket.

**Recreational - West Group** - Continuous Stations 2 and 189 including stations

1066,1067,1083,1084,1085,1086,1087,1088,1089,1090,1091,1092,1093,1094,1095,1096,1097,1098,1099,1100,1101,1102,1103,1104,1105,1106,1107,1108,1113,1114,1116,2196,2197 and 2198.

The top of the page features a dark green triangular shape on the left containing the word "Bowman" in white. To the right, a white-bordered triangular shape contains an aerial photograph of a complex road intersection with a roundabout and several cars.

**Bowman**

# **APPENDIX C**

## TRAFFIC PROJECTION MODEL

## TRAFFIC PROJECTION MODEL

**Proposed Convenience Store & Gas Station  
Weekday Morning Peak Hour  
Concord, MA**

Intersection	Dir.	Turn	2025 Counted Volumes	Volume Balancing (Existing)	2025 Existing Volumes	Background Growth 1.00% per year	292-294 Baker Avenue Background Project	1442 Main Street Background Project	2032 No Build Volumes	New PERCENT ENTER	New Trips ENTER	New PERCENT EXIT	New Trips EXIT	New Trips TOTAL	PASS BY TRIPS	2032 Build Volumes
Commonwealth Avenue at Northern Site Driveway (Kenny Dunn Square North Intersection)	EB	L	302	3	305	22			327						-7	320
		T	1		1				1	25%	5			5	7	13
		R	1		1	0			1							1
	WB	L	2		2				2			10%	2	2	4	8
		T	0		0				0			10%	2	2	2	4
		R	1		1				1			20%	4	4	8	13
	NB	L	2		2	0			2							2
		T	108		108	8		4	120			10%	1	1	-1	120
		R	0		0				0							0
SB	L	1		1				1	30%	5				5	4	10
	T	95		95	7		1	103							-2	101
	R	100		100	7			107							-2	105
Commonwealth Avenue at Laws Brook Road (Kenny Dunn Square East Intersection)	EB	L	3		3	0			3							3
		T	441		441	32	1		474	10%	2			2		476
	WB	T	91	3	94	7	2		103			25%	5	5		108
		R	107		107	8		4	119			10%	1	1	-1	119
	SB	L	97	1	98	7		1	106			10%	2	2	2	110
R		0		0	0			0							0	
Commonwealth Avenue at Southern Site Driveway	EB	L	3		3				3	10%	2			2	11	16
		T	531	1	532	39	1	1	573			10%	2	2	-9	566
		R	4		4				4							4
	WB	L	1		1				1							1
		T	195	3	198	15	2	4	219						-5	214
		R	1		1				1	35%	6			6	5	12
	NB	L	2		2				2							2
		T	0		0				0							0
		R	1		1				1							1
	SB	L	1		1				1			25%	4	4	9	14
		T	0		0				0							0
	R	1		1				1			35%	6	6	4	11	
Commonwealth Avenue at Laws Brook Road (Kenny Dunn Square West Intersection)	EB	L	307		307	22			329	25%	5			5		334
		T	437	7	444	32	1		477	10%	2			2		479
	WB	T	94		94	7	2		103			25%	5	5		108
		R	0		0	0			0							0
	SB	L	0		0	0			0							0
R		101	1	102	7			109			10%	2	2		111	

Peak Hour: 8:00 AM to 9:00 AM

## TRAFFIC PROJECTION MODEL

**Proposed Convenience Store & Gas Station  
Weekday Afternoon Peak Hour  
Concord, MA**

Intersection	Dir.	Turn	2025 Counted Volumes	Volume Balancing (Existing)	2025 Existing Volumes	Background Growth 1.00% per year	292-294 Baker Avenue Background Project	1442 Main Street Background Project	2032 No Build Volumes	New PERCENT ENTER	New Trips ENTER	New PERCENT EXIT	New Trips EXIT	New Trips TOTAL	PASS BY TRIPS	2032 Build Volumes	
Commonwealth Avenue at Northern Site Driveway (Kenny Dunn Square North Intersection)	EB	L	88		88	7			95						-2	93	
		T	0		0				0	25%	6			6	2	8	
		R	5		5	0			5							5	
	WB	L	2		2				2			10%	2	2			4
		T	0		0				0			10%	2	2		3	5
		R	2		2				2			20%	5	5		9	16
	NB	L	6		6	0			6								6
		T	484		484	35		2	521			10%	2	2	-7	516	
		R	0		0				0								0
SB	L	0		0				0	30%	7				7	6	13	
	T	137	2	139	10		4	153							-3	150	
	R	102		102	8			110							-3	107	
Commonwealth Avenue at Laws Brook Road (Kenny Dunn Square East Intersection)	EB	L	2		2	0			2							2	
		T	116	2	118	9	2		129	10%	2			2		131	
	WB	T	310		310	22	2		334			25%	6	6			340
		R	485	3	488	35		2	525			10%	2	2	-7	520	
	SB	L	144		144	10		4	158			10%	2	2		-3	157
R		2		2	0			2								2	
Commonwealth Avenue at Southern Site Driveway	EB	L	0		0				0	10%	2			2	3	5	
		T	258	2	260	19	2	4	285			10%	2	2	-6	281	
		R	2		2				2								2
	WB	L	4		4				4								4
		T	793	3	796	57	2	2	857							-19	838
		R	0		0				0	35%	8			8	19	27	
	NB	L	2		2				2								2
		T	0		0				0								0
		R	6		6				6								6
	SB	L	0		0				0			25%	6	6		6	12
T		0		0				0								0	
R		0		0				0			35%	8	8	12	20		
Commonwealth Avenue at Laws Brook Road (Kenny Dunn Square West Intersection)	EB	L	92		92	7			99	25%	6			6		105	
		T	118		118	9	2		129	10%	2			2		131	
	WB	T	311		311	22	2		335			25%	6	6			341
		R	1		1	0			1								1
	SB	L	2		2	0			2								2
R		105	1	106	8			114			10%	2	2			116	

Peak Hour: 4:00 PM to 5:00 PM

The top of the page features a dark green triangular shape on the left containing the word "Bowman" in white. To the right is an aerial photograph of a roundabout with a central tree island, overlaid with white geometric lines.

