



Traffic Impact, Access, and Parking Study for



GRAFTON WOODS 4 BRANDT LANE WORCESTER, MASSACHUSETTS



Kimley»Horn

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October 2023

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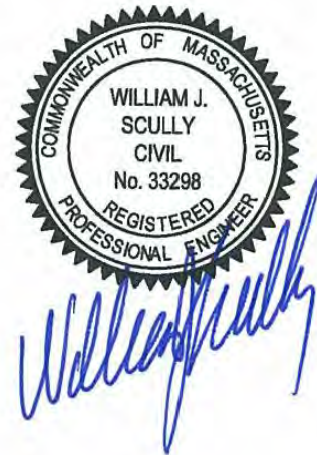
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GRAFTON WOODS WORCESTER, MASSACHUSETTS

Traffic Impact, Access, and Parking Study

PREPARED FOR
GRAFTON WOODS

PREPARED BY
KIMLEY-HORN AND ASSOCIATES, INC.



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Massachusetts Registration Number 33298
Kimley-Horn and Associates, Inc.
271 Waverley Oaks Road, Suite 302
Waltham, MA 02452

EXECUTIVE SUMMARY

PURPOSE OF REPORT AND STUDY OBJECTIVES

The report presents the results of the traffic impact, access, and parking study (TIAPS) for the development of a residential project in five (5) buildings, including one (1) building with ground-floor commercial space located in the City of Worcester. This analysis reflects an update from the October 2023 report due to the changes to the development program, decrease in dwelling units and commercial space. Additionally, site access changed along Grafton Street (Route 122) from two (2) Site Driveways to one (1) Site Driveway via Brandt Lane. The Site Driveway along Pine Hill Road remains the same as the previous version. This report describes the area transportation system, existing traffic volumes, the estimate of site-generated trips, the calculation of Future No-Build and Future Build traffic volumes, and analysis. The Future Build year for this project is 2030. The methodology is consistent with Massachusetts Department of Transportation (MassDOT) traffic analysis guidelines, and the scope of the study was reviewed with City transportation staff.

SITE LOCATION AND STUDY AREA

The proposed development is located at 4 Brandt Lane in the City of Worcester, which is bound by Brandt Lane to the south and Grafton Street (Route 122) to the west. The proposed development is located on the east side of Grafton Street (Route 122), almost opposite Roosevelt Elementary School. This proposed development will include five (5) residential buildings totaling 491 dwelling units and 4,500 square feet of ground floor commercial space in one (1) building, Building 5. Building 5, with the ground floor commercial space, would be located adjacent to Grafton Street. The primary Site Driveway is along Brandt Lane, and a secondary Site Driveway is along Pine Hill Road. The site location is shown in **Figure 1**. The study area includes seven (7) study intersections.

PRINCIPAL FINDINGS AND CONCLUSIONS

The analysis of traffic for the proposed development of 491 dwelling units and 4,500 SF of ground floor commercial space was completed following standard practice. The previous sections described the current roadway network and traffic characteristics, the forecasts of future traffic and parking conditions, and the analysis of impact and access. The key findings of this study are as follows:

- This proposed development is almost entirely a residential development, except at Building 5, which includes ground floor commercial or retail uses. The development of a predominantly residential project results in specific trip patterns. For example, there will be more trips exiting/leaving the site in the AM peak hour and more trips entering/coming to the site in the PM peak hour.
- The existing two-lane undivided roadway, Grafton Street (Route 122), exhibits some minor issues or constraints but does have available capacity to accommodate additional traffic without any major need for improvement.
- While the project adds traffic to the street system, it does not result in any significant changes in traffic operations at the study area intersections.
- The signalized intersection of Grafton Street (Route 122) & Sunderland Road is the one location within the study that experiences vehicle delays on its approaches with northbound left-turn movements prohibited. It also experiences a relatively high number of crashes each year but does not exceed the MassDOT's District 3 crash rate.

- The minor unsignalized intersections between Sunderland Road and Jennings Street generally operate satisfactorily with moderate to moderately long left turn exiting delays during peak hours. Minor street volumes are relatively low, and the intersections have good visibility along the roadway.
- The analysis indicates more than sufficient capacity exists along Grafton Street (Route 122) to accommodate the site generated traffic and any vehicle queuing will occur on the Site Driveway, not Grafton Street. With Brandt Lane located between the two (2) signalized intersections, gaps in the traffic stream are created, which would provide some assistance for motorists to exit the site drives into the main street (Grafton Street) traffic stream.
- The Brandt Lane exit movements will experience some higher vehicle delays and somewhat longer vehicle queues, but again, the queues are fully accommodated on the Brandt Lane Site Driveway.
- The proposed Site Driveway off Pine Hill Road, which mainly would serve Building 5 is anticipated to operate at LOS A.

PROPOSED MITIGATION

While the project itself is not creating any new operational deficiencies or have significant impacts to existing intersections, the importance of creating safe and efficient access for the project is essential to maintain a safe multimodal traveling network for non-site related traffic. The following potential mitigation measures have been identified below and are intended to provide for safe site access. Additionally, there has been coordination with the Superintendent to discuss the proposed development, existing conditions, and concerns.

- The exit to Grafton Street will be STOP controlled with appropriate signage and markings.
- While the ability exists to provide a wide, two lane exit approach on Brandt Lane to Grafton Street that would accommodate separate left and right turning lanes, it is recommended to keep the single lane approach that allows for a shorter, safer pedestrian and bicycle crossing of Brandt Lane, as well as bicycle accommodations along both sides of the Brandt Lane, drive connecting the project to Grafton Street.
- To be consistent with the City's multimodal goals, it is recommended that the Site Driveway/Brandt Lane connecting to Grafton Street be designed to include on-road bike accommodations in both directions and a sidewalk. Signs and markings should be installed.
- Rehabilitation of Pine Hill Road from Grafton Street (Route 122) to just beyond the proposed Site Driveway to the visitor center, approximately 225 feet. This would be a total rehabilitation including street lighting fixtures, which would improve access and safety to the residential land uses along Pine Hill Road. The rehabilitation will also sidewalk facilities on the development side - the west side of Pine Hill Road.
- Reconstruct the sidewalk along the east side of Grafton Street (Route 122) between Pine Hill Road and Brandt Lane. The right of way along the east side of Grafton Street appears sufficient where a wider facility could be provided that would result in a shared use path along this section of the street. If the feasibility of this is confirmed, it is recommended for implementation. This action would be consistent with the City's multimodal goals, and it will benefit all users, including those accessing to and from Roosevelt Elementary School.
- Provide transit information inside of each building lobby regarding routes and schedules.
- Adjust signal timings at Grafton Street (Route 122) and Sunderland Road to improve the overall traffic operations.

- Provide enhanced pedestrian street crossing along Grafton Street (Route 122) near AutoZone Auto Parts with Rectangular Rapid Flashing Beacons (RRFB), ADA-compliant ramps, and curb extensions (also known as bump outs).
- Provide an enhanced transit stop at Grafton Street (Route 122) by Brandt Lane with shelter, bench, and other amenities. There will need to be coordination with the Worcester Regional Transit Authority (WRTA) regarding the transit stop.

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INTRODUCTION

This report has been prepared by Kimley-Horn and Associates, Inc. to document the potential traffic impacts associated with the proposed development of five (5) residential buildings totaling 491 dwelling units and 4,500 square feet of ground floor commercial space in one (1) building, Building 5, known as Grafton Woods, located at 4 Brandt Lane in the City of Worcester, which is bound by Brandt Lane to the south and Grafton Street (Route 122) to the west. The proposed development is located on the east side of Grafton Street (Route 122), almost opposite Roosevelt Elementary School. Building 5, with the ground floor commercial space, would be located adjacent to Grafton Street. The primary Site Driveway is along Brandt Lane, and a secondary Site Driveway is along Pine Hill Road. The site plan depicting the proposed development and site driveways is included in **Appendix J** and **Figure 1** illustrates the location of the proposed development and study intersections. The purpose of this study was to assess the developments' impact on the roadway network, review the site access, and parking analysis.

This report summarizes the data collection, site generated traffic forecasts, intersection capacity analysis, site driveway evaluations, parking analysis, and proposed mitigation.

EXISTING CONDITIONS

ROADWAY NETWORKS

Evaluation of the traffic impacts associated with the proposed development in the surrounding roadway network in the City of Worcester requires a thorough understanding of the existing roadway system in the vicinity of the site. The existing conditions observed in the study area include an inventory of the roadways, speed limits, intersection geometry, and traffic control devices. Key roadways in the study area include Grafton Street (Route 122), Jennings Street, Dalton Street, Jolma Road, Sunderland Road, Brandt Lane, and Pine Hill Road. For orientation purposes, Grafton Street (Route 122) is northbound/southbound, and other intersecting roadways are eastbound/westbound in the vicinity.

Grafton Street (Route 122) is a north-south, two-lane undivided roadway with a posted speed limit of 35 miles per hour (MPH). It is classified by Massachusetts Department of Transportation (MassDOT) as an Urban Principal Arterial and is under the jurisdiction of the City of Worcester. In general, Grafton Street (Route 122) is an urban environment with sidewalks on both sides of the with multiple marked pedestrian crosswalks provided either at the fully signalized intersections or separately identified enhanced crossing with Rapid Rectangular Flashing Beacons (RRFBs). One (1) of the RRFB crossings is in front of Roosevelt Elementary School, nearby the proposed development. Additionally, shoulders are provided on both sides.

Sunderland Road is an east-west, two-lane undivided roadway without a posted speed limit noted during field inventories. It is classified by MassDOT as an Urban Collector and is under the jurisdiction of the City of Worcester. There are residential uses along Sunderland Road as well as an egress from the Roosevelt Elementary School. Additionally, Sunderland Road connects with Route 20 to the east.

Jennings Street is an east-west, two-lane undivided roadway without a posted speed limit noted during field inventories. It is classified by MassDOT as a Local Road and is under the jurisdiction of the City of Worcester. Jennings Street provides a connection to Commonwealth Avenue, which services as another route to connect to Hamilton Street, which ultimately connects to Route 9, via Plantation Street. There is a weight limit of 5 tons.

Dalton Street is an east-west, two-lane undivided roadway with a posted speed limit of 30 MPH. It is classified by MassDOT as a Local Road and is under the jurisdiction of the City of Worcester. There are residential uses along Dalton Street. Trucks are not allowed Dalton Street.

Pine Hill Road is an east-west, two-lane undivided roadway with a posted speed limit of 20 MPH. It is classified by MassDOT as a Local Road and is under the jurisdiction of the City of Worcester. There are residential uses along Pine Hill Road.

DESCRIPTION OF STUDY INTERSECTIONS

Grafton Street (Route 122) & Jennings Street is a three-legged unsignalized intersection. The southbound approach provided by Grafton Street (Route 122) permits through and left-turn movements via one (1) shared left-turn/through lane. The northbound approach provided by Grafton Street (Route 122) permits through and right-turn movements via one (1) shared through/right-turn lane. The westbound approach provided by Jennings Street permits right-turn and left-turn movements via one (1) shared right-turn/left-turn lane. Jennings Street approach is STOP controlled and Grafton Street (Route 122) approaches are free flow.

Grafton Street (Route 122) & Dalton Street/Stop & Shop Driveway is a four-legged signalized intersection. The northbound approach provided by Grafton Street (Route 122) permits all movements via one (1) shared through/right-turn lane and one (1) dedicated left-turn lane. The southbound approach provided by Grafton Street (Route 122) permits all movements via one (1) shared through/right-turn lane and one (1) dedicated left-turn lane. The eastbound approach provided by Dalton Street permits all movements via one (1) shared left-turn/through/right-turn lane. The westbound approach provided by Stop & Shop Driveway permits all movements via one (1) shared through/left-turn lane and one (1) dedicated right-turn lane. Crosswalk markings are provided on all approaches except the southbound approach.

Grafton Street (Route 122) & Jolma Road/Starbucks Entrance Driveway is a four-legged unsignalized intersection. The northbound approach provided by Grafton Street (Route 122) permits all movements via one (1) shared left-turn/through/right-turn lane. The southbound approach provided by Grafton Street (Route 122) permits all movements via one (1) shared left-turn/through/right-turn lane. The westbound approach provided by Jolma Road permits all movements via one (1) shared left-turn/through/right-turn lane. The west leg is a one-way entrance driveway for Starbucks. Jolma Road approach is STOP controlled and Grafton Street (Route 122) approaches are free flow.

Grafton Street (Route 122) & O'Reilly Auto Parts Driveway is a three-legged unsignalized intersection. The northbound approach provided by Grafton Street (Route 122) permits through and right-turn movements via one (1) shared through/right-turn lane. The southbound approach provided by Grafton Street (Route 122) permits through and left-turn movements via one (1) through lane and one (1) two-way left-turn lane. The westbound approach provided by O'Reilly Auto Parts Driveway permits right-turn and left-turn movements via one (1) shared right-turn/left-turn lane.

Grafton Street (Route 122) & Brandt Lane/Roosevelt Elementary School Delivery Only Driveway is a four-legged unsignalized intersection. The northbound approach provided by Grafton Street (Route 122) permits all movements via one (1) shared left-turn/through/right-turn lane. The southbound approach provided by Grafton Street (Route 122) permits all movements via one (1) shared left-turn/through/right-turn lane. The westbound approach provided by Brandt Lane permits all movements via one (1) shared left-turn/through/right-turn lane. The eastbound approach provided by Roosevelt Elementary School is a delivery only driveway that permits all movements via one (1) shared left-turn/through/right-turn lane. Brandt Lane approach is STOP controlled and Grafton Street (Route 122) approaches are free flow.

Grafton Street (Route 122) & Pine Hill Road/Roosevelt Elementary School Driveway is a four-legged unsignalized intersection. The northbound approach provided by Grafton Street (Route 122) permits all movements via one (1) shared left-turn/through/right-turn lane. The southbound approach provided by Grafton Street (Route 122) permits all movements via one (1) shared left-turn/through/right-turn lane. The westbound approach provided by Pine Hill Road permits all movements via one (1) shared left-turn/through/right-turn lane. The eastbound approach provided by Roosevelt Elementary Driveway is an ingress movement only and includes two (2) driveways, one for auto passengers and one for school buses.

Grafton Street (Route 122) & Sunderland Road is a four-legged signalized intersection. The northbound approach provided by Grafton Street (Route 122) provides one (1) dedicated through lane and one (1) dedicated right-turn lane with left-turn movements prohibited. The southbound approach provided by Grafton Street (Route 122) permits all movements via one (1) shared through/right-turn lane and one (1) dedicated left-turn lane. The eastbound approach provided by Sunderland Road permits all movements via one (1) shared left-turn/through/right-turn lane and there is a No Turn on Red signage. The westbound approach provided by Sunderland Road permits all movements via one (1) shared through/right-turn with a No Turn on Red signage and one (1) dedicated left-turn lane. Crosswalk markings are provided on the southbound approach of Grafton Road (Route 122) and westbound approach of Sunderland Road.

Legend



Study Intersection



NOT TO SCALE



Figure 1

Site Location

Grafton Woods, Worcester, MA

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PEDESTRIAN, BICYCLE, AND TRANSIT FACILITIES

Sidewalk facilities are provided on both sides along Grafton Street (Route 122) and Jolma Road. Additionally, sidewalk facilities are provided on the south side of Sunderland Road, east of Grafton Street (Route 122). While sidewalk facilities are provided along Grafton Street (Route 122), the condition of the sidewalk facilities is currently in fair to below average conditions, including non-compliant ADA curb ramps. A midblock crosswalk with RRFBs is located directly in front of Roosevelt Elementary School, near the proposed site, between Brandt Lane and Pine Hill Road. Additionally, the signalized intersections of Grafton Street (Route 122) at Dalton Street/Stop & Shop Driveway, and Grafton Street (Route 122) at Sunderland Road include marked crosswalks. Bicycle facilities are not provided within the project vicinity. However, there are six foot shoulders along Grafton Street (Route 122).

Public transportation service in the City and region is provided by Worcester Regional Transit Authority (WRTA). The following bus routes are listed below, and **Figure 2** depicts the transit routes for Bus Route 5 (shown as the green line) and Bus Route 12 (shown as the orange line).

- Bus Route 5 (Union Station Hub – Blithewood/Massasoit via Grafton Street) runs along Grafton Street (Route 122) with stops at Roosevelt Elementary and South Plaza. Service is provided during the weekday, Monday to Friday, from 5:00 AM – 9:00 PM, Saturday from 6:00 AM – 8:30 PM, and Sunday from 10:00 AM – 5:30 PM. The headways are typically 60 minutes throughout the day.
- Bus Route 12 (Southwest Commons via Grafton Street) runs along Grafton Street (Route 122) with stops at Roosevelt Elementary and South Plaza. Service is provided during the weekday, Monday to Friday, from 6:30 AM – 9:30 PM and no Saturday or Sunday Service. The headways are typically 60 minutes throughout the day.

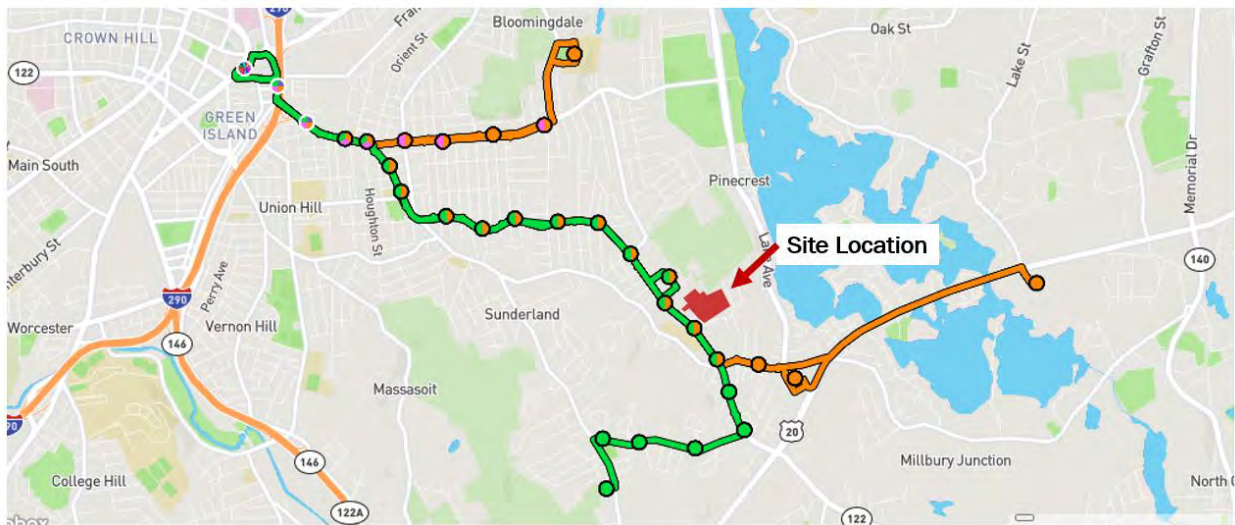


Figure 2. Bus Route 5 & Bus Route 12

TRAFFIC DATA COLLECTION

Automatic traffic recorders (ATRs) for 48 hours were conducted during June while school was still in session and September in 2023 to collect daily flow data.

The following location was conducted on Wednesday, June 7, 2023, to Thursday, June 8, 2023.

- Grafton Street (Route 122), south of Sunderland Road

The following locations were conducted on Wednesday, September 23, 2023, to Thursday, September 14, 2023.

- Grafton Street (Route 122), south of Sunderland Road
- Grafton Street (Route 122), north of Jennings Street

The daily flow along Grafton Street (Route 122), south of Sunderland Road was conducted in June and September. The average weekday volumes during June 2023 is 16,816 vehicles per day (VPD), while September 2023 is 16,642 VPD, which is approximately at 1.0% lower, however, within the margin of variability. Therefore, volumes conducted were not adjusted regardless of when the data was collected. The peak hour flows in June or September represent approximately 7.0% and 8.0% of the weekday 24-hour volumes during the AM and PM peak hours, respectively. The 85th percentile speed was observed to be 36 MPH in the northbound direction and 38 MPH in the southbound direction. Both observed 85th percentile speeds are slightly higher than the posted speed limit of 35 MPH.

Grafton Street (Route 122), north of Jennings Street average weekday volumes is 16,011 VPD. Peak hour flows represent approximately 6.0% and 8.0% of the weekday 24-hour volumes during the AM and PM peak hours, respectively. The 85th percentile speed was observed to be 35 MPH in the northbound direction and 38 MPH in the southbound direction. The observed 85th percentile speed in the southbound direction is slightly higher than the posted speed limit of 35 MPH.

A summary of the traffic volume data can be found in **Table 1**.

Table 1. Summary of Traffic Volume Data

Location	Posted Speed Limit (MPH)	85 th Percentile Speed (MPH)	Average Weekday Volume (rounded)	Weekday AM Peak Hour				Weekday PM Peak Hour			
				Time	Veh. Vol.	Truck Volume	Dir. Dist.	Time	Veh. Vol.	Truck Volume	Dir. Dist.
Grafton Street (south of Sunderland Road)	35	37 NB / 39 SB	16,820	7:30 – 8:30	1182	13 NB / 12 SB	55% NB / 45% SB	5:00 – 6:00	1,405	6 NB / 5 SB	46% NB / 54% SB
Grafton Street (south of Sunderland Road)	35	34 NB / 36 SB	16,640	7:45 – 8:45	1177	11 NB / 10 SB	59% NB / 41% SB	4:45 – 5:45	1375	8 NB / 5 SB	44% NB / 56% SB
Grafton Street (north of Jennings Street)	35	35 NB / 38 SB	16,010	8:00 – 9:00	1177	10 NB / 7 SB	53% NB / 47% SB	4:45 – 5:45	1266	4 NB / 2 SB	58% NB / 42% SB

The Existing peak hour traffic volume networks were based on manual turning movement counts (TMCs) collected on Wednesday, June 7, 2023, and Wednesday, September 13, 2023. The TMCs are included in **Appendix A**.

The following study intersections were conducted during the typical AM peak period (7:00 AM – 9:00 AM) and PM peak period (2:00 PM – 6:00 PM) on Wednesday, June 7, 2023.

- Grafton Street (Route 122) & Brandt Lane
- Grafton Street (Route 122) & Auto Parts Driveway
- Grafton Street (Route 122) & Pine Hill Road/Roosevelt Elementary Driveway

The following study intersections were conducted during the typical AM peak period (7:00 AM – 9:00 AM) and typical PM peak period (4:00 PM – 6:00 PM) on Wednesday, September 13, 2023.

- Grafton Street (Route 122) & Sunderland Road
- Grafton Street (Route 122) & Jolma Road
- Grafton Street (Route 122) & Dalton Street/Stop & Shop Driveway
- Grafton Street (Route 122) & Jennings Street

The June and September traffic volumes throughout the network were noted to be above the average conditions based on the 2019 MassDOT weekday seasonal and axle correction factors. Thus, a seasonal adjustment factor was not applied to the existing traffic volumes. **Figure 3** presents the existing turning movement volumes at the study intersections during the AM and PM peak hours.

Heavy truck movement along Grafton Street (Route 122) makes up between 4.0% to 6.0% and 1.0% during the AM and PM peak hours, respectively. The minor street traffic was generally lower in terms of heavy truck movement except for the driveways serving the shopping center and some of the other businesses.

Legend

- Study Roadway
- XX AM Peak Hour Traffic
- (XX) PM Peak Hour Traffic

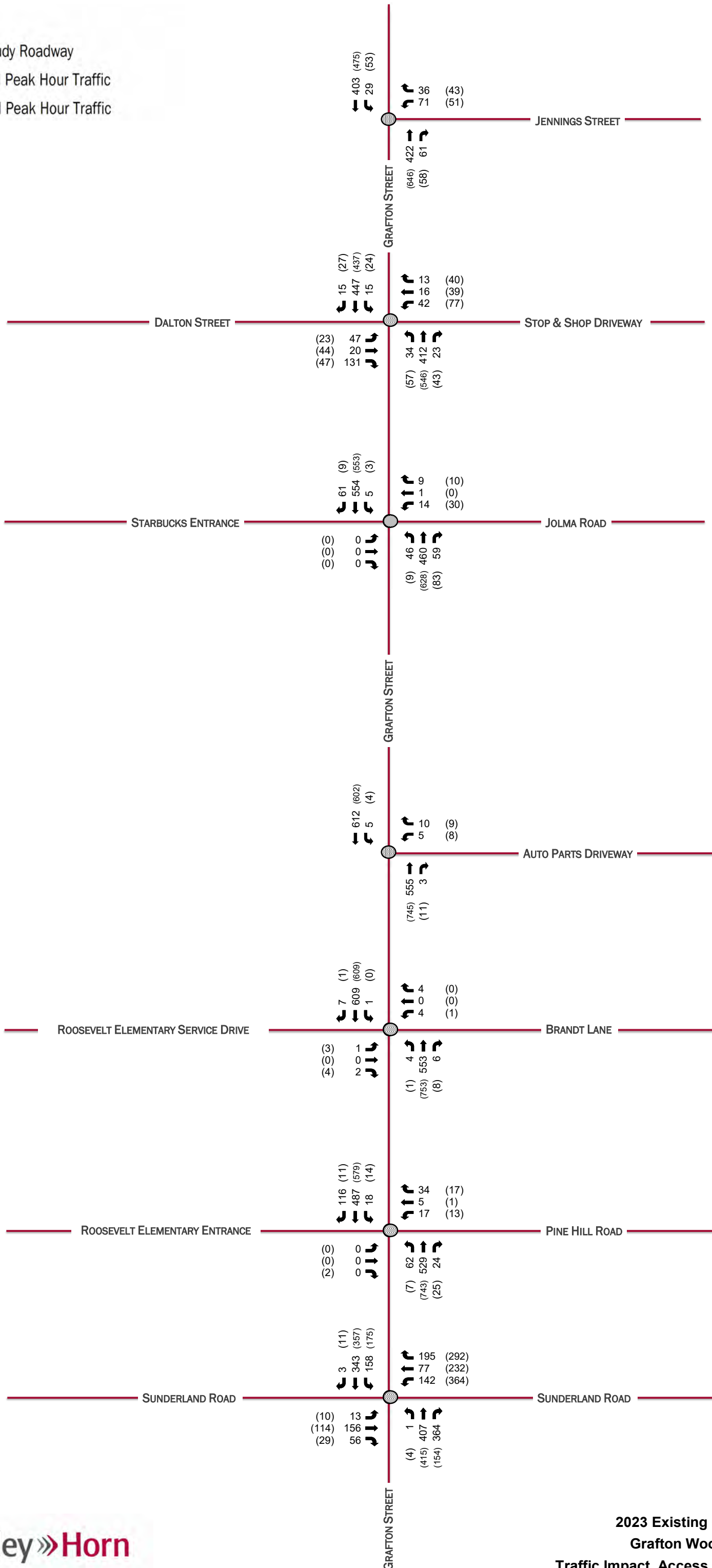
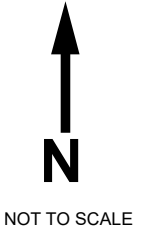


Figure 3

**2023 Existing Condition Volumes
Grafton Woods, Worcester, MA
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SCHOOL OBSERVATION

In order to understand the Roosevelt Elementary School's traffic patterns given its location and the concerns noted in relation to the student departure period, a site visit was conducted on Wednesday, June 7, 2023. Below are the key items that were observed.

- The pick-up carline started to form on the street, Grafton Road (Route 122), around 1:30 PM as the school prohibits motor vehicles cannot come through the school entrance until 1:40 PM.
- Motor vehicles were queued in the southbound shoulder along Grafton Street (Route 122) since the entrance of the Roosevelt Elementary School is not open until the student departure period, which is at 1:40 PM. The shoulder is fairly narrow, the width of four (4) feet.
- The school buses use the School's Southern Ingress Driveway to enter the school carline.
- It was observed motor vehicles were queued in the southbound shoulder extended past Dalton Street to Caspar Street, approximately 0.28 miles from the Roosevelt Elementary School Entrance Driveway.
- In addition to the motor vehicles queued in the southbound shoulder, motor vehicles were parked along Brandt Lane and Pine Hill Road, as well as in the O'Reilly Auto Parts and AP Fish Seafood Market parking lots.

The marked crosswalk with the RRFB in front of Roosevelt Elementary School is heavily utilized during dismissal. The students are dismissed in waves and teachers wait at the crosswalk to allow kids to meet their parents.

- The majority of the queue were dissipated and parked vehicles left the Roosevelt Elementary School by 2:30 PM.

While the observations noted current issues and difficulties occurring during the school departure period, it should also be noted that the school and the City have been exploring an improvement project that would significantly increase on-site parking and would be able to accommodate the waiting guardians. This would eliminate the queue along in the southbound shoulder along Grafton Street (Route 122), which does impede southbound travel along the street for a short period of time on each school day.



Grafton Street (Route 122) looking in the northbound direction shows the motor vehicles queued in the southbound shoulder beyond Dalton Street.



The school buses use the School's Southern Ingress Driveway to enter the school carline.



Motor vehicles are parked on both sides along Brandt Lane.



Students walking towards the AP Fish Seafood Market parking lot.



As the queue along the shoulder of Grafton Street (Route 122), any WRTA buses stopping along southbound bus stops stopped in the travel lanes.



An example of the few groups of students that exited the school as 'walkers.' These walking groups left the building from the delivery driveway in organized groups and were supervised by staff until they joined their guardians, most of whom were parked on Brandt Lane and the A.P. Fish Market.

CRASH HISTORY

Crash data was obtained from the MassDOT Crash Data Portal for the most recently completed three-year period from January 1, 2017, to December 31, 2019, at the study intersections. MassDOT District 3, which includes the study area, has an average crash rate of 0.89 for a signalized intersection and 0.61 for an unsignalized intersection. **Table 2** provides a summary of the crash history at the study intersections for the 2017-2019 period. The following summarizes the key aspects. **Appendix B** includes the calculation sheets of the crash rates. Please note that data from 2020 was during the pandemic when traffic volumes were significantly reduced and were not included in the analysis of crash data. Crash data from 2021 and 2022 is not yet considered complete by MassDOT and has not been fully incorporated into the crash analysis, however, the frequency of crashes for the period 2021-2022 by location was compared to the 2017-2019 period.

Below are the key findings of the crash summary for the 2017-2019 period.

- There was a total of 57 crashes at all of the study intersections.
- There was one (1) fatal crash at the intersection of Grafton Street (Route 122) & Pine Hill Road reported in 2018, and involved a motor vehicle with a pedestrian.
- The majority of the crashes were property damage only crashes.
- One-third (1/3) of the crashes were angle crashes.
- There were three (3) occurrences of a collision with a pedestrian and three (3) occurrences of a collision with a bicyclist at Grafton Street (Route 122) & Dalton Street, Grafton Street (Route 122) & Brandt Lane, Grafton Street (Route 122) & Pine Hill Road, and Grafton Street (Route 122) & Sunderland Road.
- The crash rate at all study intersections was below the MassDOT District 3 average crash rates, although the Grafton Street (Route 122) & Sunderland Road intersection crash rate of 0.78 is approaching the District 3 average rate of 0.89 with more than seven (7) crashes reported per year.

Table 2. Crash Summary (2017-2019)						
	Grafton Street (Route 122) & Jennings Street	Grafton Street (Route 122) & Dalton Street	Grafton Street (Route 122) & Jolma Road	Grafton Street (Route 122) & Brandt Lane	Grafton Street (Route 122) & Pine Hill Road	Grafton Street (Route 122) & Sunderland Road
Total Number of Crashes	8	12	3	7	5	22
Property Damage	2	5	3	4	3	15
Injury	4	4	0	2	1	5
Fatality	0	0	0	0	1	0
Not Reported	2	3	0	1	0	2
Manner of Collision						
Rear End	2	5	2	2	1	3
Angle	4	4	1	2	0	8
Side Swipe	1	1	0	1	0	3
Head On	0	1	0	0	1	3
Single Vehicle	1	0	0	1	2	3
Collision with Ped	0	1	0	0	1	1
Collision with Bike	0	1	0	1	0	1
Other/Unknown	0	0	0	0	0	0
Time of Day						
6:01 AM - 10:00 AM	1	1	0	0	1	1
10:01 AM - 4:00 PM	1	8	0	3	1	5
4:01 PM - 7:00 PM	3	1	2	3	0	7
7:01 PM - 6:00 AM	2	2	1	1	3	9

Table 2. Crash Summary (2017-2019)						
	Grafton Street (Route 122) & Jennings Street	Grafton Street (Route 122) & Dalton Street	Grafton Street (Route 122) & Jolma Road	Grafton Street (Route 122) & Brandt Lane	Grafton Street (Route 122) & Pine Hill Road	Grafton Street (Route 122) & Sunderland Road
Year						
2017	4	5	0	3	1	11
2018	1	1	1	3	3	6
2019	3	6	2	1	2	5
Weather Conditions						
Clear	5	7	1	3	4	14
Cloudy	1	2	2	1	1	3
Wet	2	3	0	1	0	1
Snow/Ice	0	0	0	1	0	3
Other/Unknown	0	0	0	1	0	1
Light Conditions						
Daylight	4	8	1	4	2	10
Dawn/Dusk	0	0	0	0	0	0
Dark (Unlit)	0	0	0	0	1	0
Dark (Lit)	4	3	2	3	2	12
Unknown	0	1	0	0	0	0
Annual Average Crashes	2.67	4.00	1.00	2.33	1.67	7.33
Intersection Crash Rate	0.44	0.62	0.16	0.39	0.47	0.78
MassDOT District 3 Average Crash Rate	0.61	0.89	0.61	0.61	0.61	0.89
Traffic Control	Unsignalized	Signalized	Unsignalized	Unsignalized	Unsignalized	Signalized

Traffic patterns changed after COVID-19 restrictions were put into place in March of 2020 and those had an impact on traffic in 2021 as well. **Table 3** compares the average crash frequencies per year for the two time periods, pre-COVID (2017-2019) and post-COVID (2021-2022). Overall, there is a general similarity between the two periods, with the exception of Grafton Street (Route 122) & Brandt Lane, where there was a notable decrease in reported crashes post-COVID. Overall, Grafton Street (Route 122) & Sunderland Road are the locations where a potential safety concern would exist, and the safety risk would be greater there than any of the other locations along the corridor section included in this analysis.

Table 3. Annual Average Crashes Comparison Before and After COVID-19 Impact						
	Grafton Street (Route 122) & Jennings Street	Grafton Street (Route 122) & Dalton Street	Grafton Street (Route 122) & Jolma Road	Grafton Street (Route 122) & Brandt Lane	Grafton Street (Route 122) & Pine Hill Road	Grafton Street (Route 122) & Sunderland Road
2017-2019 Annual Average Crashes	2.67	4	1	2.33	1.67	7.33
2021-2022 Annual Average Crashes	3	4.5	1.5	0	2	7

FUTURE NO-BUILD CONDITIONS

Future No-Build traffic conditions are defined as the expected traffic conditions on the roadway network in the year 2030 without the construction of the proposed development. Future No-Build traffic volumes used in the analysis are the sum of the existing traffic, vicinity development traffic, and additional traffic generated by the general overall background growth in the City or region that could affect the project area. The following discuss the background traffic growth rate and a summary of the relevant site specific development traffic that could affect the project area.

BACKGROUND TRAFFIC GROWTH

Traffic growth on the transportation network was determined based upon (a) historic growth trends at nearby MassDOT traffic count stations from the year 2018 to 2022, (b) population census data from the year 2010 and 2020, and (c) the Central Massachusetts Metropolitan Planning Organization (CMMPO) Mobility 2040 Plan. The growth calculations are contained in **Appendix C**.

The MassDOT count stations referenced in this analysis include the following intersections. The historic growth rate analysis based on the combined MassDOT count stations is - one percent (-1.0%) over the five (5) year period.

- MassDOT count station no. 250921 located on Grafton Street, north of Sunderland Road
- MassDOT count station no. RPA05-348-2117 located on Sunderland Road, east of Grafton Street
- MassDOT count station no. 237266 located on Grafton Street, south of Ernest Avenue

Population census data for the City of Worcester and the surrounding towns of Grafton and Millbury were analyzed over a 10-year period. In 2010, the total population between the municipalities were 212,071 and the total population in 2020 was 240,013, resulting in one percent (1.0%) over the historical 10-year period.

CMMPO identified Worcester as a slow-growth community, which is expected to grow at a slower rate than the regional average. The population growth from 2010 to 2040 is projected to be 0.3 percent (0.3%) per year.

Taking all the above into account, an annual growth of 0.5 percent (0.5%) was selected as a reasonable background growth rate and will be applied annually to the Existing (2023) traffic volumes in developing Future (2030) No-Build Conditions.

VICINITY DEVELOPMENTS

The City of Worcester's Economic Development | Planning & Regulatory Services Division was contacted to identify if there are any upcoming and planned developments within close proximity to the site to be included in the Future No-Build Conditions. Based on the information provided, one (1) development located at 1059 Grafton Street, which is a proposed automatic single tunnel car wash with vacuums, was included in the analysis. Other developments that were noted are fairly distant from the proposed project and would be accounted for in the overall background growth rate. The primary route of trips generated from 1059 Grafton Street, would be via Grafton Street (Route 122). **Figure 4** illustrates the location of the project site and the vicinity development. More information can be found in **Appendix D**.

Figure 5 present the vehicle trip assignments from the vicinity development and **Figure 6** presents the Future No-Build traffic conditions.



Figure 4

Site Location and Vicinity Development
Grafton Woods, Worcester, MA

Traffic Impact, Access and Parking Study

Legend

- Study Roadway
- XX AM Peak Hour Traffic
- (XX) PM Peak Hour Traffic

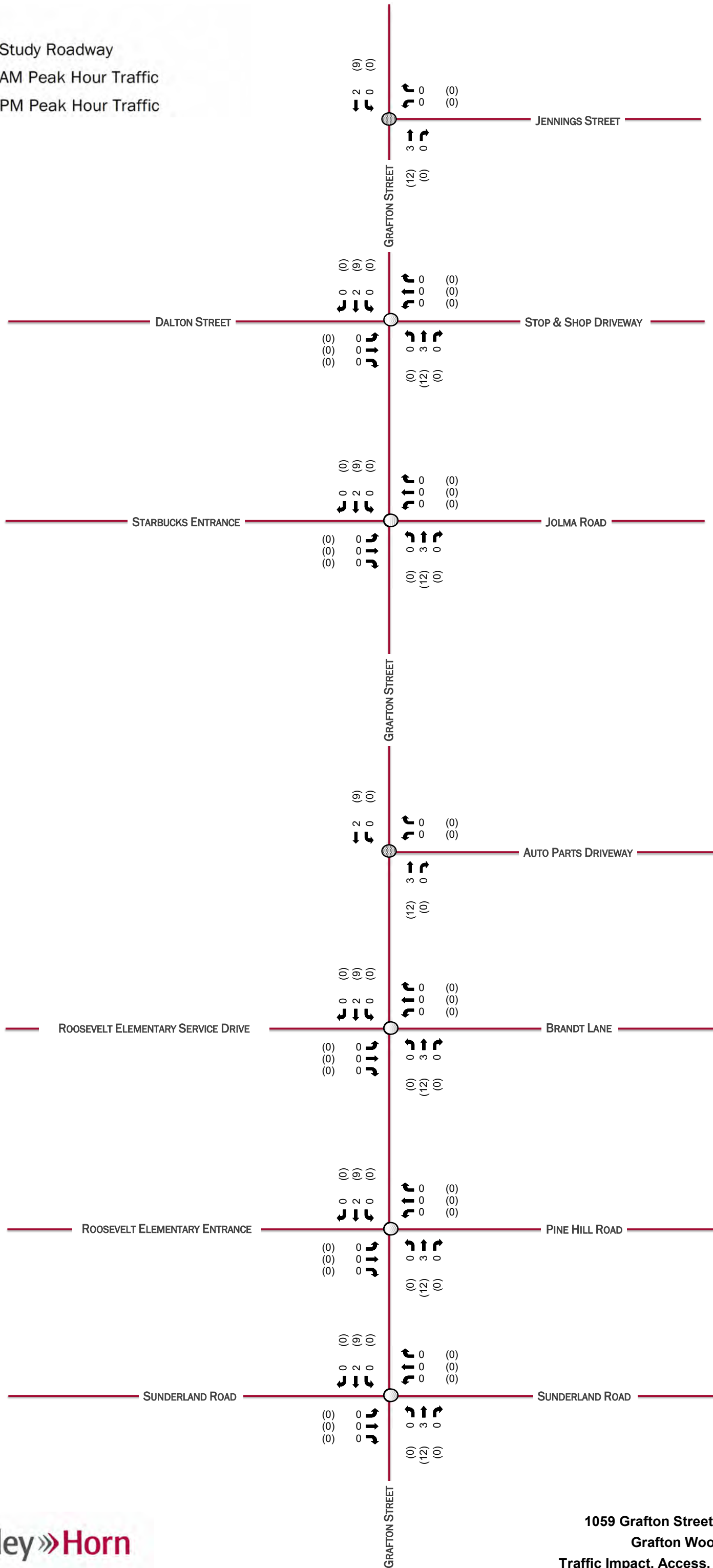
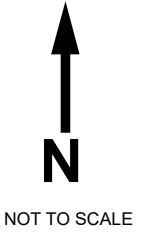


Figure 5
1059 Grafton Street Background Trips
Grafton Woods, Worcester, MA
Traffic Impact, Access, and Parking Study

Legend

- Study Roadway
- XX AM Peak Hour Traffic
- (XX) PM Peak Hour Traffic

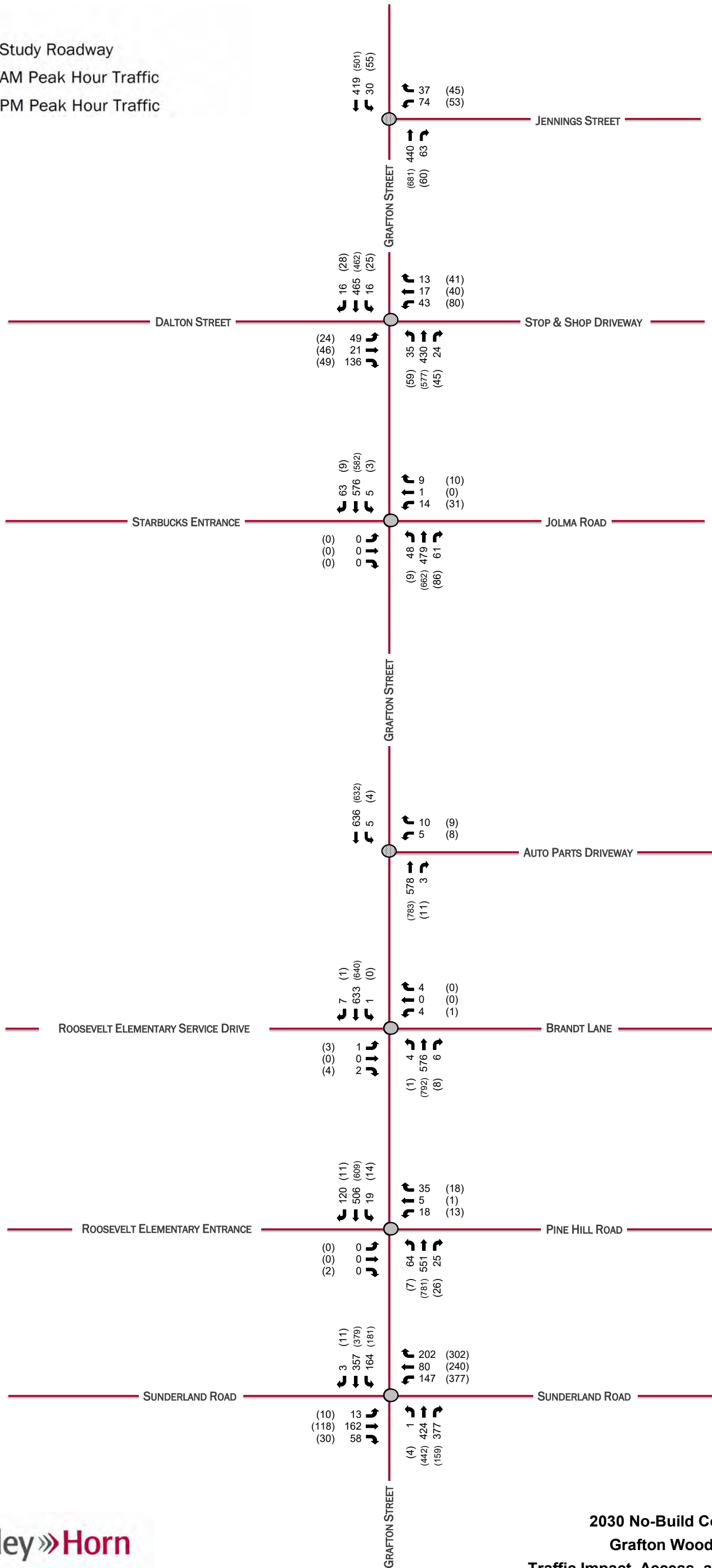
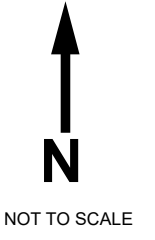


Figure 6
2030 No-Build Condition Volumes
Grafton Woods, Worcester, MA
Traffic Impact, Access, and Parking Study

PROJECT TRAFFIC

Project traffic used in this analysis is defined as the vehicle trips expected to be generated by the proposed development, which will include 491 residential units across five (5) residential buildings and 4,500 SF of ground floor commercial space in one (1) building, Building 5. Sidewalk facilities are provided along both sides of Grafton Street (Route 122), and two (2) bus routes are provided and connect to Downtown, which encourages walkability and a different mode of transportation instead of driving. The distribution and assignment of the proposed development over the study roadway network are included in this section.

TRIP GENERATION

Trip generation calculations for the proposed development were performed using the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 11th Edition. The trip generation for the proposed development was determined using ITE Land Use Code (LUC) 221 (Multifamily Housing (Mid-Rise)) and LUC 822 (Strip Retail Plaza (<40k)). Project trips were estimated for the daily and weekday AM and PM peak hours. Due to the built environment and the robust public transportation, the setting/location for the residential use during the weekday AM and PM peak hours used dense multi-use urban instead of the typical general urban/suburban. In addition, due to the small size of the commercial use, the estimate assumed all new trips without discounting for either pass by or internal capture trips, although the potential for these will exist. Listed below are the specific details across the five (5) buildings.

- Building 1: four (4) stories with 102 dwelling units (DUs)
- Building 2: four (4) stories with 100 DUs
- Building 3: four (4) stories with 138 DUs
- Building 4: four (4) stories with 112 DUs
- Building 5: four (4) stories with 39 DUs with 4,500 SF of ground floor commercial space

As shown in **Table 4**, the proposed development is expected to generate 148 net new vehicle trips (25 entering and 123 exiting) during the AM peak hour and 258 net new vehicle trips (109 entering and 49 exiting) during the PM peak hour. The detailed trip generation information is included in **Appendix E**.

AM Peak Hour (PM Peak Hour)					
Future Land Use (ITE Code)	Scale	Daily¹	Total Peak Hour Trips²	Entering Trips²	Exiting Trips²
Multifamily Housing (Mid-Rise) (221)	491 dwelling units	2,230	137 (128)	20 (94)	118 (34)
Strip Retail Plaza (<40k) (822)	4,500 square feet	420	11 (30)	6 (16)	5 (14)
Net New Vehicle Trips		2,650	148 (258)	26 (110)	123 (48)

¹ Setting/Location: General Urban/Suburban

² Setting/Location for LUC 221: Dense Multi-Use Urban

TRIP DISTRIBUTION AND ASSIGNMENT

The distribution of project traffic was estimated for the trips expected to be generated by the development and for all vehicles that may access the site. For the development's general traffic, the trip distribution estimate was based on the US Census Bureau's Journey to Work. This data source provides information on individuals who reside in the City of Worcester and where they work.

The trip distribution along the roadway network for the AM peak hour is forecast to be the following.

- 43% coming to/from the north (Grafton Street (Route 122))
- 38% coming to/from the south (Grafton Street (Route 122))
- 7% coming to/from the east (Jennings Street)
- 7% coming to/from the east (Sunderland Road)
- 5% coming to/from the west (Dalton Street)

The trip distribution along the roadway network for the PM peak hour is forecast to be the following.

- 42% coming to/from the north (Grafton Street (Route 122))
- 38% coming to/from the south (Grafton Street (Route 122))
- 7% coming to/from the east (Jennings Street)
- 7% coming to/from the east (Sunderland Road)
- 1% coming to/from the east (Stop & Shop Driveway)
- 5% coming to/from the west (Dalton Street)

Figure 7 and **Figure 8** presents the AM and PM peak hour trip distribution for the 2030 Build Conditions. Trip assignments for the weekday AM and PM peak hour for the 2030 Build Conditions is shown in **Figure 9**.

Legend

- Study Roadway
- XX IN% Distribution
- (XX) OUT% Distribution

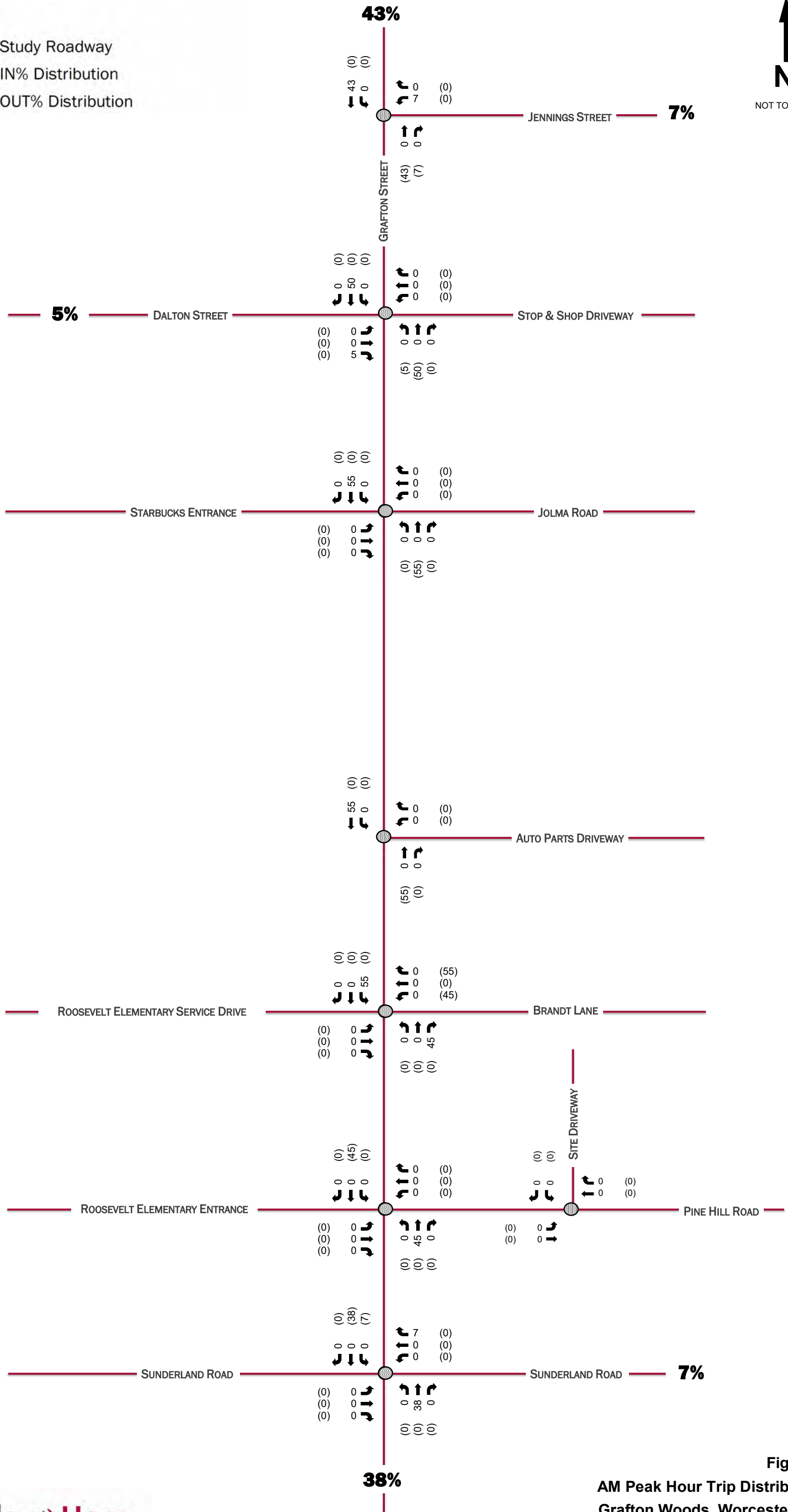
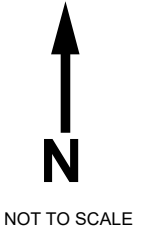


Figure 7
AM Peak Hour Trip Distribution
Grafton Woods, Worcester, MA
Traffic Impact, Access, and Parking Study

Legend

- Study Roadway
- XX IN% Distribution
- (XX) OUT% Distribution

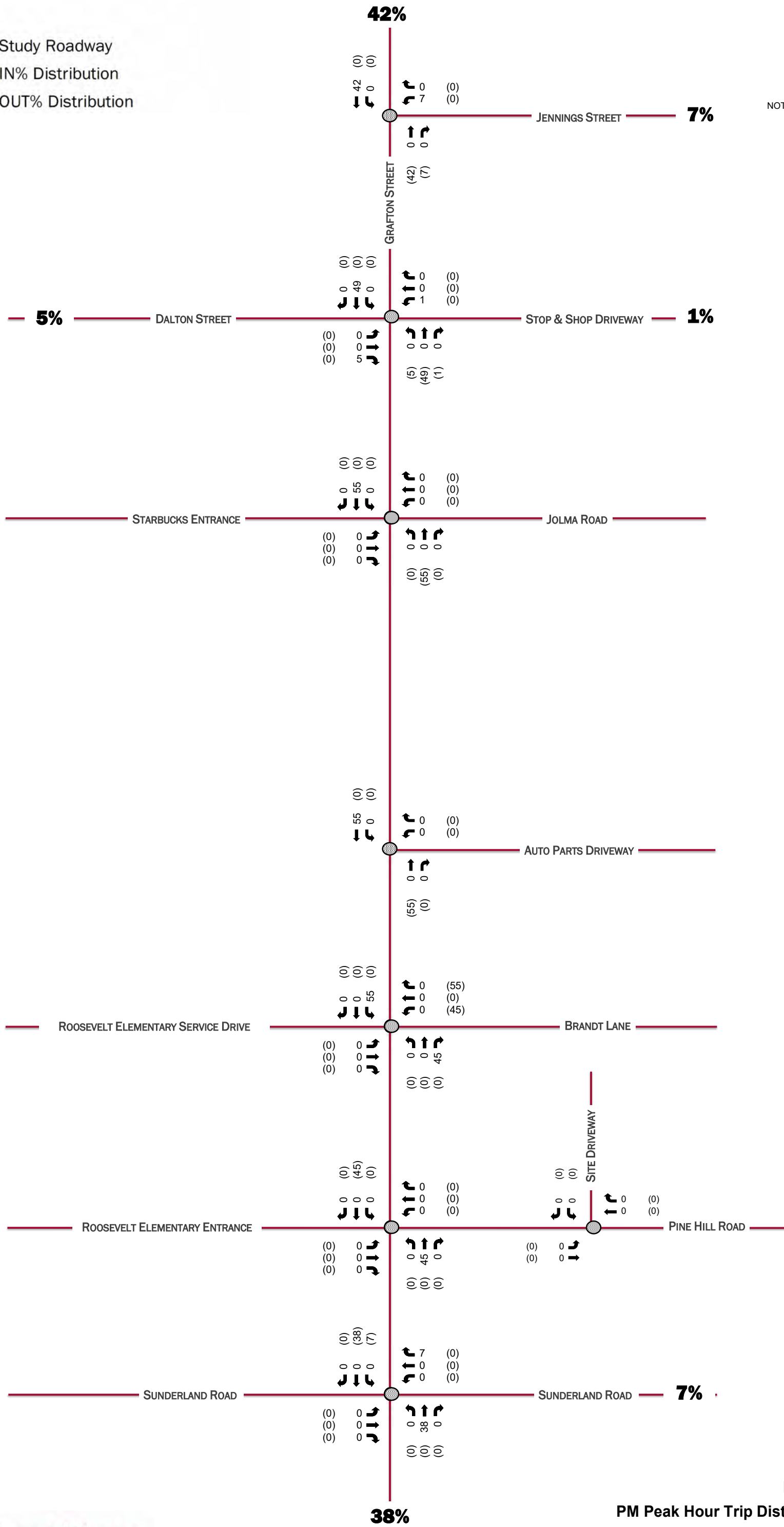
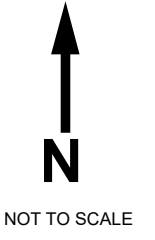
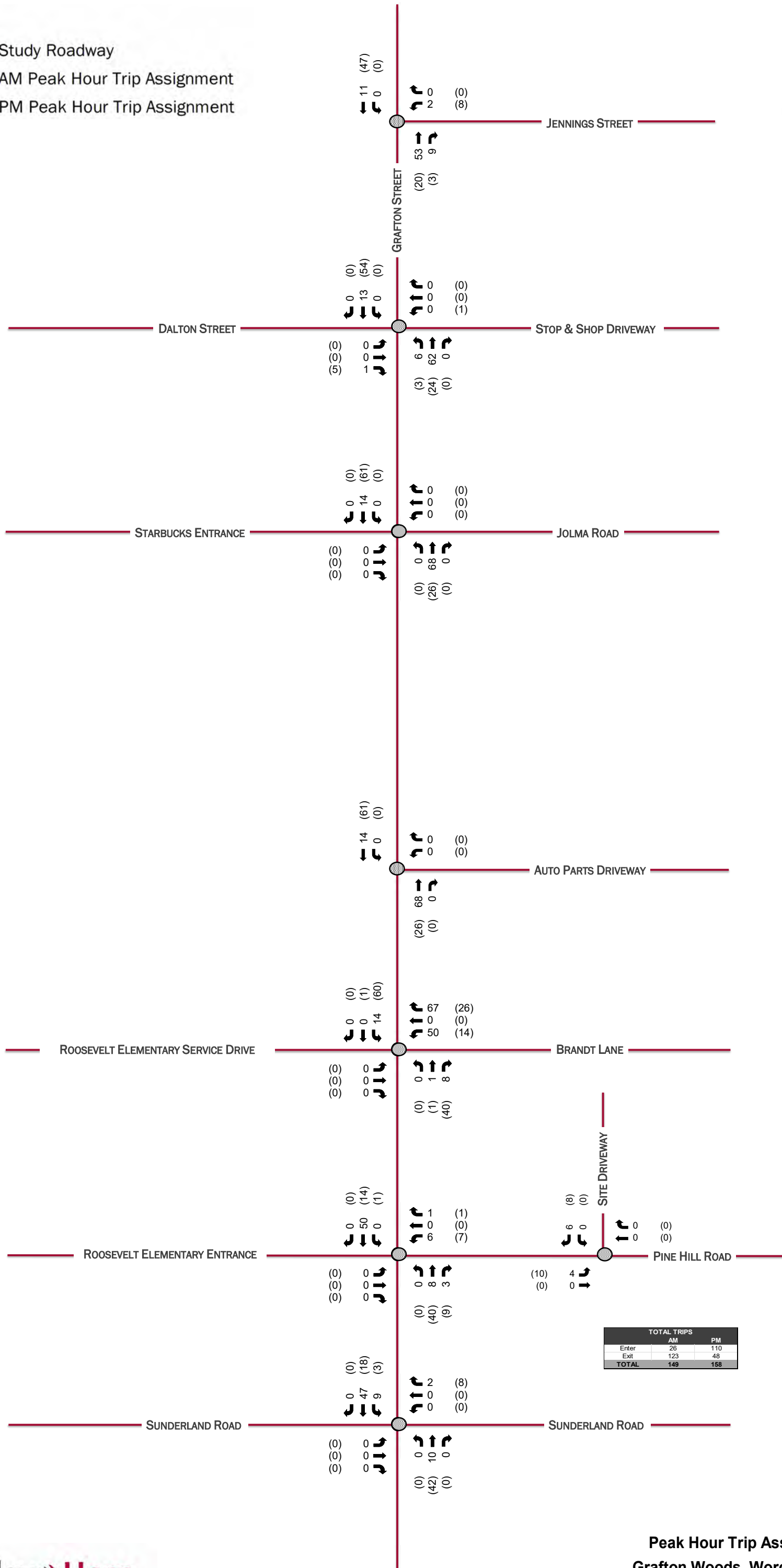
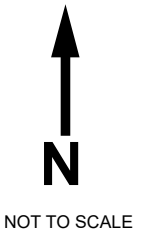


Figure 8
 PM Peak Hour Trip Distribution
 Grafton Woods, Worcester, MA
 Traffic Impact, Access, and Parking Study

Legend

- Study Roadway
- XX AM Peak Hour Trip Assignment
- (XX) PM Peak Hour Trip Assignment



TOTAL TRIPS		
	AM	PM
Enter	26	110
Exit	123	48
TOTAL	149	158

Figure 9
Peak Hour Trip Assignments
Grafton Woods, Worcester, MA
Traffic Impact, Access, and Parking Study

FUTURE BUILD CONDITIONS

Future Build Conditions are defined as the expected traffic conditions in the year 2030 after the opening of the project. The total traffic volumes considered in the analysis for this project are the sum of the background growth related traffic volumes unrelated to this specific project and the expected site-generated traffic volumes. **Figure 10** presents the future total turning movement volumes at the study intersections during the weekday AM and PM peak hours for 2030. Volume Development worksheets for the study intersections are included in **Appendix F**.

Legend

- Study Roadway
- XX AM Peak Hour Trip Assignment
- (XX) PM Peak Hour Trip Assignment

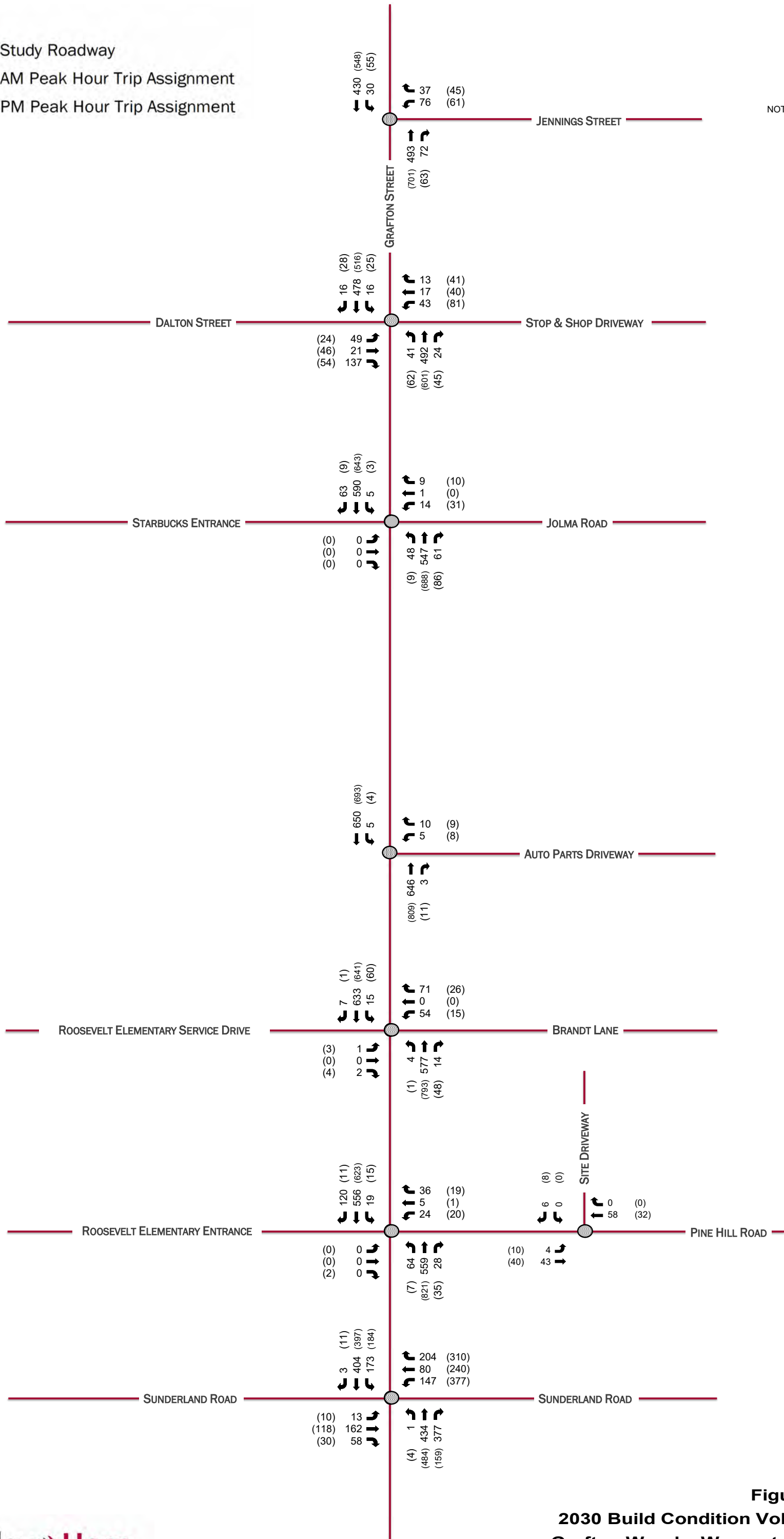
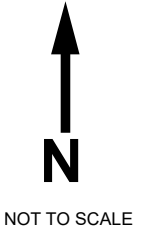


Figure 10
2030 Build Condition Volumes
Grafton Woods, Worcester, MA
Traffic Impact, Access, and Parking Study

ANALYSIS

INTERSECTION CAPACITY ANALYSIS

Methodology

Intersection capacity analyses were performed for Existing, 2030 Future No-Build, and 2030 Future Build traffic volumes for the study area intersections. The analyses were performed using the Synchro Software Package (Version 11), which utilizes methodologies contained in the *Highway Capacity Manual (6th Edition)* for signalized and unsignalized intersections. For intersections with timing configurations that are incompatible with *HCM 6th Edition*, the built-in Synchro analysis methodology is used. According to the *HCM 6th Edition*, capacity is defined as the maximum number of vehicles that can pass over a particular road segment or through a particular intersection within a fixed time duration. The analyses is described qualitatively by Level of Service (LOS) to indicate the operating characteristics of a road segment or intersection. LOS is defined as a qualitative measure that describes operational conditions and motorist perceptions within a traffic stream and relates to the level of delay experienced. The *HCM 6th Edition* defines six levels of service, LOS A through LOS F, with A being the best and F being the worst. Typically, a LOS “D” or better at signalized and unsignalized intersections is preferred, although lower levels are tolerated during peak travel hours.

The ranges of delay for each level of service are shown in **Table 5**.

Level of Service (LOS)	Delay per Vehicle (seconds per vehicle)	
	Signalized Intersections	Unsignalized Intersections
A	≤ 10	≤ 10
B	10 -20	10 -15
C	20 – 35	15 – 25
D	35 – 55	25 – 35
E	55 – 80	35 – 50
F	≥ 80	≥ 50

Intersection Capacity Analysis Summary

A summary of the intersection capacity analysis for the weekday AM and PM peak hours for the Existing Conditions, 2030 Future No-Build Conditions, and 2030 Future Conditions and can be found in **Table 6**. The intersection analysis worksheets are contained in **Appendix G**.

While some details are summarized for each analysis period below, the key findings of the intersection capacity analysis as it pertains to the proposed project are as follows:

- This existing two-lane undivided roadway, Grafton Street (Route 122) exhibits some minor issues or constraints at times but does have available capacity to accommodate additional traffic without any major need for improvement pertaining to vehicle operations.
- The signalized intersection of Grafton Street (Route 122) & Sunderland Road is the one location within the study area that experiences higher vehicle delays on its approaches during the peak hours.
- The minor unsignalized intersections between Sunderland Road and Jennings Street generally operate satisfactorily with moderate to moderately long left turn exiting delays during the peak hours, however, they are able to enter Grafton Street. Minor street volumes are relatively low, and the intersections have good visibility along the roadway.
- The project adds traffic to the system but does not result in significant operational changes at the study area intersections although does lower the overall intersection LOS at Grafton Street (Route 122) & Sunderland Road to LOS D during the PM peak hour.
- The Brandt Lane Site Driveway/ Site Driveway exiting movement is anticipated to operate at LOS E in the Existing Conditions during the PM peak hour. During the Future Conditions, the Brandt Lane exiting movements are expected to be LOS E during the AM and PM peak hours, due to the flow along Grafton Street (Route 122) with short vehicle queues. The analysis indicates more than sufficient capacity exists along Grafton Street (Route 122) to accommodate the site generated traffic and with Brandt Lane located between the two (2) signalized intersections, gaps in the traffic stream would be created that would provide some assistance for motorists to exit Brandt Lane into the main street traffic stream.
- The proposed Site Driveway off Pine Hill Road, which mainly would serve Building 5 is anticipated to operate at LOS A.

Existing Conditions

The Existing Conditions analysis was based on the existing traffic volumes, lane configurations, and traffic controls at the study area intersections. A peak hour factor (PHF) was calculated by approach and the heavy vehicle percentages were calculated for each movement based on existing TMC data. Volume balancing was applied to the existing volumes to account for the different time collections for the TMCs. Listed below are the key findings.

- The two (2) signalized intersections, Grafton Street (Route 122) & Dalton Street/Stop & Shop Driveway and Grafton Street (Route 122) & Sunderland Road, operate at an overall LOS C or better during both the AM and PM peak hour. However, there are individual movements that operate at LOS E with a delay of 58.0 seconds per vehicle such as the eastbound approach during the AM peak hour at Grafton Street (Route 122) & Sunderland Road.
- During the AM peak hour, the northbound approach experiences long queues, greater than 300 feet and approximately 12 vehicles, at Grafton Street (Route 122) & Sunderland Road. The

westbound approach and northbound through movements experience long queues during the PM peak period.

- For the most part, the minor street approaches at the unsignalized intersections operate at LOS D or better.

2030 No-Build Conditions

The 2030 No-Build Conditions analysis was based on the 2030 No-Build traffic volumes with the existing lane geometry, traffic controls, and heavy vehicle percentages. The PHF were updated to 0.92 for urban areas for the overall intersection based on the *MassDOT Highway Division Traffic and Safety Engineering 25% Design Submission Guidelines*. Listed below are the key findings.

- The two (2) signalized intersections, Grafton Street (Route 122) & Dalton Street/Stop & Shop Driveway and Grafton Street (Route 122) & Sunderland Road, continue to operate at an overall LOS C or better during both the AM and PM peak hour. However, there are individual movements that operate at LOS E such as the eastbound approach during the AM peak hour at Grafton Street (Route 122) & Sunderland Road.
- The minor street approaches at the unsignalized intersections continue to experience delays during the peak hours, but the analysis also shows that capacity exists along Grafton Street to accommodate these movements

2030 Build Conditions

The 2030 Build Conditions analysis was based on the Future Build traffic volumes and heavy vehicle percentages at the study area intersections with the PHFs the same as those used in the 2030 No-Build analysis. Listed below are the key findings.

- The two (2) signalized intersections are expected, to operate at an overall LOS D or better during both the AM and PM peak hour. There are some movements such as the northbound and eastbound movements that deteriorates to LOS E during the AM and PM peak hour. The project results in small increase in vehicle delays at the two intersections.
- There is a small delay increase of 8.6 seconds per vehicle in the westbound approach along Jennings Street, which will operate at LOS E with a delay of 44.9 seconds per vehicle during the PM peak hour.
- The Brandt Lane exiting movement is anticipated to operate at LOS E with a delay of 48.1 seconds per vehicle and a delay of 46.0 seconds per vehicle during the AM and PM peak hours, respectively with relatively short vehicle queues.
- The proposed Site Driveway off Pine Hill Road is anticipated to operate at LOS A at all approaches for the westbound left-turn movement and southbound left-turn movement.