**Bowman**

# **APPENDIX D**

## CRASH SUMMARY

# CRASH ANALYSIS

## Proposed Convenience Store and Gas Station

### Concord, MA

	Commonwealth Avenue at Northern Site Driveway (Kenny Dunn Square North Intersection)	Commonwealth Avenue at Laws Brook Road (Kenny Dunn Square East Intersection)	Commonwealth Avenue at Southern Site Driveway / Parking Lot	Commonwealth Avenue at Laws Brook Road (Kenny Dunn Square West Intersection)
<b>Year</b>				
2017	0	0	0	0
2018	0	1	0	0
2019	0	1	0	1
2020	0	1	0	0
2021	0	0	0	2
<b>Type</b>				
Angle	0	0	0	0
Rear-end	0	1	0	1
Sideswipe	0	1	0	1
Head-on	0	1	0	0
Single Vehicle	0	0	0	1
<b>Severity</b>				
Property Damage	0	2	0	3
Personal Injury	0	1	0	0
Fatality	0	0	0	0
<b>Weather</b>				
Clear	0	1	0	2
Cloudy	0	0	0	1
Rain	0	2	0	0
Snow	0	0	0	0
<b>Road Surface</b>				
Dry	0	1	0	3
Wet	0	2	0	0
Ice	0	0	0	0
Snow	0	0	0	0
<b>Time</b>				
7:00 AM to 9:00 AM	0	0	0	0
9:00 AM to 4:00 PM	0	2	0	3
4:00 PM to 6:00 PM	0	1	0	0
6:00 PM to 7:00 AM	0	0	0	0
<b>Total</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>3</b>
Crash Rate	0.00	0.14	0.00	0.23
State Average	0.57	0.57	0.57	0.57
District 4 Average	0.57	0.57	0.57	0.57

Source: MassDOT

The top of the page features a dark green triangular shape on the left containing the word "Bowman" in white. To the right, a white diagonal line separates this from a light green aerial photograph of a city street intersection with a roundabout. The rest of the page is white.

**Bowman**

# **APPENDIX E**

## HIGHWAY CAPACITY MANUAL METHODOLOGIES

## CAPACITY/LEVEL-OF-SERVICE ANALYSES METHODOLOGY

The detailed capacity/level-of-service analysis contained in this traffic impact study was performed in accordance with the standard techniques contained in the *Highway Capacity Manual*.<sup>(1)</sup> By definition, capacity represents “the maximum rate of flow that can reasonably be expected to pass a point on a uniform section of a lane or roadway under prevailing roadway, traffic, and control conditions.” The level of functioning of an intersection or a uniform section of a lane or roadway can be expressed in terms of levels of service. Level of service (LOS) is defined as “a qualitative measure describing operational conditions within a traffic stream, and their perception by motorists and/or passengers”. Such measures include “speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety.”

At unsignalized intersections, a methodology for evaluating the relative functioning of intersections controlled by stop or yield signs has been developed, and is based on several assumptions, including:

- Major street flows are not affected by the minor (stop-sign controlled) street movements.
- Left turns from the major street to the minor street are influenced only by opposing major street through flow.
- Minor street left turns are impeded by all major street traffic plus opposing minor street traffic.
- Minor street through traffic is impeded by all major street traffic.
- Minor street right turns are impeded only by the major street traffic coming from the left.

The concept of stop-controlled or yield-controlled intersection analysis is based on the estimate of average total delay on minor streets. The methodology of analysis relies on three elements: the size and distribution of gaps in the major traffic stream, the usefulness of these gaps to the minor stream drivers, and the relative priority of the various traffic streams at the intersection. The results of the analysis provide an estimate of average total delay for the various critical movements at the unsignalized intersections. Correlation between average total delay and the respective levels of service are provided for unsignalized intersections as follows:

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(1) *Transportation Research Board, Highway Capacity Manual, 6<sup>th</sup> Edition, published by the Transportation Research Board, Washington, DC, 2016.*

*Unsignalized Intersections*

Level of Service	Control Delay Per Vehicle (seconds)
A	0 – 10
B	>10 – 15
C	>15 – 25
D	>25 – 35
E	>35 – 50
F	> 50

At signalized intersections, an additional element must be considered: time allocation. Level of service is based on the average control delay per vehicle for various movements within the intersection. Volume/capacity relationships also affect the operations of signalized intersections. Thus, both volume/capacity and delay must be considered to evaluate the overall operation of a signalized intersection. Correlation between average delay per vehicle and the respective levels of service are provided for signalized intersections as follows:

*Signalized Intersections*

Level of Service	Control Delay Per Vehicle (seconds)
A	$\leq 10$
B	>10 – 20
C	>20 – 35
D	>35 – 55
E	>55 – 80
F	> 80

The top of the page features a dark green triangular shape on the left containing the word "Bowman" in white. To the right, a white diagonal line separates this from an aerial photograph of a city street intersection with a roundabout. The photograph is tinted with a light green color.

**Bowman**

# **APPENDIX F**

2025 EXISTING CAPACITY/  
LEVEL-OF-SERVICE ANALYSIS

Proposed Convenience Store & Gas Station  
 1: Commonwealth Ave & Northern Site Driveway

Weekday Morning Peak Hour  
 Timing Plan: 2025 Existing

Intersection												
Int Delay, s/veh	9.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	305	1	1	2	0	1	2	108	0	1	95	100
Future Vol, veh/h	305	1	1	2	0	1	2	108	0	1	95	100
Conflicting Peds, #/hr	0	0	0	0	0	0	1	0	3	3	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	80	80	80	86	86	86	86	86	86
Heavy Vehicles, %	1	0	0	0	0	0	0	1	0	0	6	8
Mvmt Flow	377	1	1	3	0	1	2	126	0	1	110	116

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	302	304	169	304	362	129	227	0	0	129	0	0
Stage 1	171	171	-	133	133	-	-	-	-	-	-	-
Stage 2	131	133	-	171	229	-	-	-	-	-	-	-
Critical Hdwy	7.11	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.11	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.11	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.509	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	652	613	880	652	569	926	1353	-	-	1469	-	-
Stage 1	833	761	-	875	790	-	-	-	-	-	-	-
Stage 2	875	790	-	836	718	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	649	609	879	647	565	923	1352	-	-	1465	-	-
Mov Cap-2 Maneuver	649	609	-	647	565	-	-	-	-	-	-	-
Stage 1	831	759	-	871	786	-	-	-	-	-	-	-
Stage 2	872	786	-	833	717	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Ctrl Dly, s/v	18		10		0.1		0	
HCM LOS	C		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1352	-	-	649	719	1465	-	-
HCM Lane V/C Ratio	0.002	-	-	0.584	0.005	0.001	-	-
HCM Ctrl Dly (s/v)	7.7	0	-	18	10	7.5	0	-
HCM Lane LOS	A	A	-	C	B	A	A	-
HCM 95th %tile Q (veh)	0	-	-	3.8	0	0	-	-

Proposed Convenience Store & Gas Station  
 2: Laws Brook Rd & Commonwealth Ave

Weekday Morning Peak Hour  
 Timing Plan: 2025 Existing

Intersection						
Int Delay, s/veh	2.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	3	441	94	107	98	0
Future Vol, veh/h	3	441	94	107	98	0
Conflicting Peds, #/hr	5	0	0	5	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	80	93	93	80	80
Heavy Vehicles, %	0	3	8	1	5	0
Mvmt Flow	4	551	101	115	123	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	221	0	-	0	723
Stage 1	-	-	-	-	164
Stage 2	-	-	-	-	559
Critical Hdwy	4.1	-	-	-	6.45
Critical Hdwy Stg 1	-	-	-	-	5.45
Critical Hdwy Stg 2	-	-	-	-	5.45
Follow-up Hdwy	2.2	-	-	-	3.545
Pot Cap-1 Maneuver	1360	-	-	-	389
Stage 1	-	-	-	-	858
Stage 2	-	-	-	-	567
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1354	-	-	-	384
Mov Cap-2 Maneuver	-	-	-	-	384
Stage 1	-	-	-	-	850
Stage 2	-	-	-	-	564