Table 6. AM and PM Peak Hour Capacity Analysis

Intersection	Traffic Control	Movement	2023 Existing						2030 No-Build						2030 Build						
			AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour			
			Delay (s)	LOS	95th % Queue Length (ft)	Delay (s)	LOS	95th % Queue Length (ft)	Delay (s)	LOS	95th % Queue Length (ft)	Delay (s)	LOS	95th % Queue Length (ft)	Delay (s)	LOS	95th % Queue Length (ft)	Delay (s)	LOS	95th % Queue Length (ft)	
1	Grafton Street (Route 122) & Jennings Street	One-Way Stop Control	WB	23.2	C	42.5	33.5	D	60	23.7	C	45	36.3	E	60	26.9	D	50	44.9	E	80
			SBL	8.6	A	25	9.4	A	25	8.7	A	25	9.7	A	25	8.9	A	25	9.8	A	25
2	Grafton Street (Route 122) & Dalton Street/S&S Driveway	Signalized	NBL	6.5	A	25	7.0	A	30	6.4	A	25	6.8	A	30	6.6	A	23	7.2	A	32
			NBT	7.7	A	167	8.9	A	245	7.8	A	173	9.2	A	261	8.4	A	205	9.6	A	276
			Approach	7.6	A	-	8.8	A	-	7.7	A	-	9.0	A	-	8.2	A	-	9.3	A	-
			EB	23.6	C	82	19.1	B	61	17.3	B	88	17.3	B	64	17.2	B	88	17.1	B	66
			Approach	23.6	C	-	19.1	B	-	17.3	B	-	17.3	B	-	17.2	B	-	17.1	B	-
			WBT	26.5	C	49	28.9	C	#84	24.6	C	48	27.4	C	83	24.6	C	48	27.6	C	84
			WBR	0.2	A	-	0.6	A	-	0.2	A	0	0.6	A	-	0.2	A	0	0.6	A	25
			Approach	21.6	C	-	21.7	C	-	20.2	C	-	20.5	C	-	20.2	C	-	20.6	C	-
			SBL	2.8	A	25	2.9	A	25	2.7	A	25	2.9	A	25	2.7	A	25	2.9	A	7
			SBT	7	A	115	6.8	A	113	6.6	A	121	6.4	A	121	6.7	A	125	6.9	A	140
			Approach	6.9	A	-	6.6	A	-	6.4	A	-	6.2	A	-	6.6	A	-	6.8	A	-
Intersection	11	B	-	10.3	B	-	9.5	A	-	9.9	A	-	9.6	A	-	10.2	B	-			
3	Grafton Street (Route 122) & Starbucks Entrance/Jolma Road	Two-Way Stop Control	NBL	9.2	A	25	8.6	A	0	9.2	A	25	8.8	A	0	9.2	A	25	9.0	A	0
			WB	33.6	D	25	34.3	D	30	30.9	D	25	40.8	E	30	35.7	E	25	48.4	E	35
			SBL	8.6	A	0	9.9	A	0	8.6	A	0	10.2	B	0	8.9	A	0	10.3	B	0
4	Grafton Street (Route 122) & Auto Parts Driveway	One-Way Stop Control	WB	19.3	C	25	27.5	D	25	19.1	C	25	30.8	D	25	21.0	C	25	34.6	D	25
			SBL	8.8	A	0	9.3	A	0	8.8	A	0	9.6	A	0	9.0	A	0	9.7	A	0
5	Grafton Street (Route 122) & Roosevelt Elementary Driveway/Brandt Lane	Two-Way Stop Control	NBL	8.9	A	0	8.8	A	0	9.0	A	0	9.0	A	0	9.0	A	0	9.0	A	0
			EB	19.9	C	25	24.6	C	25	19.8	C	0	27.4	D	25	23.0	C	0	38.8	E	25
			WB	22.8	C	25	37.5	E	0	23.3	C	25	45.5	E	25	48.1	E	95	46.0	E	35
			SBL	8.8	A	0	0.0	A	0	8.8	A	0	0.0	A	0	8.8	A	25	10.2	B	25
6	Grafton Street (Route 122) & Roosevelt Elementary Driveway/Pine Hill Road	Two-Way Stop Control	NBL	9.1	A	25	8.7	A	0	9.3	A	25	8.9	A	0	9.5	A	25	9.0	A	0
			WB	27.5	D	37.5	29.5	D	25	26.2	D	25	32.8	D	25	33.6	D	40	43.8	E	35
			SBL	8.9	A	25	9.4	A	25	8.9	A	25	9.7	A	25	9.0	A	25	9.9	A	25
7	Grafton Street (Route 122) & Sunderland Road	Signalized	NBT	39.5	D	#312	39.9	D	#319	45.1	D	#335	48.6	D	#319	48.3	D	#396	67.3	E	#396
			NBR	40.4	D	#287	20.3	C	98	45.1	D	#304	20.6	C	98	45.1	D	102	20.6	C	102
			Approach	39.9	D	-	34.7	C	-	45.1	D	-	41.2	D	-	46.8	D	-	55.8	E	-
			EB	58	E	#229	41.0	D	#141	56.2	E	#230	41.3	D	#141	56.2	E	#230	43.4	D	#148
			Approach	58	E	-	41.0	D	-	56.2	E	-	41.3	D	-	56.2	E	-	43.4	D	-
			WBL	16.6	B	78	32.0	C	#205	16.6	B	79	36.8	D	#205	16.6	B	79	36.8	D	#225
			WBT	11.3	B	106	37.2	D	#364	11.2	B	115	44.9	D	#364	11.2	B	108	47.3	D	#402
			Approach	13.1	B	-	35.1	D	-	13.0	B	-	41.6	D	-	13.0	B	-	43.0	D	-
			SBL	11	B	62	11.7	B	67	11.3	B	62	12.3	B	67	12.0	B	65	12.6	B	70
			SBT	13.1	B	155	13.4	B	164	13.1	B	160	13.3	B	164	14.1	B	186	13.7	B	182
Approach	12.4	B	-	12.8	B	-	12.5	B	-	13.0	B	-	13.4	B	-	13.4	B	-			
Intersection	28.8	C	-	29.5	C	-	30.9	C	-	34.2	C	-	31.4	C	-	39.1	D	-			
8	Pine Hill Road and Site Driveway	One-Way Stop Control	SBL	1						1						8.6	A	0	8.5	A	0
			WBL	1						1						7.3	A	0	7.3	A	0

1 Intersection does not exist

PARKING ANALYSIS

The proposed development is currently for 491 apartment units in five (5) buildings as well as approximately 4,500 square feet of commercial space to be in Building 5 adjacent to Grafton Street (Route 122). The proposed development will be providing on-site parking either in a combination of open parking lots adjacent to the buildings or in the proposed two level parking deck located between Buildings 2 and 3. Building 5 will have some below grade parking as well. In total, there are 793 parking spaces proposed. Per the City of Worcester Zoning Ordinance, Section 7 – Off-Street Parking and Loading, for a multi-family dwelling residential, two (2) parking spaces per dwelling unit and commercial spaces (either retail sales or services), one (1) parking space per 300 square feet of gross floor area is required. Based on these requirements, a total of 997 parking spaces would be required per the zoning code.

A parking analysis was completed in support of providing less parking supply for the project than would be required by the existing zoning bylaw. The analysis was completed for the total project but also for Building 5 separately since it is more disconnected from Buildings 1-4. The analysis was also done for Buildings 1-4 as a group as they are relatively close to each other and each parking field including the parking deck is highly walkable from each of these 4 buildings. The analysis has shown that the proposed amount of parking provided is expected to be more than adequate for meeting the needs of the project in total, as well as for Building 5 and Buildings 1-4 as a group.

The peak parking demand for the uses was determined based on the ITE models and rates, as applicable, to calculate parking demand. The parking demand models are based on actual observation of similar uses and characterized by type of area (i.e. urban/suburban, near rail transit or not) and guidance for estimating time of day patterns. Residential peak demands occur late in the night and early morning whereas the commercial demands will tend to peak in late morning or early afternoon. The estimated weekday peak parking demand on average is 521 parked vehicles including the commercial use demands. Compared to the 793 parking spaces provided in total, the proposed supply exceeds the estimated average peak demand by 272 spaces. **Appendix H** includes the detailed of the Proposed Parking Supply Waiver.

SIGHT DISTANCE ANALYSIS

Adequate sight distance is an important safety consideration at intersections and driveways. The sight distances were reviewed at the intersection of Grafton Street (Route 122) & Brandt Lane. Stopping sight distance (SSD) is the distance required for an approaching driver (with an eye height of 3.5 feet) to perceive and stop in time to avoid a collision with an object two (2) feet high in the roadway. The values are based on a perception and reaction time of 2.5 seconds and braking distance required under wet, level pavements. Corner or intersection sight distance (ISD) is based upon the time required to perceive, react and complete a desired exiting maneuver from a driveway once the driver decides to execute the maneuver. ISD is more related to operations and to some degree, the convenience or inconvenience of the oncoming motorist. The minimum criteria are defined by the American Association of State and Highway and Transportation Officials (AASHTO). SSD relates specifically to safety. As indicated by AASHTO, if available ISD meets or exceeds the minimum SSD criteria, then there is an adequate safe sight distance available for motorists to avoid collisions.

A site visit was conducted on Thursday, September 14, 2023, to measure the available sight distance at the Site Driveway along Grafton Street (Route 122). The approaching and intersection (exiting) sight distances were determined, and measurements were completed with a measuring wheel. The posted speed limit along Grafton Street (Route 122) is 35 MPH. Based upon the 48-hour ATR along Grafton Street (Route 122), an 85th percentile speed was recorded as 38 MPH. Therefore, the sight distance analysis speed includes 35 MPH and 40 MPH, with the 40 MPH providing a somewhat conservative criterion. As shown in **Table 7**, the available sight distances, the Site Driveway at Brandt Lane meets the sight distance criteria for 35 MPH and 40 MPH for both stopping and intersection sight distances.

View/Direction	Measured Distance (feet)	SSD Required for 35 MPH (feet)¹	SSD Required for 40 MPH (feet)²	Criteria Met (Y/N)
Approaching Brandt Lane from North	400+	250	305	Y
Approaching Brandt Lane from South	500+	250	305	Y
Looking to the North from Brandt Lane	400+	250	305	Y
Looking to the South from Brandt Lane	500+	250	305	Y

¹The posted speed limit along Grafton Street (Route 122) in the project vicinity is 35 MPH.

²The 85th percentile speed along Grafton Street (Route 122) was recorded around 40 MPH.

SITE ACCESS

An evaluation to help ensure the design of the Site Driveways along Grafton Street (Route 122) and Pine Hill Road can accommodate vehicle needs by using an AutoTURN software using two (2) different vehicle types, fire truck with a ladder, “ladder truck” and a WB-62 trailer truck. The evaluation helps answer if large vehicles can be accommodated, if there will be conflicting movements between vehicles, and etc. Thompson-Liston Associates, Inc prepared the truck turning exhibits and the vehicle movements is shown in **Figure 11** and **Appendix I**. In general, the vehicle movements are able to traverse the site but there are some pinch points.



Figure 11. Site Access – WB-62 and Worcester Ladder Truck Movements

CONCLUSIONS AND PROPOSED MITIGATION

The analysis of traffic for the proposed development of 491 dwelling units and 4,500 SF of ground floor commercial space was completed following standard practice. The previous sections described the current roadway network and traffic characteristics, the forecasts of future traffic and parking conditions, and the analysis of impact and access. The key findings of this study are as follows:

- This proposed development is almost entirely a residential development, except at Building 5, which includes ground floor commercial or retail uses. The development of a predominantly residential project results in specific trip patterns. For example, there will be more trips exiting/leaving the site in the AM peak hour and more trips entering/coming to the site in the PM peak hour.
- The existing two-lane undivided roadway, Grafton Street (Route 122), exhibits some minor issues or constraints but does have available capacity to accommodate additional traffic without any major need for improvement.
- While the project adds traffic to the street system, it does not result in any significant changes in traffic operations at the study area intersections.
- The signalized intersection of Grafton Street (Route 122) & Sunderland Road is the one location within the study that experiences vehicle delays on its approaches with northbound left-turn movements prohibited. It also experiences a relatively high number of crashes each year but does not exceed the MassDOT's District 3 crash rate.
- The minor unsignalized intersections between Sunderland Road and Jennings Street generally operate satisfactorily with moderate to moderately long left turn exiting delays during peak hours. Minor street volumes are relatively low, and the intersections have good visibility along the roadway.
- The analysis indicates more than sufficient capacity exists along Grafton Street (Route 122) to accommodate the site generated traffic and any vehicle queuing will occur on the Site Driveway, not Grafton Street. With Brandt Lane located between the two (2) signalized intersections, gaps in the traffic stream are created, which would provide some assistance for motorists to exit the site drives into the main street (Grafton Street) traffic stream.
- The Brandt Lane exit movements will experience some higher vehicle delays and somewhat longer vehicle queues, but again, the queues are fully accommodated on the Brandt Lane Site Driveway.
- The proposed Site Driveway off Pine Hill Road, which mainly would serve Building 5 is anticipated to operate at LOS A.

PROPOSED MITIGATION

While the project itself is not creating any new operational deficiencies or have significant impacts to existing intersections, the importance of creating safe and efficient access for the project is essential to maintain a safe multimodal traveling network for non-site related traffic. The following potential mitigation measures have been identified below and are intended to provide for safe site access. Additionally, there has been coordination with the Superintendent to discuss the proposed development, existing conditions, and concerns.

- The exit to Grafton Street will be STOP controlled with appropriate signage and markings.
- While the ability exists to provide a wide, two lane exit approach on Brandt Lane to Grafton Street that would accommodate separate left and right turning lanes, it is recommended to keep the single lane approach that allows for a shorter, safer pedestrian and bicycle crossing of Brandt Lane, as

well as bicycle accommodations along both sides of the Brandt Lane, drive connecting the project to Grafton Street.

- To be consistent with the City's multimodal goals, it is recommended that the Site Driveway/Brandt Lane connecting to Grafton Street be designed to include on-road bike accommodations in both directions and a sidewalk. Signs and markings should be installed.
- Rehabilitation of Pine Hill Road from Grafton Street (Route 122) to just beyond the proposed Site Driveway to the visitor center, approximately 225 feet. This would be a total rehabilitation including street lighting fixtures, which would improve access and safety to the residential land uses along Pine Hill Road. The rehabilitation will also sidewalk facilities on the development side - the west side of Pine Hill Road.
- Reconstruct the sidewalk along the east side of Grafton Street (Route 122) between Pine Hill Road and Brandt Lane. The right of way along the east side of Grafton Street appears sufficient where a wider facility could be provided that would result in a shared use path along this section of the street. If the feasibility of this is confirmed, it is recommended for implementation. This action would be consistent with the City's multimodal goals, and it will benefit all users, including those accessing to and from Roosevelt Elementary School.
- Provide transit information inside of each building lobby regarding routes and schedules.
- Adjust signal timings at Grafton Street (Route 122) and Sunderland Road to improve the overall traffic operations.
- Provide enhanced pedestrian street crossing along Grafton Street (Route 122) near AutoZone Auto Parts with Rectangular Rapid Flashing Beacons (RRFB), ADA-compliant ramps, and curb extensions (also known as bump outs).
- Provide an enhanced transit stop at Grafton Street (Route 122) by Brandt Lane with shelter, bench, and other amenities. There will need to be coordination with the Worcester Regional Transit Authority (WRTA) regarding the transit stop.

APPENDIX

APPENDIX A

Traffic Data



Location Map: 239385 Worcester, MA

Precision Data Industries, LLC 157 Washington Street, Suite 2, Hudson, MA 01749 ph: 508-875-0100 email: datarequests@pdillc.com

- (2) 7-9am/ 2-6pm TMCs
- (1) 48HR VCU-ATR
- (1) 48HR Radar ATR



Client: Kimley-Horn	Engineer: P. Graham	Site Code: 112858000	Date: Tues 6/6 thru Wed 6/7/2023	PDI Job # 239385	City, State: Worcester, MA
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Grafton Street (Route 122)
 south of Margin Street
 City, State: Worcester, MA
 Client: Kimley-Horn/ P. Graham
 Site Code: TBA



PDI File #: 239385 ATR-A

Count Date: Tuesday, June 6, 2023
 Direction: NB

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	15	0	0	0	15
12:15 AM	0	0	15	0	1	0	16
12:30 AM	0	0	10	0	0	0	10
12:45 AM	0	0	10	0	0	0	10
1:00 AM	0	0	6	0	0	0	6
1:15 AM	0	0	6	0	0	0	6
1:30 AM	0	0	10	0	0	2	12
1:45 AM	0	0	4	0	2	0	6
2:00 AM	0	0	13	0	0	0	13
2:15 AM	0	0	2	0	1	0	3
2:30 AM	0	0	4	0	0	0	4
2:45 AM	0	0	3	0	1	2	6
3:00 AM	0	0	4	0	0	2	6
3:15 AM	0	0	4	0	0	0	4
3:30 AM	0	0	4	0	0	1	5
3:45 AM	0	0	5	0	1	0	6
4:00 AM	0	0	2	0	1	1	4
4:15 AM	0	0	11	0	0	2	13
4:30 AM	0	0	4	0	0	1	5
4:45 AM	0	0	18	0	1	0	19
5:00 AM	0	0	23	0	1	3	27
5:15 AM	0	0	27	0	0	0	27
5:30 AM	0	0	33	1	0	1	35
5:45 AM	0	0	52	0	2	0	54
6:00 AM	0	0	52	0	1	0	53
6:15 AM	0	0	70	1	1	0	72
6:30 AM	0	0	95	5	4	3	107
6:45 AM	0	0	97	0	2	1	100
7:00 AM	0	0	126	2	2	1	131
7:15 AM	0	0	145	2	3	3	153
7:30 AM	1	0	172	2	2	1	178
7:45 AM	0	0	167	4	3	3	177
8:00 AM	0	0	146	3	1	4	154
8:15 AM	0	0	148	1	3	1	153
8:30 AM	0	0	145	2	1	2	150
8:45 AM	0	0	122	2	1	2	127
9:00 AM	0	0	121	0	1	1	123
9:15 AM	0	1	121	0	2	1	125
9:30 AM	0	1	121	2	5	3	132
9:45 AM	0	1	111	4	3	1	120
10:00 AM	0	0	117	1	3	2	123
10:15 AM	0	0	107	2	2	0	111
10:30 AM	0	1	92	0	2	1	96
10:45 AM	0	1	94	0	5	3	103
11:00 AM	0	0	113	0	3	1	117
11:15 AM	0	1	97	1	2	2	103
11:30 AM	0	0	99	1	2	0	102
11:45 AM	0	0	110	1	2	0	113

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	0	123	0	0	2	125
12:15 PM	0	1	129	0	4	0	134
12:30 PM	0	0	128	0	1	0	129
12:45 PM	0	0	120	1	5	3	129
1:00 PM	0	0	122	0	0	1	123
1:15 PM	0	0	122	2	2	1	127
1:30 PM	0	0	110	0	2	1	113
1:45 PM	0	0	87	1	1	2	91
2:00 PM	0	0	127	1	5	1	134
2:15 PM	0	0	113	2	3	2	120
2:30 PM	0	0	117	3	1	1	122
2:45 PM	0	0	115	5	2	0	122
3:00 PM	0	0	124	3	2	1	130
3:15 PM	0	0	119	2	1	2	124
3:30 PM	0	0	153	1	1	0	155
3:45 PM	0	0	149	2	3	0	154
4:00 PM	0	0	129	3	3	1	136
4:15 PM	0	1	147	1	1	0	150
4:30 PM	0	0	149	1	2	1	153
4:45 PM	0	0	132	0	2	1	135
5:00 PM	0	0	157	0	3	2	162
5:15 PM	0	0	146	0	0	1	147
5:30 PM	0	0	154	1	0	0	155
5:45 PM	1	0	175	1	0	0	177
6:00 PM	0	0	156	0	0	1	157
6:15 PM	0	0	155	1	2	0	158
6:30 PM	0	0	125	0	0	0	125
6:45 PM	0	0	112	0	0	1	113
7:00 PM	0	0	98	0	1	0	99
7:15 PM	0	0	113	1	0	0	114
7:30 PM	0	1	84	0	0	0	85
7:45 PM	0	0	72	1	1	0	74
8:00 PM	0	0	78	0	1	1	80
8:15 PM	0	0	85	0	3	0	88
8:30 PM	0	0	83	0	0	1	84
8:45 PM	0	0	66	0	1	2	69
9:00 PM	0	1	53	0	0	0	54
9:15 PM	0	0	70	0	1	0	71
9:30 PM	0	0	41	0	1	0	42
9:45 PM	0	0	44	0	1	0	45
10:00 PM	0	0	42	0	0	1	43
10:15 PM	0	0	35	0	0	0	35
10:30 PM	0	0	35	0	0	0	35
10:45 PM	0	0	32	0	0	0	32
11:00 PM	0	0	29	0	0	0	29
11:15 PM	0	0	24	0	0	0	24
11:30 PM	0	0	16	0	0	0	16
11:45 PM	0	0	11	0	0	0	11

AM Total	1	6	3073	37	67	51	3235
Percentage	0.03%	0.19%	94.99%	1.14%	2.07%	1.58%	
AM Peak	6:45 AM	9:00 AM	7:30 AM	7:15 AM	9:15 AM	7:15 AM	7:15 AM
Volume	1	3	633	11	13	11	662

PM Total	1	4	4806	33	56	30	4930
Percentage	0.02%	0.08%	97.48%	0.67%	1.14%	0.61%	
PM Peak	5:00 PM	12:00 PM	5:30 PM	2:15 PM	1:30 PM	12:45 PM	5:30 PM
Volume	1	1	640	13	11	6	647
Day Total	2	10	7879	70	123	81	8165
Percentage	0.02%	0.12%	96.50%	0.86%	1.51%	0.99%	

Grafton Street (Route 122)
 south of Margin Street
 City, State: Worcester, MA
 Client: Kimley-Horn/ P. Graham
 Site Code: TBA



PDI File #: 239385 ATR-A

Count Date: Wednesday, June 7, 2023
 Direction: NB

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	12	0	0	0	12
12:15 AM	0	0	19	0	0	1	20
12:30 AM	0	0	15	0	0	0	15
12:45 AM	0	0	8	0	0	0	8
1:00 AM	0	0	7	0	0	0	7
1:15 AM	0	0	8	0	1	0	9
1:30 AM	0	0	6	0	0	0	6
1:45 AM	0	0	5	0	0	0	5
2:00 AM	0	0	6	0	0	2	8
2:15 AM	0	0	3	0	0	0	3
2:30 AM	0	0	3	0	0	1	4
2:45 AM	0	0	2	0	0	0	2
3:00 AM	0	0	3	0	0	1	4
3:15 AM	0	0	2	0	2	0	4
3:30 AM	0	0	4	0	0	1	5
3:45 AM	0	0	9	0	0	0	9
4:00 AM	0	0	7	0	0	0	7
4:15 AM	0	0	2	0	0	0	2
4:30 AM	0	0	13	0	0	0	13
4:45 AM	0	0	17	0	0	2	19
5:00 AM	0	0	22	0	1	2	25
5:15 AM	0	0	15	0	0	1	16
5:30 AM	1	0	35	1	0	0	37
5:45 AM	1	0	44	0	1	1	47
6:00 AM	0	0	35	0	1	2	38
6:15 AM	0	0	71	1	1	2	75
6:30 AM	0	0	88	5	3	0	96
6:45 AM	0	0	106	0	3	2	111
7:00 AM	0	0	102	2	2	0	106
7:15 AM	0	0	122	2	4	0	128
7:30 AM	0	0	178	1	6	0	185
7:45 AM	0	0	161	3	3	0	167
8:00 AM	0	0	157	2	3	3	165
8:15 AM	0	0	124	2	4	2	132
8:30 AM	0	0	137	2	2	1	142
8:45 AM	0	0	144	1	2	0	147
9:00 AM	0	0	123	1	3	0	127
9:15 AM	0	0	103	0	5	2	110
9:30 AM	0	0	136	0	4	1	141
9:45 AM	0	0	92	1	4	2	99
10:00 AM	0	0	101	0	2	2	105
10:15 AM	0	0	102	1	3	1	107
10:30 AM	0	4	104	0	2	1	111
10:45 AM	0	0	110	0	2	3	115
11:00 AM	0	0	112	1	3	1	117
11:15 AM	0	0	109	0	2	3	114
11:30 AM	0	0	112	0	6	0	118
11:45 AM	0	0	107	1	2	1	111

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	0	105	1	1	1	108
12:15 PM	0	0	117	0	0	0	117
12:30 PM	0	1	128	0	3	1	133
12:45 PM	0	0	135	1	3	1	140
1:00 PM	0	0	123	0	1	1	125
1:15 PM	0	1	121	1	5	1	129
1:30 PM	0	0	113	0	4	0	117
1:45 PM	0	0	103	0	2	1	106
2:00 PM	0	0	114	2	0	1	117
2:15 PM	0	0	122	1	4	2	129
2:30 PM	0	0	106	4	1	0	111
2:45 PM	0	1	116	5	1	1	124
3:00 PM	0	0	128	1	2	1	132
3:15 PM	0	0	143	2	1	0	146
3:30 PM	0	0	142	0	0	0	142
3:45 PM	0	0	137	1	1	0	139
4:00 PM	0	0	146	1	1	1	149
4:15 PM	0	1	150	2	3	0	156
4:30 PM	0	0	141	0	4	1	146
4:45 PM	0	0	135	1	1	1	138
5:00 PM	0	1	158	0	2	0	161
5:15 PM	0	0	166	0	4	1	171
5:30 PM	0	0	150	1	0	2	153
5:45 PM	0	0	163	1	2	1	167
6:00 PM	0	0	146	0	0	1	147
6:15 PM	0	0	109	0	0	1	110
6:30 PM	0	1	144	1	0	0	146
6:45 PM	0	0	133	0	4	1	138
7:00 PM	0	0	101	1	2	1	105
7:15 PM	0	3	88	1	2	1	95
7:30 PM	0	0	102	0	0	2	104
7:45 PM	0	0	97	0	0	0	97
8:00 PM	0	0	70	1	0	1	72
8:15 PM	0	0	70	0	0	0	70
8:30 PM	0	1	64	0	0	2	67
8:45 PM	0	1	54	1	1	0	57
9:00 PM	0	0	44	0	0	1	45
9:15 PM	0	0	56	0	0	1	57
9:30 PM	0	0	60	0	1	1	62
9:45 PM	0	0	59	0	0	0	59
10:00 PM	0	0	44	0	0	1	45
10:15 PM	0	0	44	0	0	1	45
10:30 PM	0	0	44	1	0	1	46
10:45 PM	0	0	27	0	0	0	27
11:00 PM	0	0	20	0	0	0	20
11:15 PM	0	0	19	0	0	0	19
11:30 PM	0	0	26	0	0	0	26
11:45 PM	0	0	13	0	0	1	14

AM Total	2	4	3003	27	77	41	3154
Percentage	0.06%	0.13%	95.21%	0.86%	2.44%	1.30%	
AM Peak	5:00 AM	9:45 AM	7:30 AM	6:30 AM	7:15 AM	10:30 AM	7:30 AM
Volume	2	4	620	9	16	8	649

PM Total	0	11	4796	31	56	35	4929
Percentage	0.00%	0.22%	97.30%	0.63%	1.14%	0.71%	
PM Peak	12:00 PM	6:30 PM	5:00 PM	2:00 PM	12:45 PM	5:15 PM	5:00 PM
Volume	0	4	637	12	13	5	652

Day Total	2	15	7799	58	133	76	8083
Percentage	0.02%	0.19%	96.49%	0.72%	1.65%	0.94%	

Grafton Street (Route 122)
 south of Margin Street
 City, State: Worcester, MA
 Client: Kimley-Horn/ P. Graham
 Site Code: TBA



PDI File #: 239385 ATR-A

Count Date: Tuesday, June 6, 2023
 Direction: SB

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	12	0	1	2	15
12:15 AM	0	0	9	0	0	0	9
12:30 AM	0	0	10	0	0	0	10
12:45 AM	0	0	6	0	0	0	6
1:00 AM	0	0	3	0	0	0	3
1:15 AM	0	0	2	0	0	0	2
1:30 AM	0	0	6	0	0	0	6
1:45 AM	0	0	2	0	1	1	4
2:00 AM	0	0	6	0	3	2	11
2:15 AM	0	0	3	0	1	0	4
2:30 AM	0	0	1	0	0	0	1
2:45 AM	0	0	7	0	1	0	8
3:00 AM	0	0	6	0	0	0	6
3:15 AM	0	0	2	0	1	0	3
3:30 AM	0	0	4	0	1	3	8
3:45 AM	0	0	2	0	0	1	3
4:00 AM	0	0	17	0	1	1	19
4:15 AM	0	0	10	0	0	0	10
4:30 AM	0	0	18	0	1	1	20
4:45 AM	0	0	27	1	0	0	28
5:00 AM	0	0	32	0	0	1	33
5:15 AM	0	0	55	1	0	0	56
5:30 AM	0	0	65	0	0	1	66
5:45 AM	0	0	80	1	1	1	83
6:00 AM	0	0	83	0	2	1	86
6:15 AM	0	0	80	2	0	0	82
6:30 AM	0	0	105	2	1	0	108
6:45 AM	0	0	101	2	0	2	105
7:00 AM	0	0	108	1	4	3	116
7:15 AM	0	0	130	1	1	3	135
7:30 AM	0	0	113	1	4	3	121
7:45 AM	0	0	145	4	1	1	151
8:00 AM	0	1	116	0	4	2	123
8:15 AM	0	0	124	4	2	2	132
8:30 AM	0	0	115	3	1	4	123
8:45 AM	0	0	132	0	3	2	137
9:00 AM	0	0	132	0	2	1	135
9:15 AM	0	0	103	1	3	0	107
9:30 AM	0	1	113	1	4	1	120
9:45 AM	0	1	101	0	2	0	104
10:00 AM	0	0	106	1	5	1	113
10:15 AM	0	0	106	0	6	0	112
10:30 AM	0	1	110	0	1	2	114
10:45 AM	0	1	118	1	3	2	125
11:00 AM	0	0	106	1	4	2	113
11:15 AM	0	1	122	1	2	3	129
11:30 AM	0	0	109	2	6	0	117
11:45 AM	0	0	126	0	6	0	132

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	0	119	0	1	0	120
12:15 PM	0	0	123	0	0	2	125
12:30 PM	0	0	127	1	2	1	131
12:45 PM	0	0	132	1	1	0	134
1:00 PM	0	0	120	1	6	0	127
1:15 PM	0	0	112	0	5	3	120
1:30 PM	0	0	123	1	4	0	128
1:45 PM	0	0	133	1	2	2	138
2:00 PM	0	1	116	2	0	2	121
2:15 PM	0	0	141	5	5	1	152
2:30 PM	0	0	150	1	2	0	153
2:45 PM	0	0	141	4	4	1	150
3:00 PM	0	0	142	2	3	1	148
3:15 PM	0	0	168	1	3	0	172
3:30 PM	0	1	179	2	4	0	186
3:45 PM	0	0	188	1	3	0	192
4:00 PM	0	0	171	2	0	1	174
4:15 PM	0	0	179	0	1	0	180
4:30 PM	0	0	212	1	6	0	219
4:45 PM	0	0	195	0	0	0	195
5:00 PM	0	0	203	0	2	2	207
5:15 PM	0	0	189	1	0	2	192
5:30 PM	0	0	190	0	1	0	191
5:45 PM	0	0	146	0	0	0	146
6:00 PM	0	0	144	1	0	1	146
6:15 PM	0	0	118	0	0	0	118
6:30 PM	0	0	112	0	1	0	113
6:45 PM	0	0	113	0	1	0	114
7:00 PM	1	0	118	2	1	1	123
7:15 PM	0	0	94	0	0	0	94
7:30 PM	1	0	83	0	1	0	85
7:45 PM	0	0	86	1	0	0	87
8:00 PM	0	0	88	0	0	1	89
8:15 PM	2	0	80	0	0	0	82
8:30 PM	1	0	66	0	1	1	69
8:45 PM	0	0	60	0	0	0	60
9:00 PM	0	0	71	0	0	0	71
9:15 PM	0	0	54	0	0	1	55
9:30 PM	0	0	46	0	0	0	46
9:45 PM	0	0	47	2	0	0	49
10:00 PM	0	0	51	0	0	1	52
10:15 PM	0	0	45	0	0	0	45
10:30 PM	0	0	40	0	0	0	40
10:45 PM	0	0	38	0	1	0	39
11:00 PM	0	0	19	0	0	0	19
11:15 PM	0	0	16	0	0	0	16
11:30 PM	0	0	6	0	0	0	6
11:45 PM	0	0	5	0	0	0	5

AM Total	0	6	3089	31	79	49	3254
Percentage	0.00%	0.18%	94.93%	0.95%	2.43%	1.51%	
AM Peak	12:00 AM	10:30 AM	7:15 AM	7:45 AM	11:00 AM	6:45 AM	7:15 AM
Volume	0	3	504	11	18	11	530

PM Total	5	2	5299	33	61	24	5424
Percentage	0.09%	0.04%	97.70%	0.61%	1.12%	0.44%	
PM Peak	7:30 PM	1:15 PM	4:30 PM	2:00 PM	1:00 PM	1:15 PM	4:30 PM
Volume	3	1	799	12	17	7	813

Day Total	5	8	8388	64	140	73	8678
Percentage	0.06%	0.09%	96.66%	0.74%	1.61%	0.84%	

Grafton Street (Route 122)
 south of Margin Street
 City, State: Worcester, MA
 Client: Kimley-Horn/ P. Graham
 Site Code: TBA



PDI File #: 239385 ATR-A

Count Date: Wednesday, June 7, 2023
 Direction: SB

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	15	0	0	1	16
12:15 AM	0	0	8	0	0	0	8
12:30 AM	0	0	10	0	0	0	10
12:45 AM	0	0	8	0	0	0	8
1:00 AM	0	0	5	0	0	0	5
1:15 AM	0	0	5	0	0	0	5
1:30 AM	0	0	2	0	0	0	2
1:45 AM	0	0	1	0	0	0	1
2:00 AM	0	0	2	0	0	0	2
2:15 AM	0	0	1	0	0	0	1
2:30 AM	0	0	1	0	0	0	1
2:45 AM	0	0	4	0	0	0	4
3:00 AM	0	0	6	0	0	0	6
3:15 AM	0	0	1	0	1	0	2
3:30 AM	0	0	5	0	0	0	5
3:45 AM	0	0	3	0	0	0	3
4:00 AM	0	0	10	0	0	0	10
4:15 AM	0	0	11	0	0	0	11
4:30 AM	0	0	14	0	0	0	14
4:45 AM	0	1	29	0	0	1	31
5:00 AM	0	0	37	1	1	1	40
5:15 AM	0	0	44	1	0	1	46
5:30 AM	0	0	64	0	1	0	65
5:45 AM	0	0	85	0	1	0	86
6:00 AM	0	0	80	0	0	2	82
6:15 AM	0	0	82	2	2	0	86
6:30 AM	0	0	87	2	2	1	92
6:45 AM	0	0	113	3	0	0	116
7:00 AM	0	0	105	1	1	1	108
7:15 AM	0	0	93	1	1	2	97
7:30 AM	0	0	116	2	4	3	125
7:45 AM	0	0	138	4	3	1	146
8:00 AM	0	0	122	1	3	1	127
8:15 AM	0	1	119	3	3	1	127
8:30 AM	0	0	118	2	4	2	126
8:45 AM	0	0	118	1	6	2	127
9:00 AM	0	0	116	0	4	0	120
9:15 AM	0	0	89	1	1	1	92
9:30 AM	0	1	104	1	3	2	111
9:45 AM	0	0	130	0	6	0	136
10:00 AM	0	0	127	1	4	0	132
10:15 AM	0	0	96	0	0	1	97
10:30 AM	0	0	124	0	0	1	125
10:45 AM	0	1	114	0	0	2	117
11:00 AM	0	0	123	1	6	1	131
11:15 AM	1	0	107	0	3	3	114
11:30 AM	0	0	114	0	2	4	120
11:45 AM	0	0	125	0	4	3	132

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	0	148	0	1	1	150
12:15 PM	0	2	145	0	4	1	152
12:30 PM	0	0	129	1	4	1	135
12:45 PM	0	2	122	0	2	1	127
1:00 PM	0	0	119	1	2	0	122
1:15 PM	0	1	143	0	7	0	151
1:30 PM	0	0	123	0	3	0	126
1:45 PM	0	0	103	0	3	1	107
2:00 PM	0	0	124	3	4	1	132
2:15 PM	0	0	155	1	1	0	157
2:30 PM	0	0	169	3	0	4	176
2:45 PM	0	0	141	2	2	3	148
3:00 PM	0	0	158	1	1	2	162
3:15 PM	0	1	164	2	1	0	168
3:30 PM	0	0	154	0	0	1	155
3:45 PM	0	0	163	2	0	1	166
4:00 PM	1	0	177	1	0	0	179
4:15 PM	0	0	188	2	4	1	195
4:30 PM	0	0	161	1	0	0	162
4:45 PM	0	2	175	0	4	2	183
5:00 PM	1	0	201	1	3	0	206
5:15 PM	0	2	205	0	0	0	207
5:30 PM	0	1	195	0	1	1	198
5:45 PM	0	0	167	0	2	1	170
6:00 PM	0	0	119	0	1	1	121
6:15 PM	0	0	137	1	1	1	140
6:30 PM	0	0	118	0	4	0	122
6:45 PM	0	0	117	0	1	0	118
7:00 PM	0	0	112	1	1	1	115
7:15 PM	0	0	101	0	0	2	103
7:30 PM	0	0	104	0	0	0	104
7:45 PM	0	0	101	1	0	0	102
8:00 PM	0	1	89	0	2	1	93
8:15 PM	0	0	75	0	0	0	75
8:30 PM	0	0	80	1	0	0	81
8:45 PM	0	0	68	0	0	0	68
9:00 PM	0	0	60	0	2	0	62
9:15 PM	0	0	53	0	0	0	53
9:30 PM	0	0	59	0	0	0	59
9:45 PM	1	0	51	0	0	1	53
10:00 PM	0	0	41	0	0	0	41
10:15 PM	0	0	41	0	0	0	41
10:30 PM	0	0	36	0	0	1	37
10:45 PM	0	0	23	0	0	1	24
11:00 PM	0	1	22	0	0	0	23
11:15 PM	0	0	26	0	0	1	27
11:30 PM	0	0	17	0	0	0	17
11:45 PM	0	0	23	0	2	0	25

AM Total	1	4	3031	28	66	38	3168
Percentage	0.03%	0.13%	95.68%	0.88%	2.08%	1.20%	
AM Peak	10:30 AM	4:00 AM	7:45 AM	7:30 AM	8:15 AM	11:00 AM	7:45 AM
Volume	1	1	497	10	17	11	526

PM Total	3	13	5402	25	63	32	5538
Percentage	0.05%	0.23%	97.54%	0.45%	1.14%	0.58%	
PM Peak	3:15 PM	4:45 PM	4:45 PM	2:00 PM	1:15 PM	2:15 PM	4:45 PM
Volume	1	5	776	9	17	9	794

Day Total	4	17	8433	53	129	70	8706
Percentage	0.05%	0.20%	96.86%	0.61%	1.48%	0.80%	

Grafton Street (Route 122)
 south of Margin Street
 City, State: Worcester, MA
 Client: Kimley-Horn/ P. Graham
 Site Code: TBA



PRECISION
 DATA
 INDUSTRIES, LLC
 157 Washington Street, Suite 2
 Hudson, MA 01749
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

PDI File # 239385 ATR-A

Direction: NB

Weekly Report

Day Date	Tuesday 06/06/23		Wednesday 06/07/23												Week Ave			
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM		
12:00	15	125	12	108	0	0	0	0	0	0	0	0	0	0	14	117		
12:15	16	134	20	117	0	0	0	0	0	0	0	0	0	0	18	126		
12:30	10	129	15	133	0	0	0	0	0	0	0	0	0	0	13	131		
12:45	10	129	8	140	0	0	0	0	0	0	0	0	0	0	9	135		
1:00	6	123	7	125	0	0	0	0	0	0	0	0	0	0	7	124		
1:15	6	127	9	129	0	0	0	0	0	0	0	0	0	0	8	128		
1:30	12	113	6	117	0	0	0	0	0	0	0	0	0	0	9	115		
1:45	6	91	5	106	0	0	0	0	0	0	0	0	0	0	6	99		
2:00	13	134	8	117	0	0	0	0	0	0	0	0	0	0	11	126		
2:15	3	120	3	129	0	0	0	0	0	0	0	0	0	0	3	125		
2:30	4	122	4	111	0	0	0	0	0	0	0	0	0	0	4	117		
2:45	6	122	2	124	0	0	0	0	0	0	0	0	0	0	4	123		
3:00	6	130	4	132	0	0	0	0	0	0	0	0	0	0	5	131		
3:15	4	124	4	146	0	0	0	0	0	0	0	0	0	0	4	135		
3:30	5	155	5	142	0	0	0	0	0	0	0	0	0	0	5	149		
3:45	6	154	9	139	0	0	0	0	0	0	0	0	0	0	8	147		
4:00	4	136	7	149	0	0	0	0	0	0	0	0	0	0	6	143		
4:15	13	150	2	156	0	0	0	0	0	0	0	0	0	0	8	153		
4:30	5	153	13	146	0	0	0	0	0	0	0	0	0	0	9	150		
4:45	19	135	19	138	0	0	0	0	0	0	0	0	0	0	19	137		
5:00	27	162	25	161	0	0	0	0	0	0	0	0	0	0	26	162		
5:15	27	147	16	171	0	0	0	0	0	0	0	0	0	0	22	159		
5:30	35	155	37	153	0	0	0	0	0	0	0	0	0	0	36	154		
5:45	54	177	47	167	0	0	0	0	0	0	0	0	0	0	51	172		
6:00	53	157	38	147	0	0	0	0	0	0	0	0	0	0	46	152		
6:15	72	158	75	110	0	0	0	0	0	0	0	0	0	0	74	134		
6:30	107	125	96	146	0	0	0	0	0	0	0	0	0	0	102	136		
6:45	100	113	111	138	0	0	0	0	0	0	0	0	0	0	106	126		
7:00	131	99	106	105	0	0	0	0	0	0	0	0	0	0	119	102		
7:15	153	114	128	95	0	0	0	0	0	0	0	0	0	0	141	105		
7:30	178	85	185	104	0	0	0	0	0	0	0	0	0	0	182	95		
7:45	177	74	167	97	0	0	0	0	0	0	0	0	0	0	172	86		
8:00	154	80	165	72	0	0	0	0	0	0	0	0	0	0	160	76		
8:15	153	88	132	70	0	0	0	0	0	0	0	0	0	0	143	79		
8:30	150	84	142	67	0	0	0	0	0	0	0	0	0	0	146	76		
8:45	127	69	147	57	0	0	0	0	0	0	0	0	0	0	137	63		
9:00	123	54	127	45	0	0	0	0	0	0	0	0	0	0	125	50		
9:15	125	71	110	57	0	0	0	0	0	0	0	0	0	0	118	64		
9:30	132	42	141	62	0	0	0	0	0	0	0	0	0	0	137	52		
9:45	120	45	99	59	0	0	0	0	0	0	0	0	0	0	110	52		
10:00	123	43	105	45	0	0	0	0	0	0	0	0	0	0	114	44		
10:15	111	35	107	45	0	0	0	0	0	0	0	0	0	0	109	40		
10:30	96	35	111	46	0	0	0	0	0	0	0	0	0	0	104	41		
10:45	103	32	115	27	0	0	0	0	0	0	0	0	0	0	109	30		
11:00	117	29	117	20	0	0	0	0	0	0	0	0	0	0	117	25		
11:15	103	24	114	19	0	0	0	0	0	0	0	0	0	0	109	22		
11:30	102	16	118	26	0	0	0	0	0	0	0	0	0	0	110	21		
11:45	113	11	111	14	0	0	0	0	0	0	0	0	0	0	112	13		
Total	3235	4930	3154	4929	0	0	0	0	0	0	0	0	0	0	3195	4930		
Day Total	8165		8083		0		0		0		0		0		8124			
Peak HR	7:15 AM	5:30 PM	7:30 AM	5:00 PM													7:30 AM	5:00 PM
Volume	662	647	649	652													656	647

Grafton Street (Route 122)
 south of Margin Street
 City, State: Worcester, MA
 Client: Kimley-Horn/ P. Graham
 Site Code: TBA



PRECISION
 DATA
 INDUSTRIES, LLC

157 Washington Street, Suite 2
 Hudson, MA 01749
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

PDI File # 239385 ATR-A

Direction: SB

Weekly Report

Day Date	Tuesday 06/06/23		Wednesday 06/07/23												Week Ave			
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM		
12:00	15	120	16	150	0	0	0	0	0	0	0	0	0	0	16	135		
12:15	9	125	8	152	0	0	0	0	0	0	0	0	0	0	9	139		
12:30	10	131	10	135	0	0	0	0	0	0	0	0	0	0	10	133		
12:45	6	134	8	127	0	0	0	0	0	0	0	0	0	0	7	131		
1:00	3	127	5	122	0	0	0	0	0	0	0	0	0	0	4	125		
1:15	2	120	5	151	0	0	0	0	0	0	0	0	0	0	4	136		
1:30	6	128	2	126	0	0	0	0	0	0	0	0	0	0	4	127		
1:45	4	138	1	107	0	0	0	0	0	0	0	0	0	0	3	123		
2:00	11	121	2	132	0	0	0	0	0	0	0	0	0	0	7	127		
2:15	4	152	1	157	0	0	0	0	0	0	0	0	0	0	3	155		
2:30	1	153	1	176	0	0	0	0	0	0	0	0	0	0	1	165		
2:45	8	150	4	148	0	0	0	0	0	0	0	0	0	0	6	149		
3:00	6	148	6	162	0	0	0	0	0	0	0	0	0	0	6	155		
3:15	3	172	2	168	0	0	0	0	0	0	0	0	0	0	3	170		
3:30	8	186	5	155	0	0	0	0	0	0	0	0	0	0	7	171		
3:45	3	192	3	166	0	0	0	0	0	0	0	0	0	0	3	179		
4:00	19	174	10	179	0	0	0	0	0	0	0	0	0	0	15	177		
4:15	10	180	11	195	0	0	0	0	0	0	0	0	0	0	11	188		
4:30	20	219	14	162	0	0	0	0	0	0	0	0	0	0	17	191		
4:45	28	195	31	183	0	0	0	0	0	0	0	0	0	0	30	189		
5:00	33	207	40	206	0	0	0	0	0	0	0	0	0	0	37	207		
5:15	56	192	46	207	0	0	0	0	0	0	0	0	0	0	51	200		
5:30	66	191	65	198	0	0	0	0	0	0	0	0	0	0	66	195		
5:45	83	146	86	170	0	0	0	0	0	0	0	0	0	0	85	158		
6:00	86	146	82	121	0	0	0	0	0	0	0	0	0	0	84	134		
6:15	82	118	86	140	0	0	0	0	0	0	0	0	0	0	84	129		
6:30	108	113	92	122	0	0	0	0	0	0	0	0	0	0	100	118		
6:45	105	114	116	118	0	0	0	0	0	0	0	0	0	0	111	116		
7:00	116	123	108	115	0	0	0	0	0	0	0	0	0	0	112	119		
7:15	135	94	97	103	0	0	0	0	0	0	0	0	0	0	116	99		
7:30	121	85	125	104	0	0	0	0	0	0	0	0	0	0	123	95		
7:45	151	87	146	102	0	0	0	0	0	0	0	0	0	0	149	95		
8:00	123	89	127	93	0	0	0	0	0	0	0	0	0	0	125	91		
8:15	132	82	127	75	0	0	0	0	0	0	0	0	0	0	130	79		
8:30	123	69	126	81	0	0	0	0	0	0	0	0	0	0	125	75		
8:45	137	60	127	68	0	0	0	0	0	0	0	0	0	0	132	64		
9:00	135	71	120	62	0	0	0	0	0	0	0	0	0	0	128	67		
9:15	107	55	92	53	0	0	0	0	0	0	0	0	0	0	100	54		
9:30	120	46	111	59	0	0	0	0	0	0	0	0	0	0	116	53		
9:45	104	49	136	53	0	0	0	0	0	0	0	0	0	0	120	51		
10:00	113	52	132	41	0	0	0	0	0	0	0	0	0	0	123	47		
10:15	112	45	97	41	0	0	0	0	0	0	0	0	0	0	105	43		
10:30	114	40	125	37	0	0	0	0	0	0	0	0	0	0	120	39		
10:45	125	39	117	24	0	0	0	0	0	0	0	0	0	0	121	32		
11:00	113	19	131	23	0	0	0	0	0	0	0	0	0	0	122	21		
11:15	129	16	114	27	0	0	0	0	0	0	0	0	0	0	122	22		
11:30	117	6	120	17	0	0	0	0	0	0	0	0	0	0	119	12		
11:45	132	5	132	25	0	0	0	0	0	0	0	0	0	0	132	15		
Total	3254	5424	3168	5538	0	0	0	0	0	0	0	0	0	0	3211	5481		
Day Total	8678		8706		0		0		0		0		0		8692			
Peak HR	7:15 AM	4:30 PM	7:45 AM	4:45 PM													7:45 AM	4:45 PM
Volume	530	813	526	794													528	790

Grafton Road (Route 122)

south of Margin Street

City, State: Worcester, MA

Client: Kimley-Horn/ P. Graham

Site Code: 112858000



PRECISION
D A T A
INDUSTRIES, LLC

157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

PDI File #: 239385 ATR-A (Speed)

Count Date

Tuesday, June 6, 2023

Speed (60-minute)

NB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	1	4	3	6	0	0	0	0	0	0	0	14	38.0	32.6
1:00 AM	0	0	1	0	2	2	1	0	0	0	0	0	0	6	38.5	33.8
2:00 AM	0	0	0	0	1	1	1	0	0	0	0	0	0	3	39.2	36.7
3:00 AM	0	0	0	0	1	0	1	0	0	0	0	0	0	2	39.5	36.0
4:00 AM	0	0	0	1	6	2	0	0	0	0	0	0	0	9	34.8	32.9
5:00 AM	0	0	1	2	13	7	0	3	0	0	0	0	0	26	38.0	34.3
6:00 AM	2	0	11	18	59	38	6	3	1	0	0	0	0	138	37.0	32.5
7:00 AM	8	16	26	73	150	105	15	1	0	0	0	0	0	394	37.0	31.0
8:00 AM	4	2	26	86	162	91	15	4	3	0	0	0	0	393	37.0	31.8
9:00 AM	6	2	23	66	143	92	17	1	0	1	1	0	0	352	37.0	32.0
10:00 AM	8	0	13	51	158	100	17	3	0	0	0	0	0	350	37.0	32.3
11:00 AM	3	0	23	62	130	75	25	3	0	0	0	0	0	321	37.0	32.2
12:00 PM	5	2	8	82	172	84	19	0	0	0	0	0	1	373	36.0	32.0
1:00 PM	7	1	8	73	148	97	15	1	0	1	0	0	0	351	37.0	32.1
2:00 PM	8	12	37	84	116	48	12	1	0	0	0	0	0	318	35.0	29.5
3:00 PM	14	21	30	83	87	34	2	0	0	0	0	1	2	274	34.0	28.4
4:00 PM	5	14	30	88	109	54	10	2	0	0	0	0	0	312	36.0	29.9
5:00 PM	13	22	29	49	64	26	0	0	0	0	0	0	0	203	34.0	26.8
6:00 PM	8	15	26	67	137	86	18	1	1	0	0	0	0	359	37.0	31.1
7:00 PM	1	2	12	34	130	114	15	5	0	0	0	0	0	313	38.0	33.4
8:00 PM	4	2	8	45	106	88	21	2	1	0	0	0	0	277	37.6	33.0
9:00 PM	0	2	3	24	71	64	15	1	0	0	0	0	0	180	38.0	33.6
10:00 PM	0	1	2	13	57	34	11	1	0	0	0	0	0	119	38.0	33.6
11:00 PM	0	0	0	7	17	32	14	1	0	0	0	0	0	71	41.0	35.9
Total	96	114	318	1012	2042	1280	250	33	6	2	1	1	3	5158	37.0	31.5
Percent	1.86%	2.21%	6.17%	19.62%	39.59%	24.82%	4.85%	0.64%	0.12%	0.04%	0.02%	0.02%	0.06%			

AM Peak	7:00 AM	7:00 AM	7:00 AM	8:00 AM	8:00 AM	7:00 AM	11:00 AM	8:00 AM	8:00 AM	9:00 AM	9:00 AM					7:00 AM
Volume	8	16	26	86	162	105	25	4	3	1	1	0	0	394		

PM Peak	3:00 PM	5:00 PM	2:00 PM	4:00 PM	12:00 PM	7:00 PM	8:00 PM	7:00 PM	6:00 PM	1:00 PM		3:00 PM	3:00 PM	12:00 PM		
Volume	14	22	37	88	172	114	21	5	1	1	0	1	2	373		

15th Percentile:	26.0 MPH	Average Speed:	31.5 MPH	Posted Speed Limit:	35 MPH
50th Percentile:	32.0 MPH	10 MPH Pace:	28 to 37 MPH	Number of Vehicles > 35 MPH:	1211
85th Percentile:	37.0 MPH	Number in Pace:	3521	Percent of Vehicles > 35 MPH:	23.5%
95th Percentile:	40.0 MPH	Percent in Pace:	68.3%		

Grafton Road (Route 122)

south of Margin Street

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Client: Kimley-Horn/ P. Graham

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Count Date

Tuesday, June 6, 2023

Speed (60-minute)

SB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	0	3	4	1	0	0	0	0	0	0	0	8	32.0	30.5
1:00 AM	1	0	0	0	3	1	1	0	0	0	0	0	0	6	39.3	30.8
2:00 AM	0	0	0	3	12	1	1	0	0	0	0	0	0	17	34.0	32.4
3:00 AM	0	0	1	2	3	3	2	0	0	0	0	0	0	11	41.0	34.2
4:00 AM	0	0	0	6	15	7	2	1	0	0	0	0	0	31	37.5	33.4
5:00 AM	0	1	0	8	41	67	8	1	0	0	0	0	0	126	38.0	35.1
6:00 AM	3	2	1	13	95	99	35	4	0	0	0	0	0	252	40.0	35.0
7:00 AM	4	0	3	18	172	203	43	2	5	0	0	0	0	450	39.0	35.0
8:00 AM	0	0	0	28	178	203	63	10	2	1	0	0	0	485	40.0	35.5
9:00 AM	1	0	0	13	164	216	68	3	0	0	0	0	0	465	40.0	35.8
10:00 AM	1	0	0	15	167	203	58	4	1	0	1	0	0	450	39.0	35.6
11:00 AM	0	2	3	24	195	196	46	5	0	0	0	0	0	471	39.0	34.9
12:00 PM	0	0	4	27	200	210	44	6	0	1	0	0	0	492	38.0	34.8
1:00 PM	0	0	2	33	231	187	31	6	0	0	0	0	0	490	38.0	34.3
2:00 PM	0	1	1	44	214	222	35	3	0	0	0	0	0	520	38.0	34.3
3:00 PM	0	0	4	47	297	248	53	2	1	0	0	0	0	652	38.0	34.3
4:00 PM	3	0	1	40	299	323	55	8	0	2	0	0	0	731	38.0	34.8
5:00 PM	4	0	7	45	288	265	46	3	1	0	0	0	0	659	38.0	34.3
6:00 PM	0	0	2	23	170	221	58	1	0	0	0	0	0	475	39.0	35.3
7:00 PM	0	0	2	20	123	163	63	7	1	0	0	0	0	379	40.0	35.9
8:00 PM	0	3	4	8	96	135	41	3	1	0	0	0	0	291	40.0	35.5
9:00 PM	0	1	0	15	75	87	25	5	3	0	0	0	1	212	40.0	35.7
10:00 PM	0	0	1	13	82	63	7	0	0	0	0	0	0	166	37.0	33.9
11:00 PM	0	0	0	3	23	45	13	0	0	0	0	0	0	84	39.6	36.0
Total	17	10	36	451	3147	3369	798	74	15	4	1	0	1	7923	39.0	34.9
Percent	0.21%	0.13%	0.45%	5.69%	39.72%	42.52%	10.07%	0.93%	0.19%	0.05%	0.01%	0.00%	0.01%			

AM Peak	7:00 AM	6:00 AM	7:00 AM	8:00 AM	11:00 AM	9:00 AM	9:00 AM	8:00 AM	7:00 AM	8:00 AM	10:00 AM			8:00 AM
Volume	4	2	3	28	195	216	68	10	5	1	1	0	0	485

PM Peak	5:00 PM	8:00 PM	5:00 PM	3:00 PM	4:00 PM	4:00 PM	7:00 PM	4:00 PM	9:00 PM	4:00 PM			9:00 PM	4:00 PM
Volume	4	3	7	47	299	323	63	8	3	2	0	0	1	731

15th Percentile:	31.0 MPH	Average Speed:	34.9 MPH	Posted Speed Limit:	35 MPH
50th Percentile:	35.0 MPH	10 MPH Pace:	31 to 40 MPH	Number of Vehicles > 35 MPH:	3385
85th Percentile:	39.0 MPH	Number in Pace:	6592	Percent of Vehicles > 35 MPH:	42.7%
95th Percentile:	41.0 MPH	Percent in Pace:	83.2%		

Grafton Road (Route 122)

south of Margin Street

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PDI File #: 239385 ATR-A (Speed)

Count Date

Tuesday, June 6, 2023

Speed (60-minute)

Combined NB and SB

Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	1	7	7	7	0	0	0	0	0	0	0	22	37.7	31.8
1:00 AM	1	0	1	0	5	3	2	0	0	0	0	0	0	12	39.4	32.3
2:00 AM	0	0	0	3	13	2	2	0	0	0	0	0	0	20	35.5	33.1
3:00 AM	0	0	1	2	4	3	3	0	0	0	0	0	0	13	41.4	34.5
4:00 AM	0	0	0	7	21	9	2	1	0	0	0	0	0	40	37.0	33.3
5:00 AM	0	1	1	10	54	74	8	4	0	0	0	0	0	152	38.0	35.0
6:00 AM	5	2	12	31	154	137	41	7	1	0	0	0	0	390	39.0	34.1
7:00 AM	12	16	29	91	322	308	58	3	5	0	0	0	0	844	38.0	33.1
8:00 AM	4	2	26	114	340	294	78	14	5	1	0	0	0	878	38.0	33.8
9:00 AM	7	2	23	79	307	308	85	4	0	1	1	0	0	817	39.0	34.2
10:00 AM	9	0	13	66	325	303	75	7	1	0	1	0	0	800	39.0	34.2
11:00 AM	3	2	26	86	325	271	71	8	0	0	0	0	0	792	38.0	33.8
12:00 PM	5	2	12	109	372	294	63	6	0	1	0	0	1	865	38.0	33.6
1:00 PM	7	1	10	106	379	284	46	7	0	1	0	0	0	841	37.0	33.4
2:00 PM	8	13	38	128	330	270	47	4	0	0	0	0	0	838	37.0	32.5
3:00 PM	14	21	34	130	384	282	55	2	1	0	0	1	2	926	37.0	32.6
4:00 PM	8	14	31	128	408	377	65	10	0	2	0	0	0	1043	38.0	33.3
5:00 PM	17	22	36	94	352	291	46	3	1	0	0	0	0	862	37.0	32.5
6:00 PM	8	15	28	90	307	307	76	2	1	0	0	0	0	834	38.0	33.5
7:00 PM	1	2	14	54	253	277	78	12	1	0	0	0	0	692	39.0	34.8
8:00 PM	4	5	12	53	202	223	62	5	2	0	0	0	0	568	39.0	34.3
9:00 PM	0	3	3	39	146	151	40	6	3	0	0	0	1	392	39.0	34.7
10:00 PM	0	1	3	26	139	97	18	1	0	0	0	0	0	285	38.0	33.8
11:00 PM	0	0	0	10	40	77	27	1	0	0	0	0	0	155	40.0	35.9
Total	113	124	354	1463	5189	4649	1048	107	21	6	2	1	4	13081	38.0	33.6
Percent	0.86%	0.95%	2.71%	11.18%	39.67%	35.54%	8.01%	0.82%	0.16%	0.05%	0.02%	0.01%	0.03%			

AM Peak	7:00 AM	7:00 AM	7:00 AM	8:00 AM	8:00 AM	7:00 AM	9:00 AM	8:00 AM	7:00 AM	8:00 AM	9:00 AM				8:00 AM
Volume	12	16	29	114	340	308	85	14	5	1	1	0	0	878	

PM Peak	5:00 PM	5:00 PM	2:00 PM	3:00 PM	4:00 PM	4:00 PM	7:00 PM	7:00 PM	9:00 PM	4:00 PM		3:00 PM	3:00 PM	4:00 PM
Volume	17	22	38	130	408	377	78	12	3	2	0	1	2	1043

15th Percentile:	29.0 MPH	Average Speed:	33.6 MPH	Posted Speed Limit:	35 MPH
50th Percentile:	34.0 MPH	10 MPH Pace:	30 to 39 MPH	Number of Vehicles > 35 MPH:	4596
85th Percentile:	38.0 MPH	Number in Pace:	9838	Percent of Vehicles > 35 MPH:	35.1%
95th Percentile:	41.0 MPH	Percent in Pace:	75.2%		

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south of Margin Street

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PDI File #: 239385 ATR-A (Speed)

Count Date

Wednesday, June 7, 2023

Speed (60-minute)

NB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	0	4	14	23	6	0	0	0	0	0	0	47	39.0	35.3
1:00 AM	0	0	0	1	3	14	8	0	0	0	0	0	0	26	41.0	37.4
2:00 AM	0	0	1	3	8	4	1	0	1	0	0	0	0	18	37.4	33.3
3:00 AM	0	0	1	0	7	7	4	2	1	0	0	0	0	22	40.0	36.9
4:00 AM	0	0	2	2	8	19	10	0	0	0	0	0	0	41	41.0	36.0
5:00 AM	1	0	5	8	30	42	10	3	1	0	0	0	0	100	39.0	34.7
6:00 AM	3	3	6	35	80	77	24	2	1	0	0	0	0	231	39.0	33.4
7:00 AM	2	5	36	79	155	103	11	1	0	0	0	0	0	392	36.0	31.5
8:00 AM	7	10	24	64	176	86	11	0	0	0	0	0	0	378	36.0	31.1
9:00 AM	6	3	8	73	174	80	12	2	2	0	0	0	0	360	36.0	31.9
10:00 AM	3	2	11	64	149	81	17	2	1	0	0	0	0	330	36.7	32.2
11:00 AM	6	7	16	87	109	78	14	3	0	0	0	0	0	320	37.0	31.2
12:00 PM	11	9	19	81	159	70	17	3	0	0	0	0	0	369	36.0	30.7
1:00 PM	4	4	11	83	168	81	17	1	0	0	0	1	0	370	36.0	31.9
2:00 PM	7	12	22	75	94	57	9	1	1	0	0	0	0	278	36.0	30.1
3:00 PM	6	9	36	80	113	58	9	0	0	0	0	0	0	311	36.0	29.8
4:00 PM	12	23	45	72	70	34	3	1	0	1	0	1	0	262	34.9	27.5
5:00 PM	11	32	22	37	42	17	4	1	0	0	0	0	0	166	34.0	26.1
6:00 PM	13	12	19	76	96	52	4	0	1	0	0	0	0	273	35.0	29.4
7:00 PM	4	3	11	59	108	58	12	1	0	0	0	0	0	256	36.0	31.5
8:00 PM	4	1	5	31	95	65	9	2	0	0	0	0	0	212	37.0	32.6
9:00 PM	0	0	7	29	75	39	18	0	0	0	0	0	0	168	38.0	32.9
10:00 PM	0	0	0	12	48	51	10	3	0	0	0	0	0	124	38.0	34.5
11:00 PM	1	0	0	9	34	18	6	1	0	0	0	0	0	69	38.0	33.7
Total	101	135	307	1064	2015	1214	246	29	9	1	0	2	0	5123	37.0	31.3
Percent	1.97%	2.64%	5.99%	20.77%	39.33%	23.70%	4.80%	0.57%	0.18%	0.02%	0.00%	0.04%	0.00%			

AM Peak	8:00 AM	8:00 AM	7:00 AM	11:00 AM	8:00 AM	7:00 AM	6:00 AM	5:00 AM	9:00 AM							7:00 AM
Volume	7	10	36	87	176	103	24	3	2	0	0	0	0	0	0	392
PM Peak	6:00 PM	5:00 PM	4:00 PM	1:00 PM	1:00 PM	1:00 PM	9:00 PM	12:00 PM	2:00 PM	4:00 PM			1:00 PM			1:00 PM
Volume	13	32	45	83	168	81	18	3	1	1	0	1	0	0	0	370

15th Percentile:	26.0 MPH	Average Speed:	31.3 MPH	Posted Speed Limit:	35 MPH
50th Percentile:	32.0 MPH	10 MPH Pace:	28 to 37 MPH	Number of Vehicles > 35 MPH:	1158
85th Percentile:	37.0 MPH	Number in Pace:	3495	Percent of Vehicles > 35 MPH:	22.6%
95th Percentile:	40.0 MPH	Percent in Pace:	68.2%		

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12:00 AM	0	0	0	5	20	13	3	0	0	0	0	0	0	41	38.0	34.0
1:00 AM	0	0	0	2	8	11	5	0	2	0	0	0	0	28	43.0	37.1
2:00 AM	0	0	0	4	5	9	2	1	0	0	0	0	0	21	39.0	34.9
3:00 AM	0	0	2	1	6	9	5	2	1	0	0	0	0	26	41.5	36.4
4:00 AM	0	0	1	2	17	17	27	3	0	0	0	0	0	67	43.0	37.7
5:00 AM	0	0	0	3	36	115	60	11	1	2	0	0	0	228	42.0	38.3
6:00 AM	0	0	0	16	128	156	46	8	1	0	0	0	0	355	40.0	35.8
7:00 AM	2	1	3	17	163	194	46	9	0	0	0	0	0	435	39.0	35.2
8:00 AM	0	1	2	36	170	214	51	6	1	0	0	0	0	481	39.0	35.2
9:00 AM	4	0	0	18	146	211	53	7	1	1	0	0	0	441	39.0	35.5
10:00 AM	2	1	2	17	163	214	55	2	0	0	0	0	0	456	39.0	35.3
11:00 AM	0	0	4	34	184	214	49	6	0	0	0	0	0	491	38.0	34.9
12:00 PM	0	0	5	29	220	223	51	5	0	0	0	0	0	533	39.0	34.8
1:00 PM	1	0	3	21	193	217	62	4	2	0	0	0	0	503	39.0	35.3
2:00 PM	2	0	1	32	252	262	35	3	0	1	0	0	0	588	38.0	34.6
3:00 PM	0	0	0	26	206	312	69	4	0	0	0	0	0	617	39.0	35.6
4:00 PM	0	1	4	35	271	310	49	4	1	0	0	0	0	675	38.0	34.8
5:00 PM	0	0	0	40	344	269	37	3	1	0	0	0	0	694	37.0	34.3
6:00 PM	1	0	1	41	198	178	24	3	0	0	0	0	0	446	38.0	34.2
7:00 PM	3	0	1	28	152	161	26	3	0	0	0	0	0	374	38.0	34.4
8:00 PM	0	2	1	18	118	128	19	3	0	0	0	0	0	289	38.0	34.6
9:00 PM	0	0	2	9	104	80	16	2	0	1	0	0	0	214	38.0	34.5
10:00 PM	0	0	2	18	57	48	8	1	0	0	0	0	0	134	37.1	33.8
11:00 PM	0	0	1	10	31	33	10	0	0	0	0	0	0	85	38.0	34.7
Total	15	6	35	462	3192	3598	808	90	11	5	0	0	0	8222	39.0	35.0
Percent	0.18%	0.07%	0.43%	5.62%	38.82%	43.76%	9.83%	1.09%	0.13%	0.06%	0.00%	0.00%	0.00%			

AM Peak	9:00 AM	7:00 AM	11:00 AM	8:00 AM	11:00 AM	8:00 AM	5:00 AM	5:00 AM	1:00 AM	5:00 AM						11:00 AM
Volume	4	1	4	36	184	214	60	11	2	2	0	0	0	0	0	491

PM Peak	7:00 PM	8:00 PM	12:00 PM	6:00 PM	5:00 PM	3:00 PM	3:00 PM	12:00 PM	1:00 PM	2:00 PM						5:00 PM
Volume	3	2	5	41	344	312	69	5	2	1	0	0	0	0	0	694

15th Percentile:	31.0 MPH	Average Speed:	35.0 MPH	Posted Speed Limit:	35 MPH
50th Percentile:	35.0 MPH	10 MPH Pace:	31 to 40 MPH	Number of Vehicles > 35 MPH:	3622
85th Percentile:	39.0 MPH	Number in Pace:	6818	Percent of Vehicles > 35 MPH:	44.1%
95th Percentile:	41.0 MPH	Percent in Pace:	82.9%		

Grafton Road (Route 122)

south of Margin Street

City, State: Worcester, MA

Client: Kimley-Horn/ P. Graham

Site Code: 112858000



PRECISION
D A T A
INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

PDI File #: 239385 ATR-A (Speed)

Count Date

Wednesday, June 7, 2023

Speed (60-minute)

Combined NB and SB

Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	0	9	34	36	9	0	0	0	0	0	0	88	39.0	34.7
1:00 AM	0	0	0	3	11	25	13	0	2	0	0	0	0	54	42.0	37.2
2:00 AM	0	0	1	7	13	13	3	1	1	0	0	0	0	39	39.0	34.2
3:00 AM	0	0	3	1	13	16	9	4	2	0	0	0	0	48	41.0	36.6
4:00 AM	0	0	3	4	25	36	37	3	0	0	0	0	0	108	42.0	37.1
5:00 AM	1	0	5	11	66	157	70	14	2	2	0	0	0	328	41.0	37.2
6:00 AM	3	3	6	51	208	233	70	10	2	0	0	0	0	586	39.0	34.9
7:00 AM	4	6	39	96	318	297	57	10	0	0	0	0	0	827	38.0	33.4
8:00 AM	7	11	26	100	346	300	62	6	1	0	0	0	0	859	38.0	33.4
9:00 AM	10	3	8	91	320	291	65	9	3	1	0	0	0	801	38.0	33.9
10:00 AM	5	3	13	81	312	295	72	4	1	0	0	0	0	786	38.0	34.0
11:00 AM	6	7	20	121	293	292	63	9	0	0	0	0	0	811	38.0	33.4
12:00 PM	11	9	24	110	379	293	68	8	0	0	0	0	0	902	38.0	33.1
1:00 PM	5	4	14	104	361	298	79	5	2	0	0	1	0	873	38.0	33.8
2:00 PM	9	12	23	107	346	319	44	4	1	1	0	0	0	866	38.0	33.1
3:00 PM	6	9	36	106	319	370	78	4	0	0	0	0	0	928	38.0	33.6
4:00 PM	12	24	49	107	341	344	52	5	1	1	0	1	0	937	38.0	32.8
5:00 PM	11	32	22	77	386	286	41	4	1	0	0	0	0	860	37.0	32.7
6:00 PM	14	12	20	117	294	230	28	3	1	0	0	0	0	719	37.0	32.3
7:00 PM	7	3	12	87	260	219	38	4	0	0	0	0	0	630	38.0	33.2
8:00 PM	4	3	6	49	213	193	28	5	0	0	0	0	0	501	38.0	33.7
9:00 PM	0	0	9	38	179	119	34	2	0	1	0	0	0	382	38.0	33.8
10:00 PM	0	0	2	30	105	99	18	4	0	0	0	0	0	258	38.0	34.1
11:00 PM	1	0	1	19	65	51	16	1	0	0	0	0	0	154	38.0	34.2
Total	116	141	342	1526	5207	4812	1054	119	20	6	0	2	0	13345	38.0	33.6
Percent	0.87%	1.06%	2.56%	11.43%	39.02%	36.06%	7.90%	0.89%	0.15%	0.04%	0.00%	0.01%	0.00%			

AM Peak	9:00 AM	8:00 AM	7:00 AM	11:00 AM	8:00 AM	8:00 AM	10:00 AM	5:00 AM	9:00 AM	5:00 AM				8:00 AM
Volume	10	11	39	121	346	300	72	14	3	2	0	0	0	859

PM Peak	6:00 PM	5:00 PM	4:00 PM	6:00 PM	5:00 PM	3:00 PM	1:00 PM	12:00 PM	1:00 PM	2:00 PM		1:00 PM		4:00 PM
Volume	14	32	49	117	386	370	79	8	2	1	0	1	0	937

15th Percentile:	29.0 MPH	Average Speed:	33.6 MPH	Posted Speed Limit:	35 MPH
50th Percentile:	34.0 MPH	10 MPH Pace:	30 to 39 MPH	Number of Vehicles > 35 MPH:	4780
85th Percentile:	38.0 MPH	Number in Pace:	10019	Percent of Vehicles > 35 MPH:	35.8%
95th Percentile:	41.0 MPH	Percent in Pace:	75.1%		

PDI File #: **239385 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122) NE: Auto Parts Driveway**
 Location: **E: Brandt Lane W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars and Heavy Vehicles (Combined)

	Grafton Street (Route 122)						Auto Parts Driveway						Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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	105	0	0	0	105	0	0	1	0	0	1	0	0	0	0	0	0	0	91	1	0	92	0	0	0	1	0	1	199	
7:15 AM	6	108	0	1	0	115	0	0	0	0	0	0	0	0	0	0	0	0	0	85	5	0	90	2	0	0	6	0	8	213	
7:30 AM	0	146	0	1	1	148	1	0	1	0	0	2	0	0	0	0	0	0	1	109	3	0	113	0	0	0	1	0	1	264	
7:45 AM	1	166	2	2	2	173	3	0	0	0	0	3	0	0	0	0	0	0	3	105	1	0	109	2	0	0	0	0	2	287	
Total	7	525	2	4	3	541	4	0	2	0	0	6	0	0	0	0	0	3	1	390	10	0	404	4	0	0	8	0	12	963	
8:00 AM	0	155	5	1	0	161	5	0	1	0	0	6	0	4	0	4	0	8	2	0	130	0	0	132	0	0	0	0	0	0	307
8:15 AM	0	157	0	1	0	158	1	0	3	0	0	4	0	0	0	0	0	0	1	2	103	0	0	106	0	0	0	0	0	0	268
8:30 AM	0	133	0	0	0	133	0	0	4	0	0	4	0	0	0	0	0	0	4	2	103	0	0	109	0	0	0	0	0	0	246
8:45 AM	0	142	0	0	0	142	1	0	3	0	0	4	0	1	0	0	0	1	1	2	117	0	1	121	0	0	0	0	1	1	269
Total	0	587	5	2	0	594	7	0	11	0	0	18	0	5	0	4	0	9	8	6	453	0	1	468	0	0	0	0	1	1	1090
Grand Total	7	1112	7	6	3	1135	11	0	13	0	0	24	0	5	0	4	0	9	11	7	843	10	1	872	4	0	0	8	1	13	2053
Approach %	0.6	98.0	0.6	0.5	0.3		45.8	0.0	54.2	0.0	0.0		0.0	55.6	0.0	44.4	0.0		1.3	0.8	96.7	1.1	0.1		30.8	0.0	0.0	61.5	7.7		
Total %	0.3	54.2	0.3	0.3	0.1	55.3	0.5	0.0	0.6	0.0	0.0	1.2	0.0	0.2	0.0	0.2	0.0	0.4	0.5	0.3	41.1	0.5	0.0	42.5	0.2	0.0	0.0	0.4	0.0	0.6	
Exiting Leg Total						870						13						18						1134						18	2053
Cars	7	1060	7	6	3	1083	11	0	13	0	0	24	0	5	0	4	0	9	11	7	798	10	1	827	4	0	0	8	1	13	1956
% Cars	100.0	95.3	100.0	100.0	100.0	95.4	100.0	0.0	100.0	0.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	100.0	100.0	94.7	100.0	100.0	94.8	100.0	0.0	0.0	100.0	100.0	100.0	95.3
Exiting Leg Total						825						13						18						1082						18	1956
Heavy Vehicles	0	52	0	0	0	52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45	0	0	45	0	0	0	0	0	0	97
% Heavy Vehicles	0.0	4.7	0.0	0.0	0.0	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	4.7
Exiting Leg Total						45						0						0						52						0	97

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

7:30 AM	Grafton Street (Route 122)						Auto Parts Driveway						Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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	
7:30 AM	0	146	0	1	1	148	1	0	1	0	0	2	0	0	0	0	0	0	0	1	109	3	0	113	0	0	0	1	0	1	264
7:45 AM	1	166	2	2	2	173	3	0	0	0	0	3	0	0	0	0	0	0	3	0	105	1	0	109	2	0	0	0	0	2	287
8:00 AM	0	155	5	1	0	161	5	0	1	0	0	6	0	4	0	4	0	8	2	0	130	0	0	132	0	0	0	0	0	0	307
8:15 AM	0	157	0	1	0	158	1	0	3	0	0	4	0	0	0	0	0	0	1	2	103	0	0	106	0	0	0	0	0	0	268
Total Volume	1	624	7	5	3	640	10	0	5	0	0	15	0	4	0	4	0	8	6	3	447	4	0	460	2	0	0	1	0	3	1126
% Approach Total	0.2	97.5	1.1	0.8	0.5		66.7	0.0	33.3	0.0	0.0		0.0	50.0	0.0	50.0	0.0		1.3	0.7	97.2	0.9	0.0		66.7	0.0	0.0	33.3	0.0		
PHF	0.250	0.940	0.350	0.625	0.375	0.925	0.500	0.000	0.417	0.000	0.000	0.625	0.000	0.250	0.000	0.250	0.000	0.250	0.500	0.375	0.860	0.333	0.000	0.871	0.250	0.000	0.000	0.250	0.000	0.375	0.917
Cars	1	588	7	5	3	604	10	0	5	0	0	15	0	4	0	4	0	8	6	3	425	4	0	438	2	0	0	1	0	3	1068
Cars %	100.0	94.2	100.0	100.0	100.0	94.4	100.0	0.0	100.0	0.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	100.0	100.0	95.1	100.0	0.0	95.2	100.0	0.0	0.0	100.0	0.0	100.0	94.8
Heavy Vehicles	0	36	0	0	0	36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	0	0	22	0	0	0	0	0	0	58
Heavy Vehicles %	0.0	5.8	0.0	0.0	0.0	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.9	0.0	0.0	4.8	0.0	0.0	0.0	0.0	0.0	0.0	5.2
Cars Enter Leg	1	588	7	5	3	604	10	0	5	0	0	15	0	4	0	4	0	8	6	3	425	4	0	438	2	0	0	1	0	3	1068
Heavy Enter Leg	0	36	0	0	0	36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	0	0	22	0	0	0	0	0	0	58
Total Entering Leg	1	624	7	5	3	640	10	0	5	0	0	15	0	4	0	4	0	8	6	3	447	4	0	460	2	0	0	1	0	3	1126
Cars Exiting Leg						443						8						13						599						5	1068
Heavy Exiting Leg						22						0						0						36					0	58	
Total Exiting Leg						465						8						13						635						5	1126

PDI File #: **239385 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122) NE: Auto Parts Driveway**
 Location: **E: Brandt Lane W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars

	Grafton Street (Route 122)						Auto Parts Driveway						Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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	102	0	0	0	102	0	0	1	0	0	1	0	0	0	0	0	0	0	0	85	1	0	86	0	0	0	1	0	1	190
7:15 AM	6	105	0	1	0	112	0	0	0	0	0	0	0	0	0	0	0	0	0	0	78	5	0	83	2	0	0	6	0	8	203
7:30 AM	0	135	0	1	1	137	1	0	1	0	0	2	0	0	0	0	0	0	0	1	105	3	0	109	0	0	0	1	0	1	249
7:45 AM	1	158	2	2	2	165	3	0	0	0	0	3	0	0	0	0	0	0	3	0	104	1	0	108	2	0	0	0	0	2	278
Total	7	500	2	4	3	516	4	0	2	0	0	6	0	0	0	0	0	0	3	1	372	10	0	386	4	0	0	8	0	12	920
8:00 AM	0	145	5	1	0	151	5	0	1	0	0	6	0	4	0	4	0	8	2	0	116	0	0	118	0	0	0	0	0	0	283
8:15 AM	0	150	0	1	0	151	1	0	3	0	0	4	0	0	0	0	0	0	1	2	100	0	0	103	0	0	0	0	0	0	258
8:30 AM	0	128	0	0	0	128	0	0	4	0	0	4	0	0	0	0	0	0	4	2	96	0	0	102	0	0	0	0	0	0	234
8:45 AM	0	137	0	0	0	137	1	0	3	0	0	4	0	1	0	0	0	1	1	2	114	0	1	118	0	0	0	0	1	1	261
Total	0	560	5	2	0	567	7	0	11	0	0	18	0	5	0	4	0	9	8	6	426	0	1	441	0	0	0	0	1	1	1036
Grand Total	7	1060	7	6	3	1083	11	0	13	0	0	24	0	5	0	4	0	9	11	7	798	10	1	827	4	0	0	8	1	13	1956
Approach %	0.6	97.9	0.6	0.6	0.3		45.8	0.0	54.2	0.0	0.0		0.0	55.6	0.0	44.4	0.0		1.3	0.8	96.5	1.2	0.1		30.8	0.0	0.0	61.5	7.7		
Total %	0.4	54.2	0.4	0.3	0.2	55.4	0.6	0.0	0.7	0.0	0.0	1.2	0.0	0.3	0.0	0.2	0.0	0.5	0.6	0.4	40.8	0.5	0.1	42.3	0.2	0.0	0.0	0.4	0.1	0.7	
Exiting Leg Total	825						13						18						1082						18						1956

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

	Grafton Street (Route 122)						Auto Parts Driveway						Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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	
7:30 AM	0	135	0	1	1	137	1	0	1	0	0	2	0	0	0	0	0	0	0	1	105	3	0	109	0	0	0	1	0	1	249
7:45 AM	1	158	2	2	2	165	3	0	0	0	0	3	0	0	0	0	0	0	3	0	104	1	0	108	2	0	0	0	0	2	278
8:00 AM	0	145	5	1	0	151	5	0	1	0	0	6	0	4	0	4	0	8	2	0	116	0	0	118	0	0	0	0	0	0	283
8:15 AM	0	150	0	1	0	151	1	0	3	0	0	4	0	0	0	0	0	0	1	2	100	0	0	103	0	0	0	0	0	0	258
Total Volume	1	588	7	5	3	604	10	0	5	0	0	15	0	4	0	4	0	8	6	3	425	4	0	438	2	0	0	1	0	3	1068
% Approach Total	0.2	97.4	1.2	0.8	0.5		66.7	0.0	33.3	0.0	0.0		0.0	50.0	0.0	50.0	0.0		1.4	0.7	97.0	0.9	0.0		66.7	0.0	0.0	33.3	0.0		
PHF	0.250	0.930	0.350	0.625	0.375	0.915	0.500	0.000	0.417	0.000	0.000	0.625	0.000	0.250	0.000	0.250	0.000	0.250	0.500	0.375	0.916	0.333	0.000	0.928	0.250	0.000	0.000	0.250	0.000	0.375	0.943
Entering Leg	1	588	7	5	3	604	10	0	5	0	0	15	0	4	0	4	0	8	6	3	425	4	0	438	2	0	0	1	0	3	1068
Exiting Leg	443						8						13						599						5						1068
Total	1047						23						21						1037						8						2136

PDI File #: **239385 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122) NE: Auto Parts Driveway**
 Location: **E: Brandt Lane W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



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

	Grafton Street (Route 122)						Auto Parts Driveway						Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	9	
7:15 AM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	10	
7:30 AM	0	11	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	15	
7:45 AM	0	8	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	9	
Total	0	25	0	0	0	25	0	0	0	0	0	0	0	0	0	0	0	0	18	0	0	18	0	0	0	0	0	0	43		
8:00 AM	0	10	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0	0	14	0	0	0	0	0	0	24	
8:15 AM	0	7	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	10	
8:30 AM	0	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	12	
8:45 AM	0	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	8	
Total	0	27	0	0	0	27	0	0	0	0	0	0	0	0	0	0	0	0	27	0	0	27	0	0	0	0	0	0	54		
Grand Total	0	52	0	0	0	52	0	0	0	0	0	0	0	0	0	0	0	0	45	0	0	45	0	0	0	0	0	0	97		
Approach %	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	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	53.6	0.0	0.0	0.0	53.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	46.4	0.0	0.0	46.4	0.0	0.0	0.0	0.0	0.0	0.0		
Exiting Leg Total						45						0					0						52						0	97	
Buses	0	21	0	0	0	21	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	0	32	
% Buses	0.0	40.4	0.0	0.0	0.0	40.4	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	24.4	0.0	0.0	24.4	0.0	0.0	0.0	0.0	0.0	0.0	33.0	
Exiting Leg Total						11						0					0						21						0	32	
Single-Unit Trucks	0	25	0	0	0	25	0	0	0	0	0	0	0	0	0	0	0	0	0	27	0	0	27	0	0	0	0	0	0	52	
% Single-Unit	0.0	48.1	0.0	0.0	0.0	48.1	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	60.0	0.0	0.0	60.0	0.0	0.0	0.0	0.0	0.0	0.0	53.6	
Exiting Leg Total						27						0					0						27						0	52	
Articulated Trucks	0	6	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	13	
% Articulated	0.0	11.5	0.0	0.0	0.0	11.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.6	0.0	0.0	15.6	0.0	0.0	0.0	0.0	0.0	0.0	13.4	
Exiting Leg Total						7						0					0						7						0	13	

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

	Grafton Street (Route 122)						Auto Parts Driveway						Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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	
7:15 AM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	10	
7:30 AM	0	11	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	15	
7:45 AM	0	8	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	9	
8:00 AM	0	10	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0	0	14	0	0	0	0	0	0	24	
Total Volume	0	32	0	0	0	32	0	0	0	0	0	0	0	0	0	0	0	0	26	0	0	26	0	0	0	0	0	0	58		
% Approach Total	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	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.727	0.000	0.000	0.000	0.727	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	0.464	0.000	0.000	0.464	0.000	0.000	0.000	0.000	0.000	0.000	0.604	
Buses	0	16	0	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	20	
Buses %	0.0	50.0	0.0	0.0	0.0	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	15.4	0.0	0.0	15.4	0.0	0.0	0.0	0.0	0.0	0.0	34.5	
Single-Unit Trucks	0	14	0	0	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	0	29	
Single-Unit %	0.0	43.8	0.0	0.0	0.0	43.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	57.7	0.0	0.0	57.7	0.0	0.0	0.0	0.0	0.0	0.0	50.0	
Articulated Trucks	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	9	
Articulated %	0.0	6.3	0.0	0.0	0.0	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.9	0.0	0.0	26.9	0.0	0.0	0.0	0.0	0.0	0.0	15.5	
Buses	0	16	0	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	20	
Single-Unit Trucks	0	14	0	0	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	0	29	
Articulated Trucks	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	9	
Total Entering Leg	0	32	0	0	0	32	0	0	0	0	0	0	0	0	0	0	0	0	0	26	0	0	26	0	0	0	0	0	0	58	
Buses						4						0					0						16						0	20	

PDI File #: **239385 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122) NE: Auto Parts Driveway**
 Location: **E: Brandt Lane W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**



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

	Grafton Street (Route 122)						Auto Parts Driveway						Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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	
Single-Unit Trucks						15						0						0						14						0	29
Articulated Trucks						7						0						0						2						0	9
Total Exiting Leg						26						0						0						32						0	58

PDI File #: **239385 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122) NE: Auto Parts Driveway**
 Location: **E: Brandt Lane W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Buses

	Grafton Street (Route 122)							Auto Parts Driveway					Brandt Lane					Grafton Street (Route 122)					Roosevelt School Driveway					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
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	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	2	0	0	2	0	0	0	0	0	2
7:30 AM	0	4	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	4
7:45 AM	0	6	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	7
Total	0	10	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	15	
8:00 AM	0	6	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	7
8:15 AM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
8:30 AM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
8:45 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
Total	0	11	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	17	
Grand Total	0	21	0	0	0	21	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	32	
Approach %	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	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total %	0.0	65.6	0.0	0.0	0.0	65.6	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	34.4	0.0	0.0	34.4	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total						11					0						0						21						0	32

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

7:30 AM	Grafton Street (Route 122)							Auto Parts Driveway					Brandt Lane					Grafton Street (Route 122)					Roosevelt School Driveway					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
7:30 AM	0	4	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	4
7:45 AM	0	6	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	7
8:00 AM	0	6	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	7
8:15 AM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
Total Volume	0	18	0	0	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	21
% Approach Total	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	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
PHF	0.000	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	0.000	0.000	0.750	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.750
Entering Leg	0	18	0	0	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	21
Exiting Leg						3					0						0						18						0	21
Total						21					0						0						21						0	42

PDI File #: **239385 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122) NE: Auto Parts Driveway**
 Location: **E: Brandt Lane W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Single-Unit Trucks

	Grafton Street (Route 122)							Auto Parts Driveway					Brandt Lane					Grafton Street (Route 122)					Roosevelt School Driveway						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	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	6
7:15 AM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	8
7:30 AM	0	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	8
7:45 AM	0	2	0	0	0	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	2	
Total	0	12	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0	0	12	0	0	0	0	0	0	24
8:00 AM	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	11
8:15 AM	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	6
8:30 AM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	8
8:45 AM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3
Total	0	13	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	0	28
Grand Total	0	25	0	0	0	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27	0	0	27	0	0	0	0	0	0	52
Approach %	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	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0			
Total %	0.0	48.1	0.0	0.0	0.0	48.1	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	51.9	0.0	0.0	51.9	0.0	0.0	0.0	0.0	0.0	0.0		
Exiting Leg Total						27						0												25							0	52

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

7:15 AM	Grafton Street (Route 122)							Auto Parts Driveway					Brandt Lane					Grafton Street (Route 122)					Roosevelt School Driveway						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
7:15 AM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	8
7:30 AM	0	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	8
7:45 AM	0	2	0	0	0	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	0	2
8:00 AM	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	11
Total Volume	0	14	0	0	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	0	29
% Approach Total	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	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0			
PHF	0.000	0.700	0.000	0.000	0.000	0.700	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	0.536	0.000	0.000	0.536	0.000	0.000	0.000	0.000	0.000	0.000	0.659	
Entering Leg	0	14	0	0	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	0	29
Exiting Leg						15						0												14							0	29
Total						29						0												29							0	58

PDI File #: **239385 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122) NE: Auto Parts Driveway**
 Location: **E: Brandt Lane W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Articulated Trucks

	Grafton Street (Route 122)						Auto Parts Driveway						Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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	1	0	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	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	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3	
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	
Total	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	4		
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	6	
8:15 AM	0	1	0	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	1		
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	0	0	0	0	0		
8:45 AM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2		
Total	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	9		
Grand Total	0	6	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	13		
Approach %	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	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	46.2	0.0	0.0	0.0	46.2	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	53.8	0.0	0.0	53.8	0.0	0.0	0.0	0.0	0.0		
Exiting Leg Total						7																							13		

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

7:30 AM	Grafton Street (Route 122)						Auto Parts Driveway						Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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	
7:30 AM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3		
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		
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	6		
8:15 AM	0	1	0	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	1		
Total Volume	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	10		
% Approach Total	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	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.375	0.000	0.000	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.292	0.000	0.000	0.292	0.000	0.000	0.000	0.000	0.000	0.417		
Entering Leg	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	10		
Exiting Leg						7																							10		
Total						10																							20		

PDI File #: 239385 A
 Location: N: Grafton Street (Route 122) S: Grafton Street (Route 122) NE: Auto Parts Driveway
 Location: E: Brandt Lane W: Roosevelt School Driveway
 City, State: Worcester, MA
 Client: Kimley-Horn/ P. Graham
 Site Code: TBA
 Count Date: Wednesday, June 7, 2023
 Start Time: 7:00 AM
 End Time: 9:00 AM
 Class:



Bicycles (on Roadway and Crosswalks)

	Grafton Street (Route 122)										Auto Parts Driveway						Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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-SE	Total								
7:00 AM	0	1	0	0	0	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	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	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	1	0	0	0	0	1	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	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1								
Total	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2	0	0	0	0	0	0	0	0	3								
8:00 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	0	0	0	0	0	0	0	0	0								
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	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	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								
Grand Total	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2	0	0	0	0	0	0	0	0	3								
Approach %	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	0.0	0.0	0.0		0.0	0.0	50.0	0.0	0.0	0.0	50.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0										
Total %	0.0	33.3	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	0.0	0.0	33.3	66.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0									
Exiting Leg Total	1								0								0								2								0								3								

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

	Grafton Street (Route 122)										Auto Parts Driveway						Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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-SE	Total								
7:00 AM	0	1	0	0	0	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	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	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	1	0	0	0	0	1	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	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1								
Total Volume	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2	0	0	0	0	0	0	0	0	3								
% Approach Total	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	0.0	0.0	0.0		0.0	0.0	50.0	0.0	0.0	0.0	50.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0										
PHF	0.000	0.250	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	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.250	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750								
Entering Leg	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2	0	0	0	0	0	0	0	0	3								
Exiting Leg	1								0								0								2								0								3								
Total	2								0								0								4								0								6								

PDI File #: 239385 A

Location: N: Grafton Street (Route 122) S: Grafton Street (Route 122) NE: Auto Parts Driveway

Location: E: Brandt Lane W: Roosevelt School Driveway

City, State: Worcester, MA

Client: Kimley-Horn/ P. Graham

Site Code: TBA

Count Date: Wednesday, June 7, 2023

Start Time: 2:00 PM

End Time: 6:00 PM

Class:



PRECISION
DATA
INDUSTRIES, LLC

157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	Grafton Street (Route 122)						Auto Parts Driveway						Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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	
2:00 PM	0	117	2	0	0	119	4	0	3	0	0	7	0	0	0	0	0	0	1	4	110	0	0	115	0	0	0	1	0	1	242
2:15 PM	0	184	1	1	0	186	5	0	2	0	0	7	0	4	0	2	0	6	0	2	118	0	0	120	1	0	0	0	0	1	320
2:30 PM	1	160	1	0	0	162	7	0	3	0	0	10	0	4	0	0	0	4	2	3	141	0	0	146	2	0	0	1	0	3	325
2:45 PM	0	144	1	0	0	145	1	0	3	0	0	4	0	0	0	0	0	0	2	1	147	0	0	150	0	0	0	0	0	0	299
Total	1	605	5	1	0	612	17	0	11	0	0	28	0	8	0	2	0	10	5	10	516	0	0	531	3	0	0	2	0	5	1186
3:00 PM	0	126	0	0	0	126	2	0	1	0	0	3	0	0	0	0	0	0	1	1	170	0	0	172	0	0	0	1	0	1	302
3:15 PM	0	159	0	0	0	159	1	0	1	0	0	2	0	0	0	0	0	0	2	0	174	1	0	177	1	0	0	0	0	1	339
3:30 PM	0	113	0	1	0	114	3	0	2	0	0	5	0	0	0	0	0	0	2	0	154	0	1	157	0	0	0	0	0	0	276
3:45 PM	1	151	0	3	0	155	2	0	2	0	0	4	0	0	0	0	0	0	1	1	172	0	0	174	0	0	0	0	0	0	333
Total	1	549	0	4	0	554	8	0	6	0	0	14	0	0	0	0	0	0	6	2	670	1	1	680	1	0	0	1	0	2	1250
4:00 PM	0	148	1	2	0	151	7	0	3	0	0	10	0	1	0	0	0	1	2	2	169	0	0	173	0	0	0	0	0	0	335
4:15 PM	0	151	0	1	0	152	1	0	5	0	0	6	0	1	0	1	0	2	0	5	188	0	0	193	0	0	0	0	0	0	353
4:30 PM	0	118	0	2	0	120	2	0	1	0	0	3	0	0	0	1	0	1	1	2	176	0	0	179	0	0	0	0	0	0	303
4:45 PM	1	135	0	3	0	139	2	0	4	0	0	6	0	0	0	0	0	0	2	3	182	0	0	187	1	0	0	0	0	1	333
Total	1	552	1	8	0	562	12	0	13	0	0	25	0	2	0	2	0	4	5	12	715	0	0	732	1	0	0	0	0	1	1324
5:00 PM	0	158	0	1	0	159	4	0	3	0	0	7	0	0	0	1	0	1	2	2	189	0	0	193	0	0	1	0	0	1	361
5:15 PM	0	158	0	0	0	158	2	0	1	0	0	3	0	0	0	0	0	0	3	2	193	0	0	198	2	0	0	2	0	4	363
5:30 PM	0	150	0	0	0	150	1	0	0	0	0	1	0	0	0	1	0	1	1	3	179	1	0	184	1	0	0	0	0	1	337
5:45 PM	0	129	0	1	0	130	2	0	5	0	0	7	0	0	0	2	0	2	0	1	186	0	0	187	0	0	0	1	0	1	327
Total	0	595	0	2	0	597	9	0	9	0	0	18	0	0	0	4	0	4	6	8	747	1	0	762	3	0	1	3	0	7	1388
Grand Total	3	2301	6	15	0	2325	46	0	39	0	0	85	0	10	0	8	0	18	22	32	2648	2	1	2705	8	0	1	6	0	15	5148
Approach %	0.1	99.0	0.3	0.6	0.0		54.1	0.0	45.9	0.0	0.0		0.0	55.6	0.0	44.4	0.0		0.8	1.2	97.9	0.1	0.0		53.3	0.0	6.7	40.0	0.0		
Total %	0.1	44.7	0.1	0.3	0.0	45.2	0.9	0.0	0.8	0.0	0.0	1.7	0.0	0.2	0.0	0.2	0.0	0.3	0.4	0.6	51.4	0.0	0.0	52.5	0.2	0.0	0.0	0.1	0.0	0.3	
Exiting Leg Total						2710						48						28						2357						5	5148
Cars	3	2240	5	15	0	2263	42	0	37	0	0	79	0	8	0	8	0	16	19	32	2588	2	1	2642	8	0	1	6	0	15	5015
% Cars	100.0	97.3	83.3	100.0	0.0	97.3	91.3	0.0	94.9	0.0	0.0	92.9	0.0	80.0	0.0	100.0	0.0	88.9	86.4	100.0	97.7	100.0	100.0	97.7	100.0	0.0	100.0	100.0	0.0	100.0	97.4
Exiting Leg Total						2644						48						24						2294						5	5015
Heavy Vehicles	0	61	1	0	0	62	4	0	2	0	0	6	0	2	0	0	0	2	3	0	60	0	0	63	0	0	0	0	0	0	133
% Heavy Vehicles	0.0	2.7	16.7	0.0	0.0	2.7	8.7	0.0	5.1	0.0	0.0	7.1	0.0	20.0	0.0	0.0	0.0	11.1	13.6	0.0	2.3	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0	2.6
Exiting Leg Total						66						0						4						63						0	133

Peak Hour Analysis from 02:00 PM to 06:00 PM begins at:

	Grafton Street (Route 122)						Auto Parts Driveway						Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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	
4:45 PM	1	135	0	3	0	139	2	0	4	0	0	6	0	0	0	0	0	0	2	3	182	0	0	187	1	0	0	0	0	1	333
5:00 PM	0	158	0	1	0	159	4	0	3	0	0	7	0	0	0	1	0	1	2	2	189	0	0	193	0	0	0	1	0	1	361
5:15 PM	0	158	0	0	0	158	2	0	1	0	0	3	0	0	0	0	0	0	3	2	193	0	0	198	2	0	0	2	0	4	363
5:30 PM	0	150	0	0	0	150	1	0	0	0	0	1	0	0	0	1	0	1	1	3	179	1	0	184	1	0	0	0	0	1	337
Total Volume	1	601	0	4	0	606	9	0	8	0	0	17	0	0	0	2	0	2	8	10	743	1	0	762	4	0	1	2	0	7	1394
% Approach Total	0.2	99.2	0.0	0.7	0.0		52.9	0.0	47.1	0.0	0.0		0.0	0.0	0.0	100.0	0.0		1.0	1.3	97.5	0.1	0.0		57.1	0.0	14.3	28.6	0.0		
PHF	0.250	0.951	0.000	0.333	0.000	0.953	0.563	0.000	0.500	0.000	0.000	0.607	0.000	0.000	0.000	0.500	0.000	0.500	0.667	0.833	0.962	0.250	0.000	0.962	0.500	0.000	0.250	0.250	0.000	0.438	0.960
Cars	1	594	0	4	0	599	9	0	7	0	0	16	0	0	0	2	0	2	6	10	735	1	0	752	4	0	1	2	0	7	1376
Cars %	100.0	98.8	0.0	100.0	0.0	98.8	100.0	0.0	87.5	0.0	0.0	94.1	0.0	0.0	0.0	100.0	0.0	100.0	75.0	100.0	98.9	100.0	0.0	98.7	100.0	0.0	100.0	100.0	0.0	100.0	98.7
Heavy Vehicles	0	7	0	0	0	7	0	0	1	0	0	1	0	0	0	0	0	0	2	0	8	0	0	10	0	0	0	0	0	0	18

PDI File #: **239385 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122) NE: Auto Parts Driveway**
 Location: **E: Brandt Lane W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **2:00 PM**
 End Time: **6:00 PM**



PRECISION
D A T A
INDUSTRIES, LLC

157 Washington Street, Suite 2
 Hudson, MA 01749
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	Grafton Street (Route 122)						Auto Parts Driveway						Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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	
Heavy Vehicles %	0.0	1.2	0.0	0.0	0.0	1.2	0.0	0.0	12.5	0.0	0.0	5.9	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	1.1	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	1.3
Cars Enter Leg	1	594	0	4	0	599	9	0	7	0	0	16	0	0	0	2	0	2	6	10	735	1	0	752	4	0	1	2	0	7	1376
Heavy Enter Leg	0	7	0	0	0	7	0	0	1	0	0	1	0	0	0	0	0	0	2	0	8	0	0	10	0	0	0	0	0	0	18
Total Entering Leg	1	601	0	4	0	606	9	0	8	0	0	17	0	0	0	2	0	2	8	10	743	1	0	762	4	0	1	2	0	7	1394
Cars Exiting Leg	746						15						6						607						2						
Heavy Exiting Leg	8						0						2						8						0						
Total Exiting Leg	754						15						8						615						2	1394					

PDI File #: **239385 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122) NE: Auto Parts Driveway**
 Location: **E: Brandt Lane W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **2:00 PM**
 End Time: **6:00 PM**
 Class:



Cars

	Grafton Street (Route 122)						Auto Parts Driveway						Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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	
2:00 PM	0	109	2	0	0	111	4	0	3	0	0	7	0	0	0	0	0	0	1	4	109	0	0	0	1	0	1	233			
2:15 PM	0	176	0	1	0	177	5	0	2	0	0	7	0	4	0	2	0	6	0	2	115	0	0	0	0	0	1	308			
2:30 PM	1	154	1	0	0	156	6	0	3	0	0	9	0	3	0	0	0	3	2	3	135	0	0	0	1	0	3	311			
2:45 PM	0	136	1	0	0	137	1	0	3	0	0	4	0	0	0	0	0	0	2	1	140	0	0	0	0	0	0	284			
Total	1	575	4	1	0	581	16	0	11	0	0	27	0	7	0	2	0	9	5	10	499	0	0	0	2	0	5	1136			
3:00 PM	0	122	0	0	0	122	2	0	1	0	0	3	0	0	0	0	0	0	1	1	162	0	0	0	1	0	1	290			
3:15 PM	0	153	0	0	0	153	0	0	1	0	0	1	0	0	0	0	0	0	2	0	169	1	0	0	0	0	1	327			
3:30 PM	0	112	0	1	0	113	3	0	2	0	0	5	0	0	0	0	0	0	2	0	154	0	1	0	0	0	0	275			
3:45 PM	1	148	0	3	0	152	2	0	2	0	0	4	0	0	0	0	0	0	1	1	168	0	0	0	0	0	0	326			
Total	1	535	0	4	0	540	7	0	6	0	0	13	0	0	0	0	0	0	6	2	653	1	1	1	663	1	0	2	1218		
4:00 PM	0	146	1	2	0	149	6	0	3	0	0	9	0	1	0	0	0	1	1	2	165	0	0	0	0	0	0	327			
4:15 PM	0	146	0	1	0	147	0	0	5	0	0	5	0	0	0	1	0	1	0	5	183	0	0	0	0	0	0	341			
4:30 PM	0	117	0	2	0	119	2	0	1	0	0	3	0	0	0	1	0	1	1	2	173	0	0	0	0	0	0	299			
4:45 PM	1	134	0	3	0	138	2	0	4	0	0	6	0	0	0	0	0	0	2	3	178	0	0	0	0	0	1	328			
Total	1	543	1	8	0	553	10	0	13	0	0	23	0	1	0	2	0	3	4	12	699	0	0	0	0	0	1	1295			
5:00 PM	0	155	0	1	0	156	4	0	2	0	0	6	0	0	0	1	0	1	1	2	188	0	0	1	0	0	1	355			
5:15 PM	0	158	0	0	0	158	2	0	1	0	0	3	0	0	0	0	0	0	2	2	191	0	0	0	2	0	4	360			
5:30 PM	0	147	0	0	0	147	1	0	0	0	0	1	0	0	0	1	0	1	1	3	178	1	0	0	0	0	1	333			
5:45 PM	0	127	0	1	0	128	2	0	4	0	0	6	0	0	0	2	0	2	0	1	180	0	0	1	0	1	1	318			
Total	0	587	0	2	0	589	9	0	7	0	0	16	0	0	0	4	0	4	4	8	737	1	0	0	750	3	0	7	1366		
Grand Total	3	2240	5	15	0	2263	42	0	37	0	0	79	0	8	0	8	0	16	19	32	2588	2	1	2642	8	0	15	5015			
Approach %	0.1	99.0	0.2	0.7	0.0		53.2	0.0	46.8	0.0	0.0		0.0	50.0	0.0	50.0	0.0		0.7	1.2	98.0	0.1	0.0		53.3	0.0	6.7	40.0	0.0		
Total %	0.1	44.7	0.1	0.3	0.0	45.1	0.8	0.0	0.7	0.0	0.0	1.6	0.0	0.2	0.0	0.2	0.0	0.3	0.4	0.6	51.6	0.0	0.0	52.7	0.2	0.0	0.0	0.1	0.0	0.3	
Exiting Leg Total						2644						48						24						2294				5	5015		

Peak Hour Analysis from 02:00 PM to 06:00 PM begins at:

4:45 PM	Grafton Street (Route 122)						Auto Parts Driveway						Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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	
4:45 PM	1	134	0	3	0	138	2	0	4	0	0	6	0	0	0	0	0	0	2	3	178	0	0	0	1	0	1	328			
5:00 PM	0	155	0	1	0	156	4	0	2	0	0	6	0	0	0	1	0	1	1	2	188	0	0	0	1	0	1	355			
5:15 PM	0	158	0	0	0	158	2	0	1	0	0	3	0	0	0	0	0	0	2	2	191	0	0	0	2	0	4	360			
5:30 PM	0	147	0	0	0	147	1	0	0	0	0	1	0	0	0	1	0	1	1	3	178	1	0	0	0	0	1	333			
Total Volume	1	594	0	4	0	599	9	0	7	0	0	16	0	0	0	2	0	2	6	10	735	1	0	752	4	0	1	2	7	1376	
% Approach Total	0.2	99.2	0.0	0.7	0.0		56.3	0.0	43.8	0.0	0.0		0.0	0.0	0.0	100.0	0.0		0.8	1.3	97.7	0.1	0.0		57.1	0.0	14.3	28.6	0.0		
PHF	0.250	0.940	0.000	0.333	0.000	0.948	0.563	0.000	0.438	0.000	0.000	0.667	0.000	0.000	0.000	0.500	0.000	0.500	0.750	0.833	0.962	0.250	0.000	0.964	0.500	0.000	0.250	0.250	0.000	0.438	0.956
Entering Leg	1	594	0	4	0	599	9	0	7	0	0	16	0	0	0	2	0	2	6	10	735	1	0	752	4	0	1	2	7	1376	
Exiting Leg						746						15						6						607				2	1376		
Total						1345						31					8							1359				9	2752		

PDI File #: **239385 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122) NE: Auto Parts Driveway**
 Location: **E: Brandt Lane W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **2:00 PM**
 End Time: **6:00 PM**
 Class:



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

	Grafton Street (Route 122)							Auto Parts Driveway					Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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	
2:00 PM	0	8	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	9
2:15 PM	0	8	1	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	12
2:30 PM	0	6	0	0	0	6	1	0	0	0	0	1	0	1	0	0	0	1	0	0	6	0	0	6	0	0	0	0	0	14	
2:45 PM	0	8	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	15	
Total	0	30	1	0	0	31	1	0	0	0	0	1	0	1	0	0	0	1	0	0	17	0	0	17	0	0	0	0	0	0	50
3:00 PM	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	12	
3:15 PM	0	6	0	0	0	6	1	0	0	0	0	1	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	12	
3:30 PM	0	1	0	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	1	
3:45 PM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	7	
Total	0	14	0	0	0	14	1	0	0	0	0	1	0	0	0	0	0	0	0	17	0	0	17	0	0	0	0	0	0	32	
4:00 PM	0	2	0	0	0	2	1	0	0	0	0	1	0	0	0	0	0	0	1	0	4	0	0	5	0	0	0	0	0	8	
4:15 PM	0	5	0	0	0	5	1	0	0	0	0	1	0	1	0	0	0	1	0	0	5	0	0	5	0	0	0	0	0	12	
4:30 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	4	
4:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	5	
Total	0	9	0	0	0	9	2	0	0	0	0	2	0	1	0	0	0	1	1	0	16	0	0	17	0	0	0	0	0	29	
5:00 PM	0	3	0	0	0	3	0	0	1	0	0	1	0	0	0	0	0	0	1	0	1	0	0	2	0	0	0	0	0	6	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0	3	0	0	0	0	0	3	
5:30 PM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	4	
5:45 PM	0	2	0	0	0	2	0	0	1	0	0	1	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	9	
Total	0	8	0	0	0	8	0	0	2	0	0	2	0	0	0	0	0	0	2	0	10	0	0	12	0	0	0	0	0	22	
Grand Total	0	61	1	0	0	62	4	0	2	0	0	6	0	2	0	0	0	2	3	0	60	0	0	63	0	0	0	0	0	0	133
Approach %	0.0	98.4	1.6	0.0	0.0		66.7	0.0	33.3	0.0	0.0		0.0	100.0	0.0	0.0	0.0		4.8	0.0	95.2	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	45.9	0.8	0.0	0.0	46.6	3.0	0.0	1.5	0.0	0.0	4.5	0.0	1.5	0.0	0.0	0.0	1.5	2.3	0.0	45.1	0.0	0.0	47.4	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total						66						0						4					63						0	133	
Buses	0	28	0	0	0	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	0	0	25	0	0	0	0	0	53	
% Buses	0.0	45.9	0.0	0.0	0.0	45.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	41.7	0.0	0.0	39.7	0.0	0.0	0.0	0.0	0.0	39.8	
Exiting Leg Total						25						0						0					28						0	53	
Single-Unit Trucks	0	26	1	0	0	27	3	0	1	0	0	4	0	1	0	0	0	1	2	0	31	0	0	33	0	0	0	0	0	65	
% Single-Unit	0.0	42.6	100.0	0.0	0.0	43.5	75.0	0.0	50.0	0.0	0.0	66.7	0.0	50.0	0.0	0.0	0.0	50.0	66.7	0.0	51.7	0.0	0.0	52.4	0.0	0.0	0.0	0.0	0.0	48.9	
Exiting Leg Total						35						0						3					27						0	65	
Articulated Trucks	0	7	0	0	0	7	1	0	1	0	0	2	0	1	0	0	0	1	1	0	4	0	0	5	0	0	0	0	0	15	
% Articulated	0.0	11.5	0.0	0.0	0.0	11.3	25.0	0.0	50.0	0.0	0.0	33.3	0.0	50.0	0.0	0.0	0.0	50.0	33.3	0.0	6.7	0.0	0.0	7.9	0.0	0.0	0.0	0.0	0.0	11.3	
Exiting Leg Total						6						0						1					8						0	15	

Peak Hour Analysis from 02:00 PM to 06:00 PM begins at:

2:15 PM	Grafton Street (Route 122)							Auto Parts Driveway					Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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	
2:15 PM	0	8	1	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	12	
2:30 PM	0	6	0	0	0	6	1	0	0	0	0	1	0	1	0	0	0	1	0	0	6	0	0	6	0	0	0	0	0	14	
2:45 PM	0	8	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	15	
3:00 PM	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	12	
Total Volume	0	26	1	0	0	27	1	0	0	0	0	1	0	1	0	0	0	1	0	0	24	0	0	24	0	0	0	0	0	53	
% Approach Total	0.0	96.3	3.7	0.0	0.0		100.0	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		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.813	0.250	0.000	0.000	0.750	0.250	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.750	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.883	

PDI File #: **239385 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122) NE: Auto Parts Driveway**
 Location: **E: Brandt Lane W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **2:00 PM**
 End Time: **6:00 PM**



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

	Grafton Street (Route 122)						Auto Parts Driveway						Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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	
Buses	0	12	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0	0	13	0	0	0	0	0	0	25
Buses %	0.0	46.2	0.0	0.0	0.0	44.4	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	54.2	0.0	0.0	54.2	0.0	0.0	0.0	0.0	0.0	0.0	47.2
Single-Unit Trucks	0	10	1	0	0	11	1	0	0	0	0	1	0	1	0	0	0	1	0	0	10	0	0	10	0	0	0	0	0	0	23
Single-Unit %	0.0	38.5	100.0	0.0	0.0	40.7	100.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	0.0	0.0	100.0	0.0	0.0	41.7	0.0	0.0	41.7	0.0	0.0	0.0	0.0	0.0	0.0	43.4
Articulated Trucks	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	5
Articulated %	0.0	15.4	0.0	0.0	0.0	14.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.0	0.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	9.4
Buses	0	12	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0	0	13	0	0	0	0	0	0	25
Single-Unit Trucks	0	10	1	0	0	11	1	0	0	0	0	1	0	1	0	0	0	1	0	0	10	0	0	10	0	0	0	0	0	0	23
Articulated Trucks	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	5
Total Entering Leg	0	26	1	0	0	27	1	0	0	0	0	1	0	1	0	0	0	1	0	0	24	0	0	24	0	0	0	0	0	0	53
Buses						13						0						0						12						0	25
Single-Unit Trucks						12						0						1						10						0	23
Articulated Trucks						1						0						0						4						0	5
Total Exiting Leg						26						0						1						26						0	53

PDI File #: 239385 A
 Location: N: Grafton Street (Route 122) S: Grafton Street (Route 122) NE: Auto Parts Driveway
 Location: E: Brandt Lane W: Roosevelt School Driveway
 City, State: Worcester, MA
 Client: Kimley-Horn/ P. Graham
 Site Code: TBA
 Count Date: Wednesday, June 7, 2023
 Start Time: 2:00 PM
 End Time: 6:00 PM
 Class:



Buses

	Grafton Street (Route 122)						Auto Parts Driveway						Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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	
2:00 PM	0	4	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	4	
2:15 PM	0	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	6	
2:30 PM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	8	
2:45 PM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	8	
Total	0	15	0	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	0	26		
3:00 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3	
3:15 PM	0	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	8	
3:30 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	
3:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	4	
Total	0	7	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	15		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	
4:15 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	
4:30 PM	0	1	0	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	1	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	
Total	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	6		
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	0	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	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
5:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3	
Total	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	6		
Grand Total	0	28	0	0	0	28	0	0	0	0	0	0	0	0	0	0	0	0	25	0	0	25	0	0	0	0	0	0	53		
Approach %	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	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	52.8	0.0	0.0	0.0	52.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	47.2	0.0	0.0	47.2	0.0	0.0	0.0	0.0	0.0	0.0		
Exiting Leg Total						25						0											28						0	53	

Peak Hour Analysis from 02:00 PM to 06:00 PM begins at:

	Grafton Street (Route 122)						Auto Parts Driveway						Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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	
2:30 PM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	8	
2:45 PM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	8	
3:00 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3	
3:15 PM	0	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	8	
Total Volume	0	12	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	0	27		
% Approach Total	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	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.600	0.000	0.000	0.000	0.600	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	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.844		
Entering Leg	0	12	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	0	27	
Exiting Leg						15						0											12						0	27	
Total						27						0											27						0	54	

PDI File #: **239385 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122) NE: Auto Parts Driveway**
 Location: **E: Brandt Lane W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **2:00 PM**
 End Time: **6:00 PM**
 Class:



Single-Unit Trucks

	Grafton Street (Route 122)							Auto Parts Driveway					Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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	
2:00 PM	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	5
2:15 PM	0	3	1	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	6
2:30 PM	0	2	0	0	0	2	1	0	0	0	0	1	0	1	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	5	
2:45 PM	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	6	
Total	0	13	1	0	0	14	1	0	0	0	0	1	0	1	0	0	0	1	0	0	6	0	0	6	0	0	0	0	0	22	
3:00 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	6	
3:15 PM	0	1	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	4	
3:30 PM	0	1	0	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	1	
3:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	
Total	0	4	0	0	0	4	1	0	0	0	0	1	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	13		
4:00 PM	0	2	0	0	0	2	1	0	0	0	0	1	0	0	0	0	0	0	1	0	3	0	0	4	0	0	0	0	0	7	
4:15 PM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	7	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	3	
4:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	
Total	0	6	0	0	0	6	1	0	0	0	0	1	0	0	0	0	0	0	1	0	11	0	0	12	0	0	0	0	0	19	
5:00 PM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	4	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0	3	0	0	0	0	0	3	
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	0	
5:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	4	
Total	0	3	0	0	0	3	0	0	1	0	0	1	0	0	0	0	0	0	1	0	6	0	0	7	0	0	0	0	0	11	
Grand Total	0	26	1	0	0	27	3	0	1	0	0	4	0	1	0	0	0	1	2	0	31	0	0	33	0	0	0	0	0	65	
Approach %	0.0	96.3	3.7	0.0	0.0		75.0	0.0	25.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0		6.1	0.0	93.9	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	40.0	1.5	0.0	0.0	41.5	4.6	0.0	1.5	0.0	0.0	6.2	0.0	1.5	0.0	0.0	0.0	1.5	3.1	0.0	47.7	0.0	0.0	50.8	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total						35						0						3						27						65	

Peak Hour Analysis from 02:00 PM to 06:00 PM begins at:

	Grafton Street (Route 122)							Auto Parts Driveway					Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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	
2:15 PM	0	3	1	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	6	
2:30 PM	0	2	0	0	0	2	1	0	0	0	0	1	0	1	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	5	
2:45 PM	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	6	
3:00 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	6	
Total Volume	0	10	1	0	0	11	1	0	0	0	0	1	0	1	0	0	0	1	0	0	10	0	0	10	0	0	0	0	0	23	
% Approach Total	0.0	90.9	9.1	0.0	0.0		100.0	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		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.625	0.250	0.000	0.000	0.688	0.250	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.958	
Entering Leg	0	10	1	0	0	11	1	0	0	0	0	1	0	1	0	0	0	1	0	0	10	0	0	10	0	0	0	0	0	23	
Exiting Leg						12						1						1						10						23	
Total						23					1						2							20						46	

PDI File #: **239385 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Pine Hill Road W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars and Heavy Vehicles (Combined)

	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	1	105	1	0	107	2	0	5	0	7	3	90	3	0	96	0	0	0	0	0	210
7:15 AM	8	94	6	0	108	2	0	4	0	6	3	88	11	0	102	0	0	0	0	0	216
7:30 AM	18	123	3	0	144	2	0	4	0	6	2	111	12	0	125	0	0	0	0	0	275
7:45 AM	32	120	6	0	158	7	1	4	0	12	12	103	19	0	134	0	0	0	0	0	304
Total	59	442	16	0	517	13	1	17	0	31	20	392	45	0	457	0	0	0	0	0	1005
8:00 AM	39	112	7	0	158	14	2	5	0	21	5	118	22	0	145	0	0	0	0	0	324
8:15 AM	27	132	2	0	161	11	2	4	0	17	5	94	9	0	108	0	0	0	0	0	286
8:30 AM	5	128	3	1	137	6	0	4	0	10	0	102	6	0	108	0	0	0	0	0	255
8:45 AM	5	133	2	0	140	3	0	3	0	6	0	120	4	0	124	0	1	0	0	1	271
Total	76	505	14	1	596	34	4	16	0	54	10	434	41	0	485	0	1	0	0	1	1136
Grand Total	135	947	30	1	1113	47	5	33	0	85	30	826	86	0	942	0	1	0	0	1	2141
Approach %	12.1	85.1	2.7	0.1		55.3	5.9	38.8	0.0		3.2	87.7	9.1	0.0		0.0	100.0	0.0	0.0		
Total %	6.3	44.2	1.4	0.0	52.0	2.2	0.2	1.5	0.0	4.0	1.4	38.6	4.0	0.0	44.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	874					61					980					226					2141
Cars	123	911	28	1	1063	46	4	33	0	83	29	784	84	0	897	0	1	0	0	1	2044
% Cars	91.1	96.2	93.3	100.0	95.5	97.9	80.0	100.0	0.0	97.6	96.7	94.9	97.7	0.0	95.2	0.0	100.0	0.0	0.0	100.0	95.5
Exiting Leg Total	831					58					944					211					2044
Heavy Vehicles	12	36	2	0	50	1	1	0	0	2	1	42	2	0	45	0	0	0	0	0	97
% Heavy Vehicles	8.9	3.8	6.7	0.0	4.5	2.1	20.0	0.0	0.0	2.4	3.3	5.1	2.3	0.0	4.8	0.0	0.0	0.0	0.0	0.0	4.5
Exiting Leg Total	43					3					36					15					97

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

7:30 AM	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	18	123	3	0	144	2	0	4	0	6	2	111	12	0	125	0	0	0	0	0	275
7:45 AM	32	120	6	0	158	7	1	4	0	12	12	103	19	0	134	0	0	0	0	0	304
8:00 AM	39	112	7	0	158	14	2	5	0	21	5	118	22	0	145	0	0	0	0	0	324
8:15 AM	27	132	2	0	161	11	2	4	0	17	5	94	9	0	108	0	0	0	0	0	286
Total Volume	116	487	18	0	621	34	5	17	0	56	24	426	62	0	512	0	0	0	0	0	1189
% Approach Total	18.7	78.4	2.9	0.0		60.7	8.9	30.4	0.0		4.7	83.2	12.1	0.0		0.0	0.0	0.0	0.0		
PHF	0.744	0.922	0.643	0.000	0.964	0.607	0.625	0.850	0.000	0.667	0.500	0.903	0.705	0.000	0.883	0.000	0.000	0.000	0.000	0.000	0.917
Cars	104	465	17	0	586	34	4	17	0	55	23	407	60	0	490	0	0	0	0	0	1131
Cars %	89.7	95.5	94.4	0.0	94.4	100.0	80.0	100.0	0.0	98.2	95.8	95.5	96.8	0.0	95.7	0.0	0.0	0.0	0.0	0.0	95.1
Heavy Vehicles	12	22	1	0	35	0	1	0	0	1	1	19	2	0	22	0	0	0	0	0	58
Heavy Vehicles %	10.3	4.5	5.6	0.0	5.6	0.0	20.0	0.0	0.0	1.8	4.2	4.5	3.2	0.0	4.3	0.0	0.0	0.0	0.0	0.0	4.9
Cars Enter Leg	104	465	17	0	586	34	4	17	0	55	23	407	60	0	490	0	0	0	0	0	1131
Heavy Enter Leg	12	22	1	0	35	0	1	0	0	1	1	19	2	0	22	0	0	0	0	0	58
Total Entering Leg	116	487	18	0	621	34	5	17	0	56	24	426	62	0	512	0	0	0	0	0	1189
Cars Exiting Leg	441					40					482					168					1131
Heavy Exiting Leg	19					2					22					15					58
Total Exiting Leg	460					42					504					183					1189

PDI File #: **239385 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Pine Hill Road W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars

	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	1	102	1	0	104	2	0	5	0	7	3	84	3	0	90	0	0	0	0	0	201					
7:15 AM	8	92	6	0	106	2	0	4	0	6	3	81	11	0	95	0	0	0	0	0	207					
7:30 AM	15	114	3	0	132	2	0	4	0	6	2	107	12	0	121	0	0	0	0	0	259					
7:45 AM	28	117	6	0	151	7	0	4	0	11	11	103	18	0	132	0	0	0	0	0	294					
Total	52	425	16	0	493	13	0	17	0	30	19	375	44	0	438	0	0	0	0	0	961					
8:00 AM	34	109	6	0	149	14	2	5	0	21	5	106	21	0	132	0	0	0	0	0	302					
8:15 AM	27	125	2	0	154	11	2	4	0	17	5	91	9	0	105	0	0	0	0	0	276					
8:30 AM	5	124	2	1	132	5	0	4	0	9	0	95	6	0	101	0	0	0	0	0	242					
8:45 AM	5	128	2	0	135	3	0	3	0	6	0	117	4	0	121	0	1	0	0	1	263					
Total	71	486	12	1	570	33	4	16	0	53	10	409	40	0	459	0	1	0	0	1	1083					
Grand Total	123	911	28	1	1063	46	4	33	0	83	29	784	84	0	897	0	1	0	0	1	2044					
Approach %	11.6	85.7	2.6	0.1		55.4	4.8	39.8	0.0		3.2	87.4	9.4	0.0		0.0	100.0	0.0	0.0							
Total %	6.0	44.6	1.4	0.0	52.0	2.3	0.2	1.6	0.0	4.1	1.4	38.4	4.1	0.0	43.9	0.0	0.0	0.0	0.0	0.0						
Exiting Leg Total						831					58					944					211					2044

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

	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	15	114	3	0	132	2	0	4	0	6	2	107	12	0	121	0	0	0	0	0	259					
7:45 AM	28	117	6	0	151	7	0	4	0	11	11	103	18	0	132	0	0	0	0	0	294					
8:00 AM	34	109	6	0	149	14	2	5	0	21	5	106	21	0	132	0	0	0	0	0	302					
8:15 AM	27	125	2	0	154	11	2	4	0	17	5	91	9	0	105	0	0	0	0	0	276					
Total Volume	104	465	17	0	586	34	4	17	0	55	23	407	60	0	490	0	0	0	0	0	1131					
% Approach Total	17.7	79.4	2.9	0.0		61.8	7.3	30.9	0.0		4.7	83.1	12.2	0.0		0.0	0.0	0.0	0.0							
PHF	0.765	0.930	0.708	0.000	0.951	0.607	0.500	0.850	0.000	0.655	0.523	0.951	0.714	0.000	0.928	0.000	0.000	0.000	0.000	0.000	0.936					
Entering Leg	104	465	17	0	586	34	4	17	0	55	23	407	60	0	490	0	0	0	0	0	1131					
Exiting Leg						441					40					482					168					1131
Total						1027					95					972					168					2262

PDI File #: **239385 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Pine Hill Road W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**



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

	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	3	0	0	3	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	9
7:15 AM	0	2	0	0	2	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	9
7:30 AM	3	9	0	0	12	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	16
7:45 AM	4	3	0	0	7	0	1	0	0	1	1	0	1	0	2	0	0	0	0	0	10
Total	7	17	0	0	24	0	1	0	0	1	1	17	1	0	19	0	0	0	0	0	44
8:00 AM	5	3	1	0	9	0	0	0	0	0	0	12	1	0	13	0	0	0	0	0	22
8:15 AM	0	7	0	0	7	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	10
8:30 AM	0	4	1	0	5	1	0	0	0	1	0	7	0	0	7	0	0	0	0	0	13
8:45 AM	0	5	0	0	5	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	8
Total	5	19	2	0	26	1	0	0	0	1	0	25	1	0	26	0	0	0	0	0	53
Grand Total	12	36	2	0	50	1	1	0	0	2	1	42	2	0	45	0	0	0	0	0	97
Approach %	24.0	72.0	4.0	0.0		50.0	50.0	0.0	0.0		2.2	93.3	4.4	0.0		0.0	0.0	0.0	0.0		
Total %	12.4	37.1	2.1	0.0	51.5	1.0	1.0	0.0	0.0	2.1	1.0	43.3	2.1	0.0	46.4	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	43					3					36					15					97
Buses	12	8	2	0	22	1	1	0	0	2	1	12	2	0	15	0	0	0	0	0	39
% Buses	100.0	22.2	100.0	0.0	44.0	100.0	100.0	0.0	0.0	100.0	100.0	28.6	100.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	40.2
Exiting Leg Total	13					3					8					15					39
Single-Unit Trucks	0	22	0	0	22	0	0	0	0	0	0	24	0	0	24	0	0	0	0	0	46
% Single-Unit	0.0	61.1	0.0	0.0	44.0	0.0	0.0	0.0	0.0	0.0	0.0	57.1	0.0	0.0	53.3	0.0	0.0	0.0	0.0	0.0	47.4
Exiting Leg Total	24					0					22					0					46
Articulated Trucks	0	6	0	0	6	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	12
% Articulated	0.0	16.7	0.0	0.0	12.0	0.0	0.0	0.0	0.0	0.0	0.0	14.3	0.0	0.0	13.3	0.0	0.0	0.0	0.0	0.0	12.4
Exiting Leg Total	6					0					6					0					12

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

	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	3	9	0	0	12	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	16
7:45 AM	4	3	0	0	7	0	1	0	0	1	1	0	1	0	2	0	0	0	0	0	10
8:00 AM	5	3	1	0	9	0	0	0	0	0	0	12	1	0	13	0	0	0	0	0	22
8:15 AM	0	7	0	0	7	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	10
Total Volume	12	22	1	0	35	0	1	0	0	1	1	19	2	0	22	0	0	0	0	0	58
% Approach Total	34.3	62.9	2.9	0.0		0.0	100.0	0.0	0.0		4.5	86.4	9.1	0.0		0.0	0.0	0.0	0.0		
PHF	0.600	0.611	0.250	0.000	0.729	0.000	0.250	0.000	0.000	0.250	0.250	0.396	0.500	0.000	0.423	0.000	0.000	0.000	0.000	0.000	0.659
Buses	12	6	1	0	19	0	1	0	0	1	1	4	2	0	7	0	0	0	0	0	27
Buses %	100.0	27.3	100.0	0.0	54.3	0.0	100.0	0.0	0.0	100.0	100.0	21.1	100.0	0.0	31.8	0.0	0.0	0.0	0.0	0.0	46.6
Single-Unit Trucks	0	13	0	0	13	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	23
Single-Unit %	0.0	59.1	0.0	0.0	37.1	0.0	0.0	0.0	0.0	0.0	0.0	52.6	0.0	0.0	45.5	0.0	0.0	0.0	0.0	0.0	39.7
Articulated Trucks	0	3	0	0	3	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	8
Articulated %	0.0	13.6	0.0	0.0	8.6	0.0	0.0	0.0	0.0	0.0	0.0	26.3	0.0	0.0	22.7	0.0	0.0	0.0	0.0	0.0	13.8
Buses	12	6	1	0	19	0	1	0	0	1	1	4	2	0	7	0	0	0	0	0	27
Single-Unit Trucks	0	13	0	0	13	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	23
Articulated Trucks	0	3	0	0	3	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	8
Total Entering Leg	12	22	1	0	35	0	1	0	0	1	1	19	2	0	22	0	0	0	0	0	58
Buses	4					2					6					15					27
Single-Unit Trucks	10					0					13					0					23
Articulated Trucks	5					0					3					0					8
Total Exiting Leg	19					2					22					15					58

PDI File #: **239385 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Pine Hill Road W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Buses

	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	2	0	0	2	0	0	0	0	0	2
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	3
7:30 AM	3	2	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
7:45 AM	4	2	0	0	6	0	1	0	0	1	1	0	1	0	2	0	0	0	0	0	9
Total	7	4	0	0	11	0	1	0	0	1	1	5	1	0	7	0	0	0	0	0	19
8:00 AM	5	0	1	0	6	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	10
8:15 AM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
8:30 AM	0	1	1	0	2	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	4
8:45 AM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
Total	5	4	2	0	11	1	0	0	0	1	0	7	1	0	8	0	0	0	0	0	20
Grand Total	12	8	2	0	22	1	1	0	0	2	1	12	2	0	15	0	0	0	0	0	39
Approach %	54.5	36.4	9.1	0.0		50.0	50.0	0.0	0.0		6.7	80.0	13.3	0.0		0.0	0.0	0.0	0.0		
Total %	30.8	20.5	5.1	0.0	56.4	2.6	2.6	0.0	0.0	5.1	2.6	30.8	5.1	0.0	38.5	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	13					3					8					15					39

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

	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	3	0	0	3	0	0	0	0	0	3
7:30 AM	3	2	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
7:45 AM	4	2	0	0	6	0	1	0	0	1	1	0	1	0	2	0	0	0	0	0	9
8:00 AM	5	0	1	0	6	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	10
Total Volume	12	4	1	0	17	0	1	0	0	1	1	6	2	0	9	0	0	0	0	0	27
% Approach Total	70.6	23.5	5.9	0.0		0.0	100.0	0.0	0.0		11.1	66.7	22.2	0.0		0.0	0.0	0.0	0.0		
PHF	0.600	0.500	0.250	0.000	0.708	0.000	0.250	0.000	0.000	0.250	0.250	0.500	0.500	0.000	0.563	0.000	0.000	0.000	0.000	0.000	0.675
Entering Leg	12	4	1	0	17	0	1	0	0	1	1	6	2	0	9	0	0	0	0	0	27
Exiting Leg	6					2					4					15					27
Total	23					3					13					15					54

PDI File #: **239385 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Pine Hill Road W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Single-Unit Trucks

	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	2	0	0	2	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	6
7:15 AM	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	6
7:30 AM	0	5	0	0	5	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	8
7:45 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	10	0	0	10	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	21
8:00 AM	0	3	0	0	3	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	8
8:15 AM	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	6
8:30 AM	0	3	0	0	3	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	9
8:45 AM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	12	0	0	12	0	0	0	0	0	0	13	0	0	13	0	0	0	0	0	25
Grand Total	0	22	0	0	22	0	0	0	0	0	0	24	0	0	24	0	0	0	0	0	46
Approach %	0.0	100.0	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		
Total %	0.0	47.8	0.0	0.0	47.8	0.0	0.0	0.0	0.0	0.0	0.0	52.2	0.0	0.0	52.2	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	24					0					22					0					46

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

8:00 AM	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	3	0	0	3	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	8
8:15 AM	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	6
8:30 AM	0	3	0	0	3	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	9
8:45 AM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total Volume	0	12	0	0	12	0	0	0	0	0	0	13	0	0	13	0	0	0	0	0	25
% Approach Total	0.0	100.0	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		
PHF	0.000	0.750	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.542	0.000	0.000	0.542	0.000	0.000	0.000	0.000	0.000	0.694
Entering Leg	0	12	0	0	12	0	0	0	0	0	0	13	0	0	13	0	0	0	0	0	25
Exiting Leg	13					0					12					0					25
Total	25					0					25					0					50

PDI File #: **239385 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Pine Hill Road W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 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
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Articulated Trucks

	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	1	0	0	1	0	0	0	0	0	0	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
7:30 AM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	3
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
Total	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	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	4	0	0	4	0	0	0	0	0	0	0	0	0	0	4
8:15 AM	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	1
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	0	0
8:45 AM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	3
Total	0	3	0	0	3	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	8
Grand Total	0	6	0	0	6	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	12
Approach %	0.0	100.0	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		
Total %	0.0	50.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	6					0					6					0					12					

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

	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	3
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
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	4
8:15 AM	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	1
Total Volume	0	3	0	0	3	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	8
% Approach Total	0.0	100.0	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		
PHF	0.000	0.375	0.000	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.313	0.000	0.000	0.313	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500
Entering Leg	0	3	0	0	3	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	8
Exiting Leg	5					0					3					0					8					
Total	8					0					8					0					16					

PDI File #: **239385 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Pine Hill Road W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Pedestrians

	Grafton Street (Route 122)								Pine Hill Road								Grafton Street (Route 122)								Roosevelt School Driveway								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	1	0	1	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	0	0	0	0	0	0	0			
7:30 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	2	0	2	2	3							
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0	6	1	7	0	6	1	7	14						
Total	0	0	0	0	0	0	0	0	0	0	0	1	7	8	0	0	0	0	0	0	0	0	0	0	0	0	7	3	10	0	7	3	10	18						
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	5	4	9	0	0	0	0	5	2	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16
8:15 AM	0	0	0	0	1	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	3							
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2							
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	3							
Total	0	0	0	0	1	0	1	0	0	0	0	6	7	13	0	0	0	0	7	2	9	0	0	0	0	1	0	1	0	1	0	1	24							
Grand Total	0	0	0	0	1	0	1	0	0	0	0	7	14	21	0	0	0	0	7	2	9	0	0	0	0	8	3	11	0	8	3	11	42							
Approach %	0	0	0	0	100	0		0	0	0	0	33.3	66.7		0	0	0	0	77.8	22.2		0	0	0	0	72.7	27.3		0	72.7	27.3									
Total %	0	0	0	0	2.38	0	2.38	0	0	0	0	16.7	33.3	50	0	0	0	0	16.7	4.76	21.4	0	0	0	0	19	7.14	26.2	0	19	7.14	26.2								
Exiting Leg Total	1							21							9							11							42											

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

	Grafton Street (Route 122)								Pine Hill Road								Grafton Street (Route 122)								Roosevelt School Driveway								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			
7:30 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	2	2	0	2	2	3	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0	6	1	7	0	6	1	7	14
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	5	4	9	0	0	0	0	5	2	7	0	0	0	0	0	0	0	0	0	0	0	16	
8:15 AM	0	0	0	0	1	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	3	
Total Volume	0	0	0	0	1	0	1	0	0	0	0	6	12	18	0	0	0	0	5	2	7	0	0	0	0	7	3	10	0	7	3	10	36	
% Approach Total	0.0	0.0	0.0	0.0	100.0	0.0		0.0	0.0	0.0	0.0	33.3	66.7		0.0	0.0	0.0	0.0	71.4	28.6		0.0	0.0	0.0	0.0	70.0	30.0		0.0	70.0	30.0			
PHF	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.300	0.429	0.500	0.000	0.000	0.000	0.000	0.250	0.250	0.250	0.000	0.000	0.000	0.000	0.292	0.375	0.357	0.000	0.292	0.375	0.357	0.563	
Entering Leg	0	0	0	0	1	0	1	0	0	0	0	6	12	18	0	0	0	0	5	2	7	0	0	0	0	7	3	10	0	7	3	10	36	
Exiting Leg	1							18							7							10							36					
Total	2							36							14							20							72					

PDI File #: **239385 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Pine Hill Road W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **2:00 PM**
 End Time: **6:00 PM**
 Class:



Cars and Heavy Vehicles (Combined)

	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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						
2:00 PM	15	110	5	0	130	5	0	3	0	8	11	124	2	0	137	0	0	0	0	0	275					
2:15 PM	51	135	1	0	187	9	0	7	0	16	17	124	4	0	145	0	0	0	0	0	348					
2:30 PM	10	143	6	0	159	7	0	5	0	12	5	139	9	0	153	0	0	0	0	0	324					
2:45 PM	5	125	7	0	137	4	0	6	0	10	7	148	1	0	156	0	0	0	0	0	303					
Total	81	513	19	0	613	25	0	21	0	46	40	535	16	0	591	0	0	0	0	0	1250					
3:00 PM	0	123	3	0	126	6	1	7	0	14	7	165	0	0	172	0	0	0	0	0	312					
3:15 PM	0	157	3	0	160	7	0	3	0	10	3	170	1	0	174	0	0	0	0	0	344					
3:30 PM	1	111	3	0	115	4	0	4	0	8	6	153	2	0	161	0	0	1	0	1	285					
3:45 PM	2	145	3	0	150	4	0	3	0	7	7	170	3	0	180	1	0	0	0	1	338					
Total	3	536	12	0	551	21	1	17	0	39	23	658	6	0	687	1	0	1	0	2	1279					
4:00 PM	3	142	3	0	148	2	0	2	0	4	9	174	3	0	186	0	0	0	0	0	338					
4:15 PM	3	145	6	0	154	4	0	2	0	6	12	189	6	0	207	0	0	0	0	0	367					
4:30 PM	3	112	5	0	120	2	0	9	0	11	11	177	2	0	190	0	0	0	0	0	321					
4:45 PM	3	131	4	0	138	8	0	4	0	12	7	175	1	0	183	0	0	0	0	0	333					
Total	12	530	18	0	560	16	0	17	0	33	39	715	12	0	766	0	0	0	0	0	1359					
5:00 PM	5	144	4	0	153	4	0	3	0	7	8	186	2	0	196	1	0	0	0	1	357					
5:15 PM	2	150	3	0	155	4	1	3	0	8	7	196	2	0	205	1	0	0	0	1	369					
5:30 PM	1	154	3	0	158	1	0	3	0	4	3	186	2	0	191	0	0	0	0	0	353					
5:45 PM	0	133	3	0	136	5	0	3	0	8	7	182	0	0	189	0	0	0	0	0	333					
Total	8	581	13	0	602	14	1	12	0	27	25	750	6	0	781	2	0	0	0	2	1412					
Grand Total	104	2160	62	0	2326	76	2	67	0	145	127	2658	40	0	2825	3	0	1	0	4	5300					
Approach %	4.5	92.9	2.7	0.0		52.4	1.4	46.2	0.0		4.5	94.1	1.4	0.0		75.0	0.0	25.0	0.0							
Total %	2.0	40.8	1.2	0.0	43.9	1.4	0.0	1.3	0.0	2.7	2.4	50.2	0.8	0.0	53.3	0.1	0.0	0.0	0.0	0.1						
Exiting Leg Total						2735					189					2230					146					5300
Cars	95	2108	61	0	2264	75	2	64	0	141	123	2604	37	0	2764	3	0	1	0	4	5173					
% Cars	91.3	97.6	98.4	0.0	97.3	98.7	100.0	95.5	0.0	97.2	96.9	98.0	92.5	0.0	97.8	100.0	0.0	100.0	0.0	100.0	97.6					
Exiting Leg Total						2680					184					2175					134					5173
Heavy Vehicles	9	52	1	0	62	1	0	3	0	4	4	54	3	0	61	0	0	0	0	0	127					
% Heavy Vehicles	8.7	2.4	1.6	0.0	2.7	1.3	0.0	4.5	0.0	2.8	3.1	2.0	7.5	0.0	2.2	0.0	0.0	0.0	0.0	0.0	2.4					
Exiting Leg Total						55					55					12					127					

Peak Hour Analysis from 02:00 PM to 06:00 PM begins at:

4:45 PM	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	3	131	4	0	138	8	0	4	0	12	7	175	1	0	183	0	0	0	0	0	333	
5:00 PM	5	144	4	0	153	4	0	3	0	7	8	186	2	0	196	1	0	0	0	1	357	
5:15 PM	2	150	3	0	155	4	1	3	0	8	7	196	2	0	205	1	0	0	0	1	369	
5:30 PM	1	154	3	0	158	1	0	3	0	4	3	186	2	0	191	0	0	0	0	0	353	
Total Volume	11	579	14	0	604	17	1	13	0	31	25	743	7	0	775	2	0	0	0	2	1412	
% Approach Total	1.8	95.9	2.3	0.0		54.8	3.2	41.9	0.0		3.2	95.9	0.9	0.0		100.0	0.0	0.0	0.0			
PHF	0.550	0.940	0.875	0.000	0.956	0.531	0.250	0.813	0.000	0.646	0.781	0.948	0.875	0.000	0.945	0.500	0.000	0.000	0.000	0.500	0.957	
Cars	11	570	14	0	595	17	1	13	0	31	24	734	7	0	765	2	0	0	0	2	1393	
Cars %	100.0	98.4	100.0	0.0	98.5	100.0	100.0	100.0	0.0	100.0	96.0	98.8	100.0	0.0	98.7	100.0	0.0	0.0	0.0	100.0	98.7	
Heavy Vehicles	0	9	0	0	9	0	0	0	0	0	1	9	0	0	10	0	0	0	0	0	19	
Heavy Vehicles %	0.0	1.6	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	4.0	1.2	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	1.3	
Cars Enter Leg	11	570	14	0	595	17	1	13	0	31	24	734	7	0	765	2	0	0	0	2	1393	
Heavy Enter Leg	0	9	0	0	9	0	0	0	0	0	1	9	0	0	10	0	0	0	0	0	19	
Total Entering Leg	11	579	14	0	604	17	1	13	0	31	25	743	7	0	775	2	0	0	0	2	1412	
Cars Exiting Leg						751					38					19					1393	
Heavy Exiting Leg						9					1					0					19	
Total Exiting Leg						760					39					594					19	1412