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.1	0	18.7
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1354	-	-	-	384
HCM Lane V/C Ratio	0.003	-	-	-	0.319
HCM Ctrl Dly (s/v)	7.7	0	-	-	18.7
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q (veh)	0	-	-	-	1.4

Proposed Convenience Store & Gas Station  
 3: Parking Lot/Southern Site Driveway & Commonwealth Ave

Weekday Morning Peak Hour  
 Timing Plan: 2025 Existing

Intersection												
Int Delay, s/veh	0.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	532	4	1	198	1	2	0	1	1	0	1
Future Vol, veh/h	3	532	4	1	198	1	2	0	1	1	0	1
Conflicting Peds, #/hr	5	0	1	1	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	89	89	89	80	80	80	80	80	80
Heavy Vehicles, %	11	3	25	0	4	0	0	0	0	0	0	0
Mvmt Flow	4	665	5	1	222	1	3	0	1	1	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	228	0	0	671	0	0	902	907	669	906	909	228
Stage 1	-	-	-	-	-	-	677	677	-	230	230	-
Stage 2	-	-	-	-	-	-	225	230	-	676	679	-
Critical Hdwy	4.21	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.299	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1289	-	-	929	-	-	261	278	461	259	277	816
Stage 1	-	-	-	-	-	-	446	455	-	777	718	-
Stage 2	-	-	-	-	-	-	782	718	-	446	454	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1283	-	-	928	-	-	259	275	461	256	274	812
Mov Cap-2 Maneuver	-	-	-	-	-	-	259	275	-	256	274	-
Stage 1	-	-	-	-	-	-	443	452	-	769	714	-
Stage 2	-	-	-	-	-	-	780	714	-	443	451	-

Approach	EB			WB			NB			SB		
HCM Ctrl Dly, s/v	0			0			17			14.3		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	303	1283	-	-	928	-	-	389
HCM Lane V/C Ratio	0.012	0.003	-	-	0.001	-	-	0.006
HCM Ctrl Dly (s/v)	17	7.8	0	-	8.9	0	-	14.3
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q (veh)	0	0	-	-	0	-	-	0

Proposed Convenience Store & Gas Station  
4: Laws Brook Rd & Commonwealth Ave

Weekday Morning Peak Hour  
Timing Plan: 2025 Existing

Intersection						
Int Delay, s/veh	3.8					
Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	307	444	94	0	0	102
Future Vol, veh/h	307	444	94	0	0	102
Conflicting Peds, #/hr	2	0	0	2	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	84	84	80	80
Heavy Vehicles, %	2	3	8	0	0	8
Mvmt Flow	361	522	112	0	0	128

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	114	0	-	0	1359
Stage 1	-	-	-	-	114
Stage 2	-	-	-	-	1245
Critical Hdwy	4.12	-	-	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	2.218	-	-	-	3.5
Pot Cap-1 Maneuver	1475	-	-	-	165
Stage 1	-	-	-	-	916
Stage 2	-	-	-	-	274
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1472	-	-	-	107
Mov Cap-2 Maneuver	-	-	-	-	107
Stage 1	-	-	-	-	598
Stage 2	-	-	-	-	273

Approach	EB	WB	SW
HCM Ctrl Dly, s/v	3.4	0	9.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBRSWLn1
Capacity (veh/h)	1472	-	-	-
HCM Lane V/C Ratio	0.245	-	-	-
HCM Ctrl Dly (s/v)	8.2	0	-	-
HCM Lane LOS	A	A	-	-
HCM 95th %tile Q (veh)	1	-	-	-

Proposed Convenience Store & Gas Station  
 1: Commonwealth Ave & Northern Site Driveway

Weekday Evening Peak Hour  
 Timing Plan: 2025 Existing

Intersection												
Int Delay, s/veh	3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	88	0	5	2	0	2	6	484	0	0	139	102
Future Vol, veh/h	88	0	5	2	0	2	6	484	0	0	139	102
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	4	4	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	84	84	84	88	88	88
Heavy Vehicles, %	3	0	0	0	0	0	0	1	0	0	2	5
Mvmt Flow	110	0	6	3	0	3	7	576	0	0	158	116

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	808	810	216	813	868	580	274	0	0	580	0	0
Stage 1	216	216	-	594	594	-	-	-	-	-	-	-
Stage 2	592	594	-	219	274	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.13	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	298	316	829	299	293	518	1301	-	-	1004	-	-
Stage 1	784	728	-	495	496	-	-	-	-	-	-	-
Stage 2	491	496	-	788	687	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	295	312	829	294	289	516	1301	-	-	1000	-	-
Mov Cap-2 Maneuver	295	312	-	294	289	-	-	-	-	-	-	-
Stage 1	778	728	-	489	490	-	-	-	-	-	-	-
Stage 2	485	490	-	782	687	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Ctrl Dly, s/v	23.8		14.7		0.1		0	
HCM LOS	C		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1301	-	-	306	375	1000	-	-
HCM Lane V/C Ratio	0.005	-	-	0.38	0.013	-	-	-
HCM Ctrl Dly (s/v)	7.8	0	-	23.8	14.7	0	-	-
HCM Lane LOS	A	A	-	C	B	A	-	-
HCM 95th %tile Q (veh)	0	-	-	1.7	0	0	-	-

Proposed Convenience Store & Gas Station  
 2: Laws Brook Rd & Commonwealth Ave

Weekday Evening Peak Hour  
 Timing Plan: 2025 Existing

Intersection						
Int Delay, s/veh	2.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	2	118	310	488	144	2
Future Vol, veh/h	2	118	310	488	144	2
Conflicting Peds, #/hr	4	0	0	4	0	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	89	89	96	96
Heavy Vehicles, %	0	2	1	1	2	0
Mvmt Flow	2	128	348	548	150	2

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	900	0	-	0	758 628
Stage 1	-	-	-	-	626 -
Stage 2	-	-	-	-	132 -
Critical Hdwy	4.1	-	-	-	6.42 6.2
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.2	-	-	-	3.518 3.3
Pot Cap-1 Maneuver	763	-	-	-	375 487
Stage 1	-	-	-	-	533 -
Stage 2	-	-	-	-	894 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	760	-	-	-	371 484
Mov Cap-2 Maneuver	-	-	-	-	371 -
Stage 1	-	-	-	-	529 -
Stage 2	-	-	-	-	890 -

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.2	0	21.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	760	-	-	-	372
HCM Lane V/C Ratio	0.003	-	-	-	0.409
HCM Ctrl Dly (s/v)	9.8	0	-	-	21.2
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q (veh)	0	-	-	-	1.9

Proposed Convenience Store & Gas Station  
 3: Parking Lot/Southern Site Driveway & Commonwealth Ave