PDI File #: **239385 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Pine Hill Road W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **2:00 PM**
 End Time: **6:00 PM**
 Class:



Cars

	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	
2:00 PM	12	106	5	0	123	5	0	3	0	8	11	123	0	0	134	0	0	0	0	0	265
2:15 PM	47	132	1	0	180	9	0	7	0	16	17	122	3	0	142	0	0	0	0	0	338
2:30 PM	9	140	5	0	154	7	0	3	0	10	5	133	9	0	147	0	0	0	0	0	311
2:45 PM	4	118	7	0	129	4	0	6	0	10	7	142	1	0	150	0	0	0	0	0	289
Total	72	496	18	0	586	25	0	19	0	44	40	520	13	0	573	0	0	0	0	0	1203
3:00 PM	0	120	3	0	123	5	1	7	0	13	7	158	0	0	165	0	0	0	0	0	301
3:15 PM	0	151	3	0	154	7	0	3	0	10	3	166	1	0	170	0	0	0	0	0	334
3:30 PM	1	110	3	0	114	4	0	4	0	8	6	152	2	0	160	0	0	1	0	1	283
3:45 PM	2	142	3	0	147	4	0	3	0	7	7	167	3	0	177	1	0	0	0	1	332
Total	3	523	12	0	538	20	1	17	0	38	23	643	6	0	672	1	0	1	0	2	1250
4:00 PM	3	141	3	0	147	2	0	2	0	4	8	171	3	0	182	0	0	0	0	0	333
4:15 PM	3	140	6	0	149	4	0	2	0	6	12	185	6	0	203	0	0	0	0	0	358
4:30 PM	3	111	5	0	119	2	0	8	0	10	10	175	2	0	187	0	0	0	0	0	316
4:45 PM	3	130	4	0	137	8	0	4	0	12	7	172	1	0	180	0	0	0	0	0	329
Total	12	522	18	0	552	16	0	16	0	32	37	703	12	0	752	0	0	0	0	0	1336
5:00 PM	5	140	4	0	149	4	0	3	0	7	7	184	2	0	193	1	0	0	0	1	350
5:15 PM	2	150	3	0	155	4	1	3	0	8	7	193	2	0	202	1	0	0	0	1	366
5:30 PM	1	150	3	0	154	1	0	3	0	4	3	185	2	0	190	0	0	0	0	0	348
5:45 PM	0	127	3	0	130	5	0	3	0	8	6	176	0	0	182	0	0	0	0	0	320
Total	8	567	13	0	588	14	1	12	0	27	23	738	6	0	767	2	0	0	0	2	1384
Grand Total	95	2108	61	0	2264	75	2	64	0	141	123	2604	37	0	2764	3	0	1	0	4	5173
Approach %	4.2	93.1	2.7	0.0		53.2	1.4	45.4	0.0		4.5	94.2	1.3	0.0		75.0	0.0	25.0	0.0		
Total %	1.8	40.8	1.2	0.0	43.8	1.4	0.0	1.2	0.0	2.7	2.4	50.3	0.7	0.0	53.4	0.1	0.0	0.0	0.0	0.1	
Exiting Leg Total	2680					184					2175					134					5173

Peak Hour Analysis from 02:00 PM to 06:00 PM begins at:

	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	3	130	4	0	137	8	0	4	0	12	7	172	1	0	180	0	0	0	0	0	329
5:00 PM	5	140	4	0	149	4	0	3	0	7	7	184	2	0	193	1	0	0	0	1	350
5:15 PM	2	150	3	0	155	4	1	3	0	8	7	193	2	0	202	1	0	0	0	1	366
5:30 PM	1	150	3	0	154	1	0	3	0	4	3	185	2	0	190	0	0	0	0	0	348
Total Volume	11	570	14	0	595	17	1	13	0	31	24	734	7	0	765	2	0	0	0	2	1393
% Approach Total	1.8	95.8	2.4	0.0		54.8	3.2	41.9	0.0		3.1	95.9	0.9	0.0		100.0	0.0	0.0	0.0		
PHF	0.550	0.950	0.875	0.000	0.960	0.531	0.250	0.813	0.000	0.646	0.857	0.951	0.875	0.000	0.947	0.500	0.000	0.000	0.000	0.500	0.952
Entering Leg	11	570	14	0	595	17	1	13	0	31	24	734	7	0	765	2	0	0	0	2	1393
Exiting Leg	751					38					585					19					1393
Total	1346					69					1350					21					2786

PDI File #: **239385 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Pine Hill Road W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **2:00 PM**
 End Time: **6:00 PM**



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

	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	
2:00 PM	3	4	0	0	7	0	0	0	0	0	0	1	2	0	3	0	0	0	0	0	10
2:15 PM	4	3	0	0	7	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	10
2:30 PM	1	3	1	0	5	0	0	2	0	2	0	6	0	0	6	0	0	0	0	0	13
2:45 PM	1	7	0	0	8	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	14
Total	9	17	1	0	27	0	0	2	0	2	0	15	3	0	18	0	0	0	0	0	47
3:00 PM	0	3	0	0	3	1	0	0	0	1	0	7	0	0	7	0	0	0	0	0	11
3:15 PM	0	6	0	0	6	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	10
3:30 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
3:45 PM	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	6
Total	0	13	0	0	13	1	0	0	0	1	0	15	0	0	15	0	0	0	0	0	29
4:00 PM	0	1	0	0	1	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0	5
4:15 PM	0	5	0	0	5	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	9
4:30 PM	0	1	0	0	1	0	0	1	0	1	1	2	0	0	3	0	0	0	0	0	5
4:45 PM	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	4
Total	0	8	0	0	8	0	0	1	0	1	2	12	0	0	14	0	0	0	0	0	23
5:00 PM	0	4	0	0	4	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	7
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	3
5:30 PM	0	4	0	0	4	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	5
5:45 PM	0	6	0	0	6	0	0	0	0	0	1	6	0	0	7	0	0	0	0	0	13
Total	0	14	0	0	14	0	0	0	0	0	2	12	0	0	14	0	0	0	0	0	28
Grand Total	9	52	1	0	62	1	0	3	0	4	4	54	3	0	61	0	0	0	0	0	127
Approach %	14.5	83.9	1.6	0.0		25.0	0.0	75.0	0.0		6.6	88.5	4.9	0.0		0.0	0.0	0.0	0.0		
Total %	7.1	40.9	0.8	0.0	48.8	0.8	0.0	2.4	0.0	3.1	3.1	42.5	2.4	0.0	48.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	55					5					55					12					127
Buses	9	14	1	0	24	1	0	1	0	2	1	22	3	0	26	0	0	0	0	0	52
% Buses	100.0	26.9	100.0	0.0	38.7	100.0	0.0	33.3	0.0	50.0	25.0	40.7	100.0	0.0	42.6	0.0	0.0	0.0	0.0	0.0	40.9
Exiting Leg Total	23					2					15					12					52
Single-Unit Trucks	0	34	0	0	34	0	0	2	0	2	2	27	0	0	29	0	0	0	0	0	65
% Single-Unit	0.0	65.4	0.0	0.0	54.8	0.0	0.0	66.7	0.0	50.0	50.0	50.0	0.0	0.0	47.5	0.0	0.0	0.0	0.0	0.0	51.2
Exiting Leg Total	27					2					36					0					65
Articulated Trucks	0	4	0	0	4	0	0	0	0	0	1	5	0	0	6	0	0	0	0	0	10
% Articulated	0.0	7.7	0.0	0.0	6.5	0.0	0.0	0.0	0.0	0.0	25.0	9.3	0.0	0.0	9.8	0.0	0.0	0.0	0.0	0.0	7.9
Exiting Leg Total	5					1					4					0					10

Peak Hour Analysis from 02:00 PM to 06:00 PM begins at:

	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	
2:15 PM	4	3	0	0	7	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	10
2:30 PM	1	3	1	0	5	0	0	2	0	2	0	6	0	0	6	0	0	0	0	0	13
2:45 PM	1	7	0	0	8	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	14
3:00 PM	0	3	0	0	3	1	0	0	0	1	0	7	0	0	7	0	0	0	0	0	11
Total Volume	6	16	1	0	23	1	0	2	0	3	0	21	1	0	22	0	0	0	0	0	48
% Approach Total	26.1	69.6	4.3	0.0		33.3	0.0	66.7	0.0		0.0	95.5	4.5	0.0		0.0	0.0	0.0	0.0		
PHF	0.375	0.571	0.250	0.000	0.719	0.250	0.000	0.250	0.000	0.375	0.000	0.750	0.250	0.000	0.786	0.000	0.000	0.000	0.000	0.000	0.857
Buses	6	5	1	0	12	1	0	1	0	2	0	11	1	0	12	0	0	0	0	0	26
Buses %	100.0	31.3	100.0	0.0	52.2	100.0	0.0	50.0	0.0	66.7	0.0	52.4	100.0	0.0	54.5	0.0	0.0	0.0	0.0	0.0	54.2
Single-Unit Trucks	0	10	0	0	10	0	0	1	0	1	0	9	0	0	9	0	0	0	0	0	20
Single-Unit %	0.0	62.5	0.0	0.0	43.5	0.0	0.0	50.0	0.0	33.3	0.0	42.9	0.0	0.0	40.9	0.0	0.0	0.0	0.0	0.0	41.7
Articulated Trucks	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
Articulated %	0.0	6.3	0.0	0.0	4.3	0.0	0.0	0.0	0.0	0.0	0.0	4.8	0.0	0.0	4.5	0.0	0.0	0.0	0.0	0.0	4.2
Buses	6	5	1	0	12	1	0	1	0	2	0	11	1	0	12	0	0	0	0	0	26
Single-Unit Trucks	0	10	0	0	10	0	0	1	0	1	0	9	0	0	9	0	0	0	0	0	20
Articulated Trucks	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
Total Entering Leg	6	16	1	0	23	1	0	2	0	3	0	21	1	0	22	0	0	0	0	0	48
Buses	12					1					6					7					26

PDI File #: **239385 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Pine Hill Road W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **2:00 PM**
 End Time: **6:00 PM**
 Class:



**PRECISION
D A T A
INDUSTRIES, LLC**

157 Washington Street, Suite 2
 Hudson, MA 01749
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

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

	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	
Single-Unit Trucks					9					0					11					0	20
Articulated Trucks					1					0					1					0	2
Total Exiting Leg					22					1					18					7	48

PDI File #: **239385 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Pine Hill Road W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **2:00 PM**
 End Time: **6:00 PM**
 Class:



Buses

	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	
2:00 PM	3	1	0	0	4	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	6
2:15 PM	4	1	0	0	5	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	7
2:30 PM	1	1	1	0	3	0	0	1	0	1	0	5	0	0	5	0	0	0	0	0	9
2:45 PM	1	2	0	0	3	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	7
Total	9	5	1	0	15	0	0	1	0	1	0	10	3	0	13	0	0	0	0	0	29
3:00 PM	0	1	0	0	1	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	3
3:15 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
3:45 PM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
Total	0	4	0	0	4	1	0	0	0	1	0	6	0	0	6	0	0	0	0	0	11
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
4:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
4:30 PM	0	1	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	2	0	0	2	0	0	0	0	0	2
Total	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	6
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	3	0	0	3	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	1	2	0	0	3	0	0	0	0	0	3
Total	0	3	0	0	3	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	6
Grand Total	9	14	1	0	24	1	0	1	0	2	1	22	3	0	26	0	0	0	0	0	52
Approach %	37.5	58.3	4.2	0.0		50.0	0.0	50.0	0.0		3.8	84.6	11.5	0.0		0.0	0.0	0.0	0.0		
Total %	17.3	26.9	1.9	0.0	46.2	1.9	0.0	1.9	0.0	3.8	1.9	42.3	5.8	0.0	50.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	23					2					15					12					52

Peak Hour Analysis from 02:00 PM to 06:00 PM begins at:

	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	
2:00 PM	3	1	0	0	4	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	6
2:15 PM	4	1	0	0	5	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	7
2:30 PM	1	1	1	0	3	0	0	1	0	1	0	5	0	0	5	0	0	0	0	0	9
2:45 PM	1	2	0	0	3	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	7
Total Volume	9	5	1	0	15	0	0	1	0	1	0	10	3	0	13	0	0	0	0	0	29
% Approach Total	60.0	33.3	6.7	0.0		0.0	0.0	100.0	0.0		0.0	76.9	23.1	0.0		0.0	0.0	0.0	0.0		
PHF	0.563	0.625	0.250	0.000	0.750	0.000	0.000	0.250	0.000	0.250	0.000	0.500	0.375	0.000	0.650	0.000	0.000	0.000	0.000	0.000	0.806
Entering Leg	9	5	1	0	15	0	0	1	0	1	0	10	3	0	13	0	0	0	0	0	29
Exiting Leg	10					1					6					12					29
Total	25					2					19					12					58

PDI File #: **239385 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Pine Hill Road W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **2:00 PM**
 End Time: **6:00 PM**
 Class:



Single-Unit Trucks

	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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						
2:00 PM	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	4					
2:15 PM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3					
2:30 PM	0	2	0	0	2	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	4					
2:45 PM	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	6					
Total	0	11	0	0	11	0	0	1	0	1	0	5	0	0	5	0	0	0	0	0	17					
3:00 PM	0	2	0	0	2	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	7					
3:15 PM	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	6					
3:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1					
3:45 PM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3					
Total	0	9	0	0	9	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	17					
4:00 PM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3					
4:15 PM	0	4	0	0	4	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	7					
4:30 PM	0	0	0	0	0	0	0	1	0	1	1	2	0	0	3	0	0	0	0	0	4					
4:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1					
Total	0	6	0	0	6	0	0	1	0	1	1	7	0	0	8	0	0	0	0	0	15					
5:00 PM	0	3	0	0	3	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	6					
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2					
5:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1					
5:45 PM	0	4	0	0	4	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	7					
Total	0	8	0	0	8	0	0	0	0	0	1	7	0	0	8	0	0	0	0	0	16					
Grand Total	0	34	0	0	34	0	0	2	0	2	2	27	0	0	29	0	0	0	0	0	65					
Approach %	0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		6.9	93.1	0.0	0.0		0.0	0.0	0.0	0.0							
Total %	0.0	52.3	0.0	0.0	52.3	0.0	0.0	3.1	0.0	3.1	3.1	41.5	0.0	0.0	44.6	0.0	0.0	0.0	0.0	0.0						
Exiting Leg Total						27					2					36					0					65

Peak Hour Analysis from 02:00 PM to 06:00 PM begins at:

	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	
2:30 PM	0	2	0	0	2	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	4
2:45 PM	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	6
3:00 PM	0	2	0	0	2	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	7
3:15 PM	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	6
Total Volume	0	12	0	0	12	0	0	1	0	1	0	10	0	0	10	0	0	0	0	0	23
% Approach Total	0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.750	0.000	0.000	0.750	0.000	0.000	0.250	0.000	0.250	0.000	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.821
Entering Leg	0	12	0	0	12	0	0	1	0	1	0	10	0	0	10	0	0	0	0	0	23
Exiting Leg											0					13					0
Total						22					1					23					0

PDI File #: **239385 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Pine Hill Road W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **2:00 PM**
 End Time: **6:00 PM**
 Class:



Articulated Trucks

	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	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	1	0	0	1	0	0	0	0	0	1
4:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
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	1	0	0	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	2
5:00 PM	0	1	0	0	1	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	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	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
Total	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	6
Grand Total	0	4	0	0	4	0	0	0	0	0	1	5	0	0	6	0	0	0	0	0	10
Approach %	0.0	100.0	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		
Total %	0.0	40.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	10.0	50.0	0.0	0.0	60.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	5					1					4					0					10

Peak Hour Analysis from 02:00 PM to 06:00 PM begins at:

5:00 PM	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	
5:00 PM	0	1	0	0	1	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	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	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
Total Volume	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	6
% Approach Total	0.0	100.0	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		
PHF	0.000	0.375	0.000	0.000	0.375	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	0.500
Entering Leg	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	6
Exiting Leg	3					0					3					0					6
Total	6					0					6					0					12

PDI File #: 239385 B
 Location: N: Grafton Street (Route 122) S: Grafton Street (Route 122)
 Location: E: Pine Hill Road W: Roosevelt School Driveway
 City, State: Worcester, MA
 Client: Kimley-Horn/ P. Graham
 Site Code: TBA
 Count Date: Wednesday, June 7, 2023
 Start Time: 2:00 PM
 End Time: 6:00 PM
 Class:



Pedestrians

	Grafton Street (Route 122)								Pine Hill Road								Grafton Street (Route 122)								Roosevelt School Driveway								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		
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6			
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	17	11	28	0	0	0	0	0	0	0	0	0	0	0	0	3	3	31				
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	4	1	5	9					
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3				
Total	0	0	0	0	0	0	0	0	0	0	0	18	23	41	0	0	0	0	0	0	0	0	0	0	4	4	8	49					
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3				
3:15 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	1	1	1	1					
3:30 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	2				
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	4	2	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6				
Total	0	0	0	0	0	0	0	0	0	0	0	8	3	11	0	0	0	0	0	0	0	0	0	0	1	1	1	12					
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	1				
4:15 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	3				
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2				
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	1	5	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6				
5:00 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	1				
5:15 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	1	1	1	2					
5:30 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	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				
Total	0	0	0	0	0	0	0	0	0	0	0	3	1	4	0	0	0	0	0	0	0	0	0	0	1	1	1	5					
Grand Total	0	0	0	0	0	0	0	0	0	0	0	30	32	62	0	0	0	0	0	0	0	0	0	4	6	10	72						
Approach %	0	0	0	0	0	0	0	0	0	0	0	48.4	51.6		0	0	0	0	0	0	0	0	0	40	60								
Total %	0	0	0	0	0	0	0	0	0	0	0	41.7	44.4	86.1	0	0	0	0	0	0	0	0	0	5.56	8.33	13.9							
Exiting Leg Total	0								62								0								10								72

Peak Hour Analysis from 02:00 PM to 06:00 PM begins at:

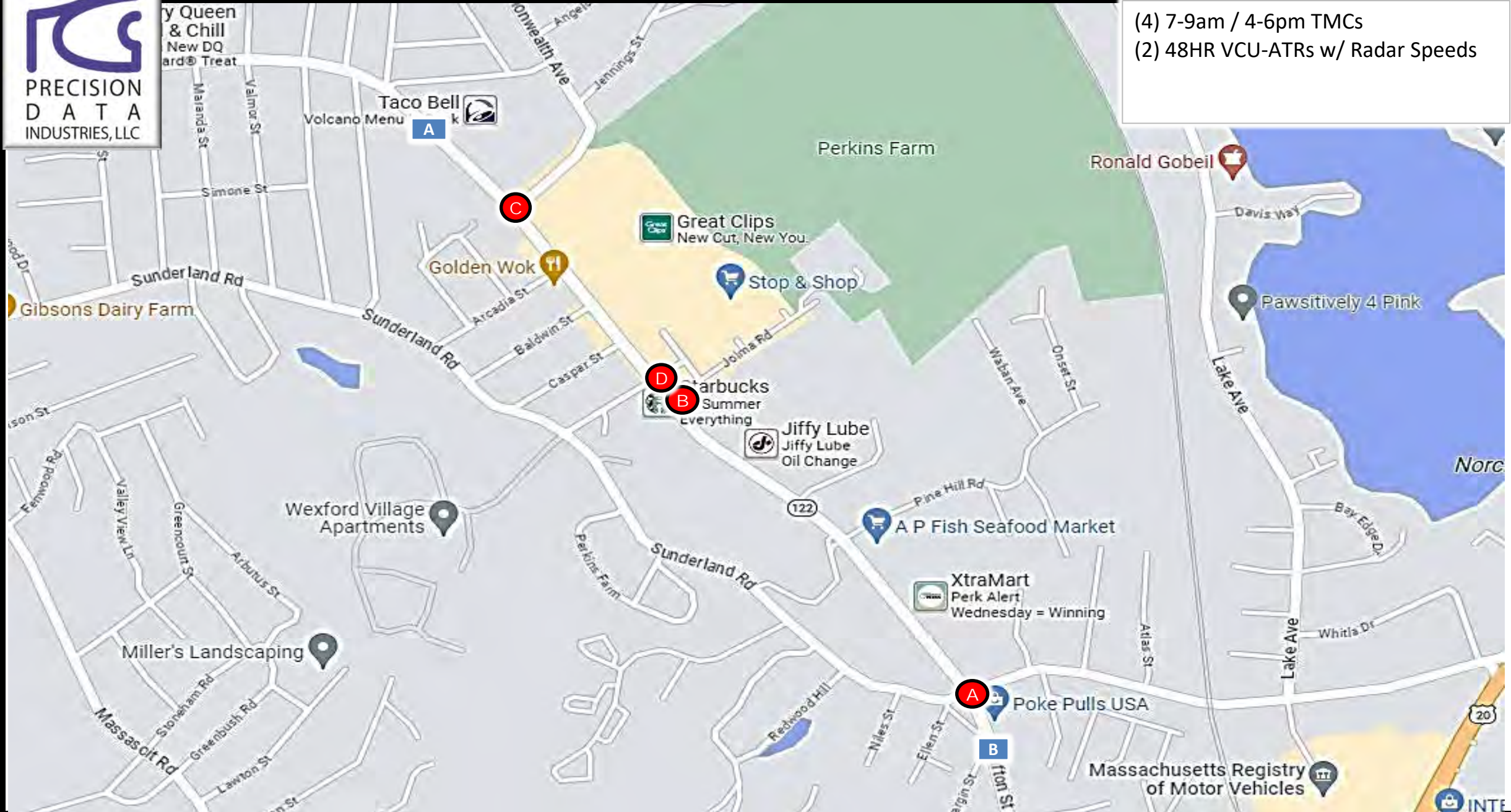
	Grafton Street (Route 122)								Pine Hill Road								Grafton Street (Route 122)								Roosevelt School Driveway								Total
	from North								from East								from South								from West								
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total		Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total		Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total		Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6				
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	17	11	28	0	0	0	0	0	0	0	0	0	0	0	3	3	31					
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	4	1	5	9					
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	2	3	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	18	23	41	0	0	0	0	0	0	0	0	0	0	4	4	8	49					
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	43.9	56.1		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	50.0								
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.265	0.523	0.366	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.333	0.400	0.395						
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	18	23	41	0	0	0	0	0	0	0	0	0	4	4	8	49						
Exiting Leg	0								41								0								8								49
Total	0								82								0								16								98



Location Map: 239484 Worcester, MA

Precision Data Industries, LLC 157 Washington Street, Suite 2, Hudson, MA 01749 ph: 508-875-0100 email: datarequests@pdillc.com

(4) 7-9am / 4-6pm TMCs
(2) 48HR VCU-ATRs w/ Radar Speeds



Client: Kimley Horn	Engineer: L. Juan	Site Code: 112858001	Date: Wed 9/13 thur Thurs 9/14/2023	PDI Job # 239484	City, State: Worcester, MA
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Grafton Street (Route 122)
north of Jennings Street
City, State: Worcester, MA
Client: Kimley-Horn/ L. Juan
Site Code: 112858000-02



PDI File #: 239484 ATR-A

Count Date: **Wednesday, September 13, 2023**
Direction: **NB**

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	28	0	0	0	28
12:15 AM	0	0	21	0	1	0	22
12:30 AM	0	0	19	0	0	0	19
12:45 AM	0	0	12	0	0	0	12
1:00 AM	0	0	14	0	0	0	14
1:15 AM	0	0	13	0	0	0	13
1:30 AM	0	0	9	0	0	0	9
1:45 AM	0	0	9	0	0	0	9
2:00 AM	0	0	6	0	0	0	6
2:15 AM	0	0	3	0	0	0	3
2:30 AM	0	0	3	0	0	0	3
2:45 AM	0	0	6	0	0	0	6
3:00 AM	0	0	3	0	0	0	3
3:15 AM	1	0	5	0	0	0	6
3:30 AM	0	0	3	0	1	1	5
3:45 AM	0	0	6	0	0	0	6
4:00 AM	0	0	10	0	1	0	11
4:15 AM	0	0	5	0	0	0	5
4:30 AM	0	0	6	0	1	0	7
4:45 AM	0	0	8	0	0	0	8
5:00 AM	0	0	9	0	0	0	9
5:15 AM	0	0	16	0	0	1	17
5:30 AM	0	0	23	1	2	0	26
5:45 AM	0	0	31	0	1	0	32
6:00 AM	0	0	48	0	3	0	51
6:15 AM	0	0	46	0	3	0	49
6:30 AM	0	0	61	3	4	1	69
6:45 AM	0	0	79	3	1	0	83
7:00 AM	0	0	69	2	2	0	73
7:15 AM	0	1	103	1	0	1	106
7:30 AM	0	0	109	2	6	2	119
7:45 AM	0	0	97	0	3	1	101
8:00 AM	0	0	106	4	5	0	115
8:15 AM	1	0	134	3	1	0	139
8:30 AM	0	0	122	6	3	4	135
8:45 AM	0	0	104	1	2	0	107
9:00 AM	0	0	104	0	6	0	110
9:15 AM	0	0	118	0	3	0	121
9:30 AM	0	0	99	1	3	0	103
9:45 AM	0	0	103	1	2	2	108
10:00 AM	0	0	112	1	4	4	121
10:15 AM	0	0	114	1	5	1	121
10:30 AM	0	0	105	1	3	1	110
10:45 AM	0	0	125	1	2	1	129
11:00 AM	0	0	121	0	4	1	126
11:15 AM	0	0	107	2	4	1	114
11:30 AM	0	0	104	0	1	0	105
11:45 AM	0	0	94	0	2	0	96

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	0	103	0	0	0	103
12:15 PM	0	0	120	1	3	0	124
12:30 PM	0	0	93	0	2	0	95
12:45 PM	0	0	112	3	3	0	118
1:00 PM	0	0	114	0	1	2	117
1:15 PM	0	0	126	0	1	1	128
1:30 PM	0	0	126	2	1	0	129
1:45 PM	0	0	131	1	1	0	133
2:00 PM	0	0	109	0	3	0	112
2:15 PM	0	0	139	2	3	1	145
2:30 PM	0	0	142	2	0	1	145
2:45 PM	0	1	133	0	1	0	135
3:00 PM	0	0	138	3	1	0	142
3:15 PM	0	0	161	1	0	0	162
3:30 PM	0	0	154	2	1	0	157
3:45 PM	0	0	142	0	1	0	143
4:00 PM	0	0	155	1	2	0	158
4:15 PM	0	0	136	2	0	0	138
4:30 PM	0	0	147	0	1	1	149
4:45 PM	0	0	163	2	1	0	166
5:00 PM	1	0	178	0	1	1	181
5:15 PM	0	0	186	0	0	1	187
5:30 PM	0	0	170	1	1	0	172
5:45 PM	0	0	157	2	0	0	159
6:00 PM	0	0	154	0	1	0	155
6:15 PM	0	1	163	1	1	0	166
6:30 PM	0	0	112	1	1	0	114
6:45 PM	0	0	144	0	0	0	144
7:00 PM	0	0	132	0	0	0	132
7:15 PM	0	0	107	1	0	0	108
7:30 PM	0	0	115	2	1	0	118
7:45 PM	0	0	113	1	0	0	114
8:00 PM	0	0	112	0	0	0	112
8:15 PM	0	0	113	1	0	0	114
8:30 PM	0	0	94	0	0	0	94
8:45 PM	0	0	69	1	1	0	71
9:00 PM	0	0	82	0	0	0	82
9:15 PM	0	0	72	1	0	0	73
9:30 PM	0	1	64	0	1	0	66
9:45 PM	0	0	69	0	1	0	70
10:00 PM	0	0	59	0	0	0	59
10:15 PM	0	0	51	0	0	0	51
10:30 PM	0	0	34	0	0	0	34
10:45 PM	0	0	44	0	0	0	44
11:00 PM	0	0	48	0	0	0	48
11:15 PM	0	0	41	0	0	0	41
11:30 PM	1	0	36	0	0	0	37
11:45 PM	0	0	19	0	0	0	19

AM Total	2	1	2652	34	79	22	2790
Percentage	0.07%	0.04%	95.05%	1.22%	2.83%	0.79%	
AM Peak	2:30 AM	6:30 AM	8:00 AM	8:00 AM	7:30 AM	9:45 AM	8:00 AM
Volume	1	1	466	14	15	8	496

PM Total	2	3	5382	34	35	8	5464
Percentage	0.04%	0.05%	98.50%	0.62%	0.64%	0.15%	
PM Peak	4:15 PM	2:00 PM	4:45 PM	2:15 PM	12:15 PM	12:30 PM	4:45 PM
Volume	1	1	697	7	9	3	706

Day Total	4	4	8034	68	114	30	8254
Percentage	0.05%	0.05%	97.33%	0.82%	1.38%	0.36%	

Grafton Street (Route 122)
north of Jennings Street
City, State: Worcester, MA
Client: Kimley-Horn/ L. Juan
Site Code: 112858000-02



PDI File #: 239484 ATR-A

Count Date: Thursday, September 14, 2023
Direction: NB

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	35	0	0	0	35
12:15 AM	0	0	29	0	0	1	30
12:30 AM	0	0	13	0	0	0	13
12:45 AM	0	0	18	0	0	0	18
1:00 AM	0	0	13	0	0	0	13
1:15 AM	0	0	10	0	0	0	10
1:30 AM	0	0	9	0	0	0	9
1:45 AM	0	0	9	0	0	0	9
2:00 AM	0	0	6	0	0	0	6
2:15 AM	0	0	11	0	0	0	11
2:30 AM	0	0	6	0	0	0	6
2:45 AM	0	0	10	0	0	0	10
3:00 AM	0	0	6	0	1	0	7
3:15 AM	1	0	5	0	1	0	7
3:30 AM	0	0	3	0	0	0	3
3:45 AM	0	0	9	0	3	0	12
4:00 AM	0	0	8	0	0	0	8
4:15 AM	0	0	7	0	0	0	7
4:30 AM	0	0	10	0	0	0	10
4:45 AM	0	0	13	0	0	0	13
5:00 AM	0	0	9	0	0	0	9
5:15 AM	0	0	26	0	0	0	26
5:30 AM	0	0	22	1	0	0	23
5:45 AM	0	0	41	0	2	0	43
6:00 AM	0	0	52	1	1	1	55
6:15 AM	0	0	53	0	5	1	59
6:30 AM	1	0	69	2	2	0	74
6:45 AM	0	0	59	4	3	1	67
7:00 AM	0	2	70	0	2	0	74
7:15 AM	0	0	114	3	3	1	121
7:30 AM	0	0	107	1	4	0	112
7:45 AM	0	0	97	0	0	1	98
8:00 AM	0	0	115	6	0	0	121
8:15 AM	0	0	111	2	1	1	115
8:30 AM	0	0	98	3	4	1	106
8:45 AM	0	0	125	2	4	0	131
9:00 AM	0	0	134	0	1	0	135
9:15 AM	0	2	109	2	2	1	116
9:30 AM	0	0	95	0	2	1	98
9:45 AM	0	0	123	1	4	1	129
10:00 AM	0	0	113	1	1	0	115
10:15 AM	0	0	106	1	2	1	110
10:30 AM	0	1	125	0	4	2	132
10:45 AM	0	0	110	2	5	0	117
11:00 AM	0	1	123	1	2	1	128
11:15 AM	0	2	116	2	3	3	126
11:30 AM	0	0	106	0	1	0	107
11:45 AM	0	0	106	2	1	0	109

AM Total	2	8	2764	37	64	18	2893
Percentage	0.07%	0.28%	95.54%	1.28%	2.21%	0.62%	
AM Peak	2:30 AM	10:30 AM	10:30 AM	8:00 AM	10:30 AM	10:30 AM	10:30 AM
Volume	1	4	474	13	14	6	503

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	0	141	0	3	0	144
12:15 PM	0	0	144	0	0	1	145
12:30 PM	0	0	135	0	2	0	137
12:45 PM	0	0	141	4	5	1	151
1:00 PM	0	1	128	0	2	0	131
1:15 PM	0	0	134	0	3	0	137
1:30 PM	0	0	154	2	3	1	160
1:45 PM	0	1	153	0	2	1	157
2:00 PM	0	0	122	1	2	2	127
2:15 PM	0	2	154	3	3	1	163
2:30 PM	1	0	129	5	4	0	139
2:45 PM	0	0	139	0	3	1	143
3:00 PM	0	0	158	2	3	0	163
3:15 PM	0	0	149	2	0	0	151
3:30 PM	3	1	162	1	0	0	167
3:45 PM	1	2	156	0	3	0	162
4:00 PM	1	1	158	1	3	0	164
4:15 PM	0	0	145	1	0	0	146
4:30 PM	0	1	169	0	1	0	171
4:45 PM	1	2	163	2	2	1	171
5:00 PM	1	1	212	0	1	0	215
5:15 PM	0	0	183	0	2	0	185
5:30 PM	1	2	175	0	1	0	179
5:45 PM	0	1	170	2	0	1	174
6:00 PM	1	1	167	0	0	0	169
6:15 PM	0	0	194	0	1	0	195
6:30 PM	1	2	159	2	1	1	166
6:45 PM	0	0	155	0	0	0	155
7:00 PM	0	1	141	0	0	0	142
7:15 PM	0	2	148	1	0	0	151
7:30 PM	0	0	146	1	0	0	147
7:45 PM	0	0	147	1	1	0	149
8:00 PM	0	0	124	0	1	0	125
8:15 PM	0	1	116	1	2	0	120
8:30 PM	0	0	105	0	0	0	105
8:45 PM	0	0	94	1	1	3	99
9:00 PM	0	0	81	1	0	0	82
9:15 PM	0	0	88	0	0	0	88
9:30 PM	0	0	83	0	1	1	85
9:45 PM	0	0	64	0	0	0	64
10:00 PM	0	0	52	0	0	0	52
10:15 PM	0	0	64	0	0	0	64
10:30 PM	0	0	55	0	0	0	55
10:45 PM	0	0	42	0	0	1	43
11:00 PM	0	0	56	0	0	0	56
11:15 PM	0	0	38	0	0	0	38
11:30 PM	1	0	41	0	0	0	42
11:45 PM	0	0	24	0	0	0	24

PM Total	12	22	6058	34	56	16	6198
Percentage	0.19%	0.35%	97.74%	0.55%	0.90%	0.26%	
PM Peak	3:15 PM	4:45 PM	5:00 PM	2:15 PM	12:45 PM	1:30 PM	5:00 PM
Volume	5	5	740	10	13	5	753
Day Total	14	30	8822	71	120	34	9091
Percentage	0.15%	0.33%	97.04%	0.78%	1.32%	0.37%	

Grafton Street (Route 122)
north of Jennings Street
City, State: Worcester, MA
Client: Kimley-Horn/ L. Juan
Site Code: 112858000-02



PDI File #: 239484 ATR-A

Count Date: **Wednesday, September 13, 2023**
Direction: **SB**

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	13	0	0	0	13
12:15 AM	0	0	8	0	1	0	9
12:30 AM	0	0	13	0	0	0	13
12:45 AM	0	0	12	0	0	0	12
1:00 AM	0	0	5	0	0	0	5
1:15 AM	0	0	4	0	0	0	4
1:30 AM	0	0	2	0	2	0	4
1:45 AM	0	0	7	0	0	1	8
2:00 AM	0	0	3	0	0	0	3
2:15 AM	0	0	3	0	0	0	3
2:30 AM	0	0	3	0	0	0	3
2:45 AM	0	0	6	0	0	0	6
3:00 AM	0	0	9	0	0	0	9
3:15 AM	0	0	6	0	0	0	6
3:30 AM	0	0	3	0	0	0	3
3:45 AM	0	0	4	0	1	0	5
4:00 AM	0	0	5	0	0	0	5
4:15 AM	0	0	17	0	2	0	19
4:30 AM	0	0	25	0	0	0	25
4:45 AM	0	0	33	0	2	0	35
5:00 AM	0	0	42	1	0	1	44
5:15 AM	0	0	46	0	1	0	47
5:30 AM	0	0	60	0	2	0	62
5:45 AM	0	0	75	0	1	0	76
6:00 AM	0	0	76	0	1	0	77
6:15 AM	0	0	75	1	2	0	78
6:30 AM	0	0	86	3	1	0	90
6:45 AM	0	0	95	0	2	0	97
7:00 AM	0	0	99	0	1	1	101
7:15 AM	0	0	123	1	1	0	125
7:30 AM	0	0	87	0	1	0	88
7:45 AM	0	0	111	3	1	0	115
8:00 AM	1	0	106	5	1	0	113
8:15 AM	0	0	93	3	4	0	100
8:30 AM	0	0	106	1	1	0	108
8:45 AM	0	0	99	1	1	0	101
9:00 AM	0	0	115	0	1	1	117
9:15 AM	0	0	103	0	5	0	108
9:30 AM	0	0	98	1	1	0	100
9:45 AM	0	0	111	1	2	0	114
10:00 AM	0	0	90	2	3	0	95
10:15 AM	0	1	111	0	4	0	116
10:30 AM	0	0	100	0	1	0	101
10:45 AM	0	0	99	3	2	2	106
11:00 AM	0	0	110	0	4	0	114
11:15 AM	0	0	100	0	2	0	102
11:30 AM	0	0	88	2	1	0	91
11:45 AM	0	0	105	2	3	0	110

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	0	87	0	6	2	95
12:15 PM	0	0	100	2	3	1	106
12:30 PM	0	0	97	0	3	0	100
12:45 PM	0	0	103	0	1	0	104
1:00 PM	0	0	91	2	0	0	93
1:15 PM	0	0	121	0	0	0	121
1:30 PM	0	0	97	1	1	0	99
1:45 PM	0	0	89	2	1	0	92
2:00 PM	0	0	108	1	2	1	112
2:15 PM	0	0	123	2	2	0	127
2:30 PM	0	1	129	1	0	0	131
2:45 PM	0	0	137	2	0	0	139
3:00 PM	1	0	106	0	2	0	109
3:15 PM	0	0	115	1	3	1	120
3:30 PM	0	0	107	2	4	1	114
3:45 PM	0	0	101	1	0	0	102
4:00 PM	0	0	109	2	1	0	112
4:15 PM	0	0	110	2	1	0	113
4:30 PM	0	0	94	0	1	0	95
4:45 PM	0	0	140	0	2	0	142
5:00 PM	0	0	127	0	0	0	127
5:15 PM	1	0	117	2	0	0	120
5:30 PM	0	0	142	2	0	0	144
5:45 PM	0	0	124	1	2	1	128
6:00 PM	0	0	102	1	0	0	103
6:15 PM	0	0	92	0	1	0	93
6:30 PM	0	0	80	1	0	0	81
6:45 PM	0	0	83	1	0	0	84
7:00 PM	0	0	77	1	1	0	79
7:15 PM	0	0	96	0	0	0	96
7:30 PM	0	0	82	2	0	0	84
7:45 PM	0	0	87	0	1	0	88
8:00 PM	0	0	75	1	0	0	76
8:15 PM	0	0	51	1	1	0	53
8:30 PM	0	0	45	0	1	0	46
8:45 PM	0	0	55	1	0	0	56
9:00 PM	0	0	45	0	0	0	45
9:15 PM	0	0	54	0	1	1	56
9:30 PM	0	0	52	0	0	1	53
9:45 PM	0	0	38	0	0	0	38
10:00 PM	1	0	34	0	0	0	35
10:15 PM	0	0	35	0	0	0	35
10:30 PM	0	0	26	0	0	0	26
10:45 PM	0	0	31	0	0	0	31
11:00 PM	0	0	29	0	0	0	29
11:15 PM	0	0	26	0	0	0	26
11:30 PM	0	0	20	0	0	0	20
11:45 PM	0	0	19	0	0	0	19

AM Total	1	1	2790	30	58	6	2886
Percentage	0.03%	0.03%	96.67%	1.04%	2.01%	0.21%	
AM Peak	7:15 AM	9:30 AM	7:15 AM	7:45 AM	9:15 AM	10:00 AM	7:15 AM
Volume	1	1	427	12	11	2	441

PM Total	3	1	4008	35	41	9	4097
Percentage	0.07%	0.02%	97.83%	0.85%	1.00%	0.22%	
PM Peak	2:15 PM	1:45 PM	4:45 PM	3:30 PM	12:00 PM	12:00 PM	4:45 PM
Volume	1	1	526	7	13	3	533
Day Total	4	2	6798	65	99	15	6983
Percentage	0.06%	0.03%	97.35%	0.93%	1.42%	0.21%	

Grafton Street (Route 122)
north of Jennings Street
City, State: Worcester, MA
Client: Kimley-Horn/ L. Juan
Site Code: 112858000-02



PDI File #: 239484 ATR-A

Count Date: Thursday, September 14, 2023
Direction: SB

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	11	0	0	0	11
12:15 AM	0	0	7	0	0	1	8
12:30 AM	0	0	10	0	0	0	10
12:45 AM	0	0	7	0	0	0	7
1:00 AM	0	0	7	0	0	0	7
1:15 AM	0	0	7	0	2	0	9
1:30 AM	0	0	8	0	1	0	9
1:45 AM	0	0	4	0	0	0	4
2:00 AM	0	0	5	0	0	0	5
2:15 AM	0	0	6	0	0	2	8
2:30 AM	0	0	4	0	0	0	4
2:45 AM	0	0	6	0	0	0	6
3:00 AM	0	0	5	0	2	0	7
3:15 AM	0	0	2	0	1	0	3
3:30 AM	0	0	3	0	0	0	3
3:45 AM	0	0	5	0	0	0	5
4:00 AM	0	0	13	0	0	0	13
4:15 AM	0	0	21	0	0	0	21
4:30 AM	0	0	24	0	0	0	24
4:45 AM	0	0	27	0	0	0	27
5:00 AM	0	0	41	1	0	0	42
5:15 AM	0	0	43	0	0	0	43
5:30 AM	0	0	63	0	1	0	64
5:45 AM	0	0	73	1	1	1	76
6:00 AM	0	1	72	0	2	0	75
6:15 AM	0	0	93	3	0	0	96
6:30 AM	0	1	100	0	1	0	102
6:45 AM	1	0	86	1	1	1	90
7:00 AM	0	0	101	0	2	2	105
7:15 AM	0	2	107	0	2	0	111
7:30 AM	0	0	106	0	1	1	108
7:45 AM	0	0	129	5	1	0	135
8:00 AM	0	0	104	2	3	1	110
8:15 AM	0	0	109	3	2	1	115
8:30 AM	0	0	102	1	0	0	103
8:45 AM	0	0	118	1	2	0	121
9:00 AM	0	0	99	0	2	0	101
9:15 AM	0	2	99	0	2	1	104
9:30 AM	0	0	124	2	1	0	127
9:45 AM	0	0	111	1	0	0	112
10:00 AM	1	0	102	1	1	1	106
10:15 AM	0	1	108	0	2	1	112
10:30 AM	0	0	109	2	4	0	115
10:45 AM	0	1	102	0	4	0	107
11:00 AM	0	1	102	1	1	1	106
11:15 AM	1	0	126	1	3	0	131
11:30 AM	0	1	102	1	2	0	106
11:45 AM	1	0	111	1	3	1	117

AM Total	4	10	2924	28	50	15	3031
Percentage	0.13%	0.33%	96.47%	0.92%	1.65%	0.49%	
AM Peak	11:00 AM	6:30 AM	7:30 AM	7:45 AM	10:30 AM	6:45 AM	7:30 AM
Volume	2	3	448	11	12	4	468

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	0	90	1	4	3	98
12:15 PM	0	1	124	1	4	1	131
12:30 PM	0	0	120	1	3	0	124
12:45 PM	0	0	102	0	3	1	106
1:00 PM	0	1	109	2	1	0	113
1:15 PM	0	0	133	0	2	1	136
1:30 PM	1	0	135	0	0	0	136
1:45 PM	0	0	128	3	3	1	135
2:00 PM	1	0	119	3	0	1	124
2:15 PM	0	0	115	2	2	0	119
2:30 PM	0	0	130	0	1	0	131
2:45 PM	0	1	142	2	4	1	150
3:00 PM	0	0	139	0	1	0	140
3:15 PM	0	1	119	1	1	0	122
3:30 PM	0	0	110	1	1	0	112
3:45 PM	0	0	104	0	2	0	106
4:00 PM	1	1	123	2	2	0	129
4:15 PM	0	0	113	3	0	0	116
4:30 PM	0	0	142	1	2	0	145
4:45 PM	0	0	127	0	0	0	127
5:00 PM	0	2	145	0	1	0	148
5:15 PM	0	0	124	2	0	0	126
5:30 PM	0	0	140	0	1	1	142
5:45 PM	0	0	125	0	0	0	125
6:00 PM	1	0	127	0	0	0	128
6:15 PM	0	0	85	2	0	0	87
6:30 PM	0	0	121	0	0	0	121
6:45 PM	0	0	118	0	0	2	120
7:00 PM	0	1	99	2	1	0	103
7:15 PM	0	0	100	0	0	0	100
7:30 PM	0	0	100	1	1	0	102
7:45 PM	0	0	94	0	1	0	95
8:00 PM	0	1	58	0	0	0	59
8:15 PM	0	0	80	1	1	0	82
8:30 PM	0	0	68	1	0	0	69
8:45 PM	0	0	82	0	0	1	83
9:00 PM	0	1	71	0	1	0	73
9:15 PM	0	0	58	0	0	0	58
9:30 PM	0	0	55	0	0	0	55
9:45 PM	0	1	52	0	0	0	53
10:00 PM	0	0	50	0	0	0	50
10:15 PM	0	0	38	0	0	0	38
10:30 PM	0	0	39	0	0	0	39
10:45 PM	0	0	33	0	0	0	33
11:00 PM	0	0	27	0	0	0	27
11:15 PM	0	0	19	0	0	0	19
11:30 PM	0	0	15	0	0	0	15
11:45 PM	0	0	13	0	0	0	13

PM Total	4	11	4560	32	43	13	4663
Percentage	0.09%	0.24%	97.79%	0.69%	0.92%	0.28%	
PM Peak	1:15 PM	12:15 PM	4:30 PM	1:30 PM	12:00 PM	12:00 PM	4:30 PM
Volume	2	2	538	8	14	5	546
Day Total	8	21	7484	60	93	28	7694
Percentage	0.10%	0.27%	97.27%	0.78%	1.21%	0.36%	

Grafton Street (Route 122)
north of Jennings Street
City, State: Worcester, MA
Client: Kimley-Horn/ L. Juan
Site Code: 112858000-02



PRECISION
DATA
INDUSTRIES, LLC

157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

PDI File # 239484 ATR-A

Direction: NB

Weekly Report

Day Date	Wednesday 09/13/23		Thursday 09/14/23												Week Ave			
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM		
12:00	28	103	35	144	0	0	0	0	0	0	0	0	0	0	32	124		
12:15	22	124	30	145	0	0	0	0	0	0	0	0	0	0	26	135		
12:30	19	95	13	137	0	0	0	0	0	0	0	0	0	0	16	116		
12:45	12	118	18	151	0	0	0	0	0	0	0	0	0	0	15	135		
1:00	14	117	13	131	0	0	0	0	0	0	0	0	0	0	14	124		
1:15	13	128	10	137	0	0	0	0	0	0	0	0	0	0	12	133		
1:30	9	129	9	160	0	0	0	0	0	0	0	0	0	0	9	145		
1:45	9	133	9	157	0	0	0	0	0	0	0	0	0	0	9	145		
2:00	6	112	6	127	0	0	0	0	0	0	0	0	0	0	6	120		
2:15	3	145	11	163	0	0	0	0	0	0	0	0	0	0	7	154		
2:30	3	145	6	139	0	0	0	0	0	0	0	0	0	0	5	142		
2:45	6	135	10	143	0	0	0	0	0	0	0	0	0	0	8	139		
3:00	3	142	7	163	0	0	0	0	0	0	0	0	0	0	5	153		
3:15	6	162	7	151	0	0	0	0	0	0	0	0	0	0	7	157		
3:30	5	157	3	167	0	0	0	0	0	0	0	0	0	0	4	162		
3:45	6	143	12	162	0	0	0	0	0	0	0	0	0	0	9	153		
4:00	11	158	8	164	0	0	0	0	0	0	0	0	0	0	10	161		
4:15	5	138	7	146	0	0	0	0	0	0	0	0	0	0	6	142		
4:30	7	149	10	171	0	0	0	0	0	0	0	0	0	0	9	160		
4:45	8	166	13	171	0	0	0	0	0	0	0	0	0	0	11	169		
5:00	9	181	9	215	0	0	0	0	0	0	0	0	0	0	9	198		
5:15	17	187	26	185	0	0	0	0	0	0	0	0	0	0	22	186		
5:30	26	172	23	179	0	0	0	0	0	0	0	0	0	0	25	176		
5:45	32	159	43	174	0	0	0	0	0	0	0	0	0	0	38	167		
6:00	51	155	55	169	0	0	0	0	0	0	0	0	0	0	53	162		
6:15	49	166	59	195	0	0	0	0	0	0	0	0	0	0	54	181		
6:30	69	114	74	166	0	0	0	0	0	0	0	0	0	0	72	140		
6:45	83	144	67	155	0	0	0	0	0	0	0	0	0	0	75	150		
7:00	73	132	74	142	0	0	0	0	0	0	0	0	0	0	74	137		
7:15	106	108	121	151	0	0	0	0	0	0	0	0	0	0	114	130		
7:30	119	118	112	147	0	0	0	0	0	0	0	0	0	0	116	133		
7:45	101	114	98	149	0	0	0	0	0	0	0	0	0	0	100	132		
8:00	115	112	121	125	0	0	0	0	0	0	0	0	0	0	118	119		
8:15	139	114	115	120	0	0	0	0	0	0	0	0	0	0	127	117		
8:30	135	94	106	105	0	0	0	0	0	0	0	0	0	0	121	100		
8:45	107	71	131	99	0	0	0	0	0	0	0	0	0	0	119	85		
9:00	110	82	135	82	0	0	0	0	0	0	0	0	0	0	123	82		
9:15	121	73	116	88	0	0	0	0	0	0	0	0	0	0	119	81		
9:30	103	66	98	85	0	0	0	0	0	0	0	0	0	0	101	76		
9:45	108	70	129	64	0	0	0	0	0	0	0	0	0	0	119	67		
10:00	121	59	115	52	0	0	0	0	0	0	0	0	0	0	118	56		
10:15	121	51	110	64	0	0	0	0	0	0	0	0	0	0	116	58		
10:30	110	34	132	55	0	0	0	0	0	0	0	0	0	0	121	45		
10:45	129	44	117	43	0	0	0	0	0	0	0	0	0	0	123	44		
11:00	126	48	128	56	0	0	0	0	0	0	0	0	0	0	127	52		
11:15	114	41	126	38	0	0	0	0	0	0	0	0	0	0	120	40		
11:30	105	37	107	42	0	0	0	0	0	0	0	0	0	0	106	40		
11:45	96	19	109	24	0	0	0	0	0	0	0	0	0	0	103	22		
Total	2790	5464	2893	6198	0	0	0	0	0	0	0	0	0	0	2842	5831		
Day Total	8254		9091		0		0		0		0		0		8673			
Peak HR	8:00 AM	4:45 PM	10:30 AM	5:00 PM													10:30 AM	4:45 PM
Volume	496	706	503	753													491	728

Grafton Street (Route 122)
north of Jennings Street
City, State: Worcester, MA
Client: Kimley-Horn/ L. Juan
Site Code: 112858000-02



PRECISION
DATA
INDUSTRIES, LLC

157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

PDI File # 239484 ATR-A

Direction: SB

Weekly Report

Day Date	Wednesday 09/13/23		Thursday 09/14/23												Week Ave			
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM		
12:00	13	95	11	98	0	0	0	0	0	0	0	0	0	0	12	97		
12:15	9	106	8	131	0	0	0	0	0	0	0	0	0	0	9	119		
12:30	13	100	10	124	0	0	0	0	0	0	0	0	0	0	12	112		
12:45	12	104	7	106	0	0	0	0	0	0	0	0	0	0	10	105		
1:00	5	93	7	113	0	0	0	0	0	0	0	0	0	0	6	103		
1:15	4	121	9	136	0	0	0	0	0	0	0	0	0	0	7	129		
1:30	4	99	9	136	0	0	0	0	0	0	0	0	0	0	7	118		
1:45	8	92	4	135	0	0	0	0	0	0	0	0	0	0	6	114		
2:00	3	112	5	124	0	0	0	0	0	0	0	0	0	0	4	118		
2:15	3	127	8	119	0	0	0	0	0	0	0	0	0	0	6	123		
2:30	3	131	4	131	0	0	0	0	0	0	0	0	0	0	4	131		
2:45	6	139	6	150	0	0	0	0	0	0	0	0	0	0	6	145		
3:00	9	109	7	140	0	0	0	0	0	0	0	0	0	0	8	125		
3:15	6	120	3	122	0	0	0	0	0	0	0	0	0	0	5	121		
3:30	3	114	3	112	0	0	0	0	0	0	0	0	0	0	3	113		
3:45	5	102	5	106	0	0	0	0	0	0	0	0	0	0	5	104		
4:00	5	112	13	129	0	0	0	0	0	0	0	0	0	0	9	121		
4:15	19	113	21	116	0	0	0	0	0	0	0	0	0	0	20	115		
4:30	25	95	24	145	0	0	0	0	0	0	0	0	0	0	25	120		
4:45	35	142	27	127	0	0	0	0	0	0	0	0	0	0	31	135		
5:00	44	127	42	148	0	0	0	0	0	0	0	0	0	0	43	138		
5:15	47	120	43	126	0	0	0	0	0	0	0	0	0	0	45	123		
5:30	62	144	64	142	0	0	0	0	0	0	0	0	0	0	63	143		
5:45	76	128	76	125	0	0	0	0	0	0	0	0	0	0	76	127		
6:00	77	103	75	128	0	0	0	0	0	0	0	0	0	0	76	116		
6:15	78	93	96	87	0	0	0	0	0	0	0	0	0	0	87	90		
6:30	90	81	102	121	0	0	0	0	0	0	0	0	0	0	96	101		
6:45	97	84	90	120	0	0	0	0	0	0	0	0	0	0	94	102		
7:00	101	79	105	103	0	0	0	0	0	0	0	0	0	0	103	91		
7:15	125	96	111	100	0	0	0	0	0	0	0	0	0	0	118	98		
7:30	88	84	108	102	0	0	0	0	0	0	0	0	0	0	98	93		
7:45	115	88	135	95	0	0	0	0	0	0	0	0	0	0	125	92		
8:00	113	76	110	59	0	0	0	0	0	0	0	0	0	0	112	68		
8:15	100	53	115	82	0	0	0	0	0	0	0	0	0	0	108	68		
8:30	108	46	103	69	0	0	0	0	0	0	0	0	0	0	106	58		
8:45	101	56	121	83	0	0	0	0	0	0	0	0	0	0	111	70		
9:00	117	45	101	73	0	0	0	0	0	0	0	0	0	0	109	59		
9:15	108	56	104	58	0	0	0	0	0	0	0	0	0	0	106	57		
9:30	100	53	127	55	0	0	0	0	0	0	0	0	0	0	114	54		
9:45	114	38	112	53	0	0	0	0	0	0	0	0	0	0	113	46		
10:00	95	35	106	50	0	0	0	0	0	0	0	0	0	0	101	43		
10:15	116	35	112	38	0	0	0	0	0	0	0	0	0	0	114	37		
10:30	101	26	115	39	0	0	0	0	0	0	0	0	0	0	108	33		
10:45	106	31	107	33	0	0	0	0	0	0	0	0	0	0	107	32		
11:00	114	29	106	27	0	0	0	0	0	0	0	0	0	0	110	28		
11:15	102	26	131	19	0	0	0	0	0	0	0	0	0	0	117	23		
11:30	91	20	106	15	0	0	0	0	0	0	0	0	0	0	99	18		
11:45	110	19	117	13	0	0	0	0	0	0	0	0	0	0	114	16		
Total	2886	4097	3031	4663	0	0	0	0	0	0	0	0	0	0	2959	4380		
Day Total	6983		7694		0		0		0		0		0		7339			
Peak HR	7:15 AM	4:45 PM	7:30 AM	4:30 PM													7:15 AM	4:45 PM
Volume	441	533	468	546													453	538

Grafton Street (Route 122)
north of Jennings Street
City, State: Worcester, MA
Client: Kimley-Horn/ L. Juan
Site Code: 112858000-02



PDI File #: 239484 ATR-A (Speed)

Count Date
Wednesday, September 13, 2023

Speed (60-minute)

NB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	1	4	16	32	21	5	3	0	0	0	0	0	82	38.0	32.8
1:00 AM	0	0	2	5	16	15	5	1	0	0	0	0	0	44	38.0	34.1
2:00 AM	0	0	1	0	7	5	4	0	0	0	0	0	0	17	40.0	34.6
3:00 AM	0	0	0	2	5	9	2	1	0	1	0	0	0	20	40.6	36.8
4:00 AM	0	1	0	4	14	6	7	0	0	0	0	0	0	32	41.0	34.3
5:00 AM	0	0	4	18	34	19	6	1	0	0	0	0	0	82	37.0	32.6
6:00 AM	0	2	12	34	114	62	6	0	0	0	0	0	0	230	36.0	32.2
7:00 AM	0	1	10	65	180	86	6	1	0	0	0	0	0	349	36.0	32.2
8:00 AM	2	9	21	90	210	75	2	0	0	0	0	0	0	409	35.0	30.9
9:00 AM	0	2	14	76	212	73	4	1	0	0	0	0	1	383	35.0	31.7
10:00 AM	0	1	9	104	241	63	4	1	0	0	0	0	0	423	35.0	31.5
11:00 AM	3	5	15	139	177	44	3	1	0	0	0	0	0	387	34.0	30.0
12:00 PM	3	5	24	126	176	39	5	1	1	0	0	0	0	380	34.0	30.1
1:00 PM	3	1	18	135	229	59	5	1	0	0	0	0	0	451	34.0	30.8
2:00 PM	4	12	30	143	205	34	1	0	0	0	0	0	0	429	33.0	29.5
3:00 PM	1	2	25	200	234	43	1	0	1	1	0	0	0	508	34.0	30.1
4:00 PM	2	4	26	161	258	43	2	0	0	0	0	0	0	496	34.0	30.1
5:00 PM	0	4	32	228	239	54	6	0	0	0	0	0	0	563	33.0	29.9
6:00 PM	0	1	18	133	278	83	8	0	0	0	0	0	0	521	35.0	31.4
7:00 PM	0	2	11	100	262	49	9	0	0	0	0	0	0	433	34.0	31.3
8:00 PM	0	0	9	101	177	58	5	1	1	0	0	0	0	352	35.0	31.4
9:00 PM	1	0	16	57	133	58	6	1	0	0	0	0	0	272	35.0	31.6
10:00 PM	0	0	3	39	91	46	4	2	0	0	0	0	0	185	36.4	32.4
11:00 PM	0	0	6	20	68	40	8	2	1	0	0	0	0	145	37.0	33.2
Total	19	53	310	1996	3592	1084	114	18	4	2	0	0	1	7193	35.0	31.0
Percent	0.26%	0.74%	4.31%	27.75%	49.94%	15.07%	1.58%	0.25%	0.06%	0.03%	0.00%	0.00%	0.01%			

AM Peak	11:00 AM	8:00 AM	8:00 AM	11:00 AM	10:00 AM	7:00 AM	4:00 AM	12:00 AM		3:00 AM		9:00 AM	10:00 AM
Volume	3	9	21	139	241	86	7	3	0	1	0	0	423

PM Peak	2:00 PM	2:00 PM	5:00 PM	5:00 PM	6:00 PM	6:00 PM	7:00 PM	10:00 PM	12:00 PM	3:00 PM			5:00 PM
Volume	4	12	32	228	278	83	9	2	1	1	0	0	563

15th Percentile:	27.0 MPH	Average Speed:	31.0 MPH	Posted Speed Limit:	35 MPH
50th Percentile:	31.0 MPH	10 MPH Pace:	27 to 36 MPH	Number of Vehicles > 35 MPH:	814
85th Percentile:	35.0 MPH	Number in Pace:	5900	Percent of Vehicles > 35 MPH:	11.3%
95th Percentile:	37.0 MPH	Percent in Pace:	82.0%		

Grafton Street (Route 122)
north of Jennings Street
City, State: Worcester, MA
Client: Kimley-Horn/ L. Juan
Site Code: 112858000-02



PDI File #: 239484 ATR-A (Speed)

Count Date
Wednesday, September 13, 2023

Speed (60-minute)

SB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	1	3	20	15	6	1	0	0	0	0	0	46	39.3	34.9
1:00 AM	0	0	0	1	4	11	3	1	0	0	0	0	0	20	40.3	36.8
2:00 AM	0	0	1	0	3	7	3	1	0	0	0	0	0	15	40.9	36.7
3:00 AM	0	0	0	2	7	9	4	1	0	0	0	0	0	23	40.7	36.0
4:00 AM	0	0	1	2	22	44	12	1	0	0	0	0	0	82	39.9	36.1
5:00 AM	0	0	1	5	78	119	20	5	1	0	0	0	0	229	39.0	35.7
6:00 AM	0	1	2	13	128	156	46	5	0	0	0	0	0	351	39.0	35.4
7:00 AM	0	0	1	28	169	180	50	2	0	0	0	0	0	430	39.0	35.0
8:00 AM	1	1	8	36	174	172	26	4	2	0	0	0	0	424	38.0	34.3
9:00 AM	0	2	7	23	193	183	25	3	1	0	0	0	0	437	38.0	34.5
10:00 AM	0	1	5	21	219	160	19	0	0	0	0	0	0	425	37.0	33.9
11:00 AM	0	0	3	38	220	143	9	2	0	0	0	0	0	415	37.0	33.4
12:00 PM	1	0	7	67	209	96	9	0	0	0	0	0	0	389	36.0	32.3
1:00 PM	0	0	2	55	188	128	24	0	0	0	0	0	0	397	37.0	33.5
2:00 PM	0	1	8	85	268	122	10	2	0	0	0	0	0	496	36.0	32.4
3:00 PM	1	0	3	55	236	130	16	0	1	0	0	0	0	442	37.0	33.1
4:00 PM	0	1	4	57	239	130	17	0	0	0	0	0	0	448	37.0	33.2
5:00 PM	0	1	5	55	273	170	15	1	0	0	0	0	0	520	37.0	33.3
6:00 PM	0	0	1	18	158	162	17	1	2	0	0	0	0	359	38.0	34.4
7:00 PM	0	0	0	40	166	120	12	5	0	0	0	0	0	343	37.0	33.8
8:00 PM	0	0	1	14	113	85	15	5	0	0	0	0	0	233	38.0	34.4
9:00 PM	1	0	0	21	80	76	12	1	2	0	0	0	0	193	38.0	34.2
10:00 PM	0	0	2	11	45	52	12	4	2	0	0	0	0	128	39.0	35.3
11:00 PM	0	0	0	5	32	42	10	3	1	0	0	0	0	93	39.2	35.7
Total	4	8	63	655	3244	2512	392	48	12	0	0	0	0	6938	38.0	33.9
Percent	0.06%	0.12%	0.91%	9.44%	46.76%	36.21%	5.65%	0.69%	0.17%	0.00%	0.00%	0.00%	0.00%			

AM Peak	8:00 AM	9:00 AM	8:00 AM	11:00 AM	11:00 AM	9:00 AM	7:00 AM	5:00 AM	8:00 AM							9:00 AM
Volume	1	2	8	38	220	183	50	5	2	0	0	0	0	0	0	437
PM Peak	12:00 PM	2:00 PM	2:00 PM	2:00 PM	5:00 PM	5:00 PM	1:00 PM	7:00 PM	6:00 PM							5:00 PM
Volume	1	1	8	85	273	170	24	5	2	0	0	0	0	0	0	520

15th Percentile:	30.0 MPH	Average Speed:	33.9 MPH	Posted Speed Limit:	35 MPH
50th Percentile:	34.0 MPH	10 MPH Pace:	30 to 39 MPH	Number of Vehicles > 35 MPH:	2207
85th Percentile:	38.0 MPH	Number in Pace:	5756	Percent of Vehicles > 35 MPH:	31.8%
95th Percentile:	40.0 MPH	Percent in Pace:	83.0%		

Grafton Street (Route 122)
north of Jennings Street
City, State: Worcester, MA
Client: Kimley-Horn/ L. Juan
Site Code: 112858000-02



PDI File #: 239484 ATR-A (Speed)

Count Date
Wednesday, September 13, 2023

Speed (60-minute)

Combined NB and SB

Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	1	5	19	52	36	11	4	0	0	0	0	0	128	38.0	33.6
1:00 AM	0	0	2	6	20	26	8	2	0	0	0	0	0	64	39.6	34.9
2:00 AM	0	0	2	0	10	12	7	1	0	0	0	0	0	32	40.0	35.6
3:00 AM	0	0	0	4	12	18	6	2	0	1	0	0	0	43	40.7	36.4
4:00 AM	0	1	1	6	36	50	19	1	0	0	0	0	0	114	40.0	35.6
5:00 AM	0	0	5	23	112	138	26	6	1	0	0	0	0	311	39.0	34.9
6:00 AM	0	3	14	47	242	218	52	5	0	0	0	0	0	581	38.0	34.1
7:00 AM	0	1	11	93	349	266	56	3	0	0	0	0	0	779	38.0	33.8
8:00 AM	3	10	29	126	384	247	28	4	2	0	0	0	0	833	37.0	32.6
9:00 AM	0	4	21	99	405	256	29	4	1	0	0	0	1	820	37.0	33.2
10:00 AM	0	2	14	125	460	223	23	1	0	0	0	0	0	848	36.0	32.7
11:00 AM	3	5	18	177	397	187	12	3	0	0	0	0	0	802	36.0	31.8
12:00 PM	4	5	31	193	385	135	14	1	1	0	0	0	0	769	35.0	31.2
1:00 PM	3	1	20	190	417	187	29	1	0	0	0	0	0	848	36.0	32.0
2:00 PM	4	13	38	228	473	156	11	2	0	0	0	0	0	925	35.0	31.1
3:00 PM	2	2	28	255	470	173	17	0	2	1	0	0	0	950	35.0	31.5
4:00 PM	2	5	30	218	497	173	19	0	0	0	0	0	0	944	35.0	31.6
5:00 PM	0	5	37	283	512	224	21	1	0	0	0	0	0	1083	35.0	31.5
6:00 PM	0	1	19	151	436	245	25	1	2	0	0	0	0	880	36.0	32.6
7:00 PM	0	2	11	140	428	169	21	5	0	0	0	0	0	776	36.0	32.4
8:00 PM	0	0	10	115	290	143	20	6	1	0	0	0	0	585	36.0	32.6
9:00 PM	2	0	16	78	213	134	18	2	2	0	0	0	0	465	36.0	32.7
10:00 PM	0	0	5	50	136	98	16	6	2	0	0	0	0	313	38.0	33.6
11:00 PM	0	0	6	25	100	82	18	5	2	0	0	0	0	238	38.0	34.2
Total	23	61	373	2651	6836	3596	506	66	16	2	0	0	1	14131	36.0	32.4
Percent	0.16%	0.43%	2.64%	18.76%	48.38%	25.45%	3.58%	0.47%	0.11%	0.01%	0.00%	0.00%	0.01%			

AM Peak	8:00 AM	8:00 AM	8:00 AM	11:00 AM	10:00 AM	7:00 AM	7:00 AM	5:00 AM	8:00 AM	3:00 AM				9:00 AM	10:00 AM
Volume	3	10	29	177	460	266	56	6	2	1	0	0		1	848

PM Peak	12:00 PM	2:00 PM	2:00 PM	5:00 PM	5:00 PM	6:00 PM	1:00 PM	8:00 PM	3:00 PM	3:00 PM					5:00 PM
Volume	4	13	38	283	512	245	29	6	2	1	0	0		0	1083

15th Percentile:	28.0 MPH	Average Speed:	32.4 MPH	Posted Speed Limit:	35 MPH
50th Percentile:	32.0 MPH	10 MPH Pace:	28 to 37 MPH	Number of Vehicles > 35 MPH:	3021
85th Percentile:	36.0 MPH	Number in Pace:	11235	Percent of Vehicles > 35 MPH:	21.4%
95th Percentile:	39.0 MPH	Percent in Pace:	79.5%		

Grafton Street (Route 122)
north of Jennings Street
City, State: Worcester, MA
Client: Kimley-Horn/ L. Juan
Site Code: 112858000-02



PDI File #: 239484 ATR-A (Speed)

Count Date
Thursday, September 14, 2023

Speed (60-minute)

NB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	2	3	14	34	31	9	1	0	0	0	0	0	94	38.1	33.1
1:00 AM	0	0	4	8	9	11	9	0	1	0	0	0	0	42	40.0	34.0
2:00 AM	0	0	2	4	14	10	3	0	0	0	0	0	0	33	37.2	33.0
3:00 AM	0	0	0	3	8	13	3	0	0	1	0	0	0	28	38.0	35.6
4:00 AM	0	0	1	10	9	14	4	0	0	0	0	0	0	38	39.0	33.7
5:00 AM	0	0	5	16	36	31	5	1	1	0	0	0	0	95	38.0	33.3
6:00 AM	3	4	5	39	119	53	11	1	0	0	0	0	0	235	36.0	32.3
7:00 AM	0	1	7	65	184	79	9	1	0	0	0	0	0	346	36.0	32.3
8:00 AM	3	5	22	128	169	66	5	0	1	0	0	0	0	399	35.0	30.5
9:00 AM	0	0	9	102	228	82	5	1	1	0	0	0	0	428	35.0	31.8
10:00 AM	0	2	11	131	210	48	5	1	0	0	0	0	0	408	34.0	30.6
11:00 AM	2	9	21	150	200	44	2	3	0	0	0	0	0	431	34.0	30.1
12:00 PM	2	4	15	169	235	55	5	0	0	0	0	0	0	485	34.0	30.5
1:00 PM	1	3	33	173	205	51	4	0	0	1	0	0	0	471	34.0	30.1
2:00 PM	4	11	45	171	174	41	2	0	0	0	0	0	0	448	33.0	29.1
3:00 PM	0	6	30	142	255	74	11	0	0	0	0	0	0	518	35.0	30.9
4:00 PM	0	4	23	151	268	71	6	0	0	0	0	0	0	523	34.0	30.8
5:00 PM	3	4	25	207	312	65	5	1	0	0	0	0	0	622	34.0	30.5
6:00 PM	2	5	12	177	305	67	3	0	0	0	0	0	0	571	34.0	30.7
7:00 PM	1	2	15	183	239	66	0	1	0	0	0	0	0	507	34.0	30.5
8:00 PM	1	3	21	109	229	51	3	1	0	0	0	0	0	418	34.0	30.8
9:00 PM	0	2	17	61	178	38	5	2	2	0	0	0	0	305	35.0	31.4
10:00 PM	0	0	6	41	94	56	15	1	0	0	0	0	0	213	37.0	33.0
11:00 PM	0	2	14	21	66	36	13	1	0	0	0	0	0	153	37.0	32.3
Total	22	69	346	2275	3780	1153	142	16	6	2	0	0	0	7811	35.0	30.9
Percent	0.28%	0.88%	4.43%	29.13%	48.39%	14.76%	1.82%	0.20%	0.08%	0.03%	0.00%	0.00%	0.00%			

AM Peak	6:00 AM	11:00 AM	8:00 AM	11:00 AM	9:00 AM	9:00 AM	6:00 AM	11:00 AM	1:00 AM	3:00 AM					11:00 AM
Volume	3	9	22	150	228	82	11	3	1	1	0	0	0	431	
PM Peak	2:00 PM	2:00 PM	2:00 PM	5:00 PM	5:00 PM	3:00 PM	10:00 PM	9:00 PM	9:00 PM	1:00 PM					5:00 PM
Volume	4	11	45	207	312	74	15	2	2	1	0	0	0	622	

15th Percentile:	27.0 MPH	Average Speed:	30.9 MPH	Posted Speed Limit:	35 MPH
50th Percentile:	31.0 MPH	10 MPH Pace:	27 to 36 MPH	Number of Vehicles > 35 MPH:	885
85th Percentile:	35.0 MPH	Number in Pace:	6374	Percent of Vehicles > 35 MPH:	11.3%
95th Percentile:	37.0 MPH	Percent in Pace:	81.6%		

Grafton Street (Route 122)

north of Jennings Street

City, State: Worcester, MA

Client: Kimley-Horn/ L. Juan

Site Code: 112858000-02



PRECISION
D A T A
INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

PDI File #: 239484 ATR-A (Speed)

Count Date

Thursday, September 14, 2023

Speed (60-minute)

SB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	0	2	9	18	4	2	0	0	0	0	0	35	39.9	36.1
1:00 AM	0	0	2	0	8	16	2	1	0	0	0	1	0	30	39.0	36.4
2:00 AM	2	0	1	2	8	8	3	0	0	0	0	0	0	24	38.0	32.0
3:00 AM	0	0	0	1	6	6	2	2	0	0	0	0	0	17	40.6	36.3
4:00 AM	0	0	0	5	21	39	19	2	1	1	0	0	0	88	42.0	36.8
5:00 AM	0	0	3	12	67	111	23	5	0	0	0	0	0	221	39.0	35.4
6:00 AM	0	0	2	21	100	179	51	4	0	0	0	0	0	357	40.0	35.7
7:00 AM	0	1	2	24	143	244	44	7	1	0	0	0	0	466	39.0	35.3
8:00 AM	0	2	2	45	201	168	31	2	0	0	0	0	0	451	38.0	34.0
9:00 AM	0	0	4	46	200	171	27	1	0	0	0	0	0	449	37.0	33.9
10:00 AM	0	0	1	33	221	150	28	4	0	0	0	0	0	437	37.0	34.0
11:00 AM	0	6	8	50	222	142	25	1	0	0	0	0	0	454	37.0	33.2
12:00 PM	0	0	0	40	235	160	28	2	1	0	0	0	0	466	38.0	34.0
1:00 PM	0	0	1	51	274	169	18	2	0	0	0	0	0	515	37.0	33.5
2:00 PM	0	0	9	72	289	146	17	1	0	0	0	0	0	534	36.0	32.9
3:00 PM	0	0	1	42	218	187	24	3	1	0	0	0	0	476	37.0	34.2
4:00 PM	0	2	8	55	240	181	34	1	1	0	0	0	0	522	37.0	33.7
5:00 PM	0	0	4	47	252	214	34	3	0	0	0	0	0	554	38.0	34.1
6:00 PM	0	0	7	45	228	140	27	1	0	0	0	0	0	448	38.0	33.6
7:00 PM	0	0	5	37	213	119	17	3	1	0	0	0	0	395	37.0	33.5
8:00 PM	0	1	2	26	143	102	16	3	0	0	0	0	0	293	37.0	33.7
9:00 PM	0	1	3	15	105	92	17	1	2	0	0	0	0	236	38.0	34.2
10:00 PM	0	0	0	7	67	68	16	5	0	0	0	0	0	163	39.0	35.3
11:00 PM	0	0	3	5	28	26	10	3	0	0	0	0	0	75	40.0	34.8
Total	2	13	68	683	3498	2856	517	59	8	1	0	1	0	7706	38.0	34.1
Percent	0.03%	0.17%	0.88%	8.86%	45.39%	37.06%	6.71%	0.77%	0.10%	0.01%	0.00%	0.01%	0.00%			

AM Peak	2:00 AM	11:00 AM	11:00 AM	11:00 AM	11:00 AM	7:00 AM	6:00 AM	7:00 AM	4:00 AM	4:00 AM		1:00 AM		7:00 AM
Volume	2	6	8	50	222	244	51	7	1	1	0	1	0	466

PM Peak		4:00 PM	2:00 PM	2:00 PM	2:00 PM	5:00 PM	4:00 PM	10:00 PM	9:00 PM					5:00 PM
Volume	0	2	9	72	289	214	34	5	2	0	0	0	0	554

15th Percentile:	30.0 MPH	Average Speed:	34.1 MPH	Posted Speed Limit:	35 MPH
50th Percentile:	34.0 MPH	10 MPH Pace:	30 to 39 MPH	Number of Vehicles > 35 MPH:	2538
85th Percentile:	38.0 MPH	Number in Pace:	6354	Percent of Vehicles > 35 MPH:	32.9%
95th Percentile:	40.0 MPH	Percent in Pace:	82.5%		

Grafton Street (Route 122)
north of Jennings Street
City, State: Worcester, MA
Client: Kimley-Horn/ L. Juan
Site Code: 112858000-02



PDI File #: 239484 ATR-A (Speed)

Count Date
Thursday, September 14, 2023

Speed (60-minute)

Combined NB and SB

Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	2	3	16	43	49	13	3	0	0	0	0	0	129	39.0	33.9
1:00 AM	0	0	6	8	17	27	11	1	1	0	0	1	0	72	40.0	35.0
2:00 AM	2	0	3	6	22	18	6	0	0	0	0	0	0	57	38.0	32.6
3:00 AM	0	0	0	4	14	19	5	2	0	1	0	0	0	45	40.4	35.9
4:00 AM	0	0	1	15	30	53	23	2	1	1	0	0	0	126	41.0	35.8
5:00 AM	0	0	8	28	103	142	28	6	1	0	0	0	0	316	39.0	34.8
6:00 AM	3	4	7	60	219	232	62	5	0	0	0	0	0	592	39.0	34.3
7:00 AM	0	2	9	89	327	323	53	8	1	0	0	0	0	812	38.0	34.0
8:00 AM	3	7	24	173	370	234	36	2	1	0	0	0	0	850	37.0	32.4
9:00 AM	0	0	13	148	428	253	32	2	1	0	0	0	0	877	36.0	32.9
10:00 AM	0	2	12	164	431	198	33	5	0	0	0	0	0	845	36.0	32.3
11:00 AM	2	15	29	200	422	186	27	4	0	0	0	0	0	885	36.0	31.7
12:00 PM	2	4	15	209	470	215	33	2	1	0	0	0	0	951	36.0	32.2
1:00 PM	1	3	34	224	479	220	22	2	0	1	0	0	0	986	36.0	31.8
2:00 PM	4	11	54	243	463	187	19	1	0	0	0	0	0	982	35.0	31.2
3:00 PM	0	6	31	184	473	261	35	3	1	0	0	0	0	994	36.0	32.4
4:00 PM	0	6	31	206	508	252	40	1	1	0	0	0	0	1045	36.0	32.2
5:00 PM	3	4	29	254	564	279	39	4	0	0	0	0	0	1176	36.0	32.2
6:00 PM	2	5	19	222	533	207	30	1	0	0	0	0	0	1019	36.0	32.0
7:00 PM	1	2	20	220	452	185	17	4	1	0	0	0	0	902	36.0	31.8
8:00 PM	1	4	23	135	372	153	19	4	0	0	0	0	0	711	36.0	32.0
9:00 PM	0	3	20	76	283	130	22	3	4	0	0	0	0	541	36.0	32.7
10:00 PM	0	0	6	48	161	124	31	6	0	0	0	0	0	376	38.0	34.0
11:00 PM	0	2	17	26	94	62	23	4	0	0	0	0	0	228	38.0	33.1
Total	24	82	414	2958	7278	4009	659	75	14	3	0	1	0	15517	37.0	32.5
Percent	0.15%	0.53%	2.67%	19.06%	46.90%	25.84%	4.25%	0.48%	0.09%	0.02%	0.00%	0.01%	0.00%			

AM Peak	6:00 AM	11:00 AM	11:00 AM	11:00 AM	10:00 AM	7:00 AM	6:00 AM	7:00 AM	1:00 AM	3:00 AM		1:00 AM		11:00 AM
Volume	3	15	29	200	431	323	62	8	1	1	0	1	0	885
PM Peak	2:00 PM	2:00 PM	2:00 PM	5:00 PM	5:00 PM	5:00 PM	4:00 PM	10:00 PM	9:00 PM	1:00 PM				5:00 PM
Volume	4	11	54	254	564	279	40	6	4	1	0	0	0	1176

15th Percentile:	28.0 MPH	Average Speed:	32.5 MPH	Posted Speed Limit:	35 MPH
50th Percentile:	33.0 MPH	10 MPH Pace:	28 to 37 MPH	Number of Vehicles > 35 MPH:	3423
85th Percentile:	37.0 MPH	Number in Pace:	12216	Percent of Vehicles > 35 MPH:	22.1%
95th Percentile:	39.0 MPH	Percent in Pace:	78.7%		

Grafton Street (Route 122)
 south of Sunderland Road
 City, State: Worcester, MA
 Client: Kimley-Horn/ L. Juan
 Site Code: 112858000-02



PDI File #: 239484 ATR-B

Count Date: **Wednesday, September 13, 2023**
 Direction: **NB**

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	17	0	0	0	17
12:15 AM	0	0	18	0	1	1	20
12:30 AM	0	0	12	0	0	0	12
12:45 AM	0	0	6	0	0	1	7
1:00 AM	0	0	11	0	1	0	12
1:15 AM	0	0	5	0	0	0	5
1:30 AM	0	0	7	0	0	1	8
1:45 AM	0	0	4	0	0	0	4
2:00 AM	0	0	5	0	0	0	5
2:15 AM	0	0	5	0	0	0	5
2:30 AM	0	0	1	0	1	1	3
2:45 AM	0	0	4	0	0	0	4
3:00 AM	0	0	4	0	0	0	4
3:15 AM	0	0	2	0	0	0	2
3:30 AM	0	0	0	0	1	1	2
3:45 AM	0	0	5	0	0	1	6
4:00 AM	0	0	5	0	1	0	6
4:15 AM	0	0	7	0	0	0	7
4:30 AM	0	0	16	0	0	0	16
4:45 AM	0	0	15	0	0	1	16
5:00 AM	0	0	24	0	0	0	24
5:15 AM	0	0	27	1	1	0	29
5:30 AM	0	0	33	0	2	0	35
5:45 AM	0	0	42	0	1	0	43
6:00 AM	0	0	50	0	2	2	54
6:15 AM	0	1	65	2	4	0	72
6:30 AM	0	0	82	5	3	0	90
6:45 AM	0	0	114	0	0	1	115
7:00 AM	0	1	121	3	2	0	127
7:15 AM	0	0	149	0	2	1	152
7:30 AM	0	0	168	2	3	3	176
7:45 AM	0	0	179	5	4	2	190
8:00 AM	0	0	180	3	3	1	187
8:15 AM	0	0	186	0	4	2	192
8:30 AM	0	0	152	2	4	2	160
8:45 AM	0	0	143	1	1	2	147
9:00 AM	1	0	119	0	8	0	128
9:15 AM	0	0	103	0	2	1	106
9:30 AM	0	0	126	1	1	1	129
9:45 AM	0	0	114	1	2	2	119
10:00 AM	0	0	129	0	1	4	134
10:15 AM	0	0	112	1	5	2	120
10:30 AM	0	0	87	0	1	4	92
10:45 AM	0	0	94	0	0	1	95
11:00 AM	0	0	107	1	2	1	111
11:15 AM	0	0	91	1	5	1	98
11:30 AM	0	0	86	0	2	0	88
11:45 AM	0	0	110	1	2	0	113

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	0	116	0	1	5	122
12:15 PM	0	0	114	0	3	3	120
12:30 PM	0	0	105	1	2	1	109
12:45 PM	0	0	100	0	4	2	106
1:00 PM	0	0	106	0	0	3	109
1:15 PM	0	0	114	1	0	2	117
1:30 PM	0	0	107	0	3	1	111
1:45 PM	0	0	128	0	2	0	130
2:00 PM	0	0	126	2	2	0	130
2:15 PM	0	0	106	2	3	3	114
2:30 PM	0	0	113	2	0	1	116
2:45 PM	0	0	113	1	3	0	117
3:00 PM	0	0	134	6	1	1	142
3:15 PM	0	0	131	2	1	0	134
3:30 PM	0	0	139	0	1	0	140
3:45 PM	0	0	125	1	1	1	128
4:00 PM	0	0	120	1	3	0	124
4:15 PM	0	0	114	3	0	1	118
4:30 PM	0	0	148	2	3	2	155
4:45 PM	0	0	134	0	2	0	136
5:00 PM	0	0	120	0	0	3	123
5:15 PM	0	0	150	0	4	2	156
5:30 PM	0	0	140	1	1	0	142
5:45 PM	0	0	139	0	2	0	141
6:00 PM	0	1	132	0	1	1	135
6:15 PM	0	0	131	1	1	0	133
6:30 PM	0	0	110	0	1	2	113
6:45 PM	0	0	127	0	1	2	130
7:00 PM	0	0	97	0	0	1	98
7:15 PM	0	0	98	2	0	1	101
7:30 PM	0	0	89	0	3	0	92
7:45 PM	0	0	78	1	0	0	79
8:00 PM	0	0	66	0	1	0	67
8:15 PM	0	0	75	0	0	0	75
8:30 PM	0	0	69	0	0	1	70
8:45 PM	0	0	63	1	0	0	64
9:00 PM	0	0	47	0	1	0	48
9:15 PM	0	0	45	0	0	0	45
9:30 PM	0	0	59	0	0	0	59
9:45 PM	0	0	39	0	0	1	40
10:00 PM	0	0	36	0	0	0	36
10:15 PM	0	0	29	0	1	0	30
10:30 PM	0	0	26	0	0	1	27
10:45 PM	0	0	24	0	0	1	25
11:00 PM	0	0	28	0	0	1	29
11:15 PM	0	0	23	0	1	1	25
11:30 PM	0	0	14	0	0	0	14
11:45 PM	0	0	18	0	0	0	18

AM Total	1	2	3142	30	72	40	3287
Percentage	0.03%	0.06%	95.59%	0.91%	2.19%	1.22%	
AM Peak	8:15 AM	6:15 AM	7:30 AM	6:15 AM	8:15 AM	9:45 AM	7:30 AM
Volume	1	2	713	10	17	12	745

PM Total	0	1	4465	30	53	44	4593
Percentage	0.00%	0.02%	97.21%	0.65%	1.15%	0.96%	
PM Peak	12:00 PM	5:15 PM	5:15 PM	2:15 PM	12:00 PM	12:00 PM	5:15 PM
Volume	0	1	561	11	10	11	574
Day Total	1	3	7607	60	125	84	7880
Percentage	0.01%	0.04%	96.54%	0.76%	1.59%	1.07%	

Grafton Street (Route 122)
south of Sunderland Road
City, State: Worcester, MA
Client: Kimley-Horn/ L. Juan
Site Code: 112858000-02



PDI File #: 239484 ATR-B

Count Date: Thursday, September 14, 2023
Direction: NB

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	24	0	0	0	24
12:15 AM	0	0	22	0	1	2	25
12:30 AM	0	0	18	0	0	0	18
12:45 AM	0	0	12	0	0	0	12
1:00 AM	0	0	15	0	1	0	16
1:15 AM	0	0	11	0	0	0	11
1:30 AM	0	0	9	0	0	0	9
1:45 AM	0	0	7	0	0	0	7
2:00 AM	0	0	3	0	0	1	4
2:15 AM	0	0	6	0	0	0	6
2:30 AM	0	0	7	0	0	1	8
2:45 AM	0	0	7	0	0	0	7
3:00 AM	0	0	6	0	0	1	7
3:15 AM	0	0	3	0	1	0	4
3:30 AM	0	0	1	0	2	0	3
3:45 AM	0	0	7	0	1	0	8
4:00 AM	0	0	5	0	0	1	6
4:15 AM	0	0	8	0	0	0	8
4:30 AM	0	0	13	0	0	0	13
4:45 AM	0	0	16	0	0	0	16
5:00 AM	0	0	22	0	0	0	22
5:15 AM	0	0	25	1	1	0	27
5:30 AM	0	1	29	0	1	0	31
5:45 AM	0	0	40	0	1	0	41
6:00 AM	0	0	56	0	2	2	60
6:15 AM	0	0	77	3	6	2	88
6:30 AM	0	0	86	3	1	0	90
6:45 AM	0	0	101	1	3	1	106
7:00 AM	0	0	112	2	2	2	118
7:15 AM	0	0	156	1	2	1	160
7:30 AM	0	0	146	2	2	2	152
7:45 AM	0	0	161	5	1	1	168
8:00 AM	0	0	172	1	0	1	174
8:15 AM	0	0	164	0	5	1	170
8:30 AM	0	0	134	1	1	2	138
8:45 AM	0	0	135	1	3	1	140
9:00 AM	0	0	123	0	4	1	128
9:15 AM	0	2	111	0	5	1	119
9:30 AM	1	0	122	0	4	2	129
9:45 AM	0	0	100	1	6	4	111
10:00 AM	1	0	104	1	4	4	114
10:15 AM	0	0	93	1	4	4	102
10:30 AM	0	0	93	0	7	0	100
10:45 AM	0	1	108	0	1	2	112
11:00 AM	1	0	108	0	1	0	110
11:15 AM	0	0	111	2	2	4	119
11:30 AM	0	0	115	0	3	2	120
11:45 AM	0	0	115	1	2	1	119

AM Total	3	4	3119	27	80	47	3280
Percentage	0.09%	0.12%	95.09%	0.82%	2.44%	1.43%	
AM Peak	9:15 AM	8:30 AM	7:30 AM	7:00 AM	9:45 AM	9:30 AM	7:30 AM
Volume	2	2	643	10	21	14	664

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	0	121	0	3	1	125
12:15 PM	0	0	132	0	3	1	136
12:30 PM	0	0	122	0	3	1	126
12:45 PM	0	0	124	1	2	3	130
1:00 PM	0	0	98	0	1	0	99
1:15 PM	0	0	133	1	4	1	139
1:30 PM	0	0	133	0	2	4	139
1:45 PM	0	0	111	1	4	3	119
2:00 PM	0	1	120	2	1	4	128
2:15 PM	0	0	113	2	3	3	121
2:30 PM	0	0	112	1	3	1	117
2:45 PM	0	0	113	5	4	3	125
3:00 PM	0	0	144	3	2	0	149
3:15 PM	0	0	150	3	3	0	156
3:30 PM	1	2	138	1	4	0	146
3:45 PM	0	1	130	2	5	0	138
4:00 PM	0	0	136	1	0	0	137
4:15 PM	0	0	147	1	3	2	153
4:30 PM	0	1	149	0	1	1	152
4:45 PM	0	2	166	1	3	0	172
5:00 PM	0	0	158	0	3	0	161
5:15 PM	2	0	154	0	3	0	159
5:30 PM	0	0	160	1	0	0	161
5:45 PM	0	1	141	1	1	0	144
6:00 PM	1	0	127	0	0	1	129
6:15 PM	0	3	157	1	2	0	163
6:30 PM	0	2	134	0	2	1	139
6:45 PM	0	1	135	0	0	0	136
7:00 PM	0	1	114	0	0	2	117
7:15 PM	0	2	113	1	0	0	116
7:30 PM	0	0	88	0	0	2	90
7:45 PM	0	1	94	1	0	0	96
8:00 PM	0	0	74	0	1	0	75
8:15 PM	0	0	74	0	2	7	83
8:30 PM	0	0	82	1	0	1	84
8:45 PM	0	1	63	0	3	2	69
9:00 PM	0	0	49	0	0	0	49
9:15 PM	0	0	51	0	0	1	52
9:30 PM	0	1	57	0	0	0	58
9:45 PM	0	0	43	0	0	0	43
10:00 PM	0	0	40	0	0	0	40
10:15 PM	0	0	34	0	0	0	34
10:30 PM	0	0	29	0	0	0	29
10:45 PM	0	0	31	0	0	1	32
11:00 PM	0	0	29	0	0	0	29
11:15 PM	0	0	28	0	0	0	28
11:30 PM	0	0	20	0	0	3	23
11:45 PM	0	0	16	0	0	0	16

PM Total	4	20	4887	31	71	49	5062
Percentage	0.08%	0.40%	96.54%	0.61%	1.40%	0.97%	
PM Peak	5:15 PM	6:15 PM	4:45 PM	2:30 PM	3:00 PM	1:30 PM	4:45 PM
Volume	3	7	638	12	14	14	653
Day Total	7	24	8006	58	151	96	8342
Percentage	0.08%	0.29%	95.97%	0.70%	1.81%	1.15%	

Grafton Street (Route 122)
south of Sunderland Road
City, State: Worcester, MA
Client: Kimley-Horn/ L. Juan
Site Code: 112858000-02



PDI File #: 239484 ATR-B

Count Date: **Wednesday, September 13, 2023**
Direction: **SB**

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	9	0	0	1	10
12:15 AM	0	0	8	0	1	0	9
12:30 AM	0	0	11	0	0	0	11
12:45 AM	0	0	6	0	0	1	7
1:00 AM	0	0	6	0	0	0	6
1:15 AM	0	0	6	0	0	2	8
1:30 AM	0	0	5	0	1	0	6
1:45 AM	0	0	3	0	0	1	4
2:00 AM	0	0	2	0	0	2	4
2:15 AM	0	0	4	0	0	0	4
2:30 AM	0	0	2	0	0	0	2
2:45 AM	0	0	4	0	1	1	6
3:00 AM	0	0	8	0	0	0	8
3:15 AM	0	0	6	0	0	0	6
3:30 AM	0	0	4	0	0	0	4
3:45 AM	0	0	6	0	1	0	7
4:00 AM	0	0	9	0	1	1	11
4:15 AM	0	0	11	0	1	1	13
4:30 AM	0	0	13	0	0	0	13
4:45 AM	0	0	27	0	0	0	27
5:00 AM	0	0	36	1	2	2	41
5:15 AM	0	0	50	0	0	0	50
5:30 AM	0	0	68	0	2	0	70
5:45 AM	0	0	84	0	2	0	86
6:00 AM	0	0	93	0	2	0	95
6:15 AM	0	0	63	1	3	0	67
6:30 AM	0	0	81	4	1	2	88
6:45 AM	0	1	111	3	0	0	115
7:00 AM	0	0	86	0	2	1	89
7:15 AM	0	0	124	0	4	1	129
7:30 AM	0	0	95	0	0	2	97
7:45 AM	0	0	108	4	2	3	117
8:00 AM	0	0	106	2	1	1	110
8:15 AM	0	0	119	0	2	2	123
8:30 AM	0	0	135	4	4	0	143
8:45 AM	0	1	109	0	1	2	113
9:00 AM	0	0	109	1	1	1	112
9:15 AM	0	0	90	0	5	2	97
9:30 AM	0	0	121	1	3	1	126
9:45 AM	0	0	124	0	3	2	129
10:00 AM	0	0	99	1	2	1	103
10:15 AM	0	0	110	0	2	1	113
10:30 AM	0	0	106	0	3	1	110
10:45 AM	0	0	110	0	0	1	111
11:00 AM	0	0	112	2	3	2	119
11:15 AM	0	0	114	1	2	0	117
11:30 AM	0	0	100	1	3	2	106
11:45 AM	0	0	118	0	3	1	122

AM Total	0	2	2931	26	64	41	3064
Percentage	0.00%	0.07%	95.66%	0.85%	2.09%	1.34%	
AM Peak	12:00 AM	6:00 AM	8:15 AM	7:45 AM	9:15 AM	7:30 AM	7:45 AM
Volume	0	1	472	10	13	8	493

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	0	119	0	5	1	125
12:15 PM	0	0	114	0	6	1	121
12:30 PM	0	1	111	1	3	2	118
12:45 PM	0	0	104	0	2	1	107
1:00 PM	0	0	106	1	1	2	110
1:15 PM	0	0	112	0	2	3	117
1:30 PM	0	0	120	0	3	1	124
1:45 PM	0	0	96	1	3	3	103
2:00 PM	0	0	103	1	0	2	106
2:15 PM	0	0	146	3	3	2	154
2:30 PM	1	0	182	4	2	1	190
2:45 PM	0	0	154	3	0	1	158
3:00 PM	0	0	150	1	5	1	157
3:15 PM	0	0	141	1	4	1	147
3:30 PM	0	0	129	1	3	1	134
3:45 PM	0	0	151	0	2	1	154
4:00 PM	0	0	173	0	3	0	176
4:15 PM	0	0	194	4	2	0	200
4:30 PM	0	0	174	0	5	1	180
4:45 PM	0	0	193	1	1	0	195
5:00 PM	0	0	174	0	1	0	175
5:15 PM	0	0	185	1	1	1	188
5:30 PM	0	0	164	0	4	0	168
5:45 PM	0	0	171	1	1	0	173
6:00 PM	0	0	134	0	0	1	135
6:15 PM	0	0	113	0	3	0	116
6:30 PM	0	0	111	0	1	0	112
6:45 PM	0	0	109	0	0	1	110
7:00 PM	0	0	96	1	0	1	98
7:15 PM	0	0	115	0	1	1	117
7:30 PM	0	0	103	1	0	0	104
7:45 PM	0	0	75	1	0	1	77
8:00 PM	0	0	87	0	3	0	90
8:15 PM	0	0	68	1	1	0	70
8:30 PM	0	0	48	0	0	0	48
8:45 PM	0	0	45	0	0	0	45
9:00 PM	0	0	57	0	0	1	58
9:15 PM	0	0	44	0	1	0	45
9:30 PM	0	0	47	0	1	0	48
9:45 PM	0	0	44	0	0	1	45
10:00 PM	0	0	40	0	0	1	41
10:15 PM	0	0	28	0	0	0	28
10:30 PM	0	0	33	0	0	0	33
10:45 PM	0	0	28	0	0	2	30
11:00 PM	0	0	32	0	1	0	33
11:15 PM	0	0	12	0	0	0	12
11:30 PM	0	0	24	0	0	0	24
11:45 PM	0	0	18	0	1	1	20

PM Total	1	1	4977	28	75	37	5119
Percentage	0.02%	0.02%	97.23%	0.55%	1.47%	0.72%	
PM Peak	1:45 PM	12:00 PM	4:15 PM	2:00 PM	12:00 PM	1:00 PM	4:00 PM
Volume	1	1	735	11	16	9	751
Day Total	1	3	7908	54	139	78	8183
Percentage	0.01%	0.04%	96.64%	0.66%	1.70%	0.95%	

Grafton Street (Route 122)
south of Sunderland Road
City, State: Worcester, MA
Client: Kimley-Horn/ L. Juan
Site Code: 112858000-02



PDI File #: 239484 ATR-B

Count Date: Thursday, September 14, 2023
Direction: SB

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	13	0	0	0	13
12:15 AM	0	0	9	0	0	0	9
12:30 AM	0	0	4	0	0	0	4
12:45 AM	0	0	4	0	0	0	4
1:00 AM	0	0	9	0	0	1	10
1:15 AM	0	0	7	0	1	0	8
1:30 AM	0	0	4	0	2	0	6
1:45 AM	0	0	4	0	0	0	4
2:00 AM	0	0	6	0	0	2	8
2:15 AM	0	0	6	0	0	3	9
2:30 AM	0	0	6	0	0	1	7
2:45 AM	0	0	2	0	0	0	2
3:00 AM	0	0	11	0	2	0	13
3:15 AM	0	0	3	0	1	1	5
3:30 AM	0	0	4	0	0	0	4
3:45 AM	0	0	3	0	0	0	3
4:00 AM	0	0	14	0	0	0	14
4:15 AM	0	0	12	0	0	0	12
4:30 AM	0	0	18	0	0	0	18
4:45 AM	0	0	23	0	0	1	24
5:00 AM	0	0	34	0	0	0	34
5:15 AM	0	0	46	1	0	0	47
5:30 AM	0	1	54	0	1	0	56
5:45 AM	0	0	91	0	1	1	93
6:00 AM	0	1	86	0	3	0	90
6:15 AM	0	0	81	2	0	2	85
6:30 AM	0	1	91	2	3	1	98
6:45 AM	0	0	108	2	1	0	111
7:00 AM	0	0	105	1	3	2	111
7:15 AM	0	0	108	1	5	2	116
7:30 AM	0	0	131	0	4	1	136
7:45 AM	0	0	105	3	4	2	114
8:00 AM	0	0	107	2	1	1	111
8:15 AM	1	0	109	1	2	2	115
8:30 AM	0	0	131	3	4	4	142
8:45 AM	0	1	115	0	1	4	121
9:00 AM	0	0	100	1	3	2	106
9:15 AM	0	0	109	0	7	2	118
9:30 AM	0	2	105	1	2	1	111
9:45 AM	0	1	120	0	1	3	125
10:00 AM	0	1	104	1	2	1	109
10:15 AM	0	0	120	0	4	1	125
10:30 AM	0	0	85	0	3	2	90
10:45 AM	0	0	116	0	4	0	120
11:00 AM	0	1	121	2	1	3	128
11:15 AM	1	0	104	0	2	1	108
11:30 AM	0	0	117	1	2	4	124
11:45 AM	0	0	110	0	7	3	120

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	0	132	0	6	2	140
12:15 PM	0	0	149	0	4	0	153
12:30 PM	0	0	136	1	2	0	139
12:45 PM	0	0	113	0	6	1	120
1:00 PM	0	0	127	1	1	2	131
1:15 PM	0	0	130	0	1	0	131
1:30 PM	0	0	140	0	1	0	141
1:45 PM	0	1	117	0	4	0	122
2:00 PM	0	0	126	4	2	2	134
2:15 PM	0	0	129	1	2	1	133
2:30 PM	0	0	167	2	2	4	175
2:45 PM	1	0	157	1	2	3	164
3:00 PM	0	0	166	2	1	2	171
3:15 PM	0	0	200	0	4	2	206
3:30 PM	0	1	167	2	0	0	170
3:45 PM	0	1	182	1	5	0	189
4:00 PM	0	0	171	1	2	1	175
4:15 PM	0	1	179	1	4	0	185
4:30 PM	0	0	186	3	2	0	191
4:45 PM	0	0	202	0	1	1	204
5:00 PM	0	1	204	0	1	1	207
5:15 PM	0	0	187	1	1	1	190
5:30 PM	0	1	209	0	0	0	210
5:45 PM	0	0	164	0	1	0	165
6:00 PM	0	1	150	0	0	1	152
6:15 PM	0	2	155	1	1	2	161
6:30 PM	0	1	113	0	0	0	114
6:45 PM	0	0	161	0	0	1	162
7:00 PM	2	0	134	1	1	0	138
7:15 PM	0	0	138	0	0	1	139
7:30 PM	0	0	91	1	0	0	92
7:45 PM	0	0	87	0	0	0	87
8:00 PM	0	2	82	0	0	1	85
8:15 PM	0	2	72	1	0	0	75
8:30 PM	0	0	70	0	0	1	71
8:45 PM	0	2	62	0	0	2	66
9:00 PM	0	0	64	0	1	1	66
9:15 PM	0	0	58	0	0	0	58
9:30 PM	0	0	51	0	0	0	51
9:45 PM	0	0	55	0	0	0	55
10:00 PM	0	1	35	0	0	0	36
10:15 PM	0	0	34	0	0	1	35
10:30 PM	0	0	40	0	0	0	40
10:45 PM	0	0	24	0	0	0	24
11:00 PM	0	0	31	0	0	0	31
11:15 PM	0	0	15	0	0	0	15
11:30 PM	0	0	21	0	0	1	22
11:45 PM	0	0	16	0	0	0	16

AM Total	2	9	2975	24	77	54	3141
Percentage	0.06%	0.29%	94.72%	0.76%	2.45%	1.72%	
AM Peak	7:30 AM	9:15 AM	8:00 AM	7:45 AM	7:00 AM	8:15 AM	8:00 AM
Volume	1	4	462	9	16	12	489

PM Total	3	17	5599	25	58	35	5737
Percentage	0.05%	0.30%	97.59%	0.44%	1.01%	0.61%	
PM Peak	6:15 PM	8:00 PM	4:45 PM	2:00 PM	12:00 PM	2:30 PM	4:45 PM
Volume	2	6	802	8	18	11	811

Day Total	5	26	8574	49	135	89	8878
Percentage	0.06%	0.29%	96.58%	0.55%	1.52%	1.00%	

Grafton Street (Route 122)
 south of Sunderland Road
 City, State: Worcester, MA
 Client: Kimley-Horn/ L. Juan
 Site Code: 112858000-02



PRECISION
 DATA
 INDUSTRIES, LLC

157 Washington Street, Suite 2
 Hudson, MA 01749
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

PDI File # 239484 ATR-B

Direction: NB

Weekly Report

Day Date	Wednesday 09/13/23		Thursday 09/14/23												Week Ave			
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM		
12:00	17	122	24	125	0	0	0	0	0	0	0	0	0	0	21	124		
12:15	20	120	25	136	0	0	0	0	0	0	0	0	0	0	23	128		
12:30	12	109	18	126	0	0	0	0	0	0	0	0	0	0	15	118		
12:45	7	106	12	130	0	0	0	0	0	0	0	0	0	0	10	118		
1:00	12	109	16	99	0	0	0	0	0	0	0	0	0	0	14	104		
1:15	5	117	11	139	0	0	0	0	0	0	0	0	0	0	8	128		
1:30	8	111	9	139	0	0	0	0	0	0	0	0	0	0	9	125		
1:45	4	130	7	119	0	0	0	0	0	0	0	0	0	0	6	125		
2:00	5	130	4	128	0	0	0	0	0	0	0	0	0	0	5	129		
2:15	5	114	6	121	0	0	0	0	0	0	0	0	0	0	6	118		
2:30	3	116	8	117	0	0	0	0	0	0	0	0	0	0	6	117		
2:45	4	117	7	125	0	0	0	0	0	0	0	0	0	0	6	121		
3:00	4	142	7	149	0	0	0	0	0	0	0	0	0	0	6	146		
3:15	2	134	4	156	0	0	0	0	0	0	0	0	0	0	3	145		
3:30	2	140	3	146	0	0	0	0	0	0	0	0	0	0	3	143		
3:45	6	128	8	138	0	0	0	0	0	0	0	0	0	0	7	133		
4:00	6	124	6	137	0	0	0	0	0	0	0	0	0	0	6	131		
4:15	7	118	8	153	0	0	0	0	0	0	0	0	0	0	8	136		
4:30	16	155	13	152	0	0	0	0	0	0	0	0	0	0	15	154		
4:45	16	136	16	172	0	0	0	0	0	0	0	0	0	0	16	154		
5:00	24	123	22	161	0	0	0	0	0	0	0	0	0	0	23	142		
5:15	29	156	27	159	0	0	0	0	0	0	0	0	0	0	28	158		
5:30	35	142	31	161	0	0	0	0	0	0	0	0	0	0	33	152		
5:45	43	141	41	144	0	0	0	0	0	0	0	0	0	0	42	143		
6:00	54	135	60	129	0	0	0	0	0	0	0	0	0	0	57	132		
6:15	72	133	88	163	0	0	0	0	0	0	0	0	0	0	80	148		
6:30	90	113	90	139	0	0	0	0	0	0	0	0	0	0	90	126		
6:45	115	130	106	136	0	0	0	0	0	0	0	0	0	0	111	133		
7:00	127	98	118	117	0	0	0	0	0	0	0	0	0	0	123	108		
7:15	152	101	160	116	0	0	0	0	0	0	0	0	0	0	156	109		
7:30	176	92	152	90	0	0	0	0	0	0	0	0	0	0	164	91		
7:45	190	79	168	96	0	0	0	0	0	0	0	0	0	0	179	88		
8:00	187	67	174	75	0	0	0	0	0	0	0	0	0	0	181	71		
8:15	192	75	170	83	0	0	0	0	0	0	0	0	0	0	181	79		
8:30	160	70	138	84	0	0	0	0	0	0	0	0	0	0	149	77		
8:45	147	64	140	69	0	0	0	0	0	0	0	0	0	0	144	67		
9:00	128	48	128	49	0	0	0	0	0	0	0	0	0	0	128	49		
9:15	106	45	119	52	0	0	0	0	0	0	0	0	0	0	113	49		
9:30	129	59	129	58	0	0	0	0	0	0	0	0	0	0	129	59		
9:45	119	40	111	43	0	0	0	0	0	0	0	0	0	0	115	42		
10:00	134	36	114	40	0	0	0	0	0	0	0	0	0	0	124	38		
10:15	120	30	102	34	0	0	0	0	0	0	0	0	0	0	111	32		
10:30	92	27	100	29	0	0	0	0	0	0	0	0	0	0	96	28		
10:45	95	25	112	32	0	0	0	0	0	0	0	0	0	0	104	29		
11:00	111	29	110	29	0	0	0	0	0	0	0	0	0	0	111	29		
11:15	98	25	119	28	0	0	0	0	0	0	0	0	0	0	109	27		
11:30	88	14	120	23	0	0	0	0	0	0	0	0	0	0	104	19		
11:45	113	18	119	16	0	0	0	0	0	0	0	0	0	0	116	17		
Total	3287	4593	3280	5062	0	0	0	0	0	0	0	0	0	0	3284	4828		
Day Total	7880		8342		0		0		0		0		0		8111			
Peak HR	7:30 AM	5:15 PM	7:30 AM	4:45 PM													7:30 AM	4:30 PM
Volume	745	574	664	653													705	607

Grafton Street (Route 122)
 south of Sunderland Road
 City, State: Worcester, MA
 Client: Kimley-Horn/ L. Juan
 Site Code: 112858000-02



PRECISION
 DATA
 INDUSTRIES, LLC

157 Washington Street, Suite 2
 Hudson, MA 01749
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

PDI File # 239484 ATR-B

Direction: SB

Weekly Report

Day Date	Wednesday 09/13/23		Thursday 09/14/23												Week Ave			
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM		
12:00	10	125	13	140	0	0	0	0	0	0	0	0	0	0	12	133		
12:15	9	121	9	153	0	0	0	0	0	0	0	0	0	0	9	137		
12:30	11	118	4	139	0	0	0	0	0	0	0	0	0	0	8	129		
12:45	7	107	4	120	0	0	0	0	0	0	0	0	0	0	6	114		
1:00	6	110	10	131	0	0	0	0	0	0	0	0	0	0	8	121		
1:15	8	117	8	131	0	0	0	0	0	0	0	0	0	0	8	124		
1:30	6	124	6	141	0	0	0	0	0	0	0	0	0	0	6	133		
1:45	4	103	4	122	0	0	0	0	0	0	0	0	0	0	4	113		
2:00	4	106	8	134	0	0	0	0	0	0	0	0	0	0	6	120		
2:15	4	154	9	133	0	0	0	0	0	0	0	0	0	0	7	144		
2:30	2	190	7	175	0	0	0	0	0	0	0	0	0	0	5	183		
2:45	6	158	2	164	0	0	0	0	0	0	0	0	0	0	4	161		
3:00	8	157	13	171	0	0	0	0	0	0	0	0	0	0	11	164		
3:15	6	147	5	206	0	0	0	0	0	0	0	0	0	0	6	177		
3:30	4	134	4	170	0	0	0	0	0	0	0	0	0	0	4	152		
3:45	7	154	3	189	0	0	0	0	0	0	0	0	0	0	5	172		
4:00	11	176	14	175	0	0	0	0	0	0	0	0	0	0	13	176		
4:15	13	200	12	185	0	0	0	0	0	0	0	0	0	0	13	193		
4:30	13	180	18	191	0	0	0	0	0	0	0	0	0	0	16	186		
4:45	27	195	24	204	0	0	0	0	0	0	0	0	0	0	26	200		
5:00	41	175	34	207	0	0	0	0	0	0	0	0	0	0	38	191		
5:15	50	188	47	190	0	0	0	0	0	0	0	0	0	0	49	189		
5:30	70	168	56	210	0	0	0	0	0	0	0	0	0	0	63	189		
5:45	86	173	93	165	0	0	0	0	0	0	0	0	0	0	90	169		
6:00	95	135	90	152	0	0	0	0	0	0	0	0	0	0	93	144		
6:15	67	116	85	161	0	0	0	0	0	0	0	0	0	0	76	139		
6:30	88	112	98	114	0	0	0	0	0	0	0	0	0	0	93	113		
6:45	115	110	111	162	0	0	0	0	0	0	0	0	0	0	113	136		
7:00	89	98	111	138	0	0	0	0	0	0	0	0	0	0	100	118		
7:15	129	117	116	139	0	0	0	0	0	0	0	0	0	0	123	128		
7:30	97	104	136	92	0	0	0	0	0	0	0	0	0	0	117	98		
7:45	117	77	114	87	0	0	0	0	0	0	0	0	0	0	116	82		
8:00	110	90	111	85	0	0	0	0	0	0	0	0	0	0	111	88		
8:15	123	70	115	75	0	0	0	0	0	0	0	0	0	0	119	73		
8:30	143	48	142	71	0	0	0	0	0	0	0	0	0	0	143	60		
8:45	113	45	121	66	0	0	0	0	0	0	0	0	0	0	117	56		
9:00	112	58	106	66	0	0	0	0	0	0	0	0	0	0	109	62		
9:15	97	45	118	58	0	0	0	0	0	0	0	0	0	0	108	52		
9:30	126	48	111	51	0	0	0	0	0	0	0	0	0	0	119	50		
9:45	129	45	125	55	0	0	0	0	0	0	0	0	0	0	127	50		
10:00	103	41	109	36	0	0	0	0	0	0	0	0	0	0	106	39		
10:15	113	28	125	35	0	0	0	0	0	0	0	0	0	0	119	32		
10:30	110	33	90	40	0	0	0	0	0	0	0	0	0	0	100	37		
10:45	111	30	120	24	0	0	0	0	0	0	0	0	0	0	116	27		
11:00	119	33	128	31	0	0	0	0	0	0	0	0	0	0	124	32		
11:15	117	12	108	15	0	0	0	0	0	0	0	0	0	0	113	14		
11:30	106	24	124	22	0	0	0	0	0	0	0	0	0	0	115	23		
11:45	122	20	120	16	0	0	0	0	0	0	0	0	0	0	121	18		
Total	3064	5119	3141	5737	0	0	0	0	0	0	0	0	0	0	3103	5428		
Day Total	8183		8878		0		0		0		0		0		8531			
Peak HR	7:45 AM	4:00 PM	8:00 AM	4:45 PM													8:00 AM	4:15 PM
Volume	493	751	489	811													489	769

Grafton Street (Route 122)

south of Sunderland Road

City, State: Worcester, MA

Client: Kimley-Horn/ L. Juan

Site Code: 112858000-02



PRECISION
D A T A
INDUSTRIES, LLC

157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

PDI File #: 239484 ATR-B (Speed)

Count Date

Wednesday, September 13, 2023

Speed (60-minute)

NB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	2	6	26	18	5	0	0	0	0	0	0	57	37.0	33.4
1:00 AM	0	0	0	8	12	9	2	0	0	0	0	0	0	31	37.5	32.9
2:00 AM	0	0	0	2	9	4	2	0	0	0	0	0	0	17	36.6	33.9
3:00 AM	0	0	0	2	4	4	4	1	0	0	0	0	0	15	41.0	36.5
4:00 AM	0	0	1	13	19	8	4	1	0	0	0	0	0	46	38.3	32.6
5:00 AM	2	0	3	24	55	34	8	0	1	0	0	0	0	127	37.0	32.5
6:00 AM	4	10	25	86	111	35	7	2	0	0	0	0	0	280	35.0	29.9
7:00 AM	11	28	76	132	164	59	11	0	1	0	0	0	0	482	34.0	28.6
8:00 AM	15	50	90	157	134	45	5	0	0	0	0	0	0	496	33.0	27.1
9:00 AM	1	11	45	130	131	44	4	0	0	0	0	0	0	366	34.0	29.3
10:00 AM	9	22	51	111	128	34	7	2	1	0	0	0	0	365	34.0	28.6
11:00 AM	10	15	45	108	93	26	6	0	0	0	0	0	0	303	33.0	28.0
12:00 PM	5	12	55	114	128	32	6	1	1	0	0	1	0	355	34.0	28.9
1:00 PM	3	12	45	116	135	38	9	1	0	0	0	0	0	359	34.0	29.3
2:00 PM	14	30	44	120	109	31	9	0	0	0	0	0	0	357	34.0	27.7
3:00 PM	20	64	96	79	67	18	4	0	0	0	0	0	0	348	32.0	24.5
4:00 PM	30	53	81	71	68	20	3	0	0	0	0	0	0	326	32.0	24.4
5:00 PM	45	84	63	60	54	16	4	0	0	0	0	0	0	326	31.0	22.8
6:00 PM	20	38	61	111	112	27	8	1	1	0	0	0	0	379	33.0	27.0
7:00 PM	6	19	40	94	113	24	9	1	0	1	0	0	0	307	34.0	28.8
8:00 PM	0	2	22	73	113	36	7	1	0	0	0	0	0	254	35.0	30.7
9:00 PM	0	1	11	48	77	29	5	1	0	0	0	0	0	172	35.0	31.1
10:00 PM	0	0	5	38	45	24	4	2	0	0	1	0	0	119	36.0	31.9
11:00 PM	0	0	4	22	33	22	6	1	1	0	0	0	0	89	37.0	32.8
Total	195	451	865	1725	1940	637	139	15	6	1	1	1	0	5976	34.0	28.2
Percent	3.26%	7.55%	14.47%	28.87%	32.46%	10.66%	2.33%	0.25%	0.10%	0.02%	0.02%	0.02%	0.00%			

AM Peak	8:00 AM	8:00 AM	8:00 AM	8:00 AM	7:00 AM	7:00 AM	7:00 AM	6:00 AM	5:00 AM							8:00 AM
Volume	15	50	90	157	164	59	11	2	1	0	0	0	0	0	0	496

PM Peak	5:00 PM	5:00 PM	3:00 PM	2:00 PM	1:00 PM	1:00 PM	1:00 PM	10:00 PM	12:00 PM	7:00 PM	10:00 PM	12:00 PM				6:00 PM
Volume	45	84	96	120	135	38	9	2	1	1	1	1	0	0	0	379

15th Percentile:	21.0 MPH	Average Speed:	28.2 MPH	Posted Speed Limit:	35 MPH
50th Percentile:	29.0 MPH	10 MPH Pace:	25 to 34 MPH	Number of Vehicles > 35 MPH:	600
85th Percentile:	34.0 MPH	Number in Pace:	3665	Percent of Vehicles > 35 MPH:	10.0%
95th Percentile:	38.0 MPH	Percent in Pace:	61.3%		

Grafton Street (Route 122)
 south of Sunderland Road
 City, State: Worcester, MA
 Client: Kimley-Horn/ L. Juan
 Site Code: 112858000-02



PDI File #: 239484 ATR-B (Speed)

Count Date
 Wednesday, September 13, 2023

Speed (60-minute)

Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	2	3	15	13	2	0	0	0	0	0	0	35	37.8	33.5
1:00 AM	0	0	1	7	8	7	1	0	0	0	0	0	0	24	37.0	31.9
2:00 AM	0	0	0	0	9	4	2	1	0	0	0	0	0	16	39.3	35.4
3:00 AM	0	0	0	3	4	10	4	1	1	0	0	0	0	23	40.7	36.7
4:00 AM	0	0	0	7	18	29	8	2	1	0	0	0	0	65	40.0	35.6
5:00 AM	0	1	1	11	87	84	27	7	0	1	0	0	0	219	40.0	35.4
6:00 AM	1	1	4	24	162	134	24	1	1	0	0	0	0	352	37.0	34.0
7:00 AM	0	0	11	57	186	121	19	3	2	0	0	0	0	399	37.0	33.2
8:00 AM	0	1	6	68	253	134	25	3	0	0	0	0	0	490	37.0	33.1
9:00 AM	1	2	5	52	218	124	39	2	0	0	0	0	0	443	38.0	33.6
10:00 AM	0	1	1	64	224	128	21	5	0	0	0	0	0	444	36.0	33.3
11:00 AM	0	0	7	88	238	98	18	0	0	0	0	0	0	449	36.0	32.3
12:00 PM	0	0	3	73	207	95	10	2	1	0	0	0	0	391	36.0	32.5
1:00 PM	1	0	14	65	192	124	16	3	0	0	0	0	0	415	37.0	32.7
2:00 PM	0	0	14	136	292	122	7	1	0	0	0	0	0	572	36.0	31.8
3:00 PM	0	1	5	114	335	117	10	0	1	0	0	0	0	583	36.0	32.1
4:00 PM	0	0	8	145	435	144	11	0	1	0	0	0	0	744	35.0	32.1
5:00 PM	0	1	13	141	389	128	12	4	1	0	0	0	0	689	35.0	31.9
6:00 PM	0	0	4	58	269	127	14	1	0	0	0	0	0	473	36.0	33.2
7:00 PM	0	1	3	74	193	91	14	1	0	0	0	0	0	377	36.0	32.6
8:00 PM	0	1	3	34	135	50	8	0	0	0	0	0	0	231	36.0	32.7
9:00 PM	0	0	3	27	82	67	10	4	0	0	0	0	0	193	37.0	33.6
10:00 PM	0	0	1	16	57	39	9	0	0	0	0	0	0	122	37.0	33.5
11:00 PM	0	0	1	11	37	30	7	1	1	0	0	0	0	88	38.0	34.0
Total	3	10	110	1278	4045	2020	318	42	10	1	0	0	0	7837	36.0	32.8
Percent	0.04%	0.13%	1.40%	16.31%	51.61%	25.78%	4.06%	0.54%	0.13%	0.01%	0.00%	0.00%	0.00%			

AM Peak	6:00 AM	9:00 AM	7:00 AM	11:00 AM	8:00 AM	6:00 AM	9:00 AM	5:00 AM	7:00 AM	5:00 AM					8:00 AM
Volume	1	2	11	88	253	134	39	7	2	1	0	0	0	490	

PM Peak	1:00 PM	3:00 PM	1:00 PM	4:00 PM	4:00 PM	4:00 PM	1:00 PM	5:00 PM	12:00 PM					4:00 PM
Volume	1	1	14	145	435	144	16	4	1	0	0	0	0	744

15th Percentile:	29.0 MPH	Average Speed:	32.8 MPH	Posted Speed Limit:	35 MPH
50th Percentile:	33.0 MPH	10 MPH Pace:	28 to 37 MPH	Number of Vehicles > 35 MPH:	1697
85th Percentile:	36.0 MPH	Number in Pace:	6459	Percent of Vehicles > 35 MPH:	21.7%
95th Percentile:	39.0 MPH	Percent in Pace:	82.4%		

Grafton Street (Route 122)
 south of Sunderland Road
 City, State: Worcester, MA
 Client: Kimley-Horn/ L. Juan
 Site Code: 112858000-02



PDI File #: 239484 ATR-B (Speed)

Count Date
 Wednesday, September 13, 2023

Speed (60-minute)
Combined NB and SB

Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	4	9	41	31	7	0	0	0	0	0	0	92	37.4	33.5
1:00 AM	0	0	1	15	20	16	3	0	0	0	0	0	0	55	37.0	32.5
2:00 AM	0	0	0	2	18	8	4	1	0	0	0	0	0	33	37.6	34.7
3:00 AM	0	0	0	5	8	14	8	2	1	0	0	0	0	38	41.0	36.6
4:00 AM	0	0	1	20	37	37	12	3	1	0	0	0	0	111	39.0	34.4
5:00 AM	2	1	4	35	142	118	35	7	1	1	0	0	0	346	39.0	34.4
6:00 AM	5	11	29	110	273	169	31	3	1	0	0	0	0	632	37.0	32.2
7:00 AM	11	28	87	189	350	180	30	3	3	0	0	0	0	881	36.0	30.7
8:00 AM	15	51	96	225	387	179	30	3	0	0	0	0	0	986	36.0	30.1
9:00 AM	2	13	50	182	349	168	43	2	0	0	0	0	0	809	37.0	31.6
10:00 AM	9	23	52	175	352	162	28	7	1	0	0	0	0	809	36.0	31.2
11:00 AM	10	15	52	196	331	124	24	0	0	0	0	0	0	752	35.0	30.6
12:00 PM	5	12	58	187	335	127	16	3	2	0	0	1	0	746	35.0	30.8
1:00 PM	4	12	59	181	327	162	25	4	0	0	0	0	0	774	36.0	31.1
2:00 PM	14	30	58	256	401	153	16	1	0	0	0	0	0	929	35.0	30.2
3:00 PM	20	65	101	193	402	135	14	0	1	0	0	0	0	931	35.0	29.3
4:00 PM	30	53	89	216	503	164	14	0	1	0	0	0	0	1070	35.0	29.7
5:00 PM	45	85	76	201	443	144	16	4	1	0	0	0	0	1015	35.0	29.0
6:00 PM	20	38	65	169	381	154	22	2	1	0	0	0	0	852	35.0	30.4
7:00 PM	6	20	43	168	306	115	23	2	0	1	0	0	0	684	35.6	30.9
8:00 PM	0	3	25	107	248	86	15	1	0	0	0	0	0	485	36.0	31.7
9:00 PM	0	1	14	75	159	96	15	5	0	0	0	0	0	365	37.0	32.5
10:00 PM	0	0	6	54	102	63	13	2	0	0	1	0	0	241	37.0	32.7
11:00 PM	0	0	5	33	70	52	13	2	2	0	0	0	0	177	37.0	33.4
Total	198	461	975	3003	5985	2657	457	57	16	2	1	1	0	13813	36.0	30.8
Percent	1.43%	3.34%	7.06%	21.74%	43.33%	19.24%	3.31%	0.41%	0.12%	0.01%	0.01%	0.01%	0.00%			

AM Peak 8:00 AM 8:00 AM 8:00 AM 8:00 AM 8:00 AM 7:00 AM 9:00 AM 5:00 AM 7:00 AM 5:00 AM 8:00 AM
 Volume 15 51 96 225 387 180 43 7 3 1 0 0 0 986

PM Peak 5:00 PM 5:00 PM 3:00 PM 2:00 PM 4:00 PM 4:00 PM 1:00 PM 9:00 PM 12:00 PM 7:00 PM 10:00 PM 12:00 PM 4:00 PM
 Volume 45 85 101 256 503 164 25 5 2 1 1 1 0 1070

15th Percentile: 26.0 MPH Average Speed: 30.8 MPH Posted Speed Limit: 35 MPH
 50th Percentile: 32.0 MPH 10 MPH Pace: 27 to 36 MPH Number of Vehicles > 35 MPH: 2297
 85th Percentile: 36.0 MPH Number in Pace: 9873 Percent of Vehicles > 35 MPH: 16.6%
 95th Percentile: 39.0 MPH Percent in Pace: 71.5%

Grafton Street (Route 122)

south of Sunderland Road

City, State: Worcester, MA

Client: Kimley-Horn/ L. Juan

Site Code: 112858000-02



PRECISION
D A T A
INDUSTRIES, LLC

157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

PDI File #: 239484 ATR-B (Speed)

Count Date

Thursday, September 14, 2023

Speed (60-minute)

NB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	2	14	29	24	10	0	0	1	0	0	0	80	39.0	34.1
1:00 AM	0	0	2	6	15	15	4	0	0	0	0	0	0	42	39.0	34.0
2:00 AM	0	0	0	4	9	4	6	0	0	0	0	0	0	23	40.7	34.8
3:00 AM	0	0	0	5	10	3	3	1	1	0	0	0	0	23	42.1	35.0
4:00 AM	0	0	0	3	18	13	9	1	0	0	0	0	0	44	40.0	35.4
5:00 AM	0	1	4	18	44	41	6	1	0	0	0	0	0	115	38.0	33.3
6:00 AM	0	13	27	70	117	49	9	0	1	0	0	0	0	286	35.3	30.4
7:00 AM	7	18	59	93	163	60	11	0	0	0	0	0	0	411	35.0	29.5
8:00 AM	9	44	79	135	158	41	9	1	0	0	0	0	0	476	33.0	27.8
9:00 AM	7	15	52	116	150	44	9	3	0	0	1	0	0	397	34.0	29.2
10:00 AM	3	10	34	118	149	41	3	1	2	0	0	0	0	361	34.0	29.7
11:00 AM	11	16	53	109	141	45	6	2	0	0	0	0	0	383	34.0	28.7
12:00 PM	9	19	55	115	135	47	7	1	1	0	0	0	0	389	34.0	28.7
1:00 PM	9	24	60	131	110	49	4	2	0	1	0	0	0	390	34.0	28.2
2:00 PM	15	34	59	108	97	21	5	0	1	1	0	0	0	341	33.0	26.8
3:00 PM	38	78	108	62	31	11	2	0	0	0	0	0	0	330	29.0	22.0
4:00 PM	43	88	95	70	49	16	0	0	0	0	0	0	0	361	30.0	22.4
5:00 PM	34	75	91	71	54	23	4	0	0	0	0	0	0	352	32.0	23.7
6:00 PM	19	66	73	112	74	29	8	0	0	0	0	0	0	381	32.0	25.5
7:00 PM	4	18	53	120	125	37	8	0	0	0	0	0	0	365	34.0	28.7
8:00 PM	9	8	38	80	110	26	9	0	0	0	0	0	0	280	34.0	28.9
9:00 PM	3	3	14	57	83	29	3	1	0	0	0	0	0	193	35.0	30.2
10:00 PM	0	1	9	27	60	31	4	2	0	0	0	0	0	134	36.0	32.0
11:00 PM	0	2	3	33	36	18	4	2	1	0	0	0	0	99	37.3	31.8
Total	220	533	970	1677	1967	717	143	18	7	3	1	0	0	6256	34.0	28.0
Percent	3.52%	8.52%	15.51%	26.81%	31.44%	11.46%	2.29%	0.29%	0.11%	0.05%	0.02%	0.00%	0.00%			

AM Peak	11:00 AM	8:00 AM	8:00 AM	8:00 AM	7:00 AM	7:00 AM	7:00 AM	9:00 AM	10:00 AM	12:00 AM	9:00 AM					8:00 AM
Volume	11	44	79	135	163	60	11	3	2	1	1	0	0			476

PM Peak	4:00 PM	4:00 PM	3:00 PM	1:00 PM	12:00 PM	1:00 PM	8:00 PM	1:00 PM	12:00 PM	1:00 PM						1:00 PM
Volume	43	88	108	131	135	49	9	2	1	1	0	0	0			390

15th Percentile:	21.0 MPH	Average Speed:	28.0 MPH	Posted Speed Limit:	35 MPH
50th Percentile:	29.0 MPH	10 MPH Pace:	25 to 34 MPH	Number of Vehicles > 35 MPH:	659
85th Percentile:	34.0 MPH	Number in Pace:	3644	Percent of Vehicles > 35 MPH:	10.5%
95th Percentile:	38.0 MPH	Percent in Pace:	58.2%		

Grafton Street (Route 122)

south of Sunderland Road

City, State: Worcester, MA

Client: Kimley-Horn/ L. Juan

Site Code: 112858000-02



PRECISION
D A T A
INDUSTRIES, LLC

157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

PDI File #: 239484 ATR-B (Speed)

Count Date

Thursday, September 14, 2023

Speed (60-minute)

SB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	1	6	12	6	3	2	0	0	0	0	0	30	39.7	34.0
1:00 AM	0	0	0	2	8	13	3	1	1	0	0	0	0	28	40.0	36.0
2:00 AM	0	0	2	8	9	4	1	1	0	0	0	0	0	25	35.4	31.4
3:00 AM	0	0	1	3	10	5	4	0	0	0	0	0	0	23	39.7	33.8
4:00 AM	0	0	0	3	18	35	11	1	0	0	0	0	0	68	40.0	36.3
5:00 AM	0	1	5	13	67	103	29	6	2	0	0	0	0	226	40.0	35.6
6:00 AM	0	1	1	19	173	131	35	4	2	1	0	0	0	367	39.0	34.7
7:00 AM	0	7	6	29	227	179	26	4	0	0	0	0	0	478	37.0	33.9
8:00 AM	0	0	7	59	238	147	25	1	1	1	0	0	0	479	37.0	33.4
9:00 AM	1	1	15	66	188	140	30	1	0	0	0	0	0	442	37.0	33.1
10:00 AM	0	1	7	41	202	149	23	1	0	0	0	0	0	424	37.0	33.5
11:00 AM	1	1	15	72	228	108	10	1	0	0	0	0	0	436	36.0	32.2
12:00 PM	0	2	15	102	232	104	11	2	1	0	0	0	0	469	36.0	32.0
1:00 PM	0	1	9	62	263	122	19	1	0	0	0	0	0	477	36.0	32.6
2:00 PM	0	4	40	155	252	93	12	2	0	0	0	0	0	558	35.0	30.9
3:00 PM	0	1	18	133	405	113	15	0	0	0	0	0	0	685	35.0	31.7
4:00 PM	1	1	23	166	354	121	14	0	0	0	0	0	0	680	35.0	31.6
5:00 PM	0	3	21	139	368	122	20	4	0	0	1	0	0	678	35.0	31.9
6:00 PM	0	0	15	78	303	125	12	1	0	0	0	0	0	534	36.0	32.3
7:00 PM	0	1	5	92	224	86	6	1	1	0	1	0	0	417	35.0	32.0
8:00 PM	1	0	7	43	139	66	10	0	0	1	0	0	0	267	36.0	32.5
9:00 PM	0	0	1	31	107	64	13	2	0	0	0	0	0	218	37.0	33.4
10:00 PM	0	1	1	15	77	29	7	1	0	0	0	0	0	131	36.5	33.0
11:00 PM	0	0	2	9	35	25	6	2	0	1	0	0	0	80	38.2	34.1
Total	4	26	217	1346	4139	2090	345	39	8	4	2	0	0	8220	36.0	32.6
Percent	0.05%	0.32%	2.64%	16.37%	50.35%	25.43%	4.20%	0.47%	0.10%	0.05%	0.02%	0.00%	0.00%			

AM Peak	9:00 AM	7:00 AM	9:00 AM	11:00 AM	8:00 AM	7:00 AM	6:00 AM	5:00 AM	5:00 AM	6:00 AM					8:00 AM
Volume	1	7	15	72	238	179	35	6	2	1	0	0	0	479	

PM Peak	4:00 PM	2:00 PM	2:00 PM	4:00 PM	3:00 PM	6:00 PM	5:00 PM	5:00 PM	12:00 PM	8:00 PM	5:00 PM				3:00 PM
Volume	1	4	40	166	405	125	20	4	1	1	1	0	0	685	

15th Percentile:	29.0 MPH	Average Speed:	32.6 MPH	Posted Speed Limit:	35 MPH
50th Percentile:	33.0 MPH	10 MPH Pace:	28 to 37 MPH	Number of Vehicles > 35 MPH:	1766
85th Percentile:	36.0 MPH	Number in Pace:	6638	Percent of Vehicles > 35 MPH:	21.5%
95th Percentile:	39.0 MPH	Percent in Pace:	80.8%		

Grafton Street (Route 122)

south of Sunderland Road

City, State: Worcester, MA

Client: Kimley-Horn/ L. Juan

Site Code: 112858000-02



PRECISION
D A T A
INDUSTRIES, LLC

157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

PDI File #: 239484 ATR-B (Speed)

Count Date

Thursday, September 14, 2023

Speed (60-minute)

Combined NB and SB

Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	3	20	41	30	13	2	0	1	0	0	0	110	39.0	34.0
1:00 AM	0	0	2	8	23	28	7	1	1	0	0	0	0	70	39.0	34.8
2:00 AM	0	0	2	12	18	8	7	1	0	0	0	0	0	48	39.9	33.0
3:00 AM	0	0	1	8	20	8	7	1	1	0	0	0	0	46	40.0	34.4
4:00 AM	0	0	0	6	36	48	20	2	0	0	0	0	0	112	40.0	35.9
5:00 AM	0	2	9	31	111	144	35	7	2	0	0	0	0	341	39.0	34.8
6:00 AM	0	14	28	89	290	180	44	4	3	1	0	0	0	653	37.0	32.8
7:00 AM	7	25	65	122	390	239	37	4	0	0	0	0	0	889	37.0	31.9
8:00 AM	9	44	86	194	396	188	34	2	1	1	0	0	0	955	36.0	30.6
9:00 AM	8	16	67	182	338	184	39	4	0	0	1	0	0	839	36.0	31.3
10:00 AM	3	11	41	159	351	190	26	2	2	0	0	0	0	785	36.0	31.8
11:00 AM	12	17	68	181	369	153	16	3	0	0	0	0	0	819	36.0	30.6
12:00 PM	9	21	70	217	367	151	18	3	2	0	0	0	0	858	35.0	30.5
1:00 PM	9	25	69	193	373	171	23	3	0	1	0	0	0	867	35.0	30.6
2:00 PM	15	38	99	263	349	114	17	2	1	1	0	0	0	899	34.3	29.3
3:00 PM	38	79	126	195	436	124	17	0	0	0	0	0	0	1015	34.0	28.5
4:00 PM	44	89	118	236	403	137	14	0	0	0	0	0	0	1041	34.0	28.4
5:00 PM	34	78	112	210	422	145	24	4	0	0	1	0	0	1030	35.0	29.1
6:00 PM	19	66	88	190	377	154	20	1	0	0	0	0	0	915	35.0	29.5
7:00 PM	4	19	58	212	349	123	14	1	1	0	1	0	0	782	35.0	30.5
8:00 PM	10	8	45	123	249	92	19	0	0	1	0	0	0	547	35.0	30.6
9:00 PM	3	3	15	88	190	93	16	3	0	0	0	0	0	411	36.0	31.9
10:00 PM	0	2	10	42	137	60	11	3	0	0	0	0	0	265	36.0	32.5
11:00 PM	0	2	5	42	71	43	10	4	1	1	0	0	0	179	38.0	32.9
Total	224	559	1187	3023	6106	2807	488	57	15	7	3	0	0	14476	36.0	30.6
Percent	1.55%	3.86%	8.20%	20.88%	42.18%	19.39%	3.37%	0.39%	0.10%	0.05%	0.02%	0.00%	0.00%			

AM Peak	11:00 AM	8:00 AM	8:00 AM	8:00 AM	8:00 AM	7:00 AM	6:00 AM	5:00 AM	6:00 AM	12:00 AM	9:00 AM			8:00 AM
Volume	12	44	86	194	396	239	44	7	3	1	1	0	0	955

PM Peak	4:00 PM	4:00 PM	3:00 PM	2:00 PM	3:00 PM	1:00 PM	5:00 PM	5:00 PM	12:00 PM	1:00 PM	5:00 PM			4:00 PM
Volume	44	89	126	263	436	171	24	4	2	1	1	0	0	1041

15th Percentile:	25.0 MPH	Average Speed:	30.6 MPH	Posted Speed Limit:	35 MPH
50th Percentile:	31.0 MPH	10 MPH Pace:	27 to 36 MPH	Number of Vehicles > 35 MPH:	2425
85th Percentile:	36.0 MPH	Number in Pace:	10095	Percent of Vehicles > 35 MPH:	16.8%
95th Percentile:	39.0 MPH	Percent in Pace:	69.7%		

PDI File #: **239484 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Sunderland Road W: Sunderland Road**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars and Heavy Vehicles (Combined)

	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	59	63	0	122	26	14	26	0	66	70	63	0	0	133	5	24	0	0	29	350
7:15 AM	0	80	55	0	135	52	18	41	0	111	65	78	0	0	143	9	47	2	0	58	447
7:30 AM	2	65	42	0	109	45	22	23	0	90	76	99	1	0	176	9	39	2	0	50	425
7:45 AM	0	74	42	0	116	69	13	34	0	116	97	93	0	0	190	8	35	3	0	46	468
Total	2	278	202	0	482	192	67	124	0	383	308	333	1	0	642	31	145	7	0	183	1690
8:00 AM	2	60	36	0	98	41	15	39	0	95	100	81	0	0	181	11	45	6	0	62	436
8:15 AM	0	81	48	0	129	47	24	29	0	100	92	102	0	0	194	15	35	4	0	54	477
8:30 AM	1	76	32	0	109	38	25	40	0	103	75	84	1	0	160	22	41	0	0	63	435
8:45 AM	3	77	40	0	120	34	28	32	0	94	76	72	0	0	148	4	34	3	0	41	403
Total	6	294	156	0	456	160	92	140	0	392	343	339	1	0	683	52	155	13	0	220	1751
Grand Total	8	572	358	0	938	352	159	264	0	775	651	672	2	0	1325	83	300	20	0	403	3441
Approach %	0.9	61.0	38.2	0.0		45.4	20.5	34.1	0.0		49.1	50.7	0.2	0.0		20.6	74.4	5.0	0.0		
Total %	0.2	16.6	10.4	0.0	27.3	10.2	4.6	7.7	0.0	22.5	18.9	19.5	0.1	0.0	38.5	2.4	8.7	0.6	0.0	11.7	
Exiting Leg Total	1044					1309					919					169					3441
Cars	8	549	348	0	905	337	156	250	0	743	636	636	2	0	1274	82	293	18	0	393	3315
% Cars	100.0	96.0	97.2	0.0	96.5	95.7	98.1	94.7	0.0	95.9	97.7	94.6	100.0	0.0	96.2	98.8	97.7	90.0	0.0	97.5	96.3
Exiting Leg Total	991					1277					881					166					3315
Heavy Vehicles	0	23	10	0	33	15	3	14	0	32	15	36	0	0	51	1	7	2	0	10	126
% Heavy Vehicles	0.0	4.0	2.8	0.0	3.5	4.3	1.9	5.3	0.0	4.1	2.3	5.4	0.0	0.0	3.8	1.2	2.3	10.0	0.0	2.5	3.7
Exiting Leg Total	53					32					38					3					126

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

7:45 AM	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	74	42	0	116	69	13	34	0	116	97	93	0	0	190	8	35	3	0	46	468
8:00 AM	2	60	36	0	98	41	15	39	0	95	100	81	0	0	181	11	45	6	0	62	436
8:15 AM	0	81	48	0	129	47	24	29	0	100	92	102	0	0	194	15	35	4	0	54	477
8:30 AM	1	76	32	0	109	38	25	40	0	103	75	84	1	0	160	22	41	0	0	63	435
Total Volume	3	291	158	0	452	195	77	142	0	414	364	360	1	0	725	56	156	13	0	225	1816
% Approach Total	0.7	64.4	35.0	0.0		47.1	18.6	34.3	0.0		50.2	49.7	0.1	0.0		24.9	69.3	5.8	0.0		
PHF	0.375	0.898	0.823	0.000	0.876	0.707	0.770	0.888	0.000	0.892	0.910	0.882	0.250	0.000	0.934	0.636	0.867	0.542	0.000	0.893	0.952
Cars	3	279	152	0	434	187	76	132	0	395	353	341	1	0	695	55	151	11	0	217	1741
Cars %	100.0	95.9	96.2	0.0	96.0	95.9	98.7	93.0	0.0	95.4	97.0	94.7	100.0	0.0	95.9	98.2	96.8	84.6	0.0	96.4	95.9
Heavy Vehicles	0	12	6	0	18	8	1	10	0	19	11	19	0	0	30	1	5	2	0	8	75
Heavy Vehicles %	0.0	4.1	3.8	0.0	4.0	4.1	1.3	7.0	0.0	4.6	3.0	5.3	0.0	0.0	4.1	1.8	3.2	15.4	0.0	3.6	4.1
Cars Enter Leg	3	279	152	0	434	187	76	132	0	395	353	341	1	0	695	55	151	11	0	217	1741
Heavy Enter Leg	0	12	6	0	18	8	1	10	0	19	11	19	0	0	30	1	5	2	0	8	75
Total Entering Leg	3	291	158	0	452	195	77	142	0	414	364	360	1	0	725	56	156	13	0	225	1816
Cars Exiting Leg	539					656					466					80					1741
Heavy Exiting Leg	29					22					23					1					75
Total Exiting Leg	568					678					489					81					1816

PDI File #: **239484 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Sunderland Road W: Sunderland Road**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars

	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	56	61	0	117	23	13	26	0	62	69	59	0	0	128	5	24	0	0	29	336
7:15 AM	0	76	54	0	130	50	18	40	0	108	64	76	0	0	140	9	45	2	0	56	434
7:30 AM	2	63	41	0	106	44	21	22	0	87	76	90	1	0	167	9	39	2	0	50	410
7:45 AM	0	70	40	0	110	66	13	30	0	109	91	88	0	0	179	8	34	3	0	45	443
Total	2	265	196	0	463	183	65	118	0	366	300	313	1	0	614	31	142	7	0	180	1623
8:00 AM	2	58	33	0	93	38	15	37	0	90	97	78	0	0	175	11	44	5	0	60	418
8:15 AM	0	79	48	0	127	46	23	27	0	96	92	98	0	0	190	15	33	3	0	51	464
8:30 AM	1	72	31	0	104	37	25	38	0	100	73	77	1	0	151	21	40	0	0	61	416
8:45 AM	3	75	40	0	118	33	28	30	0	91	74	70	0	0	144	4	34	3	0	41	394
Total	6	284	152	0	442	154	91	132	0	377	336	323	1	0	660	51	151	11	0	213	1692
Grand Total	8	549	348	0	905	337	156	250	0	743	636	636	2	0	1274	82	293	18	0	393	3315
Approach %	0.9	60.7	38.5	0.0		45.4	21.0	33.6	0.0		49.9	49.9	0.2	0.0		20.9	74.6	4.6	0.0		
Total %	0.2	16.6	10.5	0.0	27.3	10.2	4.7	7.5	0.0	22.4	19.2	19.2	0.1	0.0	38.4	2.5	8.8	0.5	0.0	11.9	
Exiting Leg Total	991					1277					881					166					3315

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

	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	70	40	0	110	66	13	30	0	109	91	88	0	0	179	8	34	3	0	45	443
8:00 AM	2	58	33	0	93	38	15	37	0	90	97	78	0	0	175	11	44	5	0	60	418
8:15 AM	0	79	48	0	127	46	23	27	0	96	92	98	0	0	190	15	33	3	0	51	464
8:30 AM	1	72	31	0	104	37	25	38	0	100	73	77	1	0	151	21	40	0	0	61	416
Total Volume	3	279	152	0	434	187	76	132	0	395	353	341	1	0	695	55	151	11	0	217	1741
% Approach Total	0.7	64.3	35.0	0.0		47.3	19.2	33.4	0.0		50.8	49.1	0.1	0.0		25.3	69.6	5.1	0.0		
PHF	0.375	0.883	0.792	0.000	0.854	0.708	0.760	0.868	0.000	0.906	0.910	0.870	0.250	0.000	0.914	0.655	0.858	0.550	0.000	0.889	0.938
Entering Leg	3	279	152	0	434	187	76	132	0	395	353	341	1	0	695	55	151	11	0	217	1741
Exiting Leg	539					656					466					80					1741
Total	973					1051					1161					297					3482

PDI File #: **239484 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Sunderland Road W: Sunderland Road**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**



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

	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	3	2	0	5	3	1	0	0	4	1	4	0	0	5	0	0	0	0	0	14
7:15 AM	0	4	1	0	5	2	0	1	0	3	1	2	0	0	3	0	2	0	0	2	13
7:30 AM	0	2	1	0	3	1	1	1	0	3	0	9	0	0	9	0	0	0	0	0	15
7:45 AM	0	4	2	0	6	3	0	4	0	7	6	5	0	0	11	0	1	0	0	1	25
Total	0	13	6	0	19	9	2	6	0	17	8	20	0	0	28	0	3	0	0	3	67
8:00 AM	0	2	3	0	5	3	0	2	0	5	3	3	0	0	6	0	1	1	0	2	18
8:15 AM	0	2	0	0	2	1	1	2	0	4	0	4	0	0	4	0	2	1	0	3	13
8:30 AM	0	4	1	0	5	1	0	2	0	3	2	7	0	0	9	1	1	0	0	2	19
8:45 AM	0	2	0	0	2	1	0	2	0	3	2	2	0	0	4	0	0	0	0	0	9
Total	0	10	4	0	14	6	1	8	0	15	7	16	0	0	23	1	4	2	0	7	59
Grand Total	0	23	10	0	33	15	3	14	0	32	15	36	0	0	51	1	7	2	0	10	126
Approach %	0.0	69.7	30.3	0.0		46.9	9.4	43.8	0.0		29.4	70.6	0.0	0.0		10.0	70.0	20.0	0.0		
Total %	0.0	18.3	7.9	0.0	26.2	11.9	2.4	11.1	0.0	25.4	11.9	28.6	0.0	0.0	40.5	0.8	5.6	1.6	0.0	7.9	
Exiting Leg Total	53					32					38					3					126
Buses	0	5	3	0	8	8	1	4	0	13	3	12	0	0	15	1	5	2	0	8	44
% Buses	0.0	21.7	30.0	0.0	24.2	53.3	33.3	28.6	0.0	40.6	20.0	33.3	0.0	0.0	29.4	100.0	71.4	100.0	0.0	80.0	34.9
Exiting Leg Total	22					11					10					1					44
Single-Unit Trucks	0	13	4	0	17	6	2	2	0	10	8	16	0	0	24	0	2	0	0	2	53
% Single-Unit	0.0	56.5	40.0	0.0	51.5	40.0	66.7	14.3	0.0	31.3	53.3	44.4	0.0	0.0	47.1	0.0	28.6	0.0	0.0	20.0	42.1
Exiting Leg Total	22					14					15					2					53
Articulated Trucks	0	5	3	0	8	1	0	8	0	9	4	8	0	0	12	0	0	0	0	0	29
% Articulated	0.0	21.7	30.0	0.0	24.2	6.7	0.0	57.1	0.0	28.1	26.7	22.2	0.0	0.0	23.5	0.0	0.0	0.0	0.0	0.0	23.0
Exiting Leg Total	9					7					13					0					29

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

	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	4	2	0	6	3	0	4	0	7	6	5	0	0	11	0	1	0	0	1	25
8:00 AM	0	2	3	0	5	3	0	2	0	5	3	3	0	0	6	0	1	1	0	2	18
8:15 AM	0	2	0	0	2	1	1	2	0	4	0	4	0	0	4	0	2	1	0	3	13
8:30 AM	0	4	1	0	5	1	0	2	0	3	2	7	0	0	9	1	1	0	0	2	19
Total Volume	0	12	6	0	18	8	1	10	0	19	11	19	0	0	30	1	5	2	0	8	75
% Approach Total	0.0	66.7	33.3	0.0		42.1	5.3	52.6	0.0		36.7	63.3	0.0	0.0		12.5	62.5	25.0	0.0		
PHF	0.000	0.750	0.500	0.000	0.750	0.667	0.250	0.625	0.000	0.679	0.458	0.679	0.000	0.000	0.682	0.250	0.625	0.500	0.000	0.667	0.750
Buses	0	5	2	0	7	5	0	4	0	9	3	7	0	0	10	1	3	2	0	6	32
Buses %	0.0	41.7	33.3	0.0	38.9	62.5	0.0	40.0	0.0	47.4	27.3	36.8	0.0	0.0	33.3	100.0	60.0	100.0	0.0	75.0	42.7
Single-Unit Trucks	0	5	3	0	8	3	1	2	0	6	5	8	0	0	13	0	2	0	0	2	29
Single-Unit %	0.0	41.7	50.0	0.0	44.4	37.5	100.0	20.0	0.0	31.6	45.5	42.1	0.0	0.0	43.3	0.0	40.0	0.0	0.0	25.0	38.7
Articulated Trucks	0	2	1	0	3	0	0	4	0	4	3	4	0	0	7	0	0	0	0	0	14
Articulated %	0.0	16.7	16.7	0.0	16.7	0.0	0.0	40.0	0.0	21.1	27.3	21.1	0.0	0.0	23.3	0.0	0.0	0.0	0.0	0.0	18.7
Buses	0	5	2	0	7	5	0	4	0	9	3	7	0	0	10	1	3	2	0	6	32
Single-Unit Trucks	0	5	3	0	8	3	1	2	0	6	5	8	0	0	13	0	2	0	0	2	29
Articulated Trucks	0	2	1	0	3	0	0	4	0	4	3	4	0	0	7	0	0	0	0	0	14
Total Entering Leg	0	12	6	0	18	8	1	10	0	19	11	19	0	0	30	1	5	2	0	8	75
Buses	14					8					10					0					32
Single-Unit Trucks	11					10					7					1					29
Articulated Trucks	4					4					6					0					14
Total Exiting Leg	29					22					23					1					75

PDI File #: **239484 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Sunderland Road W: Sunderland Road**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Buses

	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	1	1	0	0	2	0	2	0	0	2	0	0	0	0	0	4
7:15 AM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	2	0	0	2	3
7:30 AM	0	0	1	0	1	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	4
7:45 AM	0	2	2	0	4	2	0	2	0	4	3	2	0	0	5	0	1	0	0	1	14
Total	0	2	3	0	5	5	1	2	0	8	3	6	0	0	9	0	3	0	0	3	25
8:00 AM	0	1	0	0	1	2	0	1	0	3	0	2	0	0	2	0	1	1	0	2	8
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1	0	2	3
8:30 AM	0	2	0	0	2	1	0	1	0	2	0	2	0	0	2	1	0	0	0	1	7
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total	0	3	0	0	3	3	0	2	0	5	0	6	0	0	6	1	2	2	0	5	19
Grand Total	0	5	3	0	8	8	1	4	0	13	3	12	0	0	15	1	5	2	0	8	44
Approach %	0.0	62.5	37.5	0.0		61.5	7.7	30.8	0.0		20.0	80.0	0.0	0.0		12.5	62.5	25.0	0.0		
Total %	0.0	11.4	6.8	0.0	18.2	18.2	2.3	9.1	0.0	29.5	6.8	27.3	0.0	0.0	34.1	2.3	11.4	4.5	0.0	18.2	
Exiting Leg Total	22					11					10					1					44

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

	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	2	2	0	4	2	0	2	0	4	3	2	0	0	5	0	1	0	0	1	14
8:00 AM	0	1	0	0	1	2	0	1	0	3	0	2	0	0	2	0	1	1	0	2	8
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1	0	2	3
8:30 AM	0	2	0	0	2	1	0	1	0	2	0	2	0	0	2	1	0	0	0	1	7
Total Volume	0	5	2	0	7	5	0	4	0	9	3	7	0	0	10	1	3	2	0	6	32
% Approach Total	0.0	71.4	28.6	0.0		55.6	0.0	44.4	0.0		30.0	70.0	0.0	0.0		16.7	50.0	33.3	0.0		
PHF	0.000	0.625	0.250	0.000	0.438	0.625	0.000	0.500	0.000	0.563	0.250	0.875	0.000	0.000	0.500	0.250	0.750	0.500	0.000	0.750	0.571
Entering Leg	0	5	2	0	7	5	0	4	0	9	3	7	0	0	10	1	3	2	0	6	32
Exiting Leg	14					8					10					0					32
Total	21					17					20					6					64

PDI File #: **239484 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Sunderland Road W: Sunderland Road**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Single-Unit Trucks

	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	2	0	0	2	2	0	0	0	2	1	2	0	0	3	0	0	0	0	0	7	
7:15 AM	0	4	1	0	5	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	7	
7:30 AM	0	0	0	0	0	0	1	0	0	1	0	4	0	0	4	0	0	0	0	0	5	
7:45 AM	0	1	0	0	1	1	0	0	0	1	3	2	0	0	5	0	0	0	0	0	7	
Total	0	7	1	0	8	3	1	0	0	4	5	9	0	0	14	0	0	0	0	0	26	
8:00 AM	0	1	2	0	3	1	0	0	0	1	2	1	0	0	3	0	0	0	0	0	7	
8:15 AM	0	1	0	0	1	1	1	1	0	3	0	3	0	0	3	0	1	0	0	1	8	
8:30 AM	0	2	1	0	3	0	0	1	0	1	0	2	0	0	2	0	1	0	0	1	7	
8:45 AM	0	2	0	0	2	1	0	0	0	1	1	1	0	0	2	0	0	0	0	0	5	
Total	0	6	3	0	9	3	1	2	0	6	3	7	0	0	10	0	2	0	0	2	27	
Grand Total	0	13	4	0	17	6	2	2	0	10	8	16	0	0	24	0	2	0	0	2	53	
Approach %	0.0	76.5	23.5	0.0		60.0	20.0	20.0	0.0		33.3	66.7	0.0	0.0		0.0	100.0	0.0	0.0			
Total %	0.0	24.5	7.5	0.0	32.1	11.3	3.8	3.8	0.0	18.9	15.1	30.2	0.0	0.0	45.3	0.0	3.8	0.0	0.0	3.8		
Exiting Leg Total						22					14					15					2	53

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

	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	1	0	0	1	1	0	0	0	1	3	2	0	0	5	0	0	0	0	0	7	
7:45 AM	0	1	0	0	1	1	0	0	0	1	2	1	0	0	3	0	0	0	0	0	7	
8:00 AM	0	1	2	0	3	1	0	0	0	1	2	1	0	0	3	0	0	0	0	0	7	
8:15 AM	0	1	0	0	1	1	1	1	0	3	0	3	0	0	3	0	1	0	0	1	8	
8:30 AM	0	2	1	0	3	0	0	1	0	1	0	2	0	0	2	0	1	0	0	1	7	
Total Volume	0	5	3	0	8	3	1	2	0	6	5	8	0	0	13	0	2	0	0	2	29	
% Approach Total	0.0	62.5	37.5	0.0		50.0	16.7	33.3	0.0		38.5	61.5	0.0	0.0		0.0	100.0	0.0	0.0			
PHF	0.000	0.625	0.375	0.000	0.667	0.750	0.250	0.500	0.000	0.500	0.417	0.667	0.000	0.000	0.650	0.000	0.500	0.000	0.000	0.500	0.906	
Entering Leg	0	5	3	0	8	3	1	2	0	6	5	8	0	0	13	0	2	0	0	2	29	
Exiting Leg						11					10					7					1	29
Total						19					16					20					3	58

PDI File #: **239484 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Sunderland Road W: Sunderland Road**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Articulated Trucks

	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	1	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
7:15 AM	0	0	0	0	0	1	0	1	0	2	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	3
7:30 AM	0	2	0	0	2	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	6
7:45 AM	0	1	0	0	1	0	0	2	0	2	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	4
Total	0	4	2	0	6	1	0	4	0	5	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	16
8:00 AM	0	0	1	0	1	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3
8:15 AM	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	2	3	0	0	5	0	0	0	0	0	0	0	0	0	0	5
8:45 AM	0	0	0	0	0	0	0	2	0	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3
Total	0	1	1	0	2	0	0	4	0	4	4	3	0	0	7	0	0	0	0	0	0	0	0	0	0	13
Grand Total	0	5	3	0	8	1	0	8	0	9	4	8	0	0	12	0	0	0	0	0	0	0	0	0	0	29
Approach %	0.0	62.5	37.5	0.0		11.1	0.0	88.9	0.0		33.3	66.7	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	17.2	10.3	0.0	27.6	3.4	0.0	27.6	0.0	31.0	13.8	27.6	0.0	0.0	41.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total						9					7					13					0	29				

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

	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	1	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
7:15 AM	0	0	0	0	0	1	0	1	0	2	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	3
7:30 AM	0	2	0	0	2	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	6
7:45 AM	0	1	0	0	1	0	0	2	0	2	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	4
Total Volume	0	4	2	0	6	1	0	4	0	5	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	16
% Approach Total	0.0	66.7	33.3	0.0		20.0	0.0	80.0	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		
PHF	0.000	0.500	0.250	0.000	0.500	0.250	0.000	0.500	0.000	0.625	0.000	0.417	0.000	0.000	0.417	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.667
Entering Leg	0	4	2	0	6	1	0	4	0	5	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	16
Exiting Leg						6					2					8					0	16				
Total						12					7					13					0	32				

PDI File #: **239484 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Sunderland Road W: Sunderland Road**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Bicycles (on Roadway and Crosswalks)

	Grafton Street (Route 122)								Sunderland Road								Grafton Street (Route 122)								Sunderland 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	1	1	0	0	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	0		
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	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	0		
Total	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	3		
8:00 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		
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	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	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	0	0	0	0	0	0	0	0	0	0		
Total	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2		
Grand Total	0	0	0	0	0	0	0	0	0	0	0	2	2	4	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	5		
Approach %	0.0	0.0	0.0	0.0	0.0	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	100.0	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	40.0	40.0	80.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	20.0	0.0	0.0	0.0	0.0	20.0					
Exiting Leg Total	0							5							0							0	5										

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

	Grafton Street (Route 122)								Sunderland Road								Grafton Street (Route 122)								Sunderland 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		
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	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	0		
8:00 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		
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2		
Total Volume	0	0	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	4		
% Approach Total	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	0.0	0.0	0.0	0.0		0.0	100.0	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	0.500	0.250	0.375	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	0.250	0.500				
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	4			
Exiting Leg	0							4							0							0	4										
Total	0							7							0							1	8										

PDI File #: **239484 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Sunderland Road W: Sunderland Road**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars and Heavy Vehicles (Combined)

	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	4	79	49	0	132	71	50	87	0	208	36	90	0	0	126	11	31	0	0	42	508
4:15 PM	2	82	53	0	137	69	48	109	0	226	29	84	1	0	114	5	24	0	0	29	506
4:30 PM	4	76	31	0	111	70	65	101	0	236	45	106	1	0	152	7	31	3	0	41	540
4:45 PM	1	89	46	0	136	64	56	98	0	218	40	97	2	0	139	8	22	3	0	33	526
Total	11	326	179	0	516	274	219	395	0	888	150	377	4	0	531	31	108	6	0	145	2080
5:00 PM	2	92	45	0	139	83	57	79	0	219	26	102	0	0	128	10	30	3	0	43	529
5:15 PM	4	100	53	0	157	75	54	86	0	215	43	110	1	0	154	4	31	1	0	36	562
5:30 PM	1	84	54	0	139	63	62	77	0	202	27	110	1	0	138	5	30	4	0	39	518
5:45 PM	1	100	46	0	147	54	49	73	0	176	25	118	0	0	143	9	21	1	0	31	497
Total	8	376	198	0	582	275	222	315	0	812	121	440	2	0	563	28	112	9	0	149	2106
Grand Total	19	702	377	0	1098	549	441	710	0	1700	271	817	6	0	1094	59	220	15	0	294	4186
Approach %	1.7	63.9	34.3	0.0		32.3	25.9	41.8	0.0		24.8	74.7	0.5	0.0		20.1	74.8	5.1	0.0		
Total %	0.5	16.8	9.0	0.0	26.2	13.1	10.5	17.0	0.0	40.6	6.5	19.5	0.1	0.0	26.1	1.4	5.3	0.4	0.0	7.0	
Exiting Leg Total	1381					868					1471					466					4186
Cars	19	691	372	0	1082	545	434	699	0	1678	262	794	6	0	1062	57	216	15	0	288	4110
% Cars	100.0	98.4	98.7	0.0	98.5	99.3	98.4	98.5	0.0	98.7	96.7	97.2	100.0	0.0	97.1	96.6	98.2	100.0	0.0	98.0	98.2
Exiting Leg Total	1354					850					1447					459					4110
Heavy Vehicles	0	11	5	0	16	4	7	11	0	22	9	23	0	0	32	2	4	0	0	6	76
% Heavy Vehicles	0.0	1.6	1.3	0.0	1.5	0.7	1.6	1.5	0.0	1.3	3.3	2.8	0.0	0.0	2.9	3.4	1.8	0.0	0.0	2.0	1.8
Exiting Leg Total	27					18					24					7					76

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

4:30 PM	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	
4:30 PM	4	76	31	0	111	70	65	101	0	236	45	106	1	0	152	7	31	3	0	41	540
4:45 PM	1	89	46	0	136	64	56	98	0	218	40	97	2	0	139	8	22	3	0	33	526
5:00 PM	2	92	45	0	139	83	57	79	0	219	26	102	0	0	128	10	30	3	0	43	529
5:15 PM	4	100	53	0	157	75	54	86	0	215	43	110	1	0	154	4	31	1	0	36	562
Total Volume	11	357	175	0	543	292	232	364	0	888	154	415	4	0	573	29	114	10	0	153	2157
% Approach Total	2.0	65.7	32.2	0.0		32.9	26.1	41.0	0.0		26.9	72.4	0.7	0.0		19.0	74.5	6.5	0.0		
PHF	0.688	0.893	0.825	0.000	0.865	0.880	0.892	0.901	0.000	0.941	0.856	0.943	0.500	0.000	0.930	0.725	0.919	0.833	0.000	0.890	0.960
Cars	11	353	173	0	537	291	230	358	0	879	148	402	4	0	554	28	114	10	0	152	2122
Cars %	100.0	98.9	98.9	0.0	98.9	99.7	99.1	98.4	0.0	99.0	96.1	96.9	100.0	0.0	96.7	96.6	100.0	100.0	0.0	99.3	98.4
Heavy Vehicles	0	4	2	0	6	1	2	6	0	9	6	13	0	0	19	1	0	0	0	1	35
Heavy Vehicles %	0.0	1.1	1.1	0.0	1.1	0.3	0.9	1.6	0.0	1.0	3.9	3.1	0.0	0.0	3.3	3.4	0.0	0.0	0.0	0.7	1.6
Cars Enter Leg	11	353	173	0	537	291	230	358	0	879	148	402	4	0	554	28	114	10	0	152	2122
Heavy Enter Leg	0	4	2	0	6	1	2	6	0	9	6	13	0	0	19	1	0	0	0	1	35
Total Entering Leg	11	357	175	0	543	292	232	364	0	888	154	415	4	0	573	29	114	10	0	153	2157
Cars Exiting Leg	703					435					739					245					2122
Heavy Exiting Leg	14					8					11					2					35
Total Exiting Leg	717					443					750					247					2157

PDI File #: **239484 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Sunderland Road W: Sunderland Road**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars

	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	4	78	49	0	131	71	48	86	0	205	35	87	0	0	122	11	30	0	0	41	499
4:15 PM	2	80	52	0	134	69	47	107	0	223	27	81	1	0	109	4	22	0	0	26	492
4:30 PM	4	73	31	0	108	70	65	98	0	233	43	101	1	0	145	6	31	3	0	40	526
4:45 PM	1	89	45	0	135	63	54	98	0	215	40	96	2	0	138	8	22	3	0	33	521
Total	11	320	177	0	508	273	214	389	0	876	145	365	4	0	514	29	105	6	0	140	2038
5:00 PM	2	92	45	0	139	83	57	78	0	218	25	99	0	0	124	10	30	3	0	43	524
5:15 PM	4	99	52	0	155	75	54	84	0	213	40	106	1	0	147	4	31	1	0	36	551
5:30 PM	1	82	53	0	136	62	61	75	0	198	27	108	1	0	136	5	29	4	0	38	508
5:45 PM	1	98	45	0	144	52	48	73	0	173	25	116	0	0	141	9	21	1	0	31	489
Total	8	371	195	0	574	272	220	310	0	802	117	429	2	0	548	28	111	9	0	148	2072
Grand Total	19	691	372	0	1082	545	434	699	0	1678	262	794	6	0	1062	57	216	15	0	288	4110
Approach %	1.8	63.9	34.4	0.0		32.5	25.9	41.7	0.0		24.7	74.8	0.6	0.0		19.8	75.0	5.2	0.0		
Total %	0.5	16.8	9.1	0.0	26.3	13.3	10.6	17.0	0.0	40.8	6.4	19.3	0.1	0.0	25.8	1.4	5.3	0.4	0.0	7.0	
Exiting Leg Total	1354					850					1447					459					4110

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

	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	
4:30 PM	4	73	31	0	108	70	65	98	0	233	43	101	1	0	145	6	31	3	0	40	526
4:45 PM	1	89	45	0	135	63	54	98	0	215	40	96	2	0	138	8	22	3	0	33	521
5:00 PM	2	92	45	0	139	83	57	78	0	218	25	99	0	0	124	10	30	3	0	43	524
5:15 PM	4	99	52	0	155	75	54	84	0	213	40	106	1	0	147	4	31	1	0	36	551
Total Volume	11	353	173	0	537	291	230	358	0	879	148	402	4	0	554	28	114	10	0	152	2122
% Approach Total	2.0	65.7	32.2	0.0		33.1	26.2	40.7	0.0		26.7	72.6	0.7	0.0		18.4	75.0	6.6	0.0		
PHF	0.688	0.891	0.832	0.000	0.866	0.877	0.885	0.913	0.000	0.943	0.860	0.948	0.500	0.000	0.942	0.700	0.919	0.833	0.000	0.884	0.963
Entering Leg	11	353	173	0	537	291	230	358	0	879	148	402	4	0	554	28	114	10	0	152	2122
Exiting Leg	703					435					739					245					2122
Total	1240					1314					1293					397					4244

PDI File #: **239484 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Sunderland Road W: Sunderland Road**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



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

	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	1	0	0	1	0	2	1	0	3	1	3	0	0	4	0	1	0	0	1	9
4:15 PM	0	2	1	0	3	0	1	2	0	3	2	3	0	0	5	1	2	0	0	3	14
4:30 PM	0	3	0	0	3	0	0	3	0	3	2	5	0	0	7	1	0	0	0	1	14
4:45 PM	0	0	1	0	1	1	2	0	0	3	0	1	0	0	1	0	0	0	0	0	5
Total	0	6	2	0	8	1	5	6	0	12	5	12	0	0	17	2	3	0	0	5	42
5:00 PM	0	0	0	0	0	0	0	1	0	1	1	3	0	0	4	0	0	0	0	0	5
5:15 PM	0	1	1	0	2	0	0	2	0	2	3	4	0	0	7	0	0	0	0	0	11
5:30 PM	0	2	1	0	3	1	1	2	0	4	0	2	0	0	2	0	1	0	0	1	10
5:45 PM	0	2	1	0	3	2	1	0	0	3	0	2	0	0	2	0	0	0	0	0	8
Total	0	5	3	0	8	3	2	5	0	10	4	11	0	0	15	0	1	0	0	1	34
Grand Total	0	11	5	0	16	4	7	11	0	22	9	23	0	0	32	2	4	0	0	6	76
Approach %	0.0	68.8	31.3	0.0		18.2	31.8	50.0	0.0		28.1	71.9	0.0	0.0		33.3	66.7	0.0	0.0		
Total %	0.0	14.5	6.6	0.0	21.1	5.3	9.2	14.5	0.0	28.9	11.8	30.3	0.0	0.0	42.1	2.6	5.3	0.0	0.0	7.9	
Exiting Leg Total	27					18					24					7					76
Buses	0	4	4	0	8	3	1	3	0	7	2	5	0	0	7	1	1	0	0	2	24
% Buses	0.0	36.4	80.0	0.0	50.0	75.0	14.3	27.3	0.0	31.8	22.2	21.7	0.0	0.0	21.9	50.0	25.0	0.0	0.0	33.3	31.6
Exiting Leg Total	8					7					8					1					24
Single-Unit Trucks	0	6	1	0	7	1	6	6	0	13	2	15	0	0	17	1	3	0	0	4	41
% Single-Unit	0.0	54.5	20.0	0.0	43.8	25.0	85.7	54.5	0.0	59.1	22.2	65.2	0.0	0.0	53.1	50.0	75.0	0.0	0.0	66.7	53.9
Exiting Leg Total	16					6					13					6					41
Articulated Trucks	0	1	0	0	1	0	0	2	0	2	5	3	0	0	8	0	0	0	0	0	11
% Articulated	0.0	9.1	0.0	0.0	6.3	0.0	0.0	18.2	0.0	9.1	55.6	13.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	14.5
Exiting Leg Total	3					5					3					0					11

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

	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	1	0	0	1	0	2	1	0	3	1	3	0	0	4	0	1	0	0	1	9
4:15 PM	0	2	1	0	3	0	1	2	0	3	2	3	0	0	5	1	2	0	0	3	14
4:30 PM	0	3	0	0	3	0	0	3	0	3	2	5	0	0	7	1	0	0	0	1	14
4:45 PM	0	0	1	0	1	1	2	0	0	3	0	1	0	0	1	0	0	0	0	0	5
Total Volume	0	6	2	0	8	1	5	6	0	12	5	12	0	0	17	2	3	0	0	5	42
% Approach Total	0.0	75.0	25.0	0.0		8.3	41.7	50.0	0.0		29.4	70.6	0.0	0.0		40.0	60.0	0.0	0.0		
PHF	0.000	0.500	0.500	0.000	0.667	0.250	0.625	0.500	0.000	1.000	0.625	0.600	0.000	0.000	0.607	0.500	0.375	0.000	0.000	0.417	0.750
Buses	0	2	1	0	3	1	0	3	0	4	2	4	0	0	6	1	1	0	0	2	15
Buses %	0.0	33.3	50.0	0.0	37.5	100.0	0.0	50.0	0.0	33.3	40.0	33.3	0.0	0.0	35.3	50.0	33.3	0.0	0.0	40.0	35.7
Single-Unit Trucks	0	3	1	0	4	0	5	2	0	7	1	7	0	0	8	1	2	0	0	3	22
Single-Unit %	0.0	50.0	50.0	0.0	50.0	0.0	100.0	33.3	0.0	58.3	20.0	58.3	0.0	0.0	47.1	50.0	66.7	0.0	0.0	60.0	52.4
Articulated Trucks	0	1	0	0	1	0	0	1	0	1	2	1	0	0	3	0	0	0	0	0	5
Articulated %	0.0	16.7	0.0	0.0	12.5	0.0	0.0	16.7	0.0	8.3	40.0	8.3	0.0	0.0	17.6	0.0	0.0	0.0	0.0	0.0	11.9
Buses	0	2	1	0	3	1	0	3	0	4	2	4	0	0	6	1	1	0	0	2	15
Single-Unit Trucks	0	3	1	0	4	0	5	2	0	7	1	7	0	0	8	1	2	0	0	3	22
Articulated Trucks	0	1	0	0	1	0	0	1	0	1	2	1	0	0	3	0	0	0	0	0	5
Total Entering Leg	0	6	2	0	8	1	5	6	0	12	5	12	0	0	17	2	3	0	0	5	42
Buses	5					4					6					0					15
Single-Unit Trucks	7					4					6					5					22
Articulated Trucks	1					2					2					0					5
Total Exiting Leg	13					10					14					5					42

PDI File #: **239484 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Sunderland Road W: Sunderland Road**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Buses

	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	1	0	0	1	0	1	0	0	1	2
4:15 PM	0	1	1	0	2	0	0	2	0	2	1	2	0	0	3	1	0	0	0	1	8
4:30 PM	0	1	0	0	1	0	0	1	0	1	1	1	0	0	2	0	0	0	0	0	4
4:45 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	2	1	0	3	1	0	3	0	4	2	4	0	0	6	1	1	0	0	2	15
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	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:30 PM	0	0	1	0	1	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	3
5:45 PM	0	1	1	0	2	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	4
Total	0	2	3	0	5	2	1	0	0	3	0	1	0	0	1	0	0	0	0	0	9
Grand Total	0	4	4	0	8	3	1	3	0	7	2	5	0	0	7	1	1	0	0	2	24
Approach %	0.0	50.0	50.0	0.0		42.9	14.3	42.9	0.0		28.6	71.4	0.0	0.0		50.0	50.0	0.0	0.0		
Total %	0.0	16.7	16.7	0.0	33.3	12.5	4.2	12.5	0.0	29.2	8.3	20.8	0.0	0.0	29.2	4.2	4.2	0.0	0.0	8.3	
Exiting Leg Total	8					7					8					1					24

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

	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	1	0	0	1	0	1	0	0	1	2
4:15 PM	0	1	1	0	2	0	0	2	0	2	1	2	0	0	3	1	0	0	0	1	8
4:30 PM	0	1	0	0	1	0	0	1	0	1	1	1	0	0	2	0	0	0	0	0	4
4:45 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	2	1	0	3	1	0	3	0	4	2	4	0	0	6	1	1	0	0	2	15
% Approach Total	0.0	66.7	33.3	0.0		25.0	0.0	75.0	0.0		33.3	66.7	0.0	0.0		50.0	50.0	0.0	0.0		
PHF	0.000	0.500	0.250	0.000	0.375	0.250	0.000	0.375	0.000	0.500	0.500	0.500	0.000	0.000	0.500	0.250	0.250	0.000	0.000	0.500	0.469
Entering Leg	0	2	1	0	3	1	0	3	0	4	2	4	0	0	6	1	1	0	0	2	15
Exiting Leg	5					4					6					0					15
Total	8					8					12					2					30

PDI File #: **239484 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Sunderland Road W: Sunderland Road**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Single-Unit Trucks

	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	1	0	3	1	2	0	0	3	0	0	0	0	0	6
4:15 PM	0	1	0	0	1	0	1	0	0	1	0	1	0	0	1	0	2	0	0	2	5
4:30 PM	0	2	0	0	2	0	0	1	0	1	0	3	0	0	3	1	0	0	0	1	7
4:45 PM	0	0	1	0	1	0	2	0	0	2	0	1	0	0	1	0	0	0	0	0	4
Total	0	3	1	0	4	0	5	2	0	7	1	7	0	0	8	1	2	0	0	3	22
5:00 PM	0	0	0	0	0	0	0	1	0	1	0	2	0	0	2	0	0	0	0	0	3
5:15 PM	0	0	0	0	0	0	0	1	0	1	1	3	0	0	4	0	0	0	0	0	5
5:30 PM	0	2	0	0	2	0	1	2	0	3	0	1	0	0	1	0	1	0	0	1	7
5:45 PM	0	1	0	0	1	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	4
Total	0	3	0	0	3	1	1	4	0	6	1	8	0	0	9	0	1	0	0	1	19
Grand Total	0	6	1	0	7	1	6	6	0	13	2	15	0	0	17	1	3	0	0	4	41
Approach %	0.0	85.7	14.3	0.0		7.7	46.2	46.2	0.0		11.8	88.2	0.0	0.0		25.0	75.0	0.0	0.0		
Total %	0.0	14.6	2.4	0.0	17.1	2.4	14.6	14.6	0.0	31.7	4.9	36.6	0.0	0.0	41.5	2.4	7.3	0.0	0.0	9.8	
Exiting Leg Total	16					6					13					6					41

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

4:00 PM	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	1	0	3	1	2	0	0	3	0	0	0	0	0	6
4:15 PM	0	1	0	0	1	0	1	0	0	1	0	1	0	0	1	0	2	0	0	2	5
4:30 PM	0	2	0	0	2	0	0	1	0	1	0	3	0	0	3	1	0	0	0	1	7
4:45 PM	0	0	1	0	1	0	2	0	0	2	0	1	0	0	1	0	0	0	0	0	4
Total Volume	0	3	1	0	4	0	5	2	0	7	1	7	0	0	8	1	2	0	0	3	22
% Approach Total	0.0	75.0	25.0	0.0		0.0	71.4	28.6	0.0		12.5	87.5	0.0	0.0		33.3	66.7	0.0	0.0		
PHF	0.000	0.375	0.250	0.000	0.500	0.000	0.625	0.500	0.000	0.583	0.250	0.583	0.000	0.000	0.667	0.250	0.250	0.000	0.000	0.375	0.786
Entering Leg	0	3	1	0	4	0	5	2	0	7	1	7	0	0	8	1	2	0	0	3	22
Exiting Leg	7					4					6					5					22
Total	11					11					14					8					44

PDI File #: **239484 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Sunderland Road W: Sunderland Road**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Articulated Trucks

	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	1	0	0	1	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	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	1	0	1	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	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	0	0	0	0	0
Total	0	1	0	0	1	0	0	1	0	1	2	1	0	0	3	0	0	0	0	0	0	0	0	0	0	5
5:00 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	2
5:15 PM	0	0	0	0	0	0	0	1	0	1	2	1	0	0	3	0	0	0	0	0	0	0	0	0	0	4
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
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
Total	0	0	0	0	0	0	0	1	0	1	3	2	0	0	5	0	0	0	0	0	0	0	0	0	0	6
Grand Total	0	1	0	0	1	0	0	2	0	2	5	3	0	0	8	0	0	0	0	0	0	0	0	0	0	11
Approach %	0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		62.5	37.5	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	9.1	0.0	0.0	9.1	0.0	0.0	18.2	0.0	18.2	45.5	27.3	0.0	0.0	72.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	3					5					3					0					11					

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

	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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						
4:30 PM	0	0	0	0	0	0	0	1	0	1	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	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	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	2
5:15 PM	0	0	0	0	0	0	0	1	0	1	2	1	0	0	3	0	0	0	0	0	0	0	0	0	0	4
Total Volume	0	0	0	0	0	0	0	2	0	2	4	3	0	0	7	0	0	0	0	0	0	0	0	0	0	9
% Approach Total	0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		57.1	42.9	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	0.500	0.000	0.500	0.500	0.750	0.000	0.000	0.583	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.563
Entering Leg	0	0	0	0	0	0	0	2	0	2	4	3	0	0	7	0	0	0	0	0	0	0	0	0	0	9
Exiting Leg	3					4					2					0					9					
Total	3					6					9					0					18					

PDI File #: **239484 A**
Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
Location: **E: Sunderland Road W: Sunderland Road**
City, State: **Worcester, MA**
Client: **Kimley-Horn/ L. Juan**
Site Code: **112858000-02**
Count Date: **Wednesday, September 13, 2023**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:



Bicycles (on Roadway and Crosswalks)

	Grafton Street (Route 122)								Sunderland Road								Grafton Street (Route 122)								Sunderland 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	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	0	0		
4:30 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		
4:45 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	0		
Total	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		
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		
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		
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	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	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		
Grand Total	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		
Approach %	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	0.0				
Total %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	100.0	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					
Exiting Leg Total	0								1								0								0								

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

4:00 PM	Grafton Street (Route 122)								Sunderland Road								Grafton Street (Route 122)								Sunderland 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	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	0	0		
4:30 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		
4:45 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	0		
Total Volume	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		
% Approach Total	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	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	0.000	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	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1		
Exiting Leg	0								1								0								0								
Total	0								2								0								2								

PDI File #: **239484 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Sunderland Road W: Sunderland Road**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Pedestrians

	Grafton Street (Route 122)								Sunderland Road								Grafton Street (Route 122)								Sunderland 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	0	1	1	0	0	0	0	2	0	2	0	0	0	0	0	1	1	0	0	0	0	0	0	0	4
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2	2	0	0	0	0	0	2	2	0	0	0	0	0	2	2	5
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	1	1	2	0	0	0	0	1	1	2	2
4:45 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	0	0	0	0	0	3
Total	0	0	0	0	0	0	0	0	0	0	0	0	5	5	0	0	0	0	2	2	4	0	0	0	0	1	4	5	0	0	0	0	1	4	5	14
5:00 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	0	0	0	0	0	2
5:15 PM	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	0	0	0	0	0	0	2
5:30 PM	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	0	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	1	0	0	0	0	2	0	2	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Grand Total	0	0	0	0	1	0	1	0	0	0	0	2	5	7	0	0	0	0	3	3	6	0	0	0	0	1	4	5	0	0	0	0	1	4	5	19
Approach %	0	0	0	0	100	0		0	0	0	0	28.6	71.4		0	0	0	0	50	50		0	0	0	0	20	80									
Total %	0	0	0	0	5.26	0	5.26	0	0	0	0	10.5	26.3	36.8	0	0	0	0	15.8	15.8	31.6	0	0	0	0	5.26	21.1	26.3								
Exiting Leg Total	1							7							6							5							19							

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

	Grafton Street (Route 122)								Sunderland Road								Grafton Street (Route 122)								Sunderland 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	0	1	1	0	0	0	0	2	0	2	0	0	0	0	0	1	1	0	0	0	0	0	0	0	4
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2	2	0	0	0	0	0	2	2	0	0	0	0	0	2	2	5
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	1	1	2	0	0	0	0	1	1	2	2
4:45 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	0	0	0	0	0	3
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	5	5	0	0	0	0	2	2	4	0	0	0	0	1	4	5	0	0	0	0	1	4	5	14
% Approach Total	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	50.0	50.0		0.0	0.0	0.0	0.0	20.0	80.0									
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	0.417	0.417	0.000	0.000	0.000	0.000	0.250	0.250	0.500	0.000	0.000	0.000	0.000	0.250	0.500	0.625	0.700							
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	5	5	0	0	0	0	2	2	4	0	0	0	0	1	4	5	0	0	0	0	1	4	5	14
Exiting Leg	0							5							4							5							14							
Total	0							10							8							10							28							

PDI File #: **239484 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jolma Road W: Starbucks Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars and Heavy Vehicles (Combined)

	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	11	106	3	0	120	0	0	3	0	3	6	74	5	0	85	0	0	0	0	0	208
7:15 AM	6	153	1	0	160	0	0	3	0	3	7	116	11	0	134	0	0	0	0	0	297
7:30 AM	13	118	0	0	131	1	0	1	0	2	10	126	11	0	147	0	0	0	0	0	280
7:45 AM	16	158	3	0	177	3	0	1	0	4	10	115	14	0	139	0	0	0	0	0	320
Total	46	535	7	0	588	4	0	8	0	12	33	431	41	0	505	0	0	0	0	0	1105
8:00 AM	14	132	0	0	146	3	0	6	0	9	12	110	8	0	130	0	0	0	0	0	285
8:15 AM	16	149	0	0	165	0	0	2	0	2	22	135	14	0	171	0	0	0	0	0	338
8:30 AM	15	115	2	0	132	3	1	5	0	9	15	137	10	0	162	0	0	0	0	0	303
8:45 AM	8	109	4	0	121	1	1	1	0	3	11	105	9	0	125	0	0	0	0	0	249
Total	53	505	6	0	564	7	2	14	0	23	60	487	41	0	588	0	0	0	0	0	1175
Grand Total	99	1040	13	0	1152	11	2	22	0	35	93	918	82	0	1093	0	0	0	0	0	2280
Approach %	8.6	90.3	1.1	0.0		31.4	5.7	62.9	0.0		8.5	84.0	7.5	0.0		0.0	0.0	0.0	0.0		
Total %	4.3	45.6	0.6	0.0	50.5	0.5	0.1	1.0	0.0	1.5	4.1	40.3	3.6	0.0	47.9	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	929					106					1062					183					2280
Cars	99	1006	12	0	1117	5	2	13	0	20	86	879	82	0	1047	0	0	0	0	0	2184
% Cars	100.0	96.7	92.3	0.0	97.0	45.5	100.0	59.1	0.0	57.1	92.5	95.8	100.0	0.0	95.8	0.0	0.0	0.0	0.0	0.0	95.8
Exiting Leg Total	884					98					1019					183					2184
Heavy Vehicles	0	34	1	0	35	6	0	9	0	15	7	39	0	0	46	0	0	0	0	0	96
% Heavy Vehicles	0.0	3.3	7.7	0.0	3.0	54.5	0.0	40.9	0.0	42.9	7.5	4.2	0.0	0.0	4.2	0.0	0.0	0.0	0.0	0.0	4.2
Exiting Leg Total	45					8					43					0					96

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

7:45 AM	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	16	158	3	0	177	3	0	1	0	4	10	115	14	0	139	0	0	0	0	0	320
8:00 AM	14	132	0	0	146	3	0	6	0	9	12	110	8	0	130	0	0	0	0	0	285
8:15 AM	16	149	0	0	165	0	0	2	0	2	22	135	14	0	171	0	0	0	0	0	338
8:30 AM	15	115	2	0	132	3	1	5	0	9	15	137	10	0	162	0	0	0	0	0	303
Total Volume	61	554	5	0	620	9	1	14	0	24	59	497	46	0	602	0	0	0	0	0	1246
% Approach Total	9.8	89.4	0.8	0.0		37.5	4.2	58.3	0.0		9.8	82.6	7.6	0.0		0.0	0.0	0.0	0.0		
PHF	0.953	0.877	0.417	0.000	0.876	0.750	0.250	0.583	0.000	0.667	0.670	0.907	0.821	0.000	0.880	0.000	0.000	0.000	0.000	0.000	0.922
Cars	61	531	5	0	597	4	1	10	0	15	55	477	46	0	578	0	0	0	0	0	1190
Cars %	100.0	95.8	100.0	0.0	96.3	44.4	100.0	71.4	0.0	62.5	93.2	96.0	100.0	0.0	96.0	0.0	0.0	0.0	0.0	0.0	95.5
Heavy Vehicles	0	23	0	0	23	5	0	4	0	9	4	20	0	0	24	0	0	0	0	0	56
Heavy Vehicles %	0.0	4.2	0.0	0.0	3.7	55.6	0.0	28.6	0.0	37.5	6.8	4.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	4.5
Cars Enter Leg	61	531	5	0	597	4	1	10	0	15	55	477	46	0	578	0	0	0	0	0	1190
Heavy Enter Leg	0	23	0	0	23	5	0	4	0	9	4	20	0	0	24	0	0	0	0	0	56
Total Entering Leg	61	554	5	0	620	9	1	14	0	24	59	497	46	0	602	0	0	0	0	0	1246
Cars Exiting Leg	481					60					541					108					1190
Heavy Exiting Leg	25					4					27					0					56
Total Exiting Leg	506					64					568					108					1246

PDI File #: **239484 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jolma Road W: Starbucks Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars

	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	11	104	3	0	118	0	0	1	0	1	4	70	5	0	79	0	0	0	0	0	198
7:15 AM	6	149	1	0	156	0	0	1	0	1	7	113	11	0	131	0	0	0	0	0	288
7:30 AM	13	115	0	0	128	0	0	0	0	0	10	115	11	0	136	0	0	0	0	0	264
7:45 AM	16	151	3	0	170	2	0	1	0	3	10	110	14	0	134	0	0	0	0	0	307
Total	46	519	7	0	572	2	0	3	0	5	31	408	41	0	480	0	0	0	0	0	1057
8:00 AM	14	125	0	0	139	1	0	4	0	5	11	108	8	0	127	0	0	0	0	0	271
8:15 AM	16	143	0	0	159	0	0	1	0	1	21	131	14	0	166	0	0	0	0	0	326
8:30 AM	15	112	2	0	129	1	1	4	0	6	13	128	10	0	151	0	0	0	0	0	286
8:45 AM	8	107	3	0	118	1	1	1	0	3	10	104	9	0	123	0	0	0	0	0	244
Total	53	487	5	0	545	3	2	10	0	15	55	471	41	0	567	0	0	0	0	0	1127
Grand Total	99	1006	12	0	1117	5	2	13	0	20	86	879	82	0	1047	0	0	0	0	0	2184
Approach %	8.9	90.1	1.1	0.0		25.0	10.0	65.0	0.0		8.2	84.0	7.8	0.0		0.0	0.0	0.0	0.0	0.0	
Total %	4.5	46.1	0.5	0.0	51.1	0.2	0.1	0.6	0.0	0.9	3.9	40.2	3.8	0.0	47.9	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	884					98					1019					183					2184

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

	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	16	151	3	0	170	2	0	1	0	3	10	110	14	0	134	0	0	0	0	0	307
8:00 AM	14	125	0	0	139	1	0	4	0	5	11	108	8	0	127	0	0	0	0	0	271
8:15 AM	16	143	0	0	159	0	0	1	0	1	21	131	14	0	166	0	0	0	0	0	326
8:30 AM	15	112	2	0	129	1	1	4	0	6	13	128	10	0	151	0	0	0	0	0	286
Total Volume	61	531	5	0	597	4	1	10	0	15	55	477	46	0	578	0	0	0	0	0	1190
% Approach Total	10.2	88.9	0.8	0.0		26.7	6.7	66.7	0.0		9.5	82.5	8.0	0.0		0.0	0.0	0.0	0.0	0.0	
PHF	0.953	0.879	0.417	0.000	0.878	0.500	0.250	0.625	0.000	0.625	0.655	0.910	0.821	0.000	0.870	0.000	0.000	0.000	0.000	0.000	0.913
Entering Leg	61	531	5	0	597	4	1	10	0	15	55	477	46	0	578	0	0	0	0	0	1190
Exiting Leg	481					60					541					108					1190
Total	1078					75					1119					108					2380

PDI File #: **239484 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jolma Road W: Starbucks Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**



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

	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	2	0	0	2	0	0	2	0	2	2	4	0	0	6	0	0	0	0	0	10
7:15 AM	0	4	0	0	4	0	0	2	0	2	0	3	0	0	3	0	0	0	0	0	9
7:30 AM	0	3	0	0	3	1	0	1	0	2	0	11	0	0	11	0	0	0	0	0	16
7:45 AM	0	7	0	0	7	1	0	0	0	1	0	5	0	0	5	0	0	0	0	0	13
Total	0	16	0	0	16	2	0	5	0	7	2	23	0	0	25	0	0	0	0	0	48
8:00 AM	0	7	0	0	7	2	0	2	0	4	1	2	0	0	3	0	0	0	0	0	14
8:15 AM	0	6	0	0	6	0	0	1	0	1	1	4	0	0	5	0	0	0	0	0	12
8:30 AM	0	3	0	0	3	2	0	1	0	3	2	9	0	0	11	0	0	0	0	0	17
8:45 AM	0	2	1	0	3	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	5
Total	0	18	1	0	19	4	0	4	0	8	5	16	0	0	21	0	0	0	0	0	48
Grand Total	0	34	1	0	35	6	0	9	0	15	7	39	0	0	46	0	0	0	0	0	96
Approach %	0.0	97.1	2.9	0.0		40.0	0.0	60.0	0.0		15.2	84.8	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	35.4	1.0	0.0	36.5	6.3	0.0	9.4	0.0	15.6	7.3	40.6	0.0	0.0	47.9	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					45					8					43						96
Buses	0	18	0	0	18	1	0	0	0	1	4	13	0	0	17	0	0	0	0	0	36
% Buses	0.0	52.9	0.0	0.0	51.4	16.7	0.0	0.0	0.0	6.7	57.1	33.3	0.0	0.0	37.0	0.0	0.0	0.0	0.0	0.0	37.5
Exiting Leg Total					14					4					18						36
Single-Unit Trucks	0	15	1	0	16	4	0	4	0	8	3	18	0	0	21	0	0	0	0	0	45
% Single-Unit	0.0	44.1	100.0	0.0	45.7	66.7	0.0	44.4	0.0	53.3	42.9	46.2	0.0	0.0	45.7	0.0	0.0	0.0	0.0	0.0	46.9
Exiting Leg Total					22					4					19						45
Articulated Trucks	0	1	0	0	1	1	0	5	0	6	0	8	0	0	8	0	0	0	0	0	15
% Articulated	0.0	2.9	0.0	0.0	2.9	16.7	0.0	55.6	0.0	40.0	0.0	20.5	0.0	0.0	17.4	0.0	0.0	0.0	0.0	0.0	15.6
Exiting Leg Total					9					0					6						15

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

	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	7	0	0	7	1	0	0	0	1	0	5	0	0	5	0	0	0	0	0	13
8:00 AM	0	7	0	0	7	2	0	2	0	4	1	2	0	0	3	0	0	0	0	0	14
8:15 AM	0	6	0	0	6	0	0	1	0	1	1	4	0	0	5	0	0	0	0	0	12
8:30 AM	0	3	0	0	3	2	0	1	0	3	2	9	0	0	11	0	0	0	0	0	17
Total Volume	0	23	0	0	23	5	0	4	0	9	4	20	0	0	24	0	0	0	0	0	56
% Approach Total	0.0	100.0	0.0	0.0		55.6	0.0	44.4	0.0		16.7	83.3	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.821	0.000	0.000	0.821	0.625	0.000	0.500	0.000	0.563	0.500	0.556	0.000	0.000	0.545	0.000	0.000	0.000	0.000	0.000	0.824
Buses	0	16	0	0	16	1	0	0	0	1	2	7	0	0	9	0	0	0	0	0	26
Buses %	0.0	69.6	0.0	0.0	69.6	20.0	0.0	0.0	0.0	11.1	50.0	35.0	0.0	0.0	37.5	0.0	0.0	0.0	0.0	0.0	46.4
Single-Unit Trucks	0	7	0	0	7	3	0	2	0	5	2	9	0	0	11	0	0	0	0	0	23
Single-Unit %	0.0	30.4	0.0	0.0	30.4	60.0	0.0	50.0	0.0	55.6	50.0	45.0	0.0	0.0	45.8	0.0	0.0	0.0	0.0	0.0	41.1
Articulated Trucks	0	0	0	0	0	1	0	2	0	3	0	4	0	0	4	0	0	0	0	0	7
Articulated %	0.0	0.0	0.0	0.0	0.0	20.0	0.0	50.0	0.0	33.3	0.0	20.0	0.0	0.0	16.7	0.0	0.0	0.0	0.0	0.0	12.5
Buses	0	16	0	0	16	1	0	0	0	1	2	7	0	0	9	0	0	0	0	0	26
Single-Unit Trucks	0	7	0	0	7	3	0	2	0	5	2	9	0	0	11	0	0	0	0	0	23
Articulated Trucks	0	0	0	0	0	1	0	2	0	3	0	4	0	0	4	0	0	0	0	0	7
Total Entering Leg	0	23	0	0	23	5	0	4	0	9	4	20	0	0	24	0	0	0	0	0	56
Buses					8					2					16						26
Single-Unit Trucks					12					2					9						23
Articulated Trucks					5					0					2						7
Total Exiting Leg					25					4					27						56

PDI File #: **239484 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jolma Road W: Starbucks Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Buses

	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	1	2	0	0	3	0	0	0	0	0	3
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
7:30 AM	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	3
7:45 AM	0	6	0	0	6	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total	0	8	0	0	8	0	0	0	0	0	1	7	0	0	8	0	0	0	0	0	16
8:00 AM	0	5	0	0	5	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	2
8:15 AM	0	4	0	0	4	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
8:30 AM	0	1	0	0	1	1	0	0	0	1	1	4	0	0	5	0	0	0	0	0	5
8:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
Total	0	10	0	0	10	1	0	0	0	1	3	6	0	0	9	0	0	0	0	0	20
Grand Total	0	18	0	0	18	1	0	0	0	1	4	13	0	0	17	0	0	0	0	0	17
Approach %	0.0	100.0	0.0	0.0		100.0	0.0	0.0	0.0		23.5	76.5	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	50.0	0.0	0.0	50.0	2.8	0.0	0.0	0.0	2.8	11.1	36.1	0.0	0.0	47.2	0.0	0.0	0.0	0.0	0.0	47.2
Exiting Leg Total	14					4					18					0					36

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

	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	6	0	0	6	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
7:45 AM	0	6	0	0	6	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
8:00 AM	0	5	0	0	5	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	2
8:15 AM	0	4	0	0	4	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
8:30 AM	0	1	0	0	1	1	0	0	0	1	1	4	0	0	5	0	0	0	0	0	5
Total Volume	0	16	0	0	16	1	0	0	0	1	2	7	0	0	9	0	0	0	0	0	26
% Approach Total	0.0	100.0	0.0	0.0		100.0	0.0	0.0	0.0		22.2	77.8	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.667	0.000	0.000	0.667	0.250	0.000	0.000	0.000	0.250	0.500	0.438	0.000	0.000	0.450	0.000	0.000	0.000	0.000	0.000	0.929
Entering Leg	0	16	0	0	16	1	0	0	0	1	2	7	0	0	9	0	0	0	0	0	9
Exiting Leg	8					2					16					0					26
Total	24					3					25					0					52

PDI File #: **239484 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jolma Road W: Starbucks Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Single-Unit Trucks

	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	1	0	0	1	0	0	1	0	1	1	2	0	0	3	0	0	0	0	0	5
7:15 AM	0	4	0	0	4	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	6
7:30 AM	0	1	0	0	1	1	0	0	0	1	0	5	0	0	5	0	0	0	0	0	7
7:45 AM	0	1	0	0	1	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	5
Total	0	7	0	0	7	2	0	2	0	4	1	11	0	0	12	0	0	0	0	0	23
8:00 AM	0	2	0	0	2	2	0	1	0	3	0	1	0	0	1	0	0	0	0	0	6
8:15 AM	0	2	0	0	2	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0	6
8:30 AM	0	2	0	0	2	0	0	1	0	1	1	2	0	0	3	0	0	0	0	0	6
8:45 AM	0	2	1	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	4
Total	0	8	1	0	9	2	0	2	0	4	2	7	0	0	9	0	0	0	0	0	22
Grand Total	0	15	1	0	16	4	0	4	0	8	3	18	0	0	21	0	0	0	0	0	45
Approach %	0.0	93.8	6.3	0.0		50.0	0.0	50.0	0.0		14.3	85.7	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	33.3	2.2	0.0	35.6	8.9	0.0	8.9	0.0	17.8	6.7	40.0	0.0	0.0	46.7	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	22					4					19					0					45

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

	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	4	0	0	4	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	6
7:30 AM	0	1	0	0	1	1	0	0	0	1	0	5	0	0	5	0	0	0	0	0	7
7:45 AM	0	1	0	0	1	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	5
8:00 AM	0	2	0	0	2	2	0	1	0	3	0	1	0	0	1	0	0	0	0	0	6
Total Volume	0	8	0	0	8	4	0	2	0	6	0	10	0	0	10	0	0	0	0	0	24
% Approach Total	0.0	100.0	0.0	0.0		66.7	0.0	33.3	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.500	0.000	0.000	0.500	0.500	0.000	0.500	0.000	0.500	0.000	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.857
Entering Leg	0	8	0	0	8	4	0	2	0	6	0	10	0	0	10	0	0	0	0	0	24
Exiting Leg	14					0					10					0					24
Total	22					6					20					0					48

PDI File #: **239484 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jolma Road W: Starbucks Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Articulated Trucks

	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2
7:15 AM	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	2
7:30 AM	0	0	0	0	0	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	4
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total	0	1	0	0	1	0	0	3	0	3	0	5	0	0	5	0	0	0	0	0	9
8:00 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	4
8:45 AM	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	1	0	2	0	3	0	3	0	0	3	0	0	0	0	0	6
Grand Total	0	1	0	0	1	1	0	5	0	6	0	8	0	0	8	0	0	0	0	0	15
Approach %	0.0	100.0	0.0	0.0		16.7	0.0	83.3	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	6.7	0.0	0.0	6.7	6.7	0.0	33.3	0.0	40.0	0.0	53.3	0.0	0.0	53.3	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	9					0					6					0					15

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

	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2
7:15 AM	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	2
7:30 AM	0	0	0	0	0	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	4
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total Volume	0	1	0	0	1	0	0	3	0	3	0	5	0	0	5	0	0	0	0	0	9
% Approach Total	0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.750	0.000	0.750	0.000	0.417	0.000	0.000	0.417	0.000	0.000	0.000	0.000	0.000	0.563
Entering Leg	0	1	0	0	1	0	0	3	0	3	0	5	0	0	5	0	0	0	0	0	9
Exiting Leg	5					0					4					0					9
Total	6					3					9					0					18

PDI File #: **239484 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jolma Road W: Starbucks Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Bicycles (on Roadway and Crosswalks)

	Grafton Street (Route 122)								Jolma Road								Grafton Street (Route 122)								Starbucks Driveway								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	1	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	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	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	0	
Total	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	1	2	
8:00 AM	0	1	0	0	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	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	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	0	0	0	0	0	0	0	0	0	0	0	
Total	0	1	0	0	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	
Grand Total	0	1	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	3	
Approach %	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	100.0					
Total %	0.0	33.3	0.0	0.0	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	33.3	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	0.0	33.3	33.3				
Exiting Leg Total	0							1							1							1							3				

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

	Grafton Street (Route 122)								Jolma Road								Grafton Street (Route 122)								Starbucks Driveway								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	1	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	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	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	0	
Total Volume	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	1	2	
% Approach Total	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	100.0					
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	0.250	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	0.250	0.250	0.250			
Entering Leg	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	1	2	
Exiting Leg	0							1							0							1							2				
Total	0							2							0							2							4				

PDI File #: **239484 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jolma Road W: Starbucks Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Pedestrians

	Grafton Street (Route 122)								Jolma Road								Grafton Street (Route 122)								Starbucks Driveway								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	0	0	0	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	3	3	3	3	
7:45 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	1	1	2	3	3		
Total	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	1	4	5	6	6		
8:00 AM	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	1	0	1	2	2		
8:15 AM	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	1	1		
8:30 AM	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	3	1	4	5	5		
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	1	1	1	1		
Total	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	4	2	6	9	9		
Grand Total	0	0	0	0	0	0	0	0	0	0	0	1	3	4	0	0	0	0	0	0	0	0	0	0	0	0	5	6	11	15	15		
Approach %	0	0	0	0	0	0	0	0	0	0	0	25	75		0	0	0	0	0	0	0	0	0	0	0	0	45.5	54.5					
Total %	0	0	0	0	0	0	0	0	0	0	0	6.67	20	26.7	0	0	0	0	0	0	0	0	0	0	0	0	33.3	40	73.3				
Exiting Leg Total	0							4							0							11							15				

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

	Grafton Street (Route 122)								Jolma Road								Grafton Street (Route 122)								Starbucks Driveway								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		
7:45 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	1	1	2	3	3		
8:00 AM	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	1	0	1	2	2		
8:15 AM	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	1	1		
8:30 AM	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	3	1	4	5	5		
Total Volume	0	0	0	0	0	0	0	0	0	0	0	1	3	4	0	0	0	0	0	0	0	0	0	0	0	0	5	2	7	11	11		
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	75.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	71.4	28.6					
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	0.750	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.417	0.500	0.438	0.550			
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	1	3	4	0	0	0	0	0	0	0	0	0	0	0	0	5	2	7	11	11		
Exiting Leg	0							4							0							7							11				
Total	0							8							0							14							22				

PDI File #: **239484 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jolma Road W: Starbucks Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars and Heavy Vehicles (Combined)

	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	4	120	1	0	125	3	0	8	0	11	23	125	4	0	152	0	0	0	0	0	288
4:15 PM	5	127	1	0	133	4	0	8	0	12	14	133	3	0	150	0	0	0	0	0	295
4:30 PM	4	115	0	0	119	2	0	6	0	8	28	151	2	0	181	0	0	0	0	0	308
4:45 PM	2	138	0	0	140	4	0	6	0	10	17	147	3	0	167	0	0	0	0	0	317
Total	15	500	2	0	517	13	0	28	0	41	82	556	12	0	650	0	0	0	0	0	1208
5:00 PM	1	145	0	0	146	3	0	10	0	13	20	166	2	0	188	0	0	0	0	0	347
5:15 PM	3	126	1	0	130	3	0	7	0	10	17	155	2	0	174	0	0	0	0	0	314
5:30 PM	1	145	1	0	147	1	0	4	0	5	20	167	3	0	190	0	0	0	0	0	342
5:45 PM	4	137	1	0	142	3	0	9	0	12	26	140	2	0	168	0	0	0	0	0	322
Total	9	553	3	0	565	10	0	30	0	40	83	628	9	0	720	0	0	0	0	0	1325
Grand Total	24	1053	5	0	1082	23	0	58	0	81	165	1184	21	0	1370	0	0	0	0	0	2533
Approach %	2.2	97.3	0.5	0.0		28.4	0.0	71.6	0.0		12.0	86.4	1.5	0.0		0.0	0.0	0.0	0.0		
Total %	0.9	41.6	0.2	0.0	42.7	0.9	0.0	2.3	0.0	3.2	6.5	46.7	0.8	0.0	54.1	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	1207					170					1111					45					2533
Cars	24	1036	4	0	1064	22	0	56	0	78	156	1171	21	0	1348	0	0	0	0	0	2490
% Cars	100.0	98.4	80.0	0.0	98.3	95.7	0.0	96.6	0.0	96.3	94.5	98.9	100.0	0.0	98.4	0.0	0.0	0.0	0.0	0.0	98.3
Exiting Leg Total	1193					160					1092					45					2490
Heavy Vehicles	0	17	1	0	18	1	0	2	0	3	9	13	0	0	22	0	0	0	0	0	43
% Heavy Vehicles	0.0	1.6	20.0	0.0	1.7	4.3	0.0	3.4	0.0	3.7	5.5	1.1	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	1.7
Exiting Leg Total	14					10					19					0					43

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

5:00 PM	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	
5:00 PM	1	145	0	0	146	3	0	10	0	13	20	166	2	0	188	0	0	0	0	0	347
5:15 PM	3	126	1	0	130	3	0	7	0	10	17	155	2	0	174	0	0	0	0	0	314
5:30 PM	1	145	1	0	147	1	0	4	0	5	20	167	3	0	190	0	0	0	0	0	342
5:45 PM	4	137	1	0	142	3	0	9	0	12	26	140	2	0	168	0	0	0	0	0	322
Total Volume	9	553	3	0	565	10	0	30	0	40	83	628	9	0	720	0	0	0	0	0	1325
% Approach Total	1.6	97.9	0.5	0.0		25.0	0.0	75.0	0.0		11.5	87.2	1.3	0.0		0.0	0.0	0.0	0.0		
PHF	0.563	0.953	0.750	0.000	0.961	0.833	0.000	0.750	0.000	0.769	0.798	0.940	0.750	0.000	0.947	0.000	0.000	0.000	0.000	0.000	0.955
Cars	9	546	2	0	557	10	0	28	0	38	77	624	9	0	710	0	0	0	0	0	1305
Cars %	100.0	98.7	66.7	0.0	98.6	100.0	0.0	93.3	0.0	95.0	92.8	99.4	100.0	0.0	98.6	0.0	0.0	0.0	0.0	0.0	98.5
Heavy Vehicles	0	7	1	0	8	0	0	2	0	2	6	4	0	0	10	0	0	0	0	0	20
Heavy Vehicles %	0.0	1.3	33.3	0.0	1.4	0.0	0.0	6.7	0.0	5.0	7.2	0.6	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	1.5
Cars Enter Leg	9	546	2	0	557	10	0	28	0	38	77	624	9	0	710	0	0	0	0	0	1305
Heavy Enter Leg	0	7	1	0	8	0	0	2	0	2	6	4	0	0	10	0	0	0	0	0	20
Total Entering Leg	9	553	3	0	565	10	0	30	0	40	83	628	9	0	720	0	0	0	0	0	1325
Cars Exiting Leg	634					79					574					18					1305
Heavy Exiting Leg	4					7					9					0					20
Total Exiting Leg	638					86					583					18					1325

PDI File #: **239484 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jolma Road W: Starbucks Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars

	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	4	118	1	0	123	3	0	8	0	11	22	123	4	0	149	0	0	0	0	0	283	
4:15 PM	5	123	1	0	129	4	0	8	0	12	14	130	3	0	147	0	0	0	0	0	288	
4:30 PM	4	112	0	0	116	2	0	6	0	8	27	149	2	0	178	0	0	0	0	0	302	
4:45 PM	2	137	0	0	139	3	0	6	0	9	16	145	3	0	164	0	0	0	0	0	312	
Total	15	490	2	0	507	12	0	28	0	40	79	547	12	0	638	0	0	0	0	0	1185	
5:00 PM	1	145	0	0	146	3	0	10	0	13	20	164	2	0	186	0	0	0	0	0	345	
5:15 PM	3	124	1	0	128	3	0	7	0	10	16	153	2	0	171	0	0	0	0	0	309	
5:30 PM	1	143	1	0	145	1	0	3	0	4	18	167	3	0	188	0	0	0	0	0	337	
5:45 PM	4	134	0	0	138	3	0	8	0	11	23	140	2	0	165	0	0	0	0	0	314	
Total	9	546	2	0	557	10	0	28	0	38	77	624	9	0	710	0	0	0	0	0	1305	
Grand Total	24	1036	4	0	1064	22	0	56	0	78	156	1171	21	0	1348	0	0	0	0	0	2490	
Approach %	2.3	97.4	0.4	0.0		28.2	0.0	71.8	0.0		11.6	86.9	1.6	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	1.0	41.6	0.2	0.0	42.7	0.9	0.0	2.2	0.0	3.1	6.3	47.0	0.8	0.0	54.1	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total						1193					160					1092					45	2490

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

	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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		
5:00 PM	1	145	0	0	146	3	0	10	0	13	20	164	2	0	186	0	0	0	0	0	345	
5:15 PM	3	124	1	0	128	3	0	7	0	10	16	153	2	0	171	0	0	0	0	0	309	
5:30 PM	1	143	1	0	145	1	0	3	0	4	18	167	3	0	188	0	0	0	0	0	337	
5:45 PM	4	134	0	0	138	3	0	8	0	11	23	140	2	0	165	0	0	0	0	0	314	
Total Volume	9	546	2	0	557	10	0	28	0	38	77	624	9	0	710	0	0	0	0	0	1305	
% Approach Total	1.6	98.0	0.4	0.0		26.3	0.0	73.7	0.0		10.8	87.9	1.3	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.563	0.941	0.500	0.000	0.954	0.833	0.000	0.700	0.000	0.731	0.837	0.934	0.750	0.000	0.944	0.000	0.000	0.000	0.000	0.000	0.946	
Entering Leg	9	546	2	0	557	10	0	28	0	38	77	624	9	0	710	0	0	0	0	0	1305	
Exiting Leg						634					79					574					18	1305
Total						1191					117					1284					18	2610

PDI File #: **239484 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jolma Road W: Starbucks Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



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

	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	2	0	0	2	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	5
4:15 PM	0	4	0	0	4	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	7
4:30 PM	0	3	0	0	3	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	6
4:45 PM	0	1	0	0	1	1	0	0	0	1	1	2	0	0	3	0	0	0	0	0	5
Total	0	10	0	0	10	1	0	0	0	1	3	9	0	0	12	0	0	0	0	0	23
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	2	0	0	2	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	5
5:30 PM	0	2	0	0	2	0	0	1	0	1	2	0	0	0	2	0	0	0	0	0	5
5:45 PM	0	3	1	0	4	0	0	1	0	1	3	0	0	0	3	0	0	0	0	0	8
Total	0	7	1	0	8	0	0	2	0	2	6	4	0	0	10	0	0	0	0	0	20
Grand Total	0	17	1	0	18	1	0	2	0	3	9	13	0	0	22	0	0	0	0	0	43
Approach %	0.0	94.4	5.6	0.0		33.3	0.0	66.7	0.0		40.9	59.1	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	39.5	2.3	0.0	41.9	2.3	0.0	4.7	0.0	7.0	20.9	30.2	0.0	0.0	51.2	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	14					10					19					0					43
Buses	0	8	0	0	8	1	0	0	0	1	5	2	0	0	7	0	0	0	0	0	16
% Buses	0.0	47.1	0.0	0.0	44.4	100.0	0.0	0.0	0.0	33.3	55.6	15.4	0.0	0.0	31.8	0.0	0.0	0.0	0.0	0.0	37.2
Exiting Leg Total	3					5					8					0					16
Single-Unit Trucks	0	8	1	0	9	0	0	2	0	2	4	9	0	0	13	0	0	0	0	0	24
% Single-Unit	0.0	47.1	100.0	0.0	50.0	0.0	0.0	100.0	0.0	66.7	44.4	69.2	0.0	0.0	59.1	0.0	0.0	0.0	0.0	0.0	55.8
Exiting Leg Total	9					5					10					0					24
Articulated Trucks	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
% Articulated	0.0	5.9	0.0	0.0	5.6	0.0	0.0	0.0	0.0	0.0	0.0	15.4	0.0	0.0	9.1	0.0	0.0	0.0	0.0	0.0	7.0
Exiting Leg Total	2					0					1					0					3

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

	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	2	0	0	2	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	5
4:15 PM	0	4	0	0	4	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	7
4:30 PM	0	3	0	0	3	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	6
4:45 PM	0	1	0	0	1	1	0	0	0	1	1	2	0	0	3	0	0	0	0	0	5
Total Volume	0	10	0	0	10	1	0	0	0	1	3	9	0	0	12	0	0	0	0	0	23
% Approach Total	0.0	100.0	0.0	0.0		100.0	0.0	0.0	0.0		25.0	75.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.625	0.000	0.000	0.625	0.250	0.000	0.000	0.000	0.250	0.750	0.750	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.821
Buses	0	3	0	0	3	1	0	0	0	1	3	2	0	0	5	0	0	0	0	0	9
Buses %	0.0	30.0	0.0	0.0	30.0	100.0	0.0	0.0	0.0	100.0	100.0	22.2	0.0	0.0	41.7	0.0	0.0	0.0	0.0	0.0	39.1
Single-Unit Trucks	0	7	0	0	7	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	14
Single-Unit %	0.0	70.0	0.0	0.0	70.0	0.0	0.0	0.0	0.0	0.0	0.0	77.8	0.0	0.0	58.3	0.0	0.0	0.0	0.0	0.0	60.9
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	0	3	0	0	3	1	0	0	0	1	3	2	0	0	5	0	0	0	0	0	9
Single-Unit Trucks	0	7	0	0	7	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	14
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	0	10	0	0	10	1	0	0	0	1	3	9	0	0	12	0	0	0	0	0	23
Buses	3					3					3					0					9
Single-Unit Trucks	7					7					7					0					14
Articulated Trucks	0					0					0					0					0
Total Exiting Leg	10					3					10					0					23