Weekday Evening Peak Hour  
 Timing Plan: 2025 Existing

Intersection												
Int Delay, s/veh	0.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	260	2	4	796	0	2	0	6	0	0	0
Future Vol, veh/h	0	260	2	4	796	0	2	0	6	0	0	0
Conflicting Peds, #/hr	8	0	6	6	0	8	0	0	1	1	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	89	89	89	80	80	80	80	80	80
Heavy Vehicles, %	0	2	50	0	1	0	0	0	17	0	0	0
Mvmt Flow	0	271	2	4	894	0	3	0	8	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	902	0	0	279	0	0	1180	1188	279	1187	1189	902
Stage 1	-	-	-	-	-	-	278	278	-	910	910	-
Stage 2	-	-	-	-	-	-	902	910	-	277	279	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.37	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.453	3.5	4	3.3
Pot Cap-1 Maneuver	762	-	-	1295	-	-	169	190	725	167	190	339
Stage 1	-	-	-	-	-	-	733	684	-	332	356	-
Stage 2	-	-	-	-	-	-	335	356	-	734	683	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	756	-	-	1288	-	-	167	186	720	163	186	336
Mov Cap-2 Maneuver	-	-	-	-	-	-	167	186	-	163	186	-
Stage 1	-	-	-	-	-	-	729	680	-	329	351	-
Stage 2	-	-	-	-	-	-	333	351	-	726	679	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	0	14.4	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	394	756	-	-	1288	-	-	-
HCM Lane V/C Ratio	0.025	-	-	-	0.003	-	-	-
HCM Ctrl Dly (s/v)	14.4	0	-	-	7.8	0	-	0
HCM Lane LOS	B	A	-	-	A	A	-	A
HCM 95th %tile Q (veh)	0.1	0	-	-	0	-	-	-

Proposed Convenience Store & Gas Station  
 4: Laws Brook Rd & Commonwealth Ave

Weekday Evening Peak Hour  
 Timing Plan: 2025 Existing

Intersection						
Int Delay, s/veh	3.3					
Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	92	118	311	1	2	106
Future Vol, veh/h	92	118	311	1	2	106
Conflicting Peds, #/hr	3	0	0	3	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	81	81
Heavy Vehicles, %	3	2	1	0	0	5
Mvmt Flow	107	137	362	1	2	131

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	366	0	-	0	717 366
Stage 1	-	-	-	-	366 -
Stage 2	-	-	-	-	351 -
Critical Hdwy	4.13	-	-	-	6.4 6.25
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.227	-	-	-	3.5 3.345
Pot Cap-1 Maneuver	1187	-	-	-	399 673
Stage 1	-	-	-	-	706 -
Stage 2	-	-	-	-	717 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1184	-	-	-	358 671
Mov Cap-2 Maneuver	-	-	-	-	358 -
Stage 1	-	-	-	-	635 -
Stage 2	-	-	-	-	715 -

Approach	EB	WB	SW
HCM Ctrl Dly, s/v	3.7	0	11.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBRSWLn1
Capacity (veh/h)	1184	-	-	- 660
HCM Lane V/C Ratio	0.09	-	-	- 0.202
HCM Ctrl Dly (s/v)	8.3	0	-	- 11.8
HCM Lane LOS	A	A	-	- B
HCM 95th %tile Q (veh)	0.3	-	-	- 0.8

The top of the page features a dark green triangular shape on the left containing the word "Bowman" in white. To the right, a white diagonal line separates this from an aerial photograph of a city street intersection with a roundabout, also tinted in shades of green.

**Bowman**

# **APPENDIX G**

2032 NO BUILD CAPACITY/  
LEVEL-OF-SERVICE ANALYSIS

Proposed Convenience Store & Gas Station  
 1: Commonwealth Ave & Northern Site Driveway

Weekday Morning Peak Hour  
 Timing Plan: 2032 No Build

Intersection												
Int Delay, s/veh	10.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	327	1	1	2	0	1	2	120	0	1	103	107
Future Vol, veh/h	327	1	1	2	0	1	2	120	0	1	103	107
Conflicting Peds, #/hr	0	0	0	0	0	0	1	0	3	3	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	80	80	80	86	86	86	86	86	86
Heavy Vehicles, %	1	0	0	0	0	0	0	1	0	0	6	8
Mvmt Flow	404	1	1	3	0	1	2	140	0	1	120	124

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	330	332	183	332	394	143	245	0	0	143	0	0
Stage 1	185	185	-	147	147	-	-	-	-	-	-	-
Stage 2	145	147	-	185	247	-	-	-	-	-	-	-
Critical Hdwy	7.11	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.11	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.11	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.509	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	625	591	865	625	546	910	1333	-	-	1452	-	-
Stage 1	819	751	-	860	779	-	-	-	-	-	-	-
Stage 2	860	779	-	821	706	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	622	587	864	620	542	907	1332	-	-	1448	-	-
Mov Cap-2 Maneuver	622	587	-	620	542	-	-	-	-	-	-	-
Stage 1	817	749	-	856	775	-	-	-	-	-	-	-
Stage 2	857	775	-	818	705	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Ctrl Dly, s/v	21		10.2		0.1		0	
HCM LOS	C		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1332	-	-	622	693	1448	-	-
HCM Lane V/C Ratio	0.002	-	-	0.653	0.005	0.001	-	-
HCM Ctrl Dly (s/v)	7.7	0	-	21	10.2	7.5	0	-
HCM Lane LOS	A	A	-	C	B	A	A	-
HCM 95th %tile Q (veh)	0	-	-	4.8	0	0	-	-

Proposed Convenience Store & Gas Station  
2: Laws Brook Rd & Commonwealth Ave

Weekday Morning Peak Hour  
Timing Plan: 2032 No Build

Intersection						
Int Delay, s/veh	2.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	3	474	103	119	106	0
Future Vol, veh/h	3	474	103	119	106	0
Conflicting Peds, #/hr	5	0	0	5	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	80	93	93	80	80
Heavy Vehicles, %	0	3	8	1	5	0
Mvmt Flow	4	593	111	128	133	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	244	0	-	0	781
Stage 1	-	-	-	-	180
Stage 2	-	-	-	-	601
Critical Hdwy	4.1	-	-	-	6.45
Critical Hdwy Stg 1	-	-	-	-	5.45
Critical Hdwy Stg 2	-	-	-	-	5.45
Follow-up Hdwy	2.2	-	-	-	3.545
Pot Cap-1 Maneuver	1334	-	-	-	359
Stage 1	-	-	-	-	844
Stage 2	-	-	-	-	542
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1328	-	-	-	354
Mov Cap-2 Maneuver	-	-	-	-	354
Stage 1	-	-	-	-	836
Stage 2	-	-	-	-	539

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	21.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1328	-	-	-	354
HCM Lane V/C Ratio	0.003	-	-	-	0.374
HCM Ctrl Dly (s/v)	7.7	0	-	-	21.1
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q (veh)	0	-	-	-	1.7

Proposed Convenience Store & Gas Station  
 3: Parking Lot/Southern Site Driveway & Commonwealth Ave