PDI File #: **239484 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jolma Road W: Starbucks Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Buses

	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	1	0	0	0	1	0	0	0	0	0	1
4:15 PM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	2
Total	0	3	0	0	3	1	0	0	0	1	3	2	0	0	5	0	0	0	0	0	9
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	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:30 PM	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2
5:45 PM	0	2	0	0	2	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	3
Total	0	5	0	0	5	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	7
Grand Total	0	8	0	0	8	1	0	0	0	1	5	2	0	0	7	0	0	0	0	0	16
Approach %	0.0	100.0	0.0	0.0		100.0	0.0	0.0	0.0		71.4	28.6	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	50.0	0.0	0.0	50.0	6.3	0.0	0.0	0.0	6.3	31.3	12.5	0.0	0.0	43.8	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	3					5					8					0					16

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

	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	1	0	0	0	1	0	0	0	0	0	1
4:15 PM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	2
Total Volume	0	3	0	0	3	1	0	0	0	1	3	2	0	0	5	0	0	0	0	0	9
% Approach Total	0.0	100.0	0.0	0.0		100.0	0.0	0.0	0.0		60.0	40.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.250	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.250	0.750	0.250	0.000	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.450
Entering Leg	0	3	0	0	3	1	0	0	0	1	3	2	0	0	5	0	0	0	0	0	9
Exiting Leg	3					3					3					0					9
Total	6					4					8					0					18

PDI File #: **239484 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jolma Road W: Starbucks Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Single-Unit Trucks

	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
4:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
4:30 PM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	5
4:45 PM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
Total	0	7	0	0	7	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	14
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	1	1	0	0	2	0	0	0	0	0	2
5:30 PM	0	1	0	0	1	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	3
5:45 PM	0	0	1	0	1	0	0	1	0	1	2	0	0	0	2	0	0	0	0	0	4
Total	0	1	1	0	2	0	0	2	0	2	4	2	0	0	6	0	0	0	0	0	10
Grand Total	0	8	1	0	9	0	0	2	0	2	4	9	0	0	13	0	0	0	0	0	24
Approach %	0.0	88.9	11.1	0.0		0.0	0.0	100.0	0.0		30.8	69.2	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	33.3	4.2	0.0	37.5	0.0	0.0	8.3	0.0	8.3	16.7	37.5	0.0	0.0	54.2	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	9					5					10					0					24

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

4:00 PM	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
4:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
4:30 PM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	5
4:45 PM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
Total Volume	0	7	0	0	7	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	14
% Approach Total	0.0	100.0	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		
PHF	0.000	0.583	0.000	0.000	0.583	0.000	0.000	0.000	0.000	0.000	0.000	0.875	0.000	0.000	0.875	0.000	0.000	0.000	0.000	0.000	0.700
Entering Leg	0	7	0	0	7	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	14
Exiting Leg	7					0					7					0					14
Total	14					0					14					0					28

PDI File #: **239484 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jolma Road W: Starbucks Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Articulated Trucks

	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	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	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	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
Grand Total	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
Approach %	0.0	100.0	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		
Total %	0.0	33.3	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	0.0	66.7	0.0	0.0	66.7	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total	2					0					1					0					3

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

5:00 PM	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	
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	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
% Approach Total	0.0	100.0	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		
PHF	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.750
Entering Leg	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
Exiting Leg	2					0					1					0					3
Total	3					0					3					0					6

PDI File #: **239484 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jolma Road W: Starbucks Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Bicycles (on Roadway and Crosswalks)

	Grafton Street (Route 122)								Jolma Road								Grafton Street (Route 122)								Starbucks Driveway							
	from North								from East								from South								from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	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	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	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	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	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	1	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	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	1	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	1	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	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	0.0	0.0	0.0					
Total %	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	0.0	0.0	0.0					
Exiting Leg Total	1							0							0							1										

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

	Grafton Street (Route 122)								Jolma Road								Grafton Street (Route 122)								Starbucks Driveway							
	from North								from East								from South								from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	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					
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					
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					
5:00 PM	0	0	0	0	0	0	0	1	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	1	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	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	0.0	0.0	0.0					
PHF	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	0.000	0.000	0.000	0.250					
Entering Leg	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Exiting Leg	1							0							0							1										
Total	1							1							0							2										

PDI File #: **239484 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jolma Road W: Starbucks Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Pedestrians

	Grafton Street (Route 122)								Jolma Road								Grafton Street (Route 122)								Starbucks Driveway								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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	3		
4:15 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	1	1	2	3			
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	1	1	2	2			
4:45 PM	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	1				
Total	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	3	4	7	9				
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	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1			
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	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	0			
Total	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	1			
Grand Total	0	0	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	3	4	7	10			
Approach %	0	0	0	0	0	0	0	0	0	0	0	33.3	66.7	0	0	0	0	0	0	0	0	0	0	0	0	42.9	57.1						
Total %	0	0	0	0	0	0	0	0	0	0	0	10	20	30	0	0	0	0	0	0	0	0	0	0	0	0	30	40	70				
Exiting Leg Total	0							3							0							7							10				

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

	Grafton Street (Route 122)								Jolma Road								Grafton Street (Route 122)								Starbucks Driveway								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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	3			
4:15 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	1	1	2	3			
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	1	1	2	2			
4:45 PM	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	1				
Total Volume	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	3	4	7	9				
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	42.9	57.1						
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	0.250	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	0.750	0.500	0.583	0.750			
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	3	4	7	9			
Exiting Leg	0							2							0							7							9				
Total	0							4							0							14							18				

PDI File #: **239484 C**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jennings Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars and Heavy Vehicles (Combined)

	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	88	6	0	94	8	17	0	25	14	67	0	81	200
7:15 AM	116	11	0	127	6	22	0	28	11	98	0	109	264
7:30 AM	85	3	0	88	7	20	0	27	13	113	0	126	241
7:45 AM	112	8	0	120	6	24	0	30	14	99	0	113	263
Total	401	28	0	429	27	83	0	110	52	377	0	429	968
8:00 AM	100	10	0	110	11	16	0	27	17	104	0	121	258
8:15 AM	90	4	0	94	9	15	0	24	15	130	0	145	263
8:30 AM	101	7	0	108	10	16	0	26	15	129	0	144	278
8:45 AM	87	20	0	107	7	12	0	19	5	100	0	105	231
Total	378	41	0	419	37	59	0	96	52	463	0	515	1030
Grand Total	779	69	0	848	64	142	0	206	104	840	0	944	1998
Approach %	91.9	8.1	0.0		31.1	68.9	0.0		11.0	89.0	0.0		
Total %	39.0	3.5	0.0	42.4	3.2	7.1	0.0	10.3	5.2	42.0	0.0	47.2	
Exiting Leg Total				904				173				921	1998
Cars	754	66	0	820	63	136	0	199	97	793	0	890	1909
% Cars	96.8	95.7	0.0	96.7	98.4	95.8	0.0	96.6	93.3	94.4	0.0	94.3	95.5
Exiting Leg Total				856				163				890	1909
Heavy Vehicles	25	3	0	28	1	6	0	7	7	47	0	54	89
% Heavy Vehicles	3.2	4.3	0.0	3.3	1.6	4.2	0.0	3.4	6.7	5.6	0.0	5.7	4.5
Exiting Leg Total				48				10				31	89

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

	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:45 AM	112	8	0	120	6	24	0	30	14	99	0	113	263
8:00 AM	100	10	0	110	11	16	0	27	17	104	0	121	258
8:15 AM	90	4	0	94	9	15	0	24	15	130	0	145	263
8:30 AM	101	7	0	108	10	16	0	26	15	129	0	144	278
Total Volume	403	29	0	432	36	71	0	107	61	462	0	523	1062
% Approach Total	93.3	6.7	0.0		33.6	66.4	0.0		11.7	88.3	0.0		
PHF	0.900	0.725	0.000	0.900	0.818	0.740	0.000	0.892	0.897	0.888	0.000	0.902	0.955
Cars	386	27	0	413	35	68	0	103	56	433	0	489	1005
Cars %	95.8	93.1	0.0	95.6	97.2	95.8	0.0	96.3	91.8	93.7	0.0	93.5	94.6
Heavy Vehicles	17	2	0	19	1	3	0	4	5	29	0	34	57
Heavy Vehicles %	4.2	6.9	0.0	4.4	2.8	4.2	0.0	3.7	8.2	6.3	0.0	6.5	5.4
Cars Enter Leg	386	27	0	413	35	68	0	103	56	433	0	489	1005
Heavy Enter Leg	17	2	0	19	1	3	0	4	5	29	0	34	57
Total Entering Leg	403	29	0	432	36	71	0	107	61	462	0	523	1062
Cars Exiting Leg				468				83				454	1005
Heavy Exiting Leg				30				7				20	57
Total Exiting Leg				498				90				474	1062

PDI File #: **239484 C**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jennings Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars

	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	86	6	0	92	8	17	0	25	13	64	0	77	194
7:15 AM	113	10	0	123	6	20	0	26	11	95	0	106	255
7:30 AM	84	3	0	87	7	20	0	27	12	103	0	115	229
7:45 AM	108	8	0	116	6	22	0	28	14	95	0	109	253
Total	391	27	0	418	27	79	0	106	50	357	0	407	931
8:00 AM	94	10	0	104	11	16	0	27	15	96	0	111	242
8:15 AM	85	2	0	87	8	15	0	23	13	126	0	139	249
8:30 AM	99	7	0	106	10	15	0	25	14	116	0	130	261
8:45 AM	85	20	0	105	7	11	0	18	5	98	0	103	226
Total	363	39	0	402	36	57	0	93	47	436	0	483	978
Grand Total	754	66	0	820	63	136	0	199	97	793	0	890	1909
Approach %	92.0	8.0	0.0		31.7	68.3	0.0		10.9	89.1	0.0		
Total %	39.5	3.5	0.0	43.0	3.3	7.1	0.0	10.4	5.1	41.5	0.0	46.6	
Exiting Leg Total				856				163				890	1909

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

	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:45 AM	108	8	0	116	6	22	0	28	14	95	0	109	253
8:00 AM	94	10	0	104	11	16	0	27	15	96	0	111	242
8:15 AM	85	2	0	87	8	15	0	23	13	126	0	139	249
8:30 AM	99	7	0	106	10	15	0	25	14	116	0	130	261
Total Volume	386	27	0	413	35	68	0	103	56	433	0	489	1005
% Approach Total	93.5	6.5	0.0		34.0	66.0	0.0		11.5	88.5	0.0		
PHF	0.894	0.675	0.000	0.890	0.795	0.773	0.000	0.920	0.933	0.859	0.000	0.879	0.963
Entering Leg	386	27	0	413	35	68	0	103	56	433	0	489	1005
Exiting Leg				468				83				454	1005
Total				881				186				943	2010

PDI File #: **239484 C**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jennings Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**



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

	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	2	0	0	2	0	0	0	0	1	3	0	4	6
7:15 AM	3	1	0	4	0	2	0	2	0	3	0	3	9
7:30 AM	1	0	0	1	0	0	0	0	1	10	0	11	12
7:45 AM	4	0	0	4	0	2	0	2	0	4	0	4	10
Total	10	1	0	11	0	4	0	4	2	20	0	22	37
8:00 AM	6	0	0	6	0	0	0	0	2	8	0	10	16
8:15 AM	5	2	0	7	1	0	0	1	2	4	0	6	14
8:30 AM	2	0	0	2	0	1	0	1	1	13	0	14	17
8:45 AM	2	0	0	2	0	1	0	1	0	2	0	2	5
Total	15	2	0	17	1	2	0	3	5	27	0	32	52
Grand Total	25	3	0	28	1	6	0	7	7	47	0	54	89
Approach %	89.3	10.7	0.0		14.3	85.7	0.0		13.0	87.0	0.0		
Total %	28.1	3.4	0.0	31.5	1.1	6.7	0.0	7.9	7.9	52.8	0.0	60.7	
Exiting Leg Total				48				10				31	89
Buses	13	1	0	14	1	2	0	3	7	18	0	25	42
% Buses	52.0	33.3	0.0	50.0	100.0	33.3	0.0	42.9	100.0	38.3	0.0	46.3	47.2
Exiting Leg Total				19				8				15	42
Single-Unit Trucks	11	2	0	13	0	4	0	4	0	21	0	21	38
% Single-Unit	44.0	66.7	0.0	46.4	0.0	66.7	0.0	57.1	0.0	44.7	0.0	38.9	42.7
Exiting Leg Total				21				2				15	38
Articulated Trucks	1	0	0	1	0	0	0	0	0	8	0	8	9
% Articulated	4.0	0.0	0.0	3.6	0.0	0.0	0.0	0.0	0.0	17.0	0.0	14.8	10.1
Exiting Leg Total				8				0				1	9

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

	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:45 AM	4	0	0	4	0	2	0	2	0	4	0	4	10
8:00 AM	6	0	0	6	0	0	0	0	2	8	0	10	16
8:15 AM	5	2	0	7	1	0	0	1	2	4	0	6	14
8:30 AM	2	0	0	2	0	1	0	1	1	13	0	14	17
Total Volume	17	2	0	19	1	3	0	4	5	29	0	34	57
% Approach Total	89.5	10.5	0.0		25.0	75.0	0.0		14.7	85.3	0.0		
PHF	0.708	0.250	0.000	0.679	0.250	0.375	0.000	0.500	0.625	0.558	0.000	0.607	0.838
Buses	12	0	0	12	1	2	0	3	5	12	0	17	32
Buses %	70.6	0.0	0.0	63.2	100.0	66.7	0.0	75.0	100.0	41.4	0.0	50.0	56.1
Single-Unit Trucks	5	2	0	7	0	1	0	1	0	12	0	12	20
Single-Unit %	29.4	100.0	0.0	36.8	0.0	33.3	0.0	25.0	0.0	41.4	0.0	35.3	35.1
Articulated Trucks	0	0	0	0	0	0	0	0	0	5	0	5	5
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.2	0.0	14.7	8.8
Buses	12	0	0	12	1	2	0	3	5	12	0	17	32
Single-Unit Trucks	5	2	0	7	0	1	0	1	0	12	0	12	20
Articulated Trucks	0	0	0	0	0	0	0	0	0	5	0	5	5
Total Entering Leg	17	2	0	19	1	3	0	4	5	29	0	34	57
Buses				13				5				14	32
Single-Unit Trucks				12				2				6	20
Articulated Trucks				5				0				0	5
Total Exiting Leg				30				7				20	57

PDI File #: **239484 C**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jennings Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Buses

	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	1	2	0	3	3
7:15 AM	0	1	0	1	0	0	0	0	0	1	0	1	2
7:30 AM	0	0	0	0	0	0	0	0	1	2	0	3	3
7:45 AM	3	0	0	3	0	2	0	2	0	0	0	0	5
Total	3	1	0	4	0	2	0	2	2	5	0	7	13
8:00 AM	5	0	0	5	0	0	0	0	2	4	0	6	11
8:15 AM	3	0	0	3	1	0	0	1	2	2	0	4	8
8:30 AM	1	0	0	1	0	0	0	0	1	6	0	7	8
8:45 AM	1	0	0	1	0	0	0	0	0	1	0	1	2
Total	10	0	0	10	1	0	0	1	5	13	0	18	29
Grand Total	13	1	0	14	1	2	0	3	7	18	0	25	42
Approach %	92.9	7.1	0.0		33.3	66.7	0.0		28.0	72.0	0.0		
Total %	31.0	2.4	0.0	33.3	2.4	4.8	0.0	7.1	16.7	42.9	0.0	59.5	
Exiting Leg Total				19				8				15	42

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

7:45 AM	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:45 AM	3	0	0	3	0	2	0	2	0	0	0	0	5
8:00 AM	5	0	0	5	0	0	0	0	2	4	0	6	11
8:15 AM	3	0	0	3	1	0	0	1	2	2	0	4	8
8:30 AM	1	0	0	1	0	0	0	0	1	6	0	7	8
Total Volume	12	0	0	12	1	2	0	3	5	12	0	17	32
% Approach Total	100.0	0.0	0.0		33.3	66.7	0.0		29.4	70.6	0.0		
PHF	0.600	0.000	0.000	0.600	0.250	0.250	0.000	0.375	0.625	0.500	0.000	0.607	0.727
Entering Leg	12	0	0	12	1	2	0	3	5	12	0	17	32
Exiting Leg				13				5				14	32
Total				25				8				31	64

PDI File #: **239484 C**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jennings Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Single-Unit Trucks

	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	1	0	0	1	0	0	0	0	0	1	0	1	2
7:15 AM	3	0	0	3	0	2	0	2	0	1	0	1	6
7:30 AM	1	0	0	1	0	0	0	0	0	6	0	6	7
7:45 AM	1	0	0	1	0	0	0	0	0	3	0	3	4
Total	6	0	0	6	0	2	0	2	0	11	0	11	19
8:00 AM	1	0	0	1	0	0	0	0	0	4	0	4	5
8:15 AM	2	2	0	4	0	0	0	0	0	2	0	2	6
8:30 AM	1	0	0	1	0	1	0	1	0	3	0	3	5
8:45 AM	1	0	0	1	0	1	0	1	0	1	0	1	3
Total	5	2	0	7	0	2	0	2	0	10	0	10	19
Grand Total	11	2	0	13	0	4	0	4	0	21	0	21	38
Approach %	84.6	15.4	0.0		0.0	100.0	0.0		0.0	100.0	0.0		
Total %	28.9	5.3	0.0	34.2	0.0	10.5	0.0	10.5	0.0	55.3	0.0	55.3	
Exiting Leg Total				21				2				15	38

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

7:15 AM	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:15 AM	3	0	0	3	0	2	0	2	0	1	0	1	6
7:30 AM	1	0	0	1	0	0	0	0	0	6	0	6	7
7:45 AM	1	0	0	1	0	0	0	0	0	3	0	3	4
8:00 AM	1	0	0	1	0	0	0	0	0	4	0	4	5
Total Volume	6	0	0	6	0	2	0	2	0	14	0	14	22
% Approach Total	100.0	0.0	0.0		0.0	100.0	0.0		0.0	100.0	0.0		
PHF	0.500	0.000	0.000	0.500	0.000	0.250	0.000	0.250	0.000	0.583	0.000	0.583	0.786
Entering Leg	6	0	0	6	0	2	0	2	0	14	0	14	22
Exiting Leg				14				0				8	22
Total				20				2				22	44

PDI File #: **239484 C**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jennings Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Articulated Trucks

	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
7:30 AM	0	0	0	0	0	0	0	0	0	2	0	2	2
7:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	1	0	0	1	0	0	0	0	0	4	0	4	5
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	4	0	4	4
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	4	0	4	4
Grand Total	1	0	0	1	0	0	0	0	0	8	0	8	9
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	11.1	0.0	0.0	11.1	0.0	0.0	0.0	0.0	0.0	88.9	0.0	88.9	
Exiting Leg Total				8				0				1	9

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

7:00 AM	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
7:30 AM	0	0	0	0	0	0	0	0	0	2	0	2	2
7:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
Total Volume	1	0	0	1	0	0	0	0	0	4	0	4	5
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.500	0.625
Entering Leg	1	0	0	1	0	0	0	0	0	4	0	4	5
Exiting Leg				4				0				1	5
Total				5				0				5	10

PDI File #: **239484 C**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jennings Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**



**PRECISION
D A T A
INDUSTRIES, LLC**
 157 Washington Street, Suite 2
 Hudson, MA 01749
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilc.com

Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**

Class: **Bicycles (on Roadway and Crosswalks)**

	Grafton Street (Route 122)						Jennings Street						Grafton Street (Route 122)						Total
	from North						from East						from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	
7:00 AM	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	1	1	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
7:45 AM	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	1	1	0	0	0	0	0	0	1
8:00 AM	1	0	0	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	1	0	0	0	1	1
8:30 AM	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
Total	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	2
Grand Total	1	0	0	0	0	1	0	0	0	0	1	1	0	1	0	0	0	1	3
Approach %	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	100.0		0.0	100.0	0.0	0.0	0.0		
Total %	33.3	0.0	0.0	0.0	0.0	33.3	0.0	0.0	0.0	0.0	33.3	33.3	0.0	33.3	0.0	0.0	0.0	33.3	
Exiting Leg Total	1						1						1						3

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

7:15 AM	Grafton Street (Route 122)						Jennings Street						Grafton Street (Route 122)						Total
	from North						from East						from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	
7:15 AM	0	0	0	0	0	0	0	0	0	0	1	1	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
7:45 AM	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	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	1	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	2
% Approach Total	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	0.0		
PHF	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.500
Entering Leg	1	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	2
Exiting Leg	0						0						1						2
Total	1						2						1						4

PDI File #: **239484 C**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jennings Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Pedestrians

	Grafton Street (Route 122)						Jennings Street						Grafton Street (Route 122)						Total
	from North						from East						from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	3
7:15 AM	0	0	0	0	0	0	0	0	0	0	1	1	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
7:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	4	1	5	0	0	0	0	0	0	5
8:00 AM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	4	2	6	0	0	0	0	0	0	6
Grand Total	0	0	0	0	0	0	0	0	0	8	3	11	0	0	0	0	0	0	11
Approach %	0	0	0	0	0	0	0	0	0	72.727	27.273		0	0	0	0	0	0	
Total %	0	0	0	0	0	0	0	0	0	72.727	27.273	100	0	0	0	0	0	0	
Exiting Leg Total	0						11						0						11

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

	Grafton Street (Route 122)						Jennings Street						Grafton Street (Route 122)						Total
	from North						from East						from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	
7:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	0	0	0	4	2	6	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	66.7	33.3		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	1.000	0.500	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.750
Entering Leg	0	0	0	0	0	0	0	0	0	4	2	6	0	0	0	0	0	0	6
Exiting Leg	0						6						0						6
Total	0						12						0						12

PDI File #: **239484 C**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jennings Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars and Heavy Vehicles (Combined)

	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	104	10	0	114	10	7	0	17	9	148	0	157	288
4:15 PM	99	13	0	112	10	14	0	24	17	128	0	145	281
4:30 PM	86	7	0	93	9	11	0	20	16	144	0	160	273
4:45 PM	119	15	0	134	6	14	0	20	14	155	0	169	323
Total	408	45	0	453	35	46	0	81	56	575	0	631	1165
5:00 PM	115	17	0	132	15	8	0	23	16	163	0	179	334
5:15 PM	107	10	0	117	10	13	0	23	14	174	0	188	328
5:30 PM	134	11	0	145	12	16	0	28	14	154	0	168	341
5:45 PM	109	17	0	126	8	13	0	21	14	146	0	160	307
Total	465	55	0	520	45	50	0	95	58	637	0	695	1310
Grand Total	873	100	0	973	80	96	0	176	114	1212	0	1326	2475
Approach %	89.7	10.3	0.0		45.5	54.5	0.0		8.6	91.4	0.0		
Total %	35.3	4.0	0.0	39.3	3.2	3.9	0.0	7.1	4.6	49.0	0.0	53.6	
Exiting Leg Total				1292				214				969	2475
Cars	858	99	0	957	79	93	0	172	113	1194	0	1307	2436
% Cars	98.3	99.0	0.0	98.4	98.8	96.9	0.0	97.7	99.1	98.5	0.0	98.6	98.4
Exiting Leg Total				1273				212				951	2436
Heavy Vehicles	15	1	0	16	1	3	0	4	1	18	0	19	39
% Heavy Vehicles	1.7	1.0	0.0	1.6	1.3	3.1	0.0	2.3	0.9	1.5	0.0	1.4	1.6
Exiting Leg Total				19				2				18	39

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

4:45 PM	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:45 PM	119	15	0	134	6	14	0	20	14	155	0	169	323
5:00 PM	115	17	0	132	15	8	0	23	16	163	0	179	334
5:15 PM	107	10	0	117	10	13	0	23	14	174	0	188	328
5:30 PM	134	11	0	145	12	16	0	28	14	154	0	168	341
Total Volume	475	53	0	528	43	51	0	94	58	646	0	704	1326
% Approach Total	90.0	10.0	0.0		45.7	54.3	0.0		8.2	91.8	0.0		
PHF	0.886	0.779	0.000	0.910	0.717	0.797	0.000	0.839	0.906	0.928	0.000	0.936	0.972
Cars	469	53	0	522	42	51	0	93	58	638	0	696	1311
Cars %	98.7	100.0	0.0	98.9	97.7	100.0	0.0	98.9	100.0	98.8	0.0	98.9	98.9
Heavy Vehicles	6	0	0	6	1	0	0	1	0	8	0	8	15
Heavy Vehicles %	1.3	0.0	0.0	1.1	2.3	0.0	0.0	1.1	0.0	1.2	0.0	1.1	1.1
Cars Enter Leg	469	53	0	522	42	51	0	93	58	638	0	696	1311
Heavy Enter Leg	6	0	0	6	1	0	0	1	0	8	0	8	15
Total Entering Leg	475	53	0	528	43	51	0	94	58	646	0	704	1326
Cars Exiting Leg				680				111				520	1311
Heavy Exiting Leg				9				0				6	15
Total Exiting Leg				689				111				526	1326

PDI File #: **239484 C**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jennings Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars

	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	102	9	0	111	10	6	0	16	9	144	0	153	280
4:15 PM	96	13	0	109	10	13	0	23	16	126	0	142	274
4:30 PM	85	7	0	92	9	10	0	19	16	142	0	158	269
4:45 PM	117	15	0	132	6	14	0	20	14	151	0	165	317
Total	400	44	0	444	35	43	0	78	55	563	0	618	1140
5:00 PM	115	17	0	132	15	8	0	23	16	161	0	177	332
5:15 PM	105	10	0	115	10	13	0	23	14	173	0	187	325
5:30 PM	132	11	0	143	11	16	0	27	14	153	0	167	337
5:45 PM	106	17	0	123	8	13	0	21	14	144	0	158	302
Total	458	55	0	513	44	50	0	94	58	631	0	689	1296
Grand Total	858	99	0	957	79	93	0	172	113	1194	0	1307	2436
Approach %	89.7	10.3	0.0		45.9	54.1	0.0		8.6	91.4	0.0		
Total %	35.2	4.1	0.0	39.3	3.2	3.8	0.0	7.1	4.6	49.0	0.0	53.7	
Exiting Leg Total				1273				212				951	2436

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

	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:45 PM	117	15	0	132	6	14	0	20	14	151	0	165	317
5:00 PM	115	17	0	132	15	8	0	23	16	161	0	177	332
5:15 PM	105	10	0	115	10	13	0	23	14	173	0	187	325
5:30 PM	132	11	0	143	11	16	0	27	14	153	0	167	337
Total Volume	469	53	0	522	42	51	0	93	58	638	0	696	1311
% Approach Total	89.8	10.2	0.0		45.2	54.8	0.0		8.3	91.7	0.0		
PHF	0.888	0.779	0.000	0.913	0.700	0.797	0.000	0.861	0.906	0.922	0.000	0.930	0.973
Entering Leg	469	53	0	522	42	51	0	93	58	638	0	696	1311
Exiting Leg				680				111				520	1311
Total				1202				204				1216	2622

PDI File #: **239484 C**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jennings Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



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

	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	2	1	0	3	0	1	0	1	0	4	0	4	8
4:15 PM	3	0	0	3	0	1	0	1	1	2	0	3	7
4:30 PM	1	0	0	1	0	1	0	1	0	2	0	2	4
4:45 PM	2	0	0	2	0	0	0	0	0	4	0	4	6
Total	8	1	0	9	0	3	0	3	1	12	0	13	25
5:00 PM	0	0	0	0	0	0	0	0	0	2	0	2	2
5:15 PM	2	0	0	2	0	0	0	0	0	1	0	1	3
5:30 PM	2	0	0	2	1	0	0	1	0	1	0	1	4
5:45 PM	3	0	0	3	0	0	0	0	0	2	0	2	5
Total	7	0	0	7	1	0	0	1	0	6	0	6	14
Grand Total	15	1	0	16	1	3	0	4	1	18	0	19	39
Approach %	93.8	6.3	0.0		25.0	75.0	0.0		5.3	94.7	0.0		
Total %	38.5	2.6	0.0	41.0	2.6	7.7	0.0	10.3	2.6	46.2	0.0	48.7	
Exiting Leg Total				19				2				18	39
Buses	8	1	0	9	1	2	0	3	0	7	0	7	19
% Buses	53.3	100.0	0.0	56.3	100.0	66.7	0.0	75.0	0.0	38.9	0.0	36.8	48.7
Exiting Leg Total				8				1				10	19
Single-Unit Trucks	5	0	0	5	0	1	0	1	1	9	0	10	16
% Single-Unit	33.3	0.0	0.0	31.3	0.0	33.3	0.0	25.0	100.0	50.0	0.0	52.6	41.0
Exiting Leg Total				9				1				6	16
Articulated Trucks	2	0	0	2	0	0	0	0	0	2	0	2	4
% Articulated	13.3	0.0	0.0	12.5	0.0	0.0	0.0	0.0	0.0	11.1	0.0	10.5	10.3
Exiting Leg Total				2				0				2	4

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

	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	2	1	0	3	0	1	0	1	0	4	0	4	8
4:15 PM	3	0	0	3	0	1	0	1	1	2	0	3	7
4:30 PM	1	0	0	1	0	1	0	1	0	2	0	2	4
4:45 PM	2	0	0	2	0	0	0	0	0	4	0	4	6
Total Volume	8	1	0	9	0	3	0	3	1	12	0	13	25
% Approach Total	88.9	11.1	0.0		0.0	100.0	0.0		7.7	92.3	0.0		
PHF	0.667	0.250	0.000	0.750	0.000	0.750	0.000	0.750	0.250	0.750	0.000	0.813	0.781
Buses	3	1	0	4	0	2	0	2	0	5	0	5	11
Buses %	37.5	100.0	0.0	44.4	0.0	66.7	0.0	66.7	0.0	41.7	0.0	38.5	44.0
Single-Unit Trucks	4	0	0	4	0	1	0	1	1	7	0	8	13
Single-Unit %	50.0	0.0	0.0	44.4	0.0	33.3	0.0	33.3	100.0	58.3	0.0	61.5	52.0
Articulated Trucks	1	0	0	1	0	0	0	0	0	0	0	0	1
Articulated %	12.5	0.0	0.0	11.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0
Buses	3	1	0	4	0	2	0	2	0	5	0	5	11
Single-Unit Trucks	4	0	0	4	0	1	0	1	1	7	0	8	13
Articulated Trucks	1	0	0	1	0	0	0	0	0	0	0	0	1
Total Entering Leg	8	1	0	9	0	3	0	3	1	12	0	13	25
Buses				5				1				5	11
Single-Unit Trucks				7				1				5	13
Articulated Trucks				0				0				1	1
Total Exiting Leg				12				2				11	25

PDI File #: **239484 C**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jennings Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Buses

	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	1	1	0	2	0	1	0	1	0	1	0	1	4
4:15 PM	2	0	0	2	0	1	0	1	0	2	0	2	5
4:30 PM	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	2	0	2	2
Total	3	1	0	4	0	2	0	2	0	5	0	5	11
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	2	0	0	2	0	0	0	0	0	0	0	0	2
5:30 PM	2	0	0	2	1	0	0	1	0	0	0	0	3
5:45 PM	1	0	0	1	0	0	0	0	0	2	0	2	3
Total	5	0	0	5	1	0	0	1	0	2	0	2	8
Grand Total	8	1	0	9	1	2	0	3	0	7	0	7	19
Approach %	88.9	11.1	0.0		33.3	66.7	0.0		0.0	100.0	0.0		
Total %	42.1	5.3	0.0	47.4	5.3	10.5	0.0	15.8	0.0	36.8	0.0	36.8	
Exiting Leg Total				8				1				10	19

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

	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	1	1	0	2	0	1	0	1	0	1	0	1	4
4:15 PM	2	0	0	2	0	1	0	1	0	2	0	2	5
4:30 PM	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	2	0	2	2
Total Volume	3	1	0	4	0	2	0	2	0	5	0	5	11
% Approach Total	75.0	25.0	0.0		0.0	100.0	0.0		0.0	100.0	0.0		
PHF	0.375	0.250	0.000	0.500	0.000	0.500	0.000	0.500	0.000	0.625	0.000	0.625	0.550
Entering Leg	3	1	0	4	0	2	0	2	0	5	0	5	11
Exiting Leg				5				1				5	11
Total				9				3				10	22

PDI File #: **239484 C**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jennings Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Single-Unit Trucks

	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	3	0	3	3
4:15 PM	1	0	0	1	0	0	0	0	1	0	0	1	2
4:30 PM	1	0	0	1	0	1	0	1	0	2	0	2	4
4:45 PM	2	0	0	2	0	0	0	0	0	2	0	2	4
Total	4	0	0	4	0	1	0	1	1	7	0	8	13
5:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
5:15 PM	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	1	0	1	1
5:45 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
Total	1	0	0	1	0	0	0	0	0	2	0	2	3
Grand Total	5	0	0	5	0	1	0	1	1	9	0	10	16
Approach %	100.0	0.0	0.0		0.0	100.0	0.0		10.0	90.0	0.0		
Total %	31.3	0.0	0.0	31.3	0.0	6.3	0.0	6.3	6.3	56.3	0.0	62.5	
Exiting Leg Total				9				1				6	16

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

	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	3	0	3	3
4:15 PM	1	0	0	1	0	0	0	0	1	0	0	1	2
4:30 PM	1	0	0	1	0	1	0	1	0	2	0	2	4
4:45 PM	2	0	0	2	0	0	0	0	0	2	0	2	4
Total Volume	4	0	0	4	0	1	0	1	1	7	0	8	13
% Approach Total	100.0	0.0	0.0		0.0	100.0	0.0		12.5	87.5	0.0		
PHF	0.500	0.000	0.000	0.500	0.000	0.250	0.000	0.250	0.250	0.583	0.000	0.667	0.813
Entering Leg	4	0	0	4	0	1	0	1	1	7	0	8	13
Exiting Leg				7				1				5	13
Total				11				2				13	26

PDI File #: **239484 C**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jennings Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Articulated Trucks

	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
4:15 PM	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
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	1	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
5:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
Total	1	0	0	1	0	0	0	0	0	2	0	2	3
Grand Total	2	0	0	2	0	0	0	0	0	2	0	2	4
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	50.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	50.0	
Exiting Leg Total				2				0				2	4

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

	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
5:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
5:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
Total Volume	1	0	0	1	0	0	0	0	0	2	0	2	3
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.500	0.750
Entering Leg	1	0	0	1	0	0	0	0	0	2	0	2	3
Exiting Leg				2				0				1	3
Total				3				0				3	6

PDI File #: **239484 C**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jennings Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**



**PRECISION
D A T A
INDUSTRIES, LLC**
 157 Washington Street, Suite 2
 Hudson, MA 01749
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilc.com

Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**

Class:

Bicycles (on Roadway and Crosswalks)

	Grafton Street (Route 122)						Jennings Street						Grafton Street (Route 122)						Total
	from North						from East						from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	
4:00 PM	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	
4:30 PM	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	
Total	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	1	0	0	0	1	
5:15 PM	1	0	0	0	0	1	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	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	
Grand Total	1	0	0	0	0	1	0	0	0	0	0	0	0	1	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	100.0	0.0	0.0	0.0		
Total %	50.0	0.0	0.0	0.0	0.0	50.0	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	1						0						1						2

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

4:30 PM	Grafton Street (Route 122)						Jennings Street						Grafton Street (Route 122)						Total
	from North						from East						from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	
4:30 PM	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	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	
5:15 PM	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	1	0	0	0	0	1	0	0	0	0	0	0	0	1	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	100.0	0.0	0.0	0.0		
PHF	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.250	
Entering Leg	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	
Exiting Leg	1						0						1						2
Total	2						0						2						4

PDI File #: **239484 C**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jennings Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**



**PRECISION
D A T A
INDUSTRIES, LLC**
 157 Washington Street, Suite 2
 Hudson, MA 01749
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilc.com

Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**

Class: **Pedestrians**

	Grafton Street (Route 122)						Jennings Street						Grafton Street (Route 122)						Total
	from North						from East						from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	
4:00 PM	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
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
Total	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3
5:00 PM	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
5:30 PM	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
Total	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	3	0	0	0	0	0	0	3
Approach %	0	0	0	0	0	0	0	0	0	0	100	3	0	0	0	0	0	0	3
Total %	0	0	0	0	0	0	0	0	0	0	100	3	0	0	0	0	0	0	3
Exiting Leg Total	0						3						0						3

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

4:00 PM	Grafton Street (Route 122)						Jennings Street						Grafton Street (Route 122)						Total
	from North						from East						from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	
4:00 PM	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
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
Total Volume	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3
% Approach Total	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	3
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.375	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.375
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3
Exiting Leg	0						3						0						3
Total	0						6						0						6

PDI File #: **239484 D**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Stop and Shop Driveway W: Dalton Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars and Heavy Vehicles (Combined)

	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	4	107	3	0	114	0	3	1	0	4	3	66	7	0	76	11	1	8	0	20	214
7:15 AM	5	132	4	0	141	2	2	9	0	13	4	103	9	0	116	20	1	5	0	26	296
7:30 AM	1	107	2	0	110	6	1	5	0	12	4	117	5	0	126	18	0	5	0	23	271
7:45 AM	4	138	5	0	147	2	3	11	0	16	4	108	7	0	119	28	4	5	0	37	319
Total	14	484	14	0	512	10	9	26	0	45	15	394	28	0	437	77	6	23	0	106	1100
8:00 AM	5	98	2	0	105	3	6	11	0	20	4	103	8	0	115	41	6	13	0	60	300
8:15 AM	5	111	3	0	119	3	5	9	0	17	8	116	11	0	135	41	6	19	0	66	337
8:30 AM	1	100	5	0	106	5	2	11	0	18	7	125	8	0	140	21	4	10	0	35	299
8:45 AM	3	91	4	0	98	3	2	14	0	19	4	91	11	0	106	15	3	2	0	20	243
Total	14	400	14	0	428	14	15	45	0	74	23	435	38	0	496	118	19	44	0	181	1179
Grand Total	28	884	28	0	940	24	24	71	0	119	38	829	66	0	933	195	25	67	0	287	2279
Approach %	3.0	94.0	3.0	0.0		20.2	20.2	59.7	0.0		4.1	88.9	7.1	0.0		67.9	8.7	23.3	0.0		
Total %	1.2	38.8	1.2	0.0	41.2	1.1	1.1	3.1	0.0	5.2	1.7	36.4	2.9	0.0	40.9	8.6	1.1	2.9	0.0	12.6	
Exiting Leg Total	920					91					1150					118					2279
Cars	25	857	28	0	910	23	24	70	0	117	35	788	64	0	887	190	24	60	0	274	2188
% Cars	89.3	96.9	100.0	0.0	96.8	95.8	100.0	98.6	0.0	98.3	92.1	95.1	97.0	0.0	95.1	97.4	96.0	89.6	0.0	95.5	96.0
Exiting Leg Total	871					87					1117					113					2188
Heavy Vehicles	3	27	0	0	30	1	0	1	0	2	3	41	2	0	46	5	1	7	0	13	91
% Heavy Vehicles	10.7	3.1	0.0	0.0	3.2	4.2	0.0	1.4	0.0	1.7	7.9	4.9	3.0	0.0	4.9	2.6	4.0	10.4	0.0	4.5	4.0
Exiting Leg Total	49					4					33					5					91

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

7:45 AM	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	4	138	5	0	147	2	3	11	0	16	4	108	7	0	119	28	4	5	0	37	319
8:00 AM	5	98	2	0	105	3	6	11	0	20	4	103	8	0	115	41	6	13	0	60	300
8:15 AM	5	111	3	0	119	3	5	9	0	17	8	116	11	0	135	41	6	19	0	66	337
8:30 AM	1	100	5	0	106	5	2	11	0	18	7	125	8	0	140	21	4	10	0	35	299
Total Volume	15	447	15	0	477	13	16	42	0	71	23	452	34	0	509	131	20	47	0	198	1255
% Approach Total	3.1	93.7	3.1	0.0		18.3	22.5	59.2	0.0		4.5	88.8	6.7	0.0		66.2	10.1	23.7	0.0		
PHF	0.750	0.810	0.750	0.000	0.811	0.650	0.667	0.955	0.000	0.888	0.719	0.904	0.773	0.000	0.909	0.799	0.833	0.618	0.000	0.750	0.931
Cars	12	430	15	0	457	12	16	42	0	70	23	428	33	0	484	126	19	40	0	185	1196
Cars %	80.0	96.2	100.0	0.0	95.8	92.3	100.0	100.0	0.0	98.6	100.0	94.7	97.1	0.0	95.1	96.2	95.0	85.1	0.0	93.4	95.3
Heavy Vehicles	3	17	0	0	20	1	0	0	0	1	0	24	1	0	25	5	1	7	0	13	59
Heavy Vehicles %	20.0	3.8	0.0	0.0	4.2	7.7	0.0	0.0	0.0	1.4	0.0	5.3	2.9	0.0	4.9	3.8	5.0	14.9	0.0	6.6	4.7
Cars Enter Leg	12	430	15	0	457	12	16	42	0	70	23	428	33	0	484	126	19	40	0	185	1196
Heavy Enter Leg	3	17	0	0	20	1	0	0	0	1	0	24	1	0	25	5	1	7	0	13	59
Total Entering Leg	15	447	15	0	477	13	16	42	0	71	23	452	34	0	509	131	20	47	0	198	1255
Cars Exiting Leg	480					57					598					61					1196
Heavy Exiting Leg	32					1					22					4					59
Total Exiting Leg	512					58					620					65					1255

PDI File #: **239484 D**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Stop and Shop Driveway W: Dalton Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars

	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	4	105	3	0	112	0	3	1	0	4	2	64	6	0	72	11	1	8	0	20	208					
7:15 AM	5	129	4	0	138	2	2	9	0	13	3	101	9	0	113	20	1	5	0	26	290					
7:30 AM	1	104	2	0	107	6	1	5	0	12	3	106	5	0	114	18	0	5	0	23	256					
7:45 AM	3	133	5	0	141	2	3	11	0	16	4	102	7	0	113	26	4	5	0	35	305					
Total	13	471	14	0	498	10	9	26	0	45	12	373	27	0	412	75	6	23	0	104	1059					
8:00 AM	4	92	2	0	98	3	6	11	0	20	4	99	8	0	111	40	6	10	0	56	285					
8:15 AM	4	108	3	0	115	3	5	9	0	17	8	114	10	0	132	39	6	16	0	61	325					
8:30 AM	1	97	5	0	103	4	2	11	0	17	7	113	8	0	128	21	3	9	0	33	281					
8:45 AM	3	89	4	0	96	3	2	13	0	18	4	89	11	0	104	15	3	2	0	20	238					
Total	12	386	14	0	412	13	15	44	0	72	23	415	37	0	475	115	18	37	0	170	1129					
Grand Total	25	857	28	0	910	23	24	70	0	117	35	788	64	0	887	190	24	60	0	274	2188					
Approach %	2.7	94.2	3.1	0.0		19.7	20.5	59.8	0.0		3.9	88.8	7.2	0.0		69.3	8.8	21.9	0.0							
Total %	1.1	39.2	1.3	0.0	41.6	1.1	1.1	3.2	0.0	5.3	1.6	36.0	2.9	0.0	40.5	8.7	1.1	2.7	0.0	12.5						
Exiting Leg Total						871					87					1117					113					2188

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

	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	3	133	5	0	141	2	3	11	0	16	4	102	7	0	113	26	4	5	0	35	305					
8:00 AM	4	92	2	0	98	3	6	11	0	20	4	99	8	0	111	40	6	10	0	56	285					
8:15 AM	4	108	3	0	115	3	5	9	0	17	8	114	10	0	132	39	6	16	0	61	325					
8:30 AM	1	97	5	0	103	4	2	11	0	17	7	113	8	0	128	21	3	9	0	33	281					
Total Volume	12	430	15	0	457	12	16	42	0	70	23	428	33	0	484	126	19	40	0	185	1196					
% Approach Total	2.6	94.1	3.3	0.0		17.1	22.9	60.0	0.0		4.8	88.4	6.8	0.0		68.1	10.3	21.6	0.0							
PHF	0.750	0.808	0.750	0.000	0.810	0.750	0.667	0.955	0.000	0.875	0.719	0.939	0.825	0.000	0.917	0.788	0.792	0.625	0.000	0.758	0.920					
Entering Leg	12	430	15	0	457	12	16	42	0	70	23	428	33	0	484	126	19	40	0	185	1196					
Exiting Leg						480					57					598					61					1196
Total						937					127					1082					246					2392

PDI File #: **239484 D**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Stop and Shop Driveway W: Dalton Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**



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

	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	2	0	0	2	0	0	0	0	0	1	2	1	0	4	0	0	0	0	0	6
7:15 AM	0	3	0	0	3	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	6
7:30 AM	0	3	0	0	3	0	0	0	0	0	1	11	0	0	12	0	0	0	0	0	15
7:45 AM	1	5	0	0	6	0	0	0	0	0	0	6	0	0	6	2	0	0	0	2	14
Total	1	13	0	0	14	0	0	0	0	0	3	21	1	0	25	2	0	0	0	2	41
8:00 AM	1	6	0	0	7	0	0	0	0	0	0	4	0	0	4	1	0	3	0	4	15
8:15 AM	1	3	0	0	4	0	0	0	0	0	0	2	1	0	3	2	0	3	0	5	12
8:30 AM	0	3	0	0	3	1	0	0	0	1	0	12	0	0	12	0	1	1	0	2	18
8:45 AM	0	2	0	0	2	0	0	1	0	1	0	2	0	0	2	0	0	0	0	0	5
Total	2	14	0	0	16	1	0	1	0	2	0	20	1	0	21	3	1	7	0	11	50
Grand Total	3	27	0	0	30	1	0	1	0	2	3	41	2	0	46	5	1	7	0	13	91
Approach %	10.0	90.0	0.0	0.0		50.0	0.0	50.0	0.0		6.5	89.1	4.3	0.0		38.5	7.7	53.8	0.0		
Total %	3.3	29.7	0.0	0.0	33.0	1.1	0.0	1.1	0.0	2.2	3.3	45.1	2.2	0.0	50.5	5.5	1.1	7.7	0.0	14.3	
Exiting Leg Total	49					4					33					5					91
Buses	2	15	0	0	17	1	0	0	0	1	2	11	1	0	14	3	1	6	0	10	42
% Buses	66.7	55.6	0.0	0.0	56.7	100.0	0.0	0.0	0.0	50.0	66.7	26.8	50.0	0.0	30.4	60.0	100.0	85.7	0.0	76.9	46.2
Exiting Leg Total	18					3					18					3					42
Single-Unit Trucks	1	11	0	0	12	0	0	1	0	1	0	22	1	0	23	2	0	1	0	3	39
% Single-Unit	33.3	40.7	0.0	0.0	40.0	0.0	0.0	100.0	0.0	50.0	0.0	53.7	50.0	0.0	50.0	40.0	0.0	14.3	0.0	23.1	42.9
Exiting Leg Total	23					0					14					2					39
Articulated Trucks	0	1	0	0	1	0	0	0	0	0	1	8	0	0	9	0	0	0	0	0	10
% Articulated	0.0	3.7	0.0	0.0	3.3	0.0	0.0	0.0	0.0	0.0	33.3	19.5	0.0	0.0	19.6	0.0	0.0	0.0	0.0	0.0	11.0
Exiting Leg Total	8					1					1					0					10

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

	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	1	5	0	0	6	0	0	0	0	0	0	6	0	0	6	2	0	0	0	2	14
8:00 AM	1	6	0	0	7	0	0	0	0	0	0	4	0	0	4	1	0	3	0	4	15
8:15 AM	1	3	0	0	4	0	0	0	0	0	0	2	1	0	3	2	0	3	0	5	12
8:30 AM	0	3	0	0	3	1	0	0	0	1	0	12	0	0	12	0	1	1	0	2	18
Total Volume	3	17	0	0	20	1	0	0	0	1	0	24	1	0	25	5	1	7	0	13	59
% Approach Total	15.0	85.0	0.0	0.0		100.0	0.0	0.0	0.0		0.0	96.0	4.0	0.0		38.5	7.7	53.8	0.0		
PHF	0.750	0.708	0.000	0.000	0.714	0.250	0.000	0.000	0.000	0.250	0.000	0.500	0.250	0.000	0.521	0.625	0.250	0.583	0.000	0.650	0.819
Buses	2	13	0	0	15	1	0	0	0	1	0	7	1	0	8	3	1	6	0	10	34
Buses %	66.7	76.5	0.0	0.0	75.0	100.0	0.0	0.0	0.0	100.0	0.0	29.2	100.0	0.0	32.0	60.0	100.0	85.7	0.0	76.9	57.6
Single-Unit Trucks	1	4	0	0	5	0	0	0	0	0	0	13	0	0	13	2	0	1	0	3	21
Single-Unit %	33.3	23.5	0.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	54.2	0.0	0.0	52.0	40.0	0.0	14.3	0.0	23.1	35.6
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	4
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.7	0.0	0.0	16.0	0.0	0.0	0.0	0.0	0.0	6.8
Buses	2	13	0	0	15	1	0	0	0	1	0	7	1	0	8	3	1	6	0	10	34
Single-Unit Trucks	1	4	0	0	5	0	0	0	0	0	0	13	0	0	13	2	0	1	0	3	21
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	4
Total Entering Leg	3	17	0	0	20	1	0	0	0	1	0	24	1	0	25	5	1	7	0	13	59
Buses	14					1					16					3					34
Single-Unit Trucks	14					0					6					1					21
Articulated Trucks	4					0					0					0					4
Total Exiting Leg	32					1					22					4					59

PDI File #: **239484 D**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Stop and Shop Driveway W: Dalton Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Buses

	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	1	1	0	0	2	0	0	0	0	0	2
7:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
7:30 AM	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	5
7:45 AM	0	5	0	0	5	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	7
Total	0	7	0	0	7	0	0	0	0	0	2	5	0	0	7	1	0	0	0	1	15
8:00 AM	1	5	0	0	6	0	0	0	0	0	0	1	0	0	1	0	0	3	0	3	10
8:15 AM	1	2	0	0	3	0	0	0	0	0	0	0	1	0	1	2	0	3	0	5	9
8:30 AM	0	1	0	0	1	1	0	0	0	1	0	5	0	0	5	0	1	0	0	1	8
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	2	8	0	0	10	1	0	0	0	1	0	6	1	0	7	2	1	6	0	9	27
Grand Total	2	15	0	0	17	1	0	0	0	1	2	11	1	0	14	3	1	6	0	10	42
Approach %	11.8	88.2	0.0	0.0		100.0	0.0	0.0	0.0		14.3	78.6	7.1	0.0		30.0	10.0	60.0	0.0		
Total %	4.8	35.7	0.0	0.0	40.5	2.4	0.0	0.0	0.0	2.4	4.8	26.2	2.4	0.0	33.3	7.1	2.4	14.3	0.0	23.8	
Exiting Leg Total	18					3					18					3					42

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

	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	5	0	0	5	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	7
7:45 AM	0	5	0	0	5	0	0	0	0	0	0	1	0	0	1	0	0	3	0	3	10
8:00 AM	1	5	0	0	6	0	0	0	0	0	0	0	1	0	1	2	0	3	0	5	9
8:15 AM	1	2	0	0	3	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	8
8:30 AM	0	1	0	0	1	1	0	0	0	1	0	5	0	0	5	0	1	0	0	1	8
Total Volume	2	13	0	0	15	1	0	0	0	1	0	7	1	0	8	3	1	6	0	10	34
% Approach Total	13.3	86.7	0.0	0.0		100.0	0.0	0.0	0.0		0.0	87.5	12.5	0.0		30.0	10.0	60.0	0.0		
PHF	0.500	0.650	0.000	0.000	0.625	0.250	0.000	0.000	0.000	0.250	0.000	0.350	0.250	0.000	0.400	0.375	0.250	0.500	0.000	0.500	0.850
Entering Leg	2	13	0	0	15	1	0	0	0	1	0	7	1	0	8	3	1	6	0	10	34
Exiting Leg	14					1					16					3					34
Total	29					2					24					13					68

PDI File #: **239484 D**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Stop and Shop Driveway W: Dalton Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Single-Unit Trucks

	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	1	0	0	1	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	3
7:15 AM	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	4
7:30 AM	0	1	0	0	1	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	7
7:45 AM	1	0	0	0	1	0	0	0	0	0	0	4	0	0	4	1	0	0	0	1	6
Total	1	5	0	0	6	0	0	0	0	0	0	12	1	0	13	1	0	0	0	1	20
8:00 AM	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	1	0	0	0	1	5
8:15 AM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
8:30 AM	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	0	0	1	0	1	7
8:45 AM	0	2	0	0	2	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	4
Total	0	6	0	0	6	0	0	1	0	1	0	10	0	0	10	1	0	1	0	2	19
Grand Total	1	11	0	0	12	0	0	1	0	1	0	22	1	0	23	2	0	1	0	3	39
Approach %	8.3	91.7	0.0	0.0		0.0	0.0	100.0	0.0		0.0	95.7	4.3	0.0		66.7	0.0	33.3	0.0		
Total %	2.6	28.2	0.0	0.0	30.8	0.0	0.0	2.6	0.0	2.6	0.0	56.4	2.6	0.0	59.0	5.1	0.0	2.6	0.0	7.7	
Exiting Leg Total	23					0					14					2					39

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

7:15 AM	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	4
7:30 AM	0	1	0	0	1	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	7
7:45 AM	1	0	0	0	1	0	0	0	0	0	0	4	0	0	4	1	0	0	0	1	6
8:00 AM	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	1	0	0	0	1	5
Total Volume	1	5	0	0	6	0	0	0	0	0	0	14	0	0	14	2	0	0	0	2	22
% Approach Total	16.7	83.3	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		100.0	0.0	0.0	0.0		
PHF	0.250	0.417	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.583	0.000	0.000	0.583	0.500	0.000	0.000	0.000	0.500	0.786
Entering Leg	1	5	0	0	6	0	0	0	0	0	0	14	0	0	14	2	0	0	0	2	22
Exiting Leg	14					0					7					1					22
Total	20					0					21					3					44

PDI File #: **239484 D**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Stop and Shop Driveway W: Dalton Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Articulated Trucks

	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	1	0	0	1	0	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	1	0	0	1	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	3
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total	0	1	0	0	1	0	0	0	0	0	1	4	0	0	5	0	0	0	0	0	6
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	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	3	0	0	3	0	0	0	0	0	3
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	4
Grand Total	0	1	0	0	1	0	0	0	0	0	1	8	0	0	9	0	0	0	0	0	10
Approach %	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		11.1	88.9	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	10.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0	0.0	10.0	80.0	0.0	0.0	90.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total	8					1					1					0					10

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

	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	1	0	0	1	0	0	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	1	0	0	1	0	0	0	0	0	1	
7:30 AM	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	3	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	
Total Volume	0	1	0	0	1	0	0	0	0	0	1	4	0	0	5	0	0	0	0	0	6	
% Approach Total	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		20.0	80.0	0.0	0.0		0.0	0.0	0.0	0.0			
PHF	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.250	0.500	0.000	0.000	0.417	0.000	0.000	0.000	0.000	0.000	0.500	
Entering Leg	0	1	0	0	1	0	0	0	0	0	1	4	0	0	5	0	0	0	0	0	6	
Exiting Leg	4					1					1					0					6	
Total	5					1					6					0					12	

PDI File #: **239484 D**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Stop and Shop Driveway W: Dalton Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Bicycles (on Roadway and Crosswalks)

	Grafton Street (Route 122)								Stop and Shop Driveway								Grafton Street (Route 122)								Dalton Street								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	1	1	0	0	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	0		
7:30 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	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	0	0	0	0	0	0	0	0	0	0		
Total	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2		
8:00 AM	0	1	0	0	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	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	1	0	0	0	0	1	1		
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	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	0	0	0	0	0	0	0	0	0	0		
Total	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	2		
Grand Total	0	1	0	0	0	0	1	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	4		
Approach %	0.0	100.0	0.0	0.0	0.0	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		0.0	0.0	100.0	0.0	0.0	0.0	0.0				
Total %	0.0	25.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0	25.0	25.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	25.0				
Exiting Leg Total	1							2							1							0							4				

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

	Grafton Street (Route 122)								Stop and Shop Driveway								Grafton Street (Route 122)								Dalton Street								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		
7:30 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	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	0	0	0	0	0	0	0	0	0	0		
8:00 AM	0	1	0	0	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	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	1	0	0	0	0	1	1		
Total Volume	0	1	0	0	0	0	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	3		
% Approach Total	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	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				
PHF	0.000	0.250	0.000	0.000	0.000	0.000	0.250	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	0.000	0.000	0.250	0.000	0.000	0.000	0.250	0.750			
Entering Leg	0	1	0	0	0	0	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	3		
Exiting Leg	1							1							1							0							3				
Total	2							2							1							1							6				

PDI File #: 239484 D
 Location: N: Grafton Street (Route 122) S: Grafton Street (Route 122)
 Location: E: Stop and Shop Driveway W: Dalton Street
 City, State: Worcester, MA
 Client: Kimley-Horn/ L. Juan
 Site Code: 112858000-02
 Count Date: Wednesday, September 13, 2023
 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
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilic.com

Pedestrians

	Grafton Street (Route 122)								Stop and Shop Driveway								Grafton Street (Route 122)								Dalton Street								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	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	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	1	1	0	0	0	0	0	1	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	1	1	0	0	0	0	0	1	2	3	0	0	0	0	1	2	3	4	
Total	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	1	3	4	0	0	0	0	1	3	4	5		
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	2	2	0	0	0	0	1	1	2	0	0	0	0	1	1	2	6			
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	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0	0	0	2	2	0	0	0	0	1	1	2	0	0	0	0	1	1	2	7			
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4		
Total	0	0	0	0	0	0	0	0	0	0	0	4	4	8	0	0	0	0	1	4	5	0	0	0	0	2	2	4	0	0	0	0	2	2	4	17			
Grand Total	0	0	0	0	0	0	0	0	0	0	0	4	4	8	0	0	0	0	1	5	6	0	0	0	0	3	5	8	0	0	0	0	3	5	8	22			
Approach %	0	0	0	0	0	0	0	0	0	0	0	50	50	0	0	0	0	16.7	83.3	0	0	0	0	37.5	62.5	0	0	0	0	13.6	22.7	36.4							
Total %	0	0	0	0	0	0	0	0	0	0	0	18.2	18.2	36.4	0	0	0	0	4.55	22.7	27.3	0	0	0	0	13.6	22.7	36.4											
Exiting Leg Total	0								8								6								8								22						

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

	Grafton Street (Route 122)								Stop and Shop Driveway								Grafton Street (Route 122)								Dalton Street								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					
7:45 AM	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	1	2	3	0	0	0	0	1	2	3	4
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	2	2	0	0	0	0	1	1	2	0	0	0	0	1	1	2	6
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	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0	0	0	2	2	0	0	0	0	1	1	2	0	0	0	0	1	1	2	7
Total Volume	0	0	0	0	0	0	0	0	0	0	0	2	3	5	0	0	0	0	0	5	5	0	0	0	0	3	4	7	0	0	0	0	3	4	7	17
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40.0	60.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	42.9	57.1	0.0	0.0	0.0	0.0	13.6	22.7	36.4				
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.375	0.417	0.000	0.000	0.000	0.000	0.000	0.625	0.625	0.000	0.000	0.000	0.000	0.750	0.500	0.583	0.607							
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	2	3	5	0	0	0	0	0	5	5	0	0	0	0	3	4	7	0	0	0	0	3	4	7	17
Exiting Leg	0								5								5								7								17			
Total	0								10								10								14								34			

PDI File #: **239484 D**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Stop and Shop Driveway W: Dalton Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars and Heavy Vehicles (Combined)

	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	6	93	9	0	108	13	10	17	0	40	6	117	6	0	129	18	11	4	0	33	310
4:15 PM	6	101	6	0	113	5	3	18	0	26	5	120	11	0	136	14	6	0	0	20	295
4:30 PM	5	80	6	0	91	9	14	26	0	49	8	134	10	0	152	13	7	3	0	23	315
4:45 PM	5	110	6	0	121	13	5	12	0	30	12	125	15	0	152	16	11	5	0	32	335
Total	22	384	27	0	433	40	32	73	0	145	31	496	42	0	569	61	35	12	0	108	1255
5:00 PM	6	111	4	0	121	7	9	25	0	41	10	146	14	0	170	10	14	8	1	33	365
5:15 PM	6	98	5	0	109	11	15	22	0	48	10	132	14	0	156	11	12	6	0	29	342
5:30 PM	10	118	9	0	137	9	10	18	0	37	11	143	14	0	168	10	7	3	0	20	362
5:45 PM	3	104	9	0	116	15	8	27	0	50	11	124	9	0	144	11	11	3	0	25	335
Total	25	431	27	0	483	42	42	92	0	176	42	545	51	0	638	42	44	20	1	107	1404
Grand Total	47	815	54	0	916	82	74	165	0	321	73	1041	93	0	1207	103	79	32	1	215	2659
Approach %	5.1	89.0	5.9	0.0		25.5	23.1	51.4	0.0		6.0	86.2	7.7	0.0		47.9	36.7	14.9	0.5		
Total %	1.8	30.7	2.0	0.0	34.4	3.1	2.8	6.2	0.0	12.1	2.7	39.2	3.5	0.0	45.4	3.9	3.0	1.2	0.0	8.1	
Exiting Leg Total	1155					206					1083					215					2659
Cars	46	801	52	0	899	82	74	163	0	319	73	1029	91	0	1193	102	79	32	1	214	2625
% Cars	97.9	98.3	96.3	0.0	98.1	100.0	100.0	98.8	0.0	99.4	100.0	98.8	97.8	0.0	98.8	99.0	100.0	100.0	100.0	99.5	98.7
Exiting Leg Total	1143					204					1066					212					2625
Heavy Vehicles	1	14	2	0	17	0	0	2	0	2	0	12	2	0	14	1	0	0	0	1	34
% Heavy Vehicles	2.1	1.7	3.7	0.0	1.9	0.0	0.0	1.2	0.0	0.6	0.0	1.2	2.2	0.0	1.2	1.0	0.0	0.0	0.0	0.5	1.3
Exiting Leg Total	12					2					17					3					34

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

4:45 PM	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	5	110	6	0	121	13	5	12	0	30	12	125	15	0	152	16	11	5	0	32	335
5:00 PM	6	111	4	0	121	7	9	25	0	41	10	146	14	0	170	10	14	8	1	33	365
5:15 PM	6	98	5	0	109	11	15	22	0	48	10	132	14	0	156	11	12	6	0	29	342
5:30 PM	10	118	9	0	137	9	10	18	0	37	11	143	14	0	168	10	7	3	0	20	362
Total Volume	27	437	24	0	488	40	39	77	0	156	43	546	57	0	646	47	44	22	1	114	1404
% Approach Total	5.5	89.5	4.9	0.0		25.6	25.0	49.4	0.0		6.7	84.5	8.8	0.0		41.2	38.6	19.3	0.9		
PHF	0.675	0.926	0.667	0.000	0.891	0.769	0.650	0.770	0.000	0.813	0.896	0.935	0.950	0.000	0.950	0.734	0.786	0.688	0.250	0.864	0.962
Cars	27	433	23	0	483	40	39	76	0	155	43	541	55	0	639	47	44	22	1	114	1391
Cars %	100.0	99.1	95.8	0.0	99.0	100.0	100.0	98.7	0.0	99.4	100.0	99.1	96.5	0.0	98.9	100.0	100.0	100.0	100.0	100.0	99.1
Heavy Vehicles	0	4	1	0	5	0	0	1	0	1	0	5	2	0	7	0	0	0	0	0	13
Heavy Vehicles %	0.0	0.9	4.2	0.0	1.0	0.0	0.0	1.3	0.0	0.6	0.0	0.9	3.5	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.9
Cars Enter Leg	27	433	23	0	483	40	39	76	0	155	43	541	55	0	639	47	44	22	1	114	1391
Heavy Enter Leg	0	4	1	0	5	0	0	1	0	1	0	5	2	0	7	0	0	0	0	0	13
Total Entering Leg	27	437	24	0	488	40	39	77	0	156	43	546	57	0	646	47	44	22	1	114	1404
Cars Exiting Leg	603					110					556					122					1391
Heavy Exiting Leg	5					1					5					2					13
Total Exiting Leg	608					111					561					124					1404

PDI File #: **239484 D**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Stop and Shop Driveway W: Dalton Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars

	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	5	92	9	0	106	13	10	17	0	40	6	114	6	0	126	18	11	4	0	33	305
4:15 PM	6	97	6	0	109	5	3	18	0	26	5	118	11	0	134	14	6	0	0	20	289
4:30 PM	5	78	6	0	89	9	14	26	0	49	8	132	10	0	150	12	7	3	0	22	310
4:45 PM	5	109	5	0	119	13	5	12	0	30	12	122	15	0	149	16	11	5	0	32	330
Total	21	376	26	0	423	40	32	73	0	145	31	486	42	0	559	60	35	12	0	107	1234
5:00 PM	6	111	4	0	121	7	9	25	0	41	10	145	13	0	168	10	14	8	1	33	363
5:15 PM	6	96	5	0	107	11	15	22	0	48	10	131	13	0	154	11	12	6	0	29	338
5:30 PM	10	117	9	0	136	9	10	17	0	36	11	143	14	0	168	10	7	3	0	20	360
5:45 PM	3	101	8	0	112	15	8	26	0	49	11	124	9	0	144	11	11	3	0	25	330
Total	25	425	26	0	476	42	42	90	0	174	42	543	49	0	634	42	44	20	1	107	1391
Grand Total	46	801	52	0	899	82	74	163	0	319	73	1029	91	0	1193	102	79	32	1	214	2625
Approach %	5.1	89.1	5.8	0.0		25.7	23.2	51.1	0.0		6.1	86.3	7.6	0.0		47.7	36.9	15.0	0.5		
Total %	1.8	30.5	2.0	0.0	34.2	3.1	2.8	6.2	0.0	12.2	2.8	39.2	3.5	0.0	45.4	3.9	3.0	1.2	0.0	8.2	
Exiting Leg Total	1143					204					1066					212					2625

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

	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	5	109	5	0	119	13	5	12	0	30	12	122	15	0	149	16	11	5	0	32	330
5:00 PM	6	111	4	0	121	7	9	25	0	41	10	145	13	0	168	10	14	8	1	33	363
5:15 PM	6	96	5	0	107	11	15	22	0	48	10	131	13	0	154	11	12	6	0	29	338
5:30 PM	10	117	9	0	136	9	10	17	0	36	11	143	14	0	168	10	7	3	0	20	360
Total Volume	27	433	23	0	483	40	39	76	0	155	43	541	55	0	639	47	44	22	1	114	1391
% Approach Total	5.6	89.6	4.8	0.0		25.8	25.2	49.0	0.0		6.7	84.7	8.6	0.0		41.2	38.6	19.3	0.9		
PHF	0.675	0.925	0.639	0.000	0.888	0.769	0.650	0.760	0.000	0.807	0.896	0.933	0.917	0.000	0.951	0.734	0.786	0.688	0.250	0.864	0.958
Entering Leg	27	433	23	0	483	40	39	76	0	155	43	541	55	0	639	47	44	22	1	114	1391
Exiting Leg	603					110					556					122					1391
Total	1086					265					1195					236					2782

PDI File #: **239484 D**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Stop and Shop Driveway W: Dalton Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



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

	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	3	0	0	3	0	0	0	0	0	5
4:15 PM	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	6
4:30 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	5
4:45 PM	0	1	1	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	5
Total	1	8	1	0	10	0	0	0	0	0	0	10	0	0	10	1	0	0	0	1	21
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	2
5:15 PM	0	2	0	0	2	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	4
5:30 PM	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2
5:45 PM	0	3	1	0	4	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	5
Total	0	6	1	0	7	0	0	2	0	2	0	2	2	0	4	0	0	0	0	0	13
Grand Total	1	14	2	0	17	0	0	2	0	2	0	12	2	0	14	1	0	0	0	1	34
Approach %	5.9	82.4	11.8	0.0		0.0	0.0	100.0	0.0		0.0	85.7	14.3	0.0		100.0	0.0	0.0	0.0		
Total %	2.9	41.2	5.9	0.0	50.0	0.0	0.0	5.9	0.0	5.9	0.0	35.3	5.9	0.0	41.2	2.9	0.0	0.0	0.0	2.9	
Exiting Leg Total	12					2					17					3					34
Buses	1	7	0	0	8	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	12
% Buses	100.0	50.0	0.0	0.0	47.1	0.0	0.0	50.0	0.0	50.0	0.0	25.0	0.0	0.0	21.4	0.0	0.0	0.0	0.0	0.0	35.3
Exiting Leg Total	3					0					8					1					12
Single-Unit Trucks	0	5	2	0	7	0	0	1	0	1	0	7	2	0	9	1	0	0	0	1	18
% Single-Unit	0.0	35.7	100.0	0.0	41.2	0.0	0.0	50.0	0.0	50.0	0.0	58.3	100.0	0.0	64.3	100.0	0.0	0.0	0.0	100.0	52.9
Exiting Leg Total	7					2					7					2					18
Articulated Trucks	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
% Articulated	0.0	14.3	0.0	0.0	11.8	0.0	0.0	0.0	0.0	0.0	0.0	16.7	0.0	0.0	14.3	0.0	0.0	0.0	0.0	0.0	11.8
Exiting Leg Total	2					0					2					0					4

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

	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	3	0	0	3	0	0	0	0	0	5
4:15 PM	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	6
4:30 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	5
4:45 PM	0	1	1	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	5
Total Volume	1	8	1	0	10	0	0	0	0	0	0	10	0	0	10	1	0	0	0	1	21
% Approach Total	10.0	80.0	10.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		100.0	0.0	0.0	0.0		
PHF	0.250	0.500	0.250	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.000	0.833	0.000	0.000	0.833	0.250	0.000	0.000	0.000	0.250	0.875
Buses	1	3	0	0	4	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	7
Buses %	100.0	37.5	0.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	30.0	0.0	0.0	30.0	0.0	0.0	0.0	0.0	0.0	33.3
Single-Unit Trucks	0	4	1	0	5	0	0	0	0	0	0	7	0	0	7	1	0	0	0	1	13
Single-Unit %	0.0	50.0	100.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	70.0	0.0	0.0	70.0	100.0	0.0	0.0	0.0	100.0	61.9
Articulated Trucks	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Articulated %	0.0	12.5	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	0.0	4.8
Buses	1	3	0	0	4	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	7
Single-Unit Trucks	0	4	1	0	5	0	0	0	0	0	0	7	0	0	7	1	0	0	0	1	13
Articulated Trucks	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Entering Leg	1	8	1	0	10	0	0	0	0	0	0	10	0	0	10	1	0	0	0	1	21
Buses	3					0					3					1					7
Single-Unit Trucks	7					1					5					0					13
Articulated Trucks	0					0					1					0					1
Total Exiting Leg	10					1					9					1					21

PDI File #: **239484 D**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Stop and Shop Driveway W: Dalton Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Buses

	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	0	0	0	0	0	1
4:15 PM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	5
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
4:45 PM	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	1
Total	1	3	0	0	4	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	7
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
5:15 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:30 PM	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	1
5:45 PM	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	4	0	0	4	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Grand Total	1	7	0	0	8	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	12
Approach %	12.5	87.5	0.0	0.0		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	0.0	0.0	0.0		
Total %	8.3	58.3	0.0	0.0	66.7	0.0	0.0	8.3	0.0	8.3	0.0	25.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	3					0					8					1					12					

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

4:00 PM	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	0	0	0	0	0	1
4:15 PM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	5
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
4:45 PM	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	1
Total Volume	1	3	0	0	4	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	7
% Approach Total	25.0	75.0	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		
PHF	0.250	0.250	0.000	0.000	0.333	0.000	0.000	0.000	0.000	0.000	0.000	0.375	0.000	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.350	
Entering Leg	1	3	0	0	4	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	7
Exiting Leg	3					0					3					1					7					
Total	7					0					6					1					14					