Weekday Morning Peak Hour  
 Timing Plan: 2032 No Build

Intersection												
Int Delay, s/veh	0.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	573	4	1	219	1	2	0	1	1	0	1
Future Vol, veh/h	3	573	4	1	219	1	2	0	1	1	0	1
Conflicting Peds, #/hr	5	0	1	1	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	89	89	89	80	80	80	80	80	80
Heavy Vehicles, %	11	3	25	0	4	0	0	0	0	0	0	0
Mvmt Flow	4	716	5	1	246	1	3	0	1	1	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	252	0	0	722	0	0	977	982	720	981	984	252
Stage 1	-	-	-	-	-	-	728	728	-	254	254	-
Stage 2	-	-	-	-	-	-	249	254	-	727	730	-
Critical Hdwy	4.21	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.299	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1263	-	-	889	-	-	232	251	431	231	250	792
Stage 1	-	-	-	-	-	-	418	432	-	755	701	-
Stage 2	-	-	-	-	-	-	759	701	-	419	431	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1257	-	-	888	-	-	230	248	431	228	247	788
Mov Cap-2 Maneuver	-	-	-	-	-	-	230	248	-	228	247	-
Stage 1	-	-	-	-	-	-	415	429	-	747	697	-
Stage 2	-	-	-	-	-	-	757	697	-	416	428	-

Approach	EB			WB			NB			SB		
HCM Ctrl Dly, s/v	0			0			18.4			15.2		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	272	1257	-	-	888	-	-	354
HCM Lane V/C Ratio	0.014	0.003	-	-	0.001	-	-	0.007
HCM Ctrl Dly (s/v)	18.4	7.9	0	-	9.1	0	-	15.2
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q (veh)	0	0	-	-	0	-	-	0

Proposed Convenience Store & Gas Station  
 4: Laws Brook Rd & Commonwealth Ave

Weekday Morning Peak Hour  
 Timing Plan: 2032 No Build

Intersection						
Int Delay, s/veh	3.8					
Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	329	477	103	0	0	109
Future Vol, veh/h	329	477	103	0	0	109
Conflicting Peds, #/hr	2	0	0	2	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	84	84	80	80
Heavy Vehicles, %	2	3	8	0	0	8
Mvmt Flow	387	561	123	0	0	136

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	125	0	-	0	1461 125
Stage 1	-	-	-	-	125 -
Stage 2	-	-	-	-	1336 -
Critical Hdwy	4.12	-	-	-	6.4 6.28
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.218	-	-	-	3.5 3.372
Pot Cap-1 Maneuver	1462	-	-	-	143 910
Stage 1	-	-	-	-	906 -
Stage 2	-	-	-	-	248 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1459	-	-	-	88 908
Mov Cap-2 Maneuver	-	-	-	-	88 -
Stage 1	-	-	-	-	556 -
Stage 2	-	-	-	-	248 -

Approach	EB	WB	SW
HCM Ctrl Dly, s/v	3.4	0	9.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBRSWLn1
Capacity (veh/h)	1459	-	-	- 908
HCM Lane V/C Ratio	0.265	-	-	- 0.15
HCM Ctrl Dly (s/v)	8.4	0	-	- 9.7
HCM Lane LOS	A	A	-	- A
HCM 95th %tile Q (veh)	1.1	-	-	- 0.5

Proposed Convenience Store & Gas Station  
 1: Commonwealth Ave & Northern Site Driveway

Weekday Evening Peak Hour  
 Timing Plan: 2032 No Build

Intersection												
Int Delay, s/veh	3.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	95	0	5	2	0	2	6	521	0	0	153	110
Future Vol, veh/h	95	0	5	2	0	2	6	521	0	0	153	110
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	4	4	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	84	84	84	88	88	88
Heavy Vehicles, %	3	0	0	0	0	0	0	1	0	0	2	5
Mvmt Flow	119	0	6	3	0	3	7	620	0	0	174	125

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	873	875	237	878	937	624	299	0	0	624	0	0
Stage 1	237	237	-	638	638	-	-	-	-	-	-	-
Stage 2	636	638	-	240	299	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.13	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	269	290	807	271	267	489	1274	-	-	967	-	-
Stage 1	764	713	-	468	474	-	-	-	-	-	-	-
Stage 2	464	474	-	768	670	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	266	287	807	266	264	487	1274	-	-	963	-	-
Mov Cap-2 Maneuver	266	287	-	266	264	-	-	-	-	-	-	-
Stage 1	758	713	-	462	468	-	-	-	-	-	-	-
Stage 2	458	468	-	762	670	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Ctrl Dly, s/v	28.6		15.6		0.1		0	
HCM LOS	D		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1274	-	-	275	344	963	-	-
HCM Lane V/C Ratio	0.006	-	-	0.455	0.015	-	-	-
HCM Ctrl Dly (s/v)	7.8	0	-	28.6	15.6	0	-	-
HCM Lane LOS	A	A	-	D	C	A	-	-
HCM 95th %tile Q (veh)	0	-	-	2.2	0	0	-	-

Proposed Convenience Store & Gas Station  
 2: Laws Brook Rd & Commonwealth Ave

Weekday Evening Peak Hour  
 Timing Plan: 2032 No Build

Intersection						
Int Delay, s/veh	3.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	2	129	334	525	158	2
Future Vol, veh/h	2	129	334	525	158	2
Conflicting Peds, #/hr	4	0	0	4	0	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	89	89	96	96
Heavy Vehicles, %	0	2	1	1	2	0
Mvmt Flow	2	140	375	590	165	2

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	969	0	-	0	818 676
Stage 1	-	-	-	-	674 -
Stage 2	-	-	-	-	144 -
Critical Hdwy	4.1	-	-	-	6.42 6.2
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.2	-	-	-	3.518 3.3
Pot Cap-1 Maneuver	719	-	-	-	346 457
Stage 1	-	-	-	-	506 -
Stage 2	-	-	-	-	883 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	716	-	-	-	342 454
Mov Cap-2 Maneuver	-	-	-	-	342 -
Stage 1	-	-	-	-	502 -
Stage 2	-	-	-	-	879 -

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.2	0	25
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	716	-	-	-	343
HCM Lane V/C Ratio	0.003	-	-	-	0.486
HCM Ctrl Dly (s/v)	10	0	-	-	25
HCM Lane LOS	B	A	-	-	D
HCM 95th %tile Q (veh)	0	-	-	-	2.5

Proposed Convenience Store & Gas Station  
 3: Parking Lot/Southern Site Driveway & Commonwealth Ave

Weekday Evening Peak Hour  
 Timing Plan: 2032 No Build

Intersection												
Int Delay, s/veh	0.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	285	2	4	857	0	2	0	6	0	0	0
Future Vol, veh/h	0	285	2	4	857	0	2	0	6	0	0	0
Conflicting Peds, #/hr	8	0	6	6	0	8	0	0	1	1	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	89	89	89	80	80	80	80	80	80
Heavy Vehicles, %	0	2	50	0	1	0	0	0	17	0	0	0
Mvmt Flow	0	297	2	4	963	0	3	0	8	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	971	0	0	305	0	0	1275	1283	305	1282	1284	971
Stage 1	-	-	-	-	-	-	304	304	-	979	979	-
Stage 2	-	-	-	-	-	-	971	979	-	303	305	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.37	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.453	3.5	4	3.3
Pot Cap-1 Maneuver	718	-	-	1267	-	-	145	167	701	144	166	309
Stage 1	-	-	-	-	-	-	710	667	-	304	331	-
Stage 2	-	-	-	-	-	-	307	331	-	711	666	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	713	-	-	1260	-	-	143	163	696	141	163	307
Mov Cap-2 Maneuver	-	-	-	-	-	-	143	163	-	141	163	-
Stage 1	-	-	-	-	-	-	706	663	-	302	326	-
Stage 2	-	-	-	-	-	-	305	326	-	703	662	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	0	15.5	0
HCM LOS			C	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	354	713	-	-	1260	-	-	-
HCM Lane V/C Ratio	0.028	-	-	-	0.004	-	-	-
HCM Ctrl Dly (s/v)	15.5	0	-	-	7.9	0	-	0
HCM Lane LOS	C	A	-	-	A	A	-	A
HCM 95th %tile Q (veh)	0.1	0	-	-	0	-	-	-

Proposed Convenience Store & Gas Station  
 4: Laws Brook Rd & Commonwealth Ave

Weekday Evening Peak Hour  
 Timing Plan: 2032 No Build

Intersection						
Int Delay, s/veh	3.4					
Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	99	129	335	1	2	114
Future Vol, veh/h	99	129	335	1	2	114
Conflicting Peds, #/hr	3	0	0	3	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	81	81
Heavy Vehicles, %	3	2	1	0	0	5
Mvmt Flow	115	150	390	1	2	141

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	394	0	-	0	774 394
Stage 1	-	-	-	-	394 -
Stage 2	-	-	-	-	380 -
Critical Hdwy	4.13	-	-	-	6.4 6.25
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.227	-	-	-	3.5 3.345
Pot Cap-1 Maneuver	1159	-	-	-	370 649
Stage 1	-	-	-	-	686 -
Stage 2	-	-	-	-	696 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1156	-	-	-	328 647
Mov Cap-2 Maneuver	-	-	-	-	328 -
Stage 1	-	-	-	-	609 -
Stage 2	-	-	-	-	694 -

Approach	EB	WB	SW
HCM Ctrl Dly, s/v	3.7	0	12.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBRSWLn1
Capacity (veh/h)	1156	-	-	- 636
HCM Lane V/C Ratio	0.1	-	-	- 0.225
HCM Ctrl Dly (s/v)	8.5	0	-	- 12.3
HCM Lane LOS	A	A	-	- B
HCM 95th %tile Q (veh)	0.3	-	-	- 0.9

The top of the page features a dark green triangular shape on the left containing the word "Bowman" in white. To the right, a white diagonal line separates this from an aerial photograph of a city street intersection with a roundabout, also tinted in shades of green.

**Bowman**

# **APPENDIX H**

## **2032 BUILD CAPACITY/ LEVEL-OF-SERVICE ANALYSIS**

Proposed Convenience Store & Gas Station  
 1: Commonwealth Ave & Northern Site Driveway

Weekday Morning Peak Hour  
 Timing Plan: 2032 Build

Intersection												
Int Delay, s/veh	12.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	320	13	1	8	4	13	2	120	0	10	101	105
Future Vol, veh/h	320	13	1	8	4	13	2	120	0	10	101	105
Conflicting Peds, #/hr	0	0	0	0	0	0	1	0	3	3	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	80	80	80	86	86	86	86	86	86
Heavy Vehicles, %	1	0	0	0	0	0	0	1	0	0	6	8
Mvmt Flow	395	16	1	10	5	16	2	140	0	12	117	122

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	358	350	179	358	411	143	240	0	0	143	0	0
Stage 1	203	203	-	147	147	-	-	-	-	-	-	-
Stage 2	155	147	-	211	264	-	-	-	-	-	-	-
Critical Hdwy	7.11	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.11	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.11	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.509	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	599	577	869	601	534	910	1339	-	-	1452	-	-
Stage 1	801	737	-	860	779	-	-	-	-	-	-	-
Stage 2	850	779	-	796	694	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	578	568	868	580	525	907	1338	-	-	1448	-	-
Mov Cap-2 Maneuver	578	568	-	580	525	-	-	-	-	-	-	-
Stage 1	799	729	-	856	775	-	-	-	-	-	-	-
Stage 2	828	775	-	770	686	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Ctrl Dly, s/v	25.2		10.4		0.1		0.3	
HCM LOS	D		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1338	-	-	578	699	1448	-	-
HCM Lane V/C Ratio	0.002	-	-	0.713	0.045	0.008	-	-
HCM Ctrl Dly (s/v)	7.7	0	-	25.2	10.4	7.5	0	-
HCM Lane LOS	A	A	-	D	B	A	A	-
HCM 95th %tile Q (veh)	0	-	-	5.8	0.1	0	-	-

Proposed Convenience Store & Gas Station  
 2: Laws Brook Rd & Commonwealth Ave

Weekday Morning Peak Hour  
 Timing Plan: 2032 Build

Intersection						
Int Delay, s/veh	3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	3	476	108	119	110	0
Future Vol, veh/h	3	476	108	119	110	0
Conflicting Peds, #/hr	5	0	0	5	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	80	93	93	80	80
Heavy Vehicles, %	0	3	8	1	5	0
Mvmt Flow	4	595	116	128	138	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	249	0	-	0	788 186
Stage 1	-	-	-	-	185 -
Stage 2	-	-	-	-	603 -
Critical Hdwy	4.1	-	-	-	6.45 6.2
Critical Hdwy Stg 1	-	-	-	-	5.45 -
Critical Hdwy Stg 2	-	-	-	-	5.45 -
Follow-up Hdwy	2.2	-	-	-	3.545 3.3
Pot Cap-1 Maneuver	1328	-	-	-	356 861
Stage 1	-	-	-	-	839 -
Stage 2	-	-	-	-	541 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1322	-	-	-	351 856
Mov Cap-2 Maneuver	-	-	-	-	351 -
Stage 1	-	-	-	-	831 -
Stage 2	-	-	-	-	538 -

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	21.7
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1322	-	-	-	351
HCM Lane V/C Ratio	0.003	-	-	-	0.392
HCM Ctrl Dly (s/v)	7.7	0	-	-	21.7
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q (veh)	0	-	-	-	1.8

Proposed Convenience Store & Gas Station  
 3: Parking Lot/Southern Site Driveway & Commonwealth Ave

Weekday Morning Peak Hour  
 Timing Plan: 2032 Build

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	16	566	4	1	214	12	2	0	1	14	0	11
Future Vol, veh/h	16	566	4	1	214	12	2	0	1	14	0	11
Conflicting Peds, #/hr	5	0	1	1	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	89	89	89	80	80	80	80	80	80
Heavy Vehicles, %	11	3	25	0	4	0	0	0	0	0	0	0
Mvmt Flow	20	708	5	1	240	13	3	0	1	18	0	14

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	258	0	0	714	0	0	1008	1012	712	1005	1008	252
Stage 1	-	-	-	-	-	-	752	752	-	254	254	-
Stage 2	-	-	-	-	-	-	256	260	-	751	754	-
Critical Hdwy	4.21	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.299	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1256	-	-	895	-	-	221	241	436	222	242	792
Stage 1	-	-	-	-	-	-	405	421	-	755	701	-
Stage 2	-	-	-	-	-	-	753	697	-	406	420	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1250	-	-	894	-	-	212	233	436	216	234	788
Mov Cap-2 Maneuver	-	-	-	-	-	-	212	233	-	216	234	-
Stage 1	-	-	-	-	-	-	394	409	-	731	697	-
Stage 2	-	-	-	-	-	-	739	693	-	394	408	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.2	0	19.3	17.6
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	256	1250	-	-	894	-	-	317
HCM Lane V/C Ratio	0.015	0.016	-	-	0.001	-	-	0.099
HCM Ctrl Dly (s/v)	19.3	7.9	0	-	9	0	-	17.6
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q (veh)	0	0	-	-	0	-	-	0.3

Proposed Convenience Store & Gas Station  
 4: Laws Brook Rd & Commonwealth Ave

Weekday Morning Peak Hour  
 Timing Plan: 2032 Build

Intersection						
Int Delay, s/veh	3.8					
Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	334	479	108	0	0	111
Future Vol, veh/h	334	479	108	0	0	111
Conflicting Peds, #/hr	2	0	0	2	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	84	84	80	80
Heavy Vehicles, %	2	3	8	0	0	8
Mvmt Flow	393	564	129	0	0	139

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	131	0	-	0	1482 131
Stage 1	-	-	-	-	131 -
Stage 2	-	-	-	-	1351 -
Critical Hdwy	4.12	-	-	-	6.4 6.28
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.218	-	-	-	3.5 3.372
Pot Cap-1 Maneuver	1454	-	-	-	139 903
Stage 1	-	-	-	-	900 -
Stage 2	-	-	-	-	244 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1451	-	-	-	84 901
Mov Cap-2 Maneuver	-	-	-	-	84 -
Stage 1	-	-	-	-	545 -
Stage 2	-	-	-	-	244 -

Approach	EB	WB	SW
HCM Ctrl Dly, s/v	3.5	0	9.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBRSWLn1
Capacity (veh/h)	1451	-	-	- 901
HCM Lane V/C Ratio	0.271	-	-	- 0.154
HCM Ctrl Dly (s/v)	8.4	0	-	- 9.7
HCM Lane LOS	A	A	-	- A
HCM 95th %tile Q (veh)	1.1	-	-	- 0.5

Proposed Convenience Store & Gas Station  
 1: Commonwealth Ave & Northern Site Driveway

Weekday Evening Peak Hour  
 Timing Plan: 2032 Build

Intersection												
Int Delay, s/veh	4.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	93	8	5	4	5	16	6	516	0	13	150	107
Future Vol, veh/h	93	8	5	4	5	16	6	516	0	13	150	107
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	4	4	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	84	84	84	88	88	88
Heavy Vehicles, %	3	0	0	0	0	0	0	1	0	0	2	5
Mvmt Flow	116	10	6	5	6	20	7	614	0	15	170	122

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	902	893	231	901	954	618	292	0	0	618	0	0
Stage 1	261	261	-	632	632	-	-	-	-	-	-	-
Stage 2	641	632	-	269	322	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.13	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	258	283	813	261	261	493	1281	-	-	972	-	-
Stage 1	742	696	-	472	477	-	-	-	-	-	-	-
Stage 2	461	477	-	741	655	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	238	274	813	246	253	491	1281	-	-	968	-	-
Mov Cap-2 Maneuver	238	274	-	246	253	-	-	-	-	-	-	-
Stage 1	736	683	-	466	471	-	-	-	-	-	-	-
Stage 2	433	471	-	711	643	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Ctrl Dly, s/v	34.8		15.8		0.1		0.4	
HCM LOS	D		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1281	-	-	249	364	968	-	-
HCM Lane V/C Ratio	0.006	-	-	0.532	0.086	0.015	-	-
HCM Ctrl Dly (s/v)	7.8	0	-	34.8	15.8	8.8	0	-
HCM Lane LOS	A	A	-	D	C	A	A	-
HCM 95th %tile Q (veh)	0	-	-	2.9	0.3	0	-	-

Proposed Convenience Store & Gas Station  
 2: Laws Brook Rd & Commonwealth Ave

Weekday Evening Peak Hour  
 Timing Plan: 2032 Build

Intersection						
Int Delay, s/veh	3.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	2	131	340	520	157	2
Future Vol, veh/h	2	131	340	520	157	2
Conflicting Peds, #/hr	4	0	0	4	0	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	89	89	96	96
Heavy Vehicles, %	0	2	1	1	2	0
Mvmt Flow	2	142	382	584	164	2

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	970	0	-	0	824 680
Stage 1	-	-	-	-	678 -
Stage 2	-	-	-	-	146 -
Critical Hdwy	4.1	-	-	-	6.42 6.2
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.2	-	-	-	3.518 3.3
Pot Cap-1 Maneuver	719	-	-	-	343 454
Stage 1	-	-	-	-	504 -
Stage 2	-	-	-	-	881 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	716	-	-	-	339 451
Mov Cap-2 Maneuver	-	-	-	-	339 -
Stage 1	-	-	-	-	500 -
Stage 2	-	-	-	-	877 -

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.2	0	25.2
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	716	-	-	-	340
HCM Lane V/C Ratio	0.003	-	-	-	0.487
HCM Ctrl Dly (s/v)	10	0	-	-	25.2
HCM Lane LOS	B	A	-	-	D
HCM 95th %tile Q (veh)	0	-	-	-	2.6

Proposed Convenience Store & Gas Station  
 3: Parking Lot/Southern Site Driveway & Commonwealth Ave

Weekday Evening Peak Hour  
 Timing Plan: 2032 Build

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	281	2	4	838	27	2	0	6	12	0	20
Future Vol, veh/h	5	281	2	4	838	27	2	0	6	12	0	20
Conflicting Peds, #/hr	8	0	6	6	0	8	0	0	1	1	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	89	89	89	80	80	80	80	80	80
Heavy Vehicles, %	0	2	50	0	1	0	0	0	17	0	0	0
Mvmt Flow	5	293	2	4	942	30	3	0	8	15	0	25

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	980	0	0	301	0	0	1288	1298	301	1282	1284	965
Stage 1	-	-	-	-	-	-	310	310	-	973	973	-
Stage 2	-	-	-	-	-	-	978	988	-	309	311	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.37	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.453	3.5	4	3.3
Pot Cap-1 Maneuver	712	-	-	1272	-	-	142	163	705	144	166	312
Stage 1	-	-	-	-	-	-	705	663	-	306	333	-
Stage 2	-	-	-	-	-	-	304	328	-	705	662	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	707	-	-	1265	-	-	128	158	700	140	161	310
Mov Cap-2 Maneuver	-	-	-	-	-	-	128	158	-	140	161	-
Stage 1	-	-	-	-	-	-	695	654	-	301	328	-
Stage 2	-	-	-	-	-	-	278	323	-	691	653	-

Approach	EB			WB			NB			SB		
HCM Ctrl Dly, s/v	0.2			0			16.2			25.8		
HCM LOS							C			D		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	331	707	-	-	1265	-	-	213
HCM Lane V/C Ratio	0.03	0.007	-	-	0.004	-	-	0.188
HCM Ctrl Dly (s/v)	16.2	10.1	0	-	7.9	0	-	25.8
HCM Lane LOS	C	B	A	-	A	A	-	D
HCM 95th %tile Q (veh)	0.1	0	-	-	0	-	-	0.7

Proposed Convenience Store & Gas Station  
4: Laws Brook Rd & Commonwealth Ave

Weekday Evening Peak Hour  
Timing Plan: 2032 Build

Intersection						
Int Delay, s/veh	3.5					
Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations		↶	↷		↶	↷
Traffic Vol, veh/h	105	131	341	1	2	116
Future Vol, veh/h	105	131	341	1	2	116
Conflicting Peds, #/hr	3	0	0	3	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	81	81
Heavy Vehicles, %	3	2	1	0	0	5
Mvmt Flow	122	152	397	1	2	143

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	401	0	-	0	797
Stage 1	-	-	-	-	401
Stage 2	-	-	-	-	396
Critical Hdwy	4.13	-	-	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	2.227	-	-	-	3.5
Pot Cap-1 Maneuver	1152	-	-	-	358
Stage 1	-	-	-	-	681
Stage 2	-	-	-	-	684
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1149	-	-	-	315
Mov Cap-2 Maneuver	-	-	-	-	315
Stage 1	-	-	-	-	600
Stage 2	-	-	-	-	682

Approach	EB	WB	SW
HCM Ctrl Dly, s/v	3.8	0	12.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBRSWLn1
Capacity (veh/h)	1149	-	-	630
HCM Lane V/C Ratio	0.106	-	-	0.231
HCM Ctrl Dly (s/v)	8.5	0	-	12.4
HCM Lane LOS	A	A	-	B
HCM 95th %tile Q (veh)	0.4	-	-	0.9

The top of the page features a dark green triangular shape on the left containing the word "Bowman" in white. To the right, a white diagonal line separates this from a photograph of a city street intersection with a roundabout. The rest of the page is white.

**Bowman**

# **APPENDIX I**

## CAPACITY/LEVEL-OF-SERVICE ANALYSIS SUMMARY

## CAPACITY ANALYSIS SUMMARY

**Weekday Morning Peak Hour**

**Proposed Convenience Store & Gas Station**

**Concord, MA**

Intersection	Movement	2025 Existing					2032 No Build				2032 Build			
		LOS <sup>1</sup>	Delay <sup>2</sup>	V/C <sup>3</sup>	95th Q <sup>4</sup>	LOS	Delay	V/C	95th Q	LOS	Delay	V/C	95th Q	
Commonwealth Avenue at Northern Site Driveway	EB LTR	C	18.0	0.58	95	C	21.0	0.65	120	D	25.2	0.71	145	
(Kenny Dunn Square North Intersection)	WB LTR	B	10.0	0.01	0	B	10.2	0.01	0	B	10.4	0.05	3	
	NB LTR	A	0.1	0.00	0	A	0.1	0.00	0	A	0.1	0.00	0	
	SB LTR	A	0.0	0.00	0	A	0.0	0.00	0	A	0.3	0.01	0	
	EB LT	A	0.1	0.00	0	A	0.0	0.00	0	A	0.0	0.00	0	
Commonwealth Avenue at Laws Brook Road	WB TR	A	0.0	0.00	0	A	0.0	0.00	0	A	0.0	0.00	0	
(Kenny Dunn Square East Intersection)	SB LR	C	18.7	0.32	35	C	21.1	0.37	43	C	21.7	0.39	45	
Commonwealth Avenue at Southern Site Driveway/ Parking Lot	EB LTR	A	0.0	0.00	0	A	0.0	0.00	0	A	0.2	0.02	0	
	WB LTR	A	0.0	0.00	0	A	0.0	0.00	0	A	0.0	0.00	0	
	NB LTR	C	17.0	0.01	0	C	18.4	0.01	0	C	19.3	0.02	0	
	SB LTR	B	14.3	0.01	0	C	15.2	0.01	0	C	17.6	0.10	8	
Commonwealth Avenue at Laws Brook Road	EB LT	A	3.4	0.25	25	A	3.4	0.27	28	A	3.5	0.27	28	
	WB TR	A	0.0	0.00	0	A	0.0	0.00	0	A	0.0	0.00	0	
(Kenny Dunn Square West Intersection)	SB LR	A	9.5	0.14	13	A	9.7	0.15	13	A	9.7	0.15	13	

1 Level-of-Service

2 Average vehicle delay, in seconds

3 Volume to capacity ratio

4 95th percentile queue length, in feet

## CAPACITY ANALYSIS SUMMARY

**Weekday Afternoon Peak Hour**

**Proposed Convenience Store & Gas Station**

**Concord, MA**

Intersection	Movement	2025 Existing				2032 No Build				2032 Build			
		LOS <sup>1</sup>	Delay <sup>2</sup>	V/C <sup>3</sup>	95th Q <sup>4</sup>	LOS	Delay	V/C	95th Q	LOS	Delay	V/C	95th Q
Commonwealth Avenue at Northern Site Driveway	EB LTR	C	23.8	0.38	43	D	28.6	0.46	55	D	34.8	0.53	73
(Kenny Dunn Square North Intersection)	WB LTR	B	14.7	0.01	0	C	15.6	0.02	0	C	15.8	0.09	8
	NB LTR	A	0.1	0.01	0	A	0.1	0.01	0	A	0.1	0.01	0
	SB LTR	A	0.0	0.00	0	A	0.0	0.00	0	A	0.4	0.02	0
	EB LT	A	0.2	0.00	0	A	0.2	0.00	0	A	0.2	0.00	0
Commonwealth Avenue at Laws Brook Road	WB TR	A	0.0	0.00	0	A	0.0	0.00	0	A	0.0	0.00	0
(Kenny Dunn Square East Intersection)	SB LR	C	21.2	0.41	48	D	25.0	0.49	63	D	25.2	0.49	65
Commonwealth Avenue at Southern Site Driveway/ Parking Lot	EB LTR	A	0.0	0.00	0	A	0.0	0.00	0	A	0.2	0.01	0
	WB LTR	A	0.0	0.00	0	A	0.0	0.00	0	A	0.0	0.00	0
	NB LTR	B	14.4	0.03	3	C	15.5	0.03	3	C	16.2	0.03	3
	SB LTR	A	0.0	0.00	0	A	0.0	0.00	0	D	25.8	0.19	18
Commonwealth Avenue at Laws Brook Road (Kenny Dunn Square West Intersection)	EB LT	A	3.7	0.09	8	A	3.7	0.10	8	A	3.8	0.11	10
	WB TR	A	0.0	0.00	0	A	0.0	0.00	0	A	0.0	0.00	0
	SB LR	B	11.8	0.20	20	B	12.3	0.23	23	B	12.4	0.23	23

1 Level-of-Service

2 Average vehicle delay, in seconds

3 Volume to capacity ratio

4 95th percentile queue length, in feet