PDI File #: **239484 D**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Stop and Shop Driveway W: Dalton Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Single-Unit Trucks

	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	3	0	0	3	0	0	0	0	0	3
4:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	1	0	0	0	0	1
4:45 PM	0	1	1	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0
Total	0	4	1	0	5	0	0	0	0	0	0	7	0	0	7	1	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	0	2	0	0	1	0	1	0	0	2	0	2	0	0	0	0	0	0
Grand Total	0	5	2	0	7	0	0	1	0	1	0	7	2	0	9	1	0	0	0	0	1
Approach %	0.0	71.4	28.6	0.0		0.0	0.0	100.0	0.0		0.0	77.8	22.2	0.0		100.0	0.0	0.0	0.0		
Total %	0.0	27.8	11.1	0.0	38.9	0.0	0.0	5.6	0.0	5.6	0.0	38.9	11.1	0.0	50.0	5.6	0.0	0.0	0.0		5.6
Exiting Leg Total	7					2					7					2					18

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

4:00 PM	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	3	0	0	3	0	0	0	0	0	0
4:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	1	0	0	0	0	1
4:45 PM	0	1	1	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0
Total Volume	0	4	1	0	5	0	0	0	0	0	0	7	0	0	7	1	0	0	0	0	1
% Approach Total	0.0	80.0	20.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		100.0	0.0	0.0	0.0		
PHF	0.000	0.500	0.250	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.000	0.583	0.000	0.000	0.583	0.250	0.000	0.000	0.000	0.250	0.650
Entering Leg	0	4	1	0	5	0	0	0	0	0	0	7	0	0	7	1	0	0	0	0	1
Exiting Leg	7					1					5					0					13
Total	12					1					12					1					26

PDI File #: **239484 D**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Stop and Shop Driveway W: Dalton Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Articulated Trucks

	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	1	0	0	1	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	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
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
Total	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	1
5:00 PM	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	1
5:15 PM	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	1
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
5:45 PM	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	1
Total	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	3
Grand Total	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	4
Approach %	0.0	100.0	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		
Total %	0.0	50.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	2					0					2					0					4					

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

5:00 PM	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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						
5:00 PM	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	1
5:15 PM	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	1
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
5:45 PM	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	1
Total Volume	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	3
% Approach Total	0.0	100.0	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		
PHF	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750
Entering Leg	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	3
Exiting Leg	2					0					1					0					3					
Total	3					0					3					0					6					

PDI File #: 239484 D
 Location: N: Grafton Street (Route 122) S: Grafton Street (Route 122)
 Location: E: Stop and Shop Driveway W: Dalton Street
 City, State: Worcester, MA
 Client: Kimley-Horn/ L. Juan
 Site Code: 112858000-02
 Count Date: Wednesday, September 13, 2023
 Start Time: 4:00 PM
 End Time: 6:00 PM
 Class:



Bicycles (on Roadway and Crosswalks)

	Grafton Street (Route 122)								Stop and Shop Driveway								Grafton Street (Route 122)								Dalton Street								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	0	0	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	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	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	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
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	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	1	0	0	0	0	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	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	0	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	1
Grand Total	1	0	0	0	0	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	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	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	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 04:00 PM to 06:00 PM begins at:

	Grafton Street (Route 122)								Stop and Shop Driveway								Grafton Street (Route 122)								Dalton Street								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	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	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	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	1	0	0	0	0	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	1
Total Volume	1	0	0	0	0	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	1
% Approach Total	100.0	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	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	0.000	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	0.000	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	0	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	1	
Exiting Leg	0								0								0								1								1				
Total	1								0								0								1								2				

PDI File #: **239484 D**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Stop and Shop Driveway W: Dalton Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Pedestrians

	Grafton Street (Route 122)								Stop and Shop Driveway								Grafton Street (Route 122)								Dalton Street								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	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1	
4:15 PM	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	1	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	1	1	2	2	
4:45 PM	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	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	1	2	0	0	0	0	0	1	2	3	6	
5:00 PM	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	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	
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	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	0	0	0	
Total	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	0	0	1	
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	1	1	2	0	0	0	0	0	1	2	3	7	
Approach %	0	0	0	0	0	0	0	0	0	0	0	0	0	100		0	0	0	0	0	50	50		0	0	0	0	0	33.3	66.7			
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	28.6	28.6	0	0	0	0	0	14.3	14.3	28.6	0	0	0	0	0	14.3	28.6	42.9		
Exiting Leg Total	0								2								2								3								7

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

4:00 PM	Grafton Street (Route 122)								Stop and Shop Driveway								Grafton Street (Route 122)								Dalton Street								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	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1	
4:15 PM	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	1	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	1	1	2	2	
4:45 PM	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	
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	1	2	0	0	0	0	0	1	2	3	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	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	33.3	66.7				
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	0.250	0.000	0.000	0.000	0.000	0.250	0.250	0.500		0.000	0.000	0.000	0.000	0.250	0.500	0.375	0.750			
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	1	2	0	0	0	0	0	1	2	3	6		
Exiting Leg	0								1								2								3								6
Total	0								2								4								6								12



Location Map: 239385 Worcester, MA

Precision Data Industries, LLC 157 Washington Street, Suite 2, Hudson, MA 01749 ph: 508-875-0100 email: datarequests@pdillc.com

- (2) 7-9am/ 2-6pm TMCs
- (1) 48HR VCU-ATR
- (1) 48HR Radar ATR



Client: Kimley-Horn	Engineer: P. Graham	Site Code: 112858000	Date: Tues 6/6 thru Wed 6/7/2023	PDI Job # 239385	City, State: Worcester, MA
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Grafton Street (Route 122)
 south of Margin Street
 City, State: Worcester, MA
 Client: Kimley-Horn/ P. Graham
 Site Code: TBA



PDI File #: 239385 ATR-A

Count Date: Tuesday, June 6, 2023
 Direction: NB

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	15	0	0	0	15
12:15 AM	0	0	15	0	1	0	16
12:30 AM	0	0	10	0	0	0	10
12:45 AM	0	0	10	0	0	0	10
1:00 AM	0	0	6	0	0	0	6
1:15 AM	0	0	6	0	0	0	6
1:30 AM	0	0	10	0	0	2	12
1:45 AM	0	0	4	0	2	0	6
2:00 AM	0	0	13	0	0	0	13
2:15 AM	0	0	2	0	1	0	3
2:30 AM	0	0	4	0	0	0	4
2:45 AM	0	0	3	0	1	2	6
3:00 AM	0	0	4	0	0	2	6
3:15 AM	0	0	4	0	0	0	4
3:30 AM	0	0	4	0	0	1	5
3:45 AM	0	0	5	0	1	0	6
4:00 AM	0	0	2	0	1	1	4
4:15 AM	0	0	11	0	0	2	13
4:30 AM	0	0	4	0	0	1	5
4:45 AM	0	0	18	0	1	0	19
5:00 AM	0	0	23	0	1	3	27
5:15 AM	0	0	27	0	0	0	27
5:30 AM	0	0	33	1	0	1	35
5:45 AM	0	0	52	0	2	0	54
6:00 AM	0	0	52	0	1	0	53
6:15 AM	0	0	70	1	1	0	72
6:30 AM	0	0	95	5	4	3	107
6:45 AM	0	0	97	0	2	1	100
7:00 AM	0	0	126	2	2	1	131
7:15 AM	0	0	145	2	3	3	153
7:30 AM	1	0	172	2	2	1	178
7:45 AM	0	0	167	4	3	3	177
8:00 AM	0	0	146	3	1	4	154
8:15 AM	0	0	148	1	3	1	153
8:30 AM	0	0	145	2	1	2	150
8:45 AM	0	0	122	2	1	2	127
9:00 AM	0	0	121	0	1	1	123
9:15 AM	0	1	121	0	2	1	125
9:30 AM	0	1	121	2	5	3	132
9:45 AM	0	1	111	4	3	1	120
10:00 AM	0	0	117	1	3	2	123
10:15 AM	0	0	107	2	2	0	111
10:30 AM	0	1	92	0	2	1	96
10:45 AM	0	1	94	0	5	3	103
11:00 AM	0	0	113	0	3	1	117
11:15 AM	0	1	97	1	2	2	103
11:30 AM	0	0	99	1	2	0	102
11:45 AM	0	0	110	1	2	0	113

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	0	123	0	0	2	125
12:15 PM	0	1	129	0	4	0	134
12:30 PM	0	0	128	0	1	0	129
12:45 PM	0	0	120	1	5	3	129
1:00 PM	0	0	122	0	0	1	123
1:15 PM	0	0	122	2	2	1	127
1:30 PM	0	0	110	0	2	1	113
1:45 PM	0	0	87	1	1	2	91
2:00 PM	0	0	127	1	5	1	134
2:15 PM	0	0	113	2	3	2	120
2:30 PM	0	0	117	3	1	1	122
2:45 PM	0	0	115	5	2	0	122
3:00 PM	0	0	124	3	2	1	130
3:15 PM	0	0	119	2	1	2	124
3:30 PM	0	0	153	1	1	0	155
3:45 PM	0	0	149	2	3	0	154
4:00 PM	0	0	129	3	3	1	136
4:15 PM	0	1	147	1	1	0	150
4:30 PM	0	0	149	1	2	1	153
4:45 PM	0	0	132	0	2	1	135
5:00 PM	0	0	157	0	3	2	162
5:15 PM	0	0	146	0	0	1	147
5:30 PM	0	0	154	1	0	0	155
5:45 PM	1	0	175	1	0	0	177
6:00 PM	0	0	156	0	0	1	157
6:15 PM	0	0	155	1	2	0	158
6:30 PM	0	0	125	0	0	0	125
6:45 PM	0	0	112	0	0	1	113
7:00 PM	0	0	98	0	1	0	99
7:15 PM	0	0	113	1	0	0	114
7:30 PM	0	1	84	0	0	0	85
7:45 PM	0	0	72	1	1	0	74
8:00 PM	0	0	78	0	1	1	80
8:15 PM	0	0	85	0	3	0	88
8:30 PM	0	0	83	0	0	1	84
8:45 PM	0	0	66	0	1	2	69
9:00 PM	0	1	53	0	0	0	54
9:15 PM	0	0	70	0	1	0	71
9:30 PM	0	0	41	0	1	0	42
9:45 PM	0	0	44	0	1	0	45
10:00 PM	0	0	42	0	0	1	43
10:15 PM	0	0	35	0	0	0	35
10:30 PM	0	0	35	0	0	0	35
10:45 PM	0	0	32	0	0	0	32
11:00 PM	0	0	29	0	0	0	29
11:15 PM	0	0	24	0	0	0	24
11:30 PM	0	0	16	0	0	0	16
11:45 PM	0	0	11	0	0	0	11

AM Total	1	6	3073	37	67	51	3235
Percentage	0.03%	0.19%	94.99%	1.14%	2.07%	1.58%	
AM Peak	6:45 AM	9:00 AM	7:30 AM	7:15 AM	9:15 AM	7:15 AM	7:15 AM
Volume	1	3	633	11	13	11	662

PM Total	1	4	4806	33	56	30	4930
Percentage	0.02%	0.08%	97.48%	0.67%	1.14%	0.61%	
PM Peak	5:00 PM	12:00 PM	5:30 PM	2:15 PM	1:30 PM	12:45 PM	5:30 PM
Volume	1	1	640	13	11	6	647
Day Total	2	10	7879	70	123	81	8165
Percentage	0.02%	0.12%	96.50%	0.86%	1.51%	0.99%	

Grafton Street (Route 122)
 south of Margin Street
 City, State: Worcester, MA
 Client: Kimley-Horn/ P. Graham
 Site Code: TBA



PDI File #: 239385 ATR-A

Count Date: Wednesday, June 7, 2023
 Direction: NB

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	12	0	0	0	12
12:15 AM	0	0	19	0	0	1	20
12:30 AM	0	0	15	0	0	0	15
12:45 AM	0	0	8	0	0	0	8
1:00 AM	0	0	7	0	0	0	7
1:15 AM	0	0	8	0	1	0	9
1:30 AM	0	0	6	0	0	0	6
1:45 AM	0	0	5	0	0	0	5
2:00 AM	0	0	6	0	0	2	8
2:15 AM	0	0	3	0	0	0	3
2:30 AM	0	0	3	0	0	1	4
2:45 AM	0	0	2	0	0	0	2
3:00 AM	0	0	3	0	0	1	4
3:15 AM	0	0	2	0	2	0	4
3:30 AM	0	0	4	0	0	1	5
3:45 AM	0	0	9	0	0	0	9
4:00 AM	0	0	7	0	0	0	7
4:15 AM	0	0	2	0	0	0	2
4:30 AM	0	0	13	0	0	0	13
4:45 AM	0	0	17	0	0	2	19
5:00 AM	0	0	22	0	1	2	25
5:15 AM	0	0	15	0	0	1	16
5:30 AM	1	0	35	1	0	0	37
5:45 AM	1	0	44	0	1	1	47
6:00 AM	0	0	35	0	1	2	38
6:15 AM	0	0	71	1	1	2	75
6:30 AM	0	0	88	5	3	0	96
6:45 AM	0	0	106	0	3	2	111
7:00 AM	0	0	102	2	2	0	106
7:15 AM	0	0	122	2	4	0	128
7:30 AM	0	0	178	1	6	0	185
7:45 AM	0	0	161	3	3	0	167
8:00 AM	0	0	157	2	3	3	165
8:15 AM	0	0	124	2	4	2	132
8:30 AM	0	0	137	2	2	1	142
8:45 AM	0	0	144	1	2	0	147
9:00 AM	0	0	123	1	3	0	127
9:15 AM	0	0	103	0	5	2	110
9:30 AM	0	0	136	0	4	1	141
9:45 AM	0	0	92	1	4	2	99
10:00 AM	0	0	101	0	2	2	105
10:15 AM	0	0	102	1	3	1	107
10:30 AM	0	4	104	0	2	1	111
10:45 AM	0	0	110	0	2	3	115
11:00 AM	0	0	112	1	3	1	117
11:15 AM	0	0	109	0	2	3	114
11:30 AM	0	0	112	0	6	0	118
11:45 AM	0	0	107	1	2	1	111

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	0	105	1	1	1	108
12:15 PM	0	0	117	0	0	0	117
12:30 PM	0	1	128	0	3	1	133
12:45 PM	0	0	135	1	3	1	140
1:00 PM	0	0	123	0	1	1	125
1:15 PM	0	1	121	1	5	1	129
1:30 PM	0	0	113	0	4	0	117
1:45 PM	0	0	103	0	2	1	106
2:00 PM	0	0	114	2	0	1	117
2:15 PM	0	0	122	1	4	2	129
2:30 PM	0	0	106	4	1	0	111
2:45 PM	0	1	116	5	1	1	124
3:00 PM	0	0	128	1	2	1	132
3:15 PM	0	0	143	2	1	0	146
3:30 PM	0	0	142	0	0	0	142
3:45 PM	0	0	137	1	1	0	139
4:00 PM	0	0	146	1	1	1	149
4:15 PM	0	1	150	2	3	0	156
4:30 PM	0	0	141	0	4	1	146
4:45 PM	0	0	135	1	1	1	138
5:00 PM	0	1	158	0	2	0	161
5:15 PM	0	0	166	0	4	1	171
5:30 PM	0	0	150	1	0	2	153
5:45 PM	0	0	163	1	2	1	167
6:00 PM	0	0	146	0	0	1	147
6:15 PM	0	0	109	0	0	1	110
6:30 PM	0	1	144	1	0	0	146
6:45 PM	0	0	133	0	4	1	138
7:00 PM	0	0	101	1	2	1	105
7:15 PM	0	3	88	1	2	1	95
7:30 PM	0	0	102	0	0	2	104
7:45 PM	0	0	97	0	0	0	97
8:00 PM	0	0	70	1	0	1	72
8:15 PM	0	0	70	0	0	0	70
8:30 PM	0	1	64	0	0	2	67
8:45 PM	0	1	54	1	1	0	57
9:00 PM	0	0	44	0	0	1	45
9:15 PM	0	0	56	0	0	1	57
9:30 PM	0	0	60	0	1	1	62
9:45 PM	0	0	59	0	0	0	59
10:00 PM	0	0	44	0	0	1	45
10:15 PM	0	0	44	0	0	1	45
10:30 PM	0	0	44	1	0	1	46
10:45 PM	0	0	27	0	0	0	27
11:00 PM	0	0	20	0	0	0	20
11:15 PM	0	0	19	0	0	0	19
11:30 PM	0	0	26	0	0	0	26
11:45 PM	0	0	13	0	0	1	14

AM Total	2	4	3003	27	77	41	3154
Percentage	0.06%	0.13%	95.21%	0.86%	2.44%	1.30%	
AM Peak	5:00 AM	9:45 AM	7:30 AM	6:30 AM	7:15 AM	10:30 AM	7:30 AM
Volume	2	4	620	9	16	8	649

PM Total	0	11	4796	31	56	35	4929
Percentage	0.00%	0.22%	97.30%	0.63%	1.14%	0.71%	
PM Peak	12:00 PM	6:30 PM	5:00 PM	2:00 PM	12:45 PM	5:15 PM	5:00 PM
Volume	0	4	637	12	13	5	652

Day Total	2	15	7799	58	133	76	8083
Percentage	0.02%	0.19%	96.49%	0.72%	1.65%	0.94%	

Grafton Street (Route 122)
 south of Margin Street
 City, State: Worcester, MA
 Client: Kimley-Horn/ P. Graham
 Site Code: TBA



PDI File #: 239385 ATR-A

Count Date: Tuesday, June 6, 2023
 Direction: SB

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	12	0	1	2	15
12:15 AM	0	0	9	0	0	0	9
12:30 AM	0	0	10	0	0	0	10
12:45 AM	0	0	6	0	0	0	6
1:00 AM	0	0	3	0	0	0	3
1:15 AM	0	0	2	0	0	0	2
1:30 AM	0	0	6	0	0	0	6
1:45 AM	0	0	2	0	1	1	4
2:00 AM	0	0	6	0	3	2	11
2:15 AM	0	0	3	0	1	0	4
2:30 AM	0	0	1	0	0	0	1
2:45 AM	0	0	7	0	1	0	8
3:00 AM	0	0	6	0	0	0	6
3:15 AM	0	0	2	0	1	0	3
3:30 AM	0	0	4	0	1	3	8
3:45 AM	0	0	2	0	0	1	3
4:00 AM	0	0	17	0	1	1	19
4:15 AM	0	0	10	0	0	0	10
4:30 AM	0	0	18	0	1	1	20
4:45 AM	0	0	27	1	0	0	28
5:00 AM	0	0	32	0	0	1	33
5:15 AM	0	0	55	1	0	0	56
5:30 AM	0	0	65	0	0	1	66
5:45 AM	0	0	80	1	1	1	83
6:00 AM	0	0	83	0	2	1	86
6:15 AM	0	0	80	2	0	0	82
6:30 AM	0	0	105	2	1	0	108
6:45 AM	0	0	101	2	0	2	105
7:00 AM	0	0	108	1	4	3	116
7:15 AM	0	0	130	1	1	3	135
7:30 AM	0	0	113	1	4	3	121
7:45 AM	0	0	145	4	1	1	151
8:00 AM	0	1	116	0	4	2	123
8:15 AM	0	0	124	4	2	2	132
8:30 AM	0	0	115	3	1	4	123
8:45 AM	0	0	132	0	3	2	137
9:00 AM	0	0	132	0	2	1	135
9:15 AM	0	0	103	1	3	0	107
9:30 AM	0	1	113	1	4	1	120
9:45 AM	0	1	101	0	2	0	104
10:00 AM	0	0	106	1	5	1	113
10:15 AM	0	0	106	0	6	0	112
10:30 AM	0	1	110	0	1	2	114
10:45 AM	0	1	118	1	3	2	125
11:00 AM	0	0	106	1	4	2	113
11:15 AM	0	1	122	1	2	3	129
11:30 AM	0	0	109	2	6	0	117
11:45 AM	0	0	126	0	6	0	132

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	0	119	0	1	0	120
12:15 PM	0	0	123	0	0	2	125
12:30 PM	0	0	127	1	2	1	131
12:45 PM	0	0	132	1	1	0	134
1:00 PM	0	0	120	1	6	0	127
1:15 PM	0	0	112	0	5	3	120
1:30 PM	0	0	123	1	4	0	128
1:45 PM	0	0	133	1	2	2	138
2:00 PM	0	1	116	2	0	2	121
2:15 PM	0	0	141	5	5	1	152
2:30 PM	0	0	150	1	2	0	153
2:45 PM	0	0	141	4	4	1	150
3:00 PM	0	0	142	2	3	1	148
3:15 PM	0	0	168	1	3	0	172
3:30 PM	0	1	179	2	4	0	186
3:45 PM	0	0	188	1	3	0	192
4:00 PM	0	0	171	2	0	1	174
4:15 PM	0	0	179	0	1	0	180
4:30 PM	0	0	212	1	6	0	219
4:45 PM	0	0	195	0	0	0	195
5:00 PM	0	0	203	0	2	2	207
5:15 PM	0	0	189	1	0	2	192
5:30 PM	0	0	190	0	1	0	191
5:45 PM	0	0	146	0	0	0	146
6:00 PM	0	0	144	1	0	1	146
6:15 PM	0	0	118	0	0	0	118
6:30 PM	0	0	112	0	1	0	113
6:45 PM	0	0	113	0	1	0	114
7:00 PM	1	0	118	2	1	1	123
7:15 PM	0	0	94	0	0	0	94
7:30 PM	1	0	83	0	1	0	85
7:45 PM	0	0	86	1	0	0	87
8:00 PM	0	0	88	0	0	1	89
8:15 PM	2	0	80	0	0	0	82
8:30 PM	1	0	66	0	1	1	69
8:45 PM	0	0	60	0	0	0	60
9:00 PM	0	0	71	0	0	0	71
9:15 PM	0	0	54	0	0	1	55
9:30 PM	0	0	46	0	0	0	46
9:45 PM	0	0	47	2	0	0	49
10:00 PM	0	0	51	0	0	1	52
10:15 PM	0	0	45	0	0	0	45
10:30 PM	0	0	40	0	0	0	40
10:45 PM	0	0	38	0	1	0	39
11:00 PM	0	0	19	0	0	0	19
11:15 PM	0	0	16	0	0	0	16
11:30 PM	0	0	6	0	0	0	6
11:45 PM	0	0	5	0	0	0	5

AM Total	0	6	3089	31	79	49	3254
Percentage	0.00%	0.18%	94.93%	0.95%	2.43%	1.51%	
AM Peak	12:00 AM	10:30 AM	7:15 AM	7:45 AM	11:00 AM	6:45 AM	7:15 AM
Volume	0	3	504	11	18	11	530

PM Total	5	2	5299	33	61	24	5424
Percentage	0.09%	0.04%	97.70%	0.61%	1.12%	0.44%	
PM Peak	7:30 PM	1:15 PM	4:30 PM	2:00 PM	1:00 PM	1:15 PM	4:30 PM
Volume	3	1	799	12	17	7	813

Day Total	5	8	8388	64	140	73	8678
Percentage	0.06%	0.09%	96.66%	0.74%	1.61%	0.84%	

Grafton Street (Route 122)
 south of Margin Street
 City, State: Worcester, MA
 Client: Kimley-Horn/ P. Graham
 Site Code: TBA



PDI File #: 239385 ATR-A

Count Date: Wednesday, June 7, 2023
 Direction: SB

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	15	0	0	1	16
12:15 AM	0	0	8	0	0	0	8
12:30 AM	0	0	10	0	0	0	10
12:45 AM	0	0	8	0	0	0	8
1:00 AM	0	0	5	0	0	0	5
1:15 AM	0	0	5	0	0	0	5
1:30 AM	0	0	2	0	0	0	2
1:45 AM	0	0	1	0	0	0	1
2:00 AM	0	0	2	0	0	0	2
2:15 AM	0	0	1	0	0	0	1
2:30 AM	0	0	1	0	0	0	1
2:45 AM	0	0	4	0	0	0	4
3:00 AM	0	0	6	0	0	0	6
3:15 AM	0	0	1	0	1	0	2
3:30 AM	0	0	5	0	0	0	5
3:45 AM	0	0	3	0	0	0	3
4:00 AM	0	0	10	0	0	0	10
4:15 AM	0	0	11	0	0	0	11
4:30 AM	0	0	14	0	0	0	14
4:45 AM	0	1	29	0	0	1	31
5:00 AM	0	0	37	1	1	1	40
5:15 AM	0	0	44	1	0	1	46
5:30 AM	0	0	64	0	1	0	65
5:45 AM	0	0	85	0	1	0	86
6:00 AM	0	0	80	0	0	2	82
6:15 AM	0	0	82	2	2	0	86
6:30 AM	0	0	87	2	2	1	92
6:45 AM	0	0	113	3	0	0	116
7:00 AM	0	0	105	1	1	1	108
7:15 AM	0	0	93	1	1	2	97
7:30 AM	0	0	116	2	4	3	125
7:45 AM	0	0	138	4	3	1	146
8:00 AM	0	0	122	1	3	1	127
8:15 AM	0	1	119	3	3	1	127
8:30 AM	0	0	118	2	4	2	126
8:45 AM	0	0	118	1	6	2	127
9:00 AM	0	0	116	0	4	0	120
9:15 AM	0	0	89	1	1	1	92
9:30 AM	0	1	104	1	3	2	111
9:45 AM	0	0	130	0	6	0	136
10:00 AM	0	0	127	1	4	0	132
10:15 AM	0	0	96	0	0	1	97
10:30 AM	0	0	124	0	0	1	125
10:45 AM	0	1	114	0	0	2	117
11:00 AM	0	0	123	1	6	1	131
11:15 AM	1	0	107	0	3	3	114
11:30 AM	0	0	114	0	2	4	120
11:45 AM	0	0	125	0	4	3	132

AM Total	1	4	3031	28	66	38	3168
Percentage	0.03%	0.13%	95.68%	0.88%	2.08%	1.20%	
AM Peak	10:30 AM	4:00 AM	7:45 AM	7:30 AM	8:15 AM	11:00 AM	7:45 AM
Volume	1	1	497	10	17	11	526

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	0	148	0	1	1	150
12:15 PM	0	2	145	0	4	1	152
12:30 PM	0	0	129	1	4	1	135
12:45 PM	0	2	122	0	2	1	127
1:00 PM	0	0	119	1	2	0	122
1:15 PM	0	1	143	0	7	0	151
1:30 PM	0	0	123	0	3	0	126
1:45 PM	0	0	103	0	3	1	107
2:00 PM	0	0	124	3	4	1	132
2:15 PM	0	0	155	1	1	0	157
2:30 PM	0	0	169	3	0	4	176
2:45 PM	0	0	141	2	2	3	148
3:00 PM	0	0	158	1	1	2	162
3:15 PM	0	1	164	2	1	0	168
3:30 PM	0	0	154	0	0	1	155
3:45 PM	0	0	163	2	0	1	166
4:00 PM	1	0	177	1	0	0	179
4:15 PM	0	0	188	2	4	1	195
4:30 PM	0	0	161	1	0	0	162
4:45 PM	0	2	175	0	4	2	183
5:00 PM	1	0	201	1	3	0	206
5:15 PM	0	2	205	0	0	0	207
5:30 PM	0	1	195	0	1	1	198
5:45 PM	0	0	167	0	2	1	170
6:00 PM	0	0	119	0	1	1	121
6:15 PM	0	0	137	1	1	1	140
6:30 PM	0	0	118	0	4	0	122
6:45 PM	0	0	117	0	1	0	118
7:00 PM	0	0	112	1	1	1	115
7:15 PM	0	0	101	0	0	2	103
7:30 PM	0	0	104	0	0	0	104
7:45 PM	0	0	101	1	0	0	102
8:00 PM	0	1	89	0	2	1	93
8:15 PM	0	0	75	0	0	0	75
8:30 PM	0	0	80	1	0	0	81
8:45 PM	0	0	68	0	0	0	68
9:00 PM	0	0	60	0	2	0	62
9:15 PM	0	0	53	0	0	0	53
9:30 PM	0	0	59	0	0	0	59
9:45 PM	1	0	51	0	0	1	53
10:00 PM	0	0	41	0	0	0	41
10:15 PM	0	0	41	0	0	0	41
10:30 PM	0	0	36	0	0	1	37
10:45 PM	0	0	23	0	0	1	24
11:00 PM	0	1	22	0	0	0	23
11:15 PM	0	0	26	0	0	1	27
11:30 PM	0	0	17	0	0	0	17
11:45 PM	0	0	23	0	2	0	25

PM Total	3	13	5402	25	63	32	5538
Percentage	0.05%	0.23%	97.54%	0.45%	1.14%	0.58%	
PM Peak	3:15 PM	4:45 PM	4:45 PM	2:00 PM	1:15 PM	2:15 PM	4:45 PM
Volume	1	5	776	9	17	9	794
Day Total	4	17	8433	53	129	70	8706
Percentage	0.05%	0.20%	96.86%	0.61%	1.48%	0.80%	

Grafton Street (Route 122)
 south of Margin Street
 City, State: Worcester, MA
 Client: Kimley-Horn/ P. Graham
 Site Code: TBA



PRECISION
 DATA
 INDUSTRIES, LLC
 157 Washington Street, Suite 2
 Hudson, MA 01749
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

PDI File # 239385 ATR-A

Direction: NB

Weekly Report

Day Date	Tuesday 06/06/23		Wednesday 06/07/23												Week Ave			
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM		
12:00	15	125	12	108	0	0	0	0	0	0	0	0	0	0	14	117		
12:15	16	134	20	117	0	0	0	0	0	0	0	0	0	0	18	126		
12:30	10	129	15	133	0	0	0	0	0	0	0	0	0	0	13	131		
12:45	10	129	8	140	0	0	0	0	0	0	0	0	0	0	9	135		
1:00	6	123	7	125	0	0	0	0	0	0	0	0	0	0	7	124		
1:15	6	127	9	129	0	0	0	0	0	0	0	0	0	0	8	128		
1:30	12	113	6	117	0	0	0	0	0	0	0	0	0	0	9	115		
1:45	6	91	5	106	0	0	0	0	0	0	0	0	0	0	6	99		
2:00	13	134	8	117	0	0	0	0	0	0	0	0	0	0	11	126		
2:15	3	120	3	129	0	0	0	0	0	0	0	0	0	0	3	125		
2:30	4	122	4	111	0	0	0	0	0	0	0	0	0	0	4	117		
2:45	6	122	2	124	0	0	0	0	0	0	0	0	0	0	4	123		
3:00	6	130	4	132	0	0	0	0	0	0	0	0	0	0	5	131		
3:15	4	124	4	146	0	0	0	0	0	0	0	0	0	0	4	135		
3:30	5	155	5	142	0	0	0	0	0	0	0	0	0	0	5	149		
3:45	6	154	9	139	0	0	0	0	0	0	0	0	0	0	8	147		
4:00	4	136	7	149	0	0	0	0	0	0	0	0	0	0	6	143		
4:15	13	150	2	156	0	0	0	0	0	0	0	0	0	0	8	153		
4:30	5	153	13	146	0	0	0	0	0	0	0	0	0	0	9	150		
4:45	19	135	19	138	0	0	0	0	0	0	0	0	0	0	19	137		
5:00	27	162	25	161	0	0	0	0	0	0	0	0	0	0	26	162		
5:15	27	147	16	171	0	0	0	0	0	0	0	0	0	0	22	159		
5:30	35	155	37	153	0	0	0	0	0	0	0	0	0	0	36	154		
5:45	54	177	47	167	0	0	0	0	0	0	0	0	0	0	51	172		
6:00	53	157	38	147	0	0	0	0	0	0	0	0	0	0	46	152		
6:15	72	158	75	110	0	0	0	0	0	0	0	0	0	0	74	134		
6:30	107	125	96	146	0	0	0	0	0	0	0	0	0	0	102	136		
6:45	100	113	111	138	0	0	0	0	0	0	0	0	0	0	106	126		
7:00	131	99	106	105	0	0	0	0	0	0	0	0	0	0	119	102		
7:15	153	114	128	95	0	0	0	0	0	0	0	0	0	0	141	105		
7:30	178	85	185	104	0	0	0	0	0	0	0	0	0	0	182	95		
7:45	177	74	167	97	0	0	0	0	0	0	0	0	0	0	172	86		
8:00	154	80	165	72	0	0	0	0	0	0	0	0	0	0	160	76		
8:15	153	88	132	70	0	0	0	0	0	0	0	0	0	0	143	79		
8:30	150	84	142	67	0	0	0	0	0	0	0	0	0	0	146	76		
8:45	127	69	147	57	0	0	0	0	0	0	0	0	0	0	137	63		
9:00	123	54	127	45	0	0	0	0	0	0	0	0	0	0	125	50		
9:15	125	71	110	57	0	0	0	0	0	0	0	0	0	0	118	64		
9:30	132	42	141	62	0	0	0	0	0	0	0	0	0	0	137	52		
9:45	120	45	99	59	0	0	0	0	0	0	0	0	0	0	110	52		
10:00	123	43	105	45	0	0	0	0	0	0	0	0	0	0	114	44		
10:15	111	35	107	45	0	0	0	0	0	0	0	0	0	0	109	40		
10:30	96	35	111	46	0	0	0	0	0	0	0	0	0	0	104	41		
10:45	103	32	115	27	0	0	0	0	0	0	0	0	0	0	109	30		
11:00	117	29	117	20	0	0	0	0	0	0	0	0	0	0	117	25		
11:15	103	24	114	19	0	0	0	0	0	0	0	0	0	0	109	22		
11:30	102	16	118	26	0	0	0	0	0	0	0	0	0	0	110	21		
11:45	113	11	111	14	0	0	0	0	0	0	0	0	0	0	112	13		
Total	3235	4930	3154	4929	0	0	0	0	0	0	0	0	0	0	3195	4930		
Day Total	8165		8083		0		0		0		0		0		8124			
Peak HR	7:15 AM	5:30 PM	7:30 AM	5:00 PM													7:30 AM	5:00 PM
Volume	662	647	649	652													656	647

Grafton Street (Route 122)
 south of Margin Street
 City, State: Worcester, MA
 Client: Kimley-Horn/ P. Graham
 Site Code: TBA



PRECISION
 DATA
 INDUSTRIES, LLC

157 Washington Street, Suite 2
 Hudson, MA 01749
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

PDI File # 239385 ATR-A

Direction: SB

Weekly Report

Day Date	Tuesday 06/06/23		Wednesday 06/07/23												Week Ave			
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM		
12:00	15	120	16	150	0	0	0	0	0	0	0	0	0	0	16	135		
12:15	9	125	8	152	0	0	0	0	0	0	0	0	0	0	9	139		
12:30	10	131	10	135	0	0	0	0	0	0	0	0	0	0	10	133		
12:45	6	134	8	127	0	0	0	0	0	0	0	0	0	0	7	131		
1:00	3	127	5	122	0	0	0	0	0	0	0	0	0	0	4	125		
1:15	2	120	5	151	0	0	0	0	0	0	0	0	0	0	4	136		
1:30	6	128	2	126	0	0	0	0	0	0	0	0	0	0	4	127		
1:45	4	138	1	107	0	0	0	0	0	0	0	0	0	0	3	123		
2:00	11	121	2	132	0	0	0	0	0	0	0	0	0	0	7	127		
2:15	4	152	1	157	0	0	0	0	0	0	0	0	0	0	3	155		
2:30	1	153	1	176	0	0	0	0	0	0	0	0	0	0	1	165		
2:45	8	150	4	148	0	0	0	0	0	0	0	0	0	0	6	149		
3:00	6	148	6	162	0	0	0	0	0	0	0	0	0	0	6	155		
3:15	3	172	2	168	0	0	0	0	0	0	0	0	0	0	3	170		
3:30	8	186	5	155	0	0	0	0	0	0	0	0	0	0	7	171		
3:45	3	192	3	166	0	0	0	0	0	0	0	0	0	0	3	179		
4:00	19	174	10	179	0	0	0	0	0	0	0	0	0	0	15	177		
4:15	10	180	11	195	0	0	0	0	0	0	0	0	0	0	11	188		
4:30	20	219	14	162	0	0	0	0	0	0	0	0	0	0	17	191		
4:45	28	195	31	183	0	0	0	0	0	0	0	0	0	0	30	189		
5:00	33	207	40	206	0	0	0	0	0	0	0	0	0	0	37	207		
5:15	56	192	46	207	0	0	0	0	0	0	0	0	0	0	51	200		
5:30	66	191	65	198	0	0	0	0	0	0	0	0	0	0	66	195		
5:45	83	146	86	170	0	0	0	0	0	0	0	0	0	0	85	158		
6:00	86	146	82	121	0	0	0	0	0	0	0	0	0	0	84	134		
6:15	82	118	86	140	0	0	0	0	0	0	0	0	0	0	84	129		
6:30	108	113	92	122	0	0	0	0	0	0	0	0	0	0	100	118		
6:45	105	114	116	118	0	0	0	0	0	0	0	0	0	0	111	116		
7:00	116	123	108	115	0	0	0	0	0	0	0	0	0	0	112	119		
7:15	135	94	97	103	0	0	0	0	0	0	0	0	0	0	116	99		
7:30	121	85	125	104	0	0	0	0	0	0	0	0	0	0	123	95		
7:45	151	87	146	102	0	0	0	0	0	0	0	0	0	0	149	95		
8:00	123	89	127	93	0	0	0	0	0	0	0	0	0	0	125	91		
8:15	132	82	127	75	0	0	0	0	0	0	0	0	0	0	130	79		
8:30	123	69	126	81	0	0	0	0	0	0	0	0	0	0	125	75		
8:45	137	60	127	68	0	0	0	0	0	0	0	0	0	0	132	64		
9:00	135	71	120	62	0	0	0	0	0	0	0	0	0	0	128	67		
9:15	107	55	92	53	0	0	0	0	0	0	0	0	0	0	100	54		
9:30	120	46	111	59	0	0	0	0	0	0	0	0	0	0	116	53		
9:45	104	49	136	53	0	0	0	0	0	0	0	0	0	0	120	51		
10:00	113	52	132	41	0	0	0	0	0	0	0	0	0	0	123	47		
10:15	112	45	97	41	0	0	0	0	0	0	0	0	0	0	105	43		
10:30	114	40	125	37	0	0	0	0	0	0	0	0	0	0	120	39		
10:45	125	39	117	24	0	0	0	0	0	0	0	0	0	0	121	32		
11:00	113	19	131	23	0	0	0	0	0	0	0	0	0	0	122	21		
11:15	129	16	114	27	0	0	0	0	0	0	0	0	0	0	122	22		
11:30	117	6	120	17	0	0	0	0	0	0	0	0	0	0	119	12		
11:45	132	5	132	25	0	0	0	0	0	0	0	0	0	0	132	15		
Total	3254	5424	3168	5538	0	0	0	0	0	0	0	0	0	0	3211	5481		
Day Total	8678		8706		0		0		0		0		0		8692			
Peak HR	7:15 AM	4:30 PM	7:45 AM	4:45 PM													7:45 AM	4:45 PM
Volume	530	813	526	794													528	790

Grafton Road (Route 122)

south of Margin Street

City, State: Worcester, MA

Client: Kimley-Horn/ P. Graham

Site Code: 112858000



PRECISION
D A T A
INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

PDI File #: 239385 ATR-A (Speed)

Count Date

Tuesday, June 6, 2023

Speed (60-minute)

NB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	1	4	3	6	0	0	0	0	0	0	0	14	38.0	32.6
1:00 AM	0	0	1	0	2	2	1	0	0	0	0	0	0	6	38.5	33.8
2:00 AM	0	0	0	0	1	1	1	0	0	0	0	0	0	3	39.2	36.7
3:00 AM	0	0	0	0	1	0	1	0	0	0	0	0	0	2	39.5	36.0
4:00 AM	0	0	0	1	6	2	0	0	0	0	0	0	0	9	34.8	32.9
5:00 AM	0	0	1	2	13	7	0	3	0	0	0	0	0	26	38.0	34.3
6:00 AM	2	0	11	18	59	38	6	3	1	0	0	0	0	138	37.0	32.5
7:00 AM	8	16	26	73	150	105	15	1	0	0	0	0	0	394	37.0	31.0
8:00 AM	4	2	26	86	162	91	15	4	3	0	0	0	0	393	37.0	31.8
9:00 AM	6	2	23	66	143	92	17	1	0	1	1	0	0	352	37.0	32.0
10:00 AM	8	0	13	51	158	100	17	3	0	0	0	0	0	350	37.0	32.3
11:00 AM	3	0	23	62	130	75	25	3	0	0	0	0	0	321	37.0	32.2
12:00 PM	5	2	8	82	172	84	19	0	0	0	0	0	1	373	36.0	32.0
1:00 PM	7	1	8	73	148	97	15	1	0	1	0	0	0	351	37.0	32.1
2:00 PM	8	12	37	84	116	48	12	1	0	0	0	0	0	318	35.0	29.5
3:00 PM	14	21	30	83	87	34	2	0	0	0	0	1	2	274	34.0	28.4
4:00 PM	5	14	30	88	109	54	10	2	0	0	0	0	0	312	36.0	29.9
5:00 PM	13	22	29	49	64	26	0	0	0	0	0	0	0	203	34.0	26.8
6:00 PM	8	15	26	67	137	86	18	1	1	0	0	0	0	359	37.0	31.1
7:00 PM	1	2	12	34	130	114	15	5	0	0	0	0	0	313	38.0	33.4
8:00 PM	4	2	8	45	106	88	21	2	1	0	0	0	0	277	37.6	33.0
9:00 PM	0	2	3	24	71	64	15	1	0	0	0	0	0	180	38.0	33.6
10:00 PM	0	1	2	13	57	34	11	1	0	0	0	0	0	119	38.0	33.6
11:00 PM	0	0	0	7	17	32	14	1	0	0	0	0	0	71	41.0	35.9
Total	96	114	318	1012	2042	1280	250	33	6	2	1	1	3	5158	37.0	31.5
Percent	1.86%	2.21%	6.17%	19.62%	39.59%	24.82%	4.85%	0.64%	0.12%	0.04%	0.02%	0.02%	0.06%			

AM Peak	7:00 AM	7:00 AM	7:00 AM	8:00 AM	8:00 AM	7:00 AM	11:00 AM	8:00 AM	8:00 AM	9:00 AM	9:00 AM					7:00 AM
Volume	8	16	26	86	162	105	25	4	3	1	1	0	0			394

PM Peak	3:00 PM	5:00 PM	2:00 PM	4:00 PM	12:00 PM	7:00 PM	8:00 PM	7:00 PM	6:00 PM	1:00 PM		3:00 PM	3:00 PM	12:00 PM		
Volume	14	22	37	88	172	114	21	5	1	1	0	1	2			373

15th Percentile:	26.0 MPH	Average Speed:	31.5 MPH	Posted Speed Limit:	35 MPH
50th Percentile:	32.0 MPH	10 MPH Pace:	28 to 37 MPH	Number of Vehicles > 35 MPH:	1211
85th Percentile:	37.0 MPH	Number in Pace:	3521	Percent of Vehicles > 35 MPH:	23.5%
95th Percentile:	40.0 MPH	Percent in Pace:	68.3%		

Grafton Road (Route 122)

south of Margin Street

City, State: Worcester, MA

Client: Kimley-Horn/ P. Graham

Site Code: 112858000



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Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

PDI File #: 239385 ATR-A (Speed)

Count Date

Tuesday, June 6, 2023

Speed (60-minute)

SB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	0	3	4	1	0	0	0	0	0	0	0	8	32.0	30.5
1:00 AM	1	0	0	0	3	1	1	0	0	0	0	0	0	6	39.3	30.8
2:00 AM	0	0	0	3	12	1	1	0	0	0	0	0	0	17	34.0	32.4
3:00 AM	0	0	1	2	3	3	2	0	0	0	0	0	0	11	41.0	34.2
4:00 AM	0	0	0	6	15	7	2	1	0	0	0	0	0	31	37.5	33.4
5:00 AM	0	1	0	8	41	67	8	1	0	0	0	0	0	126	38.0	35.1
6:00 AM	3	2	1	13	95	99	35	4	0	0	0	0	0	252	40.0	35.0
7:00 AM	4	0	3	18	172	203	43	2	5	0	0	0	0	450	39.0	35.0
8:00 AM	0	0	0	28	178	203	63	10	2	1	0	0	0	485	40.0	35.5
9:00 AM	1	0	0	13	164	216	68	3	0	0	0	0	0	465	40.0	35.8
10:00 AM	1	0	0	15	167	203	58	4	1	0	1	0	0	450	39.0	35.6
11:00 AM	0	2	3	24	195	196	46	5	0	0	0	0	0	471	39.0	34.9
12:00 PM	0	0	4	27	200	210	44	6	0	1	0	0	0	492	38.0	34.8
1:00 PM	0	0	2	33	231	187	31	6	0	0	0	0	0	490	38.0	34.3
2:00 PM	0	1	1	44	214	222	35	3	0	0	0	0	0	520	38.0	34.3
3:00 PM	0	0	4	47	297	248	53	2	1	0	0	0	0	652	38.0	34.3
4:00 PM	3	0	1	40	299	323	55	8	0	2	0	0	0	731	38.0	34.8
5:00 PM	4	0	7	45	288	265	46	3	1	0	0	0	0	659	38.0	34.3
6:00 PM	0	0	2	23	170	221	58	1	0	0	0	0	0	475	39.0	35.3
7:00 PM	0	0	2	20	123	163	63	7	1	0	0	0	0	379	40.0	35.9
8:00 PM	0	3	4	8	96	135	41	3	1	0	0	0	0	291	40.0	35.5
9:00 PM	0	1	0	15	75	87	25	5	3	0	0	0	1	212	40.0	35.7
10:00 PM	0	0	1	13	82	63	7	0	0	0	0	0	0	166	37.0	33.9
11:00 PM	0	0	0	3	23	45	13	0	0	0	0	0	0	84	39.6	36.0
Total	17	10	36	451	3147	3369	798	74	15	4	1	0	1	7923	39.0	34.9
Percent	0.21%	0.13%	0.45%	5.69%	39.72%	42.52%	10.07%	0.93%	0.19%	0.05%	0.01%	0.00%	0.01%			

AM Peak	7:00 AM	6:00 AM	7:00 AM	8:00 AM	11:00 AM	9:00 AM	9:00 AM	8:00 AM	7:00 AM	8:00 AM	10:00 AM			8:00 AM
Volume	4	2	3	28	195	216	68	10	5	1	1	0	0	485

PM Peak	5:00 PM	8:00 PM	5:00 PM	3:00 PM	4:00 PM	4:00 PM	7:00 PM	4:00 PM	9:00 PM	4:00 PM			9:00 PM	4:00 PM
Volume	4	3	7	47	299	323	63	8	3	2	0	0	1	731

15th Percentile:	31.0 MPH	Average Speed:	34.9 MPH	Posted Speed Limit:	35 MPH
50th Percentile:	35.0 MPH	10 MPH Pace:	31 to 40 MPH	Number of Vehicles > 35 MPH:	3385
85th Percentile:	39.0 MPH	Number in Pace:	6592	Percent of Vehicles > 35 MPH:	42.7%
95th Percentile:	41.0 MPH	Percent in Pace:	83.2%		

Grafton Road (Route 122)

south of Margin Street

City, State: Worcester, MA

Client: Kimley-Horn/ P. Graham

Site Code: 112858000



PRECISION
D A T A
INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

PDI File #: 239385 ATR-A (Speed)

Count Date

Tuesday, June 6, 2023

Speed (60-minute)

Combined NB and SB

Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	1	7	7	7	0	0	0	0	0	0	0	22	37.7	31.8
1:00 AM	1	0	1	0	5	3	2	0	0	0	0	0	0	12	39.4	32.3
2:00 AM	0	0	0	3	13	2	2	0	0	0	0	0	0	20	35.5	33.1
3:00 AM	0	0	1	2	4	3	3	0	0	0	0	0	0	13	41.4	34.5
4:00 AM	0	0	0	7	21	9	2	1	0	0	0	0	0	40	37.0	33.3
5:00 AM	0	1	1	10	54	74	8	4	0	0	0	0	0	152	38.0	35.0
6:00 AM	5	2	12	31	154	137	41	7	1	0	0	0	0	390	39.0	34.1
7:00 AM	12	16	29	91	322	308	58	3	5	0	0	0	0	844	38.0	33.1
8:00 AM	4	2	26	114	340	294	78	14	5	1	0	0	0	878	38.0	33.8
9:00 AM	7	2	23	79	307	308	85	4	0	1	1	0	0	817	39.0	34.2
10:00 AM	9	0	13	66	325	303	75	7	1	0	1	0	0	800	39.0	34.2
11:00 AM	3	2	26	86	325	271	71	8	0	0	0	0	0	792	38.0	33.8
12:00 PM	5	2	12	109	372	294	63	6	0	1	0	0	1	865	38.0	33.6
1:00 PM	7	1	10	106	379	284	46	7	0	1	0	0	0	841	37.0	33.4
2:00 PM	8	13	38	128	330	270	47	4	0	0	0	0	0	838	37.0	32.5
3:00 PM	14	21	34	130	384	282	55	2	1	0	0	1	2	926	37.0	32.6
4:00 PM	8	14	31	128	408	377	65	10	0	2	0	0	0	1043	38.0	33.3
5:00 PM	17	22	36	94	352	291	46	3	1	0	0	0	0	862	37.0	32.5
6:00 PM	8	15	28	90	307	307	76	2	1	0	0	0	0	834	38.0	33.5
7:00 PM	1	2	14	54	253	277	78	12	1	0	0	0	0	692	39.0	34.8
8:00 PM	4	5	12	53	202	223	62	5	2	0	0	0	0	568	39.0	34.3
9:00 PM	0	3	3	39	146	151	40	6	3	0	0	0	1	392	39.0	34.7
10:00 PM	0	1	3	26	139	97	18	1	0	0	0	0	0	285	38.0	33.8
11:00 PM	0	0	0	10	40	77	27	1	0	0	0	0	0	155	40.0	35.9
Total	113	124	354	1463	5189	4649	1048	107	21	6	2	1	4	13081	38.0	33.6
Percent	0.86%	0.95%	2.71%	11.18%	39.67%	35.54%	8.01%	0.82%	0.16%	0.05%	0.02%	0.01%	0.03%			

AM Peak	7:00 AM	7:00 AM	7:00 AM	8:00 AM	8:00 AM	7:00 AM	9:00 AM	8:00 AM	7:00 AM	8:00 AM	9:00 AM			8:00 AM
Volume	12	16	29	114	340	308	85	14	5	1	1	0	0	878

PM Peak	5:00 PM	5:00 PM	2:00 PM	3:00 PM	4:00 PM	4:00 PM	7:00 PM	7:00 PM	9:00 PM	4:00 PM		3:00 PM	3:00 PM	4:00 PM
Volume	17	22	38	130	408	377	78	12	3	2	0	1	2	1043

15th Percentile:	29.0 MPH	Average Speed:	33.6 MPH	Posted Speed Limit:	35 MPH
50th Percentile:	34.0 MPH	10 MPH Pace:	30 to 39 MPH	Number of Vehicles > 35 MPH:	4596
85th Percentile:	38.0 MPH	Number in Pace:	9838	Percent of Vehicles > 35 MPH:	35.1%
95th Percentile:	41.0 MPH	Percent in Pace:	75.2%		

Grafton Road (Route 122)

south of Margin Street

City, State: Worcester, MA

Client: Kimley-Horn/ P. Graham

Site Code: 112858000



PRECISION
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157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

PDI File #: 239385 ATR-A (Speed)

Count Date

Wednesday, June 7, 2023

Speed (60-minute)

NB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	0	4	14	23	6	0	0	0	0	0	0	47	39.0	35.3
1:00 AM	0	0	0	1	3	14	8	0	0	0	0	0	0	26	41.0	37.4
2:00 AM	0	0	1	3	8	4	1	0	1	0	0	0	0	18	37.4	33.3
3:00 AM	0	0	1	0	7	7	4	2	1	0	0	0	0	22	40.0	36.9
4:00 AM	0	0	2	2	8	19	10	0	0	0	0	0	0	41	41.0	36.0
5:00 AM	1	0	5	8	30	42	10	3	1	0	0	0	0	100	39.0	34.7
6:00 AM	3	3	6	35	80	77	24	2	1	0	0	0	0	231	39.0	33.4
7:00 AM	2	5	36	79	155	103	11	1	0	0	0	0	0	392	36.0	31.5
8:00 AM	7	10	24	64	176	86	11	0	0	0	0	0	0	378	36.0	31.1
9:00 AM	6	3	8	73	174	80	12	2	2	0	0	0	0	360	36.0	31.9
10:00 AM	3	2	11	64	149	81	17	2	1	0	0	0	0	330	36.7	32.2
11:00 AM	6	7	16	87	109	78	14	3	0	0	0	0	0	320	37.0	31.2
12:00 PM	11	9	19	81	159	70	17	3	0	0	0	0	0	369	36.0	30.7
1:00 PM	4	4	11	83	168	81	17	1	0	0	0	1	0	370	36.0	31.9
2:00 PM	7	12	22	75	94	57	9	1	1	0	0	0	0	278	36.0	30.1
3:00 PM	6	9	36	80	113	58	9	0	0	0	0	0	0	311	36.0	29.8
4:00 PM	12	23	45	72	70	34	3	1	0	1	0	1	0	262	34.9	27.5
5:00 PM	11	32	22	37	42	17	4	1	0	0	0	0	0	166	34.0	26.1
6:00 PM	13	12	19	76	96	52	4	0	1	0	0	0	0	273	35.0	29.4
7:00 PM	4	3	11	59	108	58	12	1	0	0	0	0	0	256	36.0	31.5
8:00 PM	4	1	5	31	95	65	9	2	0	0	0	0	0	212	37.0	32.6
9:00 PM	0	0	7	29	75	39	18	0	0	0	0	0	0	168	38.0	32.9
10:00 PM	0	0	0	12	48	51	10	3	0	0	0	0	0	124	38.0	34.5
11:00 PM	1	0	0	9	34	18	6	1	0	0	0	0	0	69	38.0	33.7
Total	101	135	307	1064	2015	1214	246	29	9	1	0	2	0	5123	37.0	31.3
Percent	1.97%	2.64%	5.99%	20.77%	39.33%	23.70%	4.80%	0.57%	0.18%	0.02%	0.00%	0.04%	0.00%			

AM Peak	8:00 AM	8:00 AM	7:00 AM	11:00 AM	8:00 AM	7:00 AM	6:00 AM	5:00 AM	9:00 AM							7:00 AM
Volume	7	10	36	87	176	103	24	3	2	0	0	0	0	0	0	392
PM Peak	6:00 PM	5:00 PM	4:00 PM	1:00 PM	1:00 PM	1:00 PM	9:00 PM	12:00 PM	2:00 PM	4:00 PM		1:00 PM				1:00 PM
Volume	13	32	45	83	168	81	18	3	1	1	0	1	0	0	0	370

15th Percentile:	26.0 MPH	Average Speed:	31.3 MPH	Posted Speed Limit:	35 MPH
50th Percentile:	32.0 MPH	10 MPH Pace:	28 to 37 MPH	Number of Vehicles > 35 MPH:	1158
85th Percentile:	37.0 MPH	Number in Pace:	3495	Percent of Vehicles > 35 MPH:	22.6%
95th Percentile:	40.0 MPH	Percent in Pace:	68.2%		

Grafton Road (Route 122)

south of Margin Street

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Count Date

Wednesday, June 7, 2023

Speed (60-minute)

SB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	0	5	20	13	3	0	0	0	0	0	0	41	38.0	34.0
1:00 AM	0	0	0	2	8	11	5	0	2	0	0	0	0	28	43.0	37.1
2:00 AM	0	0	0	4	5	9	2	1	0	0	0	0	0	21	39.0	34.9
3:00 AM	0	0	2	1	6	9	5	2	1	0	0	0	0	26	41.5	36.4
4:00 AM	0	0	1	2	17	17	27	3	0	0	0	0	0	67	43.0	37.7
5:00 AM	0	0	0	3	36	115	60	11	1	2	0	0	0	228	42.0	38.3
6:00 AM	0	0	0	16	128	156	46	8	1	0	0	0	0	355	40.0	35.8
7:00 AM	2	1	3	17	163	194	46	9	0	0	0	0	0	435	39.0	35.2
8:00 AM	0	1	2	36	170	214	51	6	1	0	0	0	0	481	39.0	35.2
9:00 AM	4	0	0	18	146	211	53	7	1	1	0	0	0	441	39.0	35.5
10:00 AM	2	1	2	17	163	214	55	2	0	0	0	0	0	456	39.0	35.3
11:00 AM	0	0	4	34	184	214	49	6	0	0	0	0	0	491	38.0	34.9
12:00 PM	0	0	5	29	220	223	51	5	0	0	0	0	0	533	39.0	34.8
1:00 PM	1	0	3	21	193	217	62	4	2	0	0	0	0	503	39.0	35.3
2:00 PM	2	0	1	32	252	262	35	3	0	1	0	0	0	588	38.0	34.6
3:00 PM	0	0	0	26	206	312	69	4	0	0	0	0	0	617	39.0	35.6
4:00 PM	0	1	4	35	271	310	49	4	1	0	0	0	0	675	38.0	34.8
5:00 PM	0	0	0	40	344	269	37	3	1	0	0	0	0	694	37.0	34.3
6:00 PM	1	0	1	41	198	178	24	3	0	0	0	0	0	446	38.0	34.2
7:00 PM	3	0	1	28	152	161	26	3	0	0	0	0	0	374	38.0	34.4
8:00 PM	0	2	1	18	118	128	19	3	0	0	0	0	0	289	38.0	34.6
9:00 PM	0	0	2	9	104	80	16	2	0	1	0	0	0	214	38.0	34.5
10:00 PM	0	0	2	18	57	48	8	1	0	0	0	0	0	134	37.1	33.8
11:00 PM	0	0	1	10	31	33	10	0	0	0	0	0	0	85	38.0	34.7
Total	15	6	35	462	3192	3598	808	90	11	5	0	0	0	8222	39.0	35.0
Percent	0.18%	0.07%	0.43%	5.62%	38.82%	43.76%	9.83%	1.09%	0.13%	0.06%	0.00%	0.00%	0.00%			

AM Peak	9:00 AM	7:00 AM	11:00 AM	8:00 AM	11:00 AM	8:00 AM	5:00 AM	5:00 AM	1:00 AM	5:00 AM					11:00 AM
Volume	4	1	4	36	184	214	60	11	2	2	0	0	0	491	
PM Peak	7:00 PM	8:00 PM	12:00 PM	6:00 PM	5:00 PM	3:00 PM	3:00 PM	12:00 PM	1:00 PM	2:00 PM				5:00 PM	
Volume	3	2	5	41	344	312	69	5	2	1	0	0	0	694	

15th Percentile:	31.0 MPH	Average Speed:	35.0 MPH	Posted Speed Limit:	35 MPH
50th Percentile:	35.0 MPH	10 MPH Pace:	31 to 40 MPH	Number of Vehicles > 35 MPH:	3622
85th Percentile:	39.0 MPH	Number in Pace:	6818	Percent of Vehicles > 35 MPH:	44.1%
95th Percentile:	41.0 MPH	Percent in Pace:	82.9%		

Grafton Road (Route 122)

south of Margin Street

City, State: Worcester, MA

Client: Kimley-Horn/ P. Graham

Site Code: 112858000



PRECISION
D A T A
INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

PDI File #: 239385 ATR-A (Speed)

Count Date

Wednesday, June 7, 2023

Speed (60-minute)

Combined NB and SB

Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	0	9	34	36	9	0	0	0	0	0	0	88	39.0	34.7
1:00 AM	0	0	0	3	11	25	13	0	2	0	0	0	0	54	42.0	37.2
2:00 AM	0	0	1	7	13	13	3	1	1	0	0	0	0	39	39.0	34.2
3:00 AM	0	0	3	1	13	16	9	4	2	0	0	0	0	48	41.0	36.6
4:00 AM	0	0	3	4	25	36	37	3	0	0	0	0	0	108	42.0	37.1
5:00 AM	1	0	5	11	66	157	70	14	2	2	0	0	0	328	41.0	37.2
6:00 AM	3	3	6	51	208	233	70	10	2	0	0	0	0	586	39.0	34.9
7:00 AM	4	6	39	96	318	297	57	10	0	0	0	0	0	827	38.0	33.4
8:00 AM	7	11	26	100	346	300	62	6	1	0	0	0	0	859	38.0	33.4
9:00 AM	10	3	8	91	320	291	65	9	3	1	0	0	0	801	38.0	33.9
10:00 AM	5	3	13	81	312	295	72	4	1	0	0	0	0	786	38.0	34.0
11:00 AM	6	7	20	121	293	292	63	9	0	0	0	0	0	811	38.0	33.4
12:00 PM	11	9	24	110	379	293	68	8	0	0	0	0	0	902	38.0	33.1
1:00 PM	5	4	14	104	361	298	79	5	2	0	0	1	0	873	38.0	33.8
2:00 PM	9	12	23	107	346	319	44	4	1	1	0	0	0	866	38.0	33.1
3:00 PM	6	9	36	106	319	370	78	4	0	0	0	0	0	928	38.0	33.6
4:00 PM	12	24	49	107	341	344	52	5	1	1	0	1	0	937	38.0	32.8
5:00 PM	11	32	22	77	386	286	41	4	1	0	0	0	0	860	37.0	32.7
6:00 PM	14	12	20	117	294	230	28	3	1	0	0	0	0	719	37.0	32.3
7:00 PM	7	3	12	87	260	219	38	4	0	0	0	0	0	630	38.0	33.2
8:00 PM	4	3	6	49	213	193	28	5	0	0	0	0	0	501	38.0	33.7
9:00 PM	0	0	9	38	179	119	34	2	0	1	0	0	0	382	38.0	33.8
10:00 PM	0	0	2	30	105	99	18	4	0	0	0	0	0	258	38.0	34.1
11:00 PM	1	0	1	19	65	51	16	1	0	0	0	0	0	154	38.0	34.2
Total	116	141	342	1526	5207	4812	1054	119	20	6	0	2	0	13345	38.0	33.6
Percent	0.87%	1.06%	2.56%	11.43%	39.02%	36.06%	7.90%	0.89%	0.15%	0.04%	0.00%	0.01%	0.00%			

AM Peak	9:00 AM	8:00 AM	7:00 AM	11:00 AM	8:00 AM	8:00 AM	10:00 AM	5:00 AM	9:00 AM	5:00 AM				8:00 AM
Volume	10	11	39	121	346	300	72	14	3	2	0	0	0	859

PM Peak	6:00 PM	5:00 PM	4:00 PM	6:00 PM	5:00 PM	3:00 PM	1:00 PM	12:00 PM	1:00 PM	2:00 PM		1:00 PM		4:00 PM
Volume	14	32	49	117	386	370	79	8	2	1	0	1	0	937

15th Percentile:	29.0 MPH	Average Speed:	33.6 MPH	Posted Speed Limit:	35 MPH
50th Percentile:	34.0 MPH	10 MPH Pace:	30 to 39 MPH	Number of Vehicles > 35 MPH:	4780
85th Percentile:	38.0 MPH	Number in Pace:	10019	Percent of Vehicles > 35 MPH:	35.8%
95th Percentile:	41.0 MPH	Percent in Pace:	75.1%		

PDI File #: **239385 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122) NE: Auto Parts Driveway**
 Location: **E: Brandt Lane W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars and Heavy Vehicles (Combined)

	Grafton Street (Route 122)						Auto Parts Driveway						Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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	105	0	0	0	105	0	0	1	0	0	1	0	0	0	0	0	0	0	91	1	0	92	0	0	0	1	0	1	199	
7:15 AM	6	108	0	1	0	115	0	0	0	0	0	0	0	0	0	0	0	0	0	85	5	0	90	2	0	0	6	0	8	213	
7:30 AM	0	146	0	1	1	148	1	0	1	0	0	2	0	0	0	0	0	0	1	109	3	0	113	0	0	0	1	0	1	264	
7:45 AM	1	166	2	2	2	173	3	0	0	0	0	3	0	0	0	0	0	0	3	105	1	0	109	2	0	0	0	0	2	287	
Total	7	525	2	4	3	541	4	0	2	0	0	6	0	0	0	0	0	3	1	390	10	0	404	4	0	0	8	0	12	963	
8:00 AM	0	155	5	1	0	161	5	0	1	0	0	6	0	4	0	4	0	8	2	0	130	0	0	132	0	0	0	0	0	0	307
8:15 AM	0	157	0	1	0	158	1	0	3	0	0	4	0	0	0	0	0	0	1	2	103	0	0	106	0	0	0	0	0	0	268
8:30 AM	0	133	0	0	0	133	0	0	4	0	0	4	0	0	0	0	0	0	4	2	103	0	0	109	0	0	0	0	0	0	246
8:45 AM	0	142	0	0	0	142	1	0	3	0	0	4	0	1	0	0	0	1	1	2	117	0	1	121	0	0	0	0	1	1	269
Total	0	587	5	2	0	594	7	0	11	0	0	18	0	5	0	4	0	9	8	6	453	0	1	468	0	0	0	0	1	1	1090
Grand Total	7	1112	7	6	3	1135	11	0	13	0	0	24	0	5	0	4	0	9	11	7	843	10	1	872	4	0	0	8	1	13	2053
Approach %	0.6	98.0	0.6	0.5	0.3		45.8	0.0	54.2	0.0	0.0		0.0	55.6	0.0	44.4	0.0		1.3	0.8	96.7	1.1	0.1		30.8	0.0	0.0	61.5	7.7		
Total %	0.3	54.2	0.3	0.3	0.1	55.3	0.5	0.0	0.6	0.0	0.0	1.2	0.0	0.2	0.0	0.2	0.0	0.4	0.5	0.3	41.1	0.5	0.0	42.5	0.2	0.0	0.0	0.4	0.0	0.6	
Exiting Leg Total						870						13						18						1134						18	2053
Cars	7	1060	7	6	3	1083	11	0	13	0	0	24	0	5	0	4	0	9	11	7	798	10	1	827	4	0	0	8	1	13	1956
% Cars	100.0	95.3	100.0	100.0	100.0	95.4	100.0	0.0	100.0	0.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	100.0	100.0	94.7	100.0	100.0	94.8	100.0	0.0	0.0	100.0	100.0	100.0	95.3
Exiting Leg Total						825						13						18						1082						18	1956
Heavy Vehicles	0	52	0	0	0	52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45	0	0	45	0	0	0	0	0	0	97
% Heavy Vehicles	0.0	4.7	0.0	0.0	0.0	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	4.7
Exiting Leg Total						45						0						0						52						0	97

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

7:30 AM	Grafton Street (Route 122)						Auto Parts Driveway						Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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	
7:30 AM	0	146	0	1	1	148	1	0	1	0	0	2	0	0	0	0	0	0	0	1	109	3	0	113	0	0	0	1	0	1	264
7:45 AM	1	166	2	2	2	173	3	0	0	0	0	3	0	0	0	0	0	0	3	0	105	1	0	109	2	0	0	0	0	2	287
8:00 AM	0	155	5	1	0	161	5	0	1	0	0	6	0	4	0	4	0	8	2	0	130	0	0	132	0	0	0	0	0	0	307
8:15 AM	0	157	0	1	0	158	1	0	3	0	0	4	0	0	0	0	0	0	1	2	103	0	0	106	0	0	0	0	0	0	268
Total Volume	1	624	7	5	3	640	10	0	5	0	0	15	0	4	0	4	0	8	6	3	447	4	0	460	2	0	0	1	0	3	1126
% Approach Total	0.2	97.5	1.1	0.8	0.5		66.7	0.0	33.3	0.0	0.0		0.0	50.0	0.0	50.0	0.0		1.3	0.7	97.2	0.9	0.0		66.7	0.0	0.0	33.3	0.0		
PHF	0.250	0.940	0.350	0.625	0.375	0.925	0.500	0.000	0.417	0.000	0.000	0.625	0.000	0.250	0.000	0.250	0.000	0.250	0.500	0.375	0.860	0.333	0.000	0.871	0.250	0.000	0.000	0.250	0.000	0.375	0.917
Cars	1	588	7	5	3	604	10	0	5	0	0	15	0	4	0	4	0	8	6	3	425	4	0	438	2	0	0	1	0	3	1068
Cars %	100.0	94.2	100.0	100.0	100.0	94.4	100.0	0.0	100.0	0.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	100.0	100.0	95.1	100.0	0.0	95.2	100.0	0.0	0.0	100.0	0.0	100.0	94.8
Heavy Vehicles	0	36	0	0	0	36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	0	0	22	0	0	0	0	0	0	58
Heavy Vehicles %	0.0	5.8	0.0	0.0	0.0	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.9	0.0	0.0	4.8	0.0	0.0	0.0	0.0	0.0	0.0	5.2
Cars Enter Leg	1	588	7	5	3	604	10	0	5	0	0	15	0	4	0	4	0	8	6	3	425	4	0	438	2	0	0	1	0	3	1068
Heavy Enter Leg	0	36	0	0	0	36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	0	0	22	0	0	0	0	0	0	58
Total Entering Leg	1	624	7	5	3	640	10	0	5	0	0	15	0	4	0	4	0	8	6	3	447	4	0	460	2	0	0	1	0	3	1126
Cars Exiting Leg						443						8						13						599						5	1068
Heavy Exiting Leg						22						0						0						36					0	58	
Total Exiting Leg						465						8						13						635						5	1126

PDI File #: **239385 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122) NE: Auto Parts Driveway**
 Location: **E: Brandt Lane W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars

	Grafton Street (Route 122)						Auto Parts Driveway						Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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	102	0	0	0	102	0	0	1	0	0	1	0	0	0	0	0	0	0	0	85	1	0	86	0	0	0	1	0	1	190
7:15 AM	6	105	0	1	0	112	0	0	0	0	0	0	0	0	0	0	0	0	0	0	78	5	0	83	2	0	0	6	0	8	203
7:30 AM	0	135	0	1	1	137	1	0	1	0	0	2	0	0	0	0	0	0	0	1	105	3	0	109	0	0	0	1	0	1	249
7:45 AM	1	158	2	2	2	165	3	0	0	0	0	3	0	0	0	0	0	0	3	0	104	1	0	108	2	0	0	0	0	2	278
Total	7	500	2	4	3	516	4	0	2	0	0	6	0	0	0	0	0	0	3	1	372	10	0	386	4	0	0	8	0	12	920
8:00 AM	0	145	5	1	0	151	5	0	1	0	0	6	0	4	0	4	0	8	2	0	116	0	0	118	0	0	0	0	0	0	283
8:15 AM	0	150	0	1	0	151	1	0	3	0	0	4	0	0	0	0	0	0	1	2	100	0	0	103	0	0	0	0	0	0	258
8:30 AM	0	128	0	0	0	128	0	0	4	0	0	4	0	0	0	0	0	0	4	2	96	0	0	102	0	0	0	0	0	0	234
8:45 AM	0	137	0	0	0	137	1	0	3	0	0	4	0	1	0	0	0	1	1	2	114	0	1	118	0	0	0	0	1	1	261
Total	0	560	5	2	0	567	7	0	11	0	0	18	0	5	0	4	0	9	8	6	426	0	1	441	0	0	0	0	1	1	1036
Grand Total	7	1060	7	6	3	1083	11	0	13	0	0	24	0	5	0	4	0	9	11	7	798	10	1	827	4	0	0	8	1	13	1956
Approach %	0.6	97.9	0.6	0.6	0.3		45.8	0.0	54.2	0.0	0.0		0.0	55.6	0.0	44.4	0.0		1.3	0.8	96.5	1.2	0.1		30.8	0.0	0.0	61.5	7.7		
Total %	0.4	54.2	0.4	0.3	0.2	55.4	0.6	0.0	0.7	0.0	0.0	1.2	0.0	0.3	0.0	0.2	0.0	0.5	0.6	0.4	40.8	0.5	0.1	42.3	0.2	0.0	0.0	0.4	0.1	0.7	
Exiting Leg Total	825						13						18						1082						18						1956

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

	Grafton Street (Route 122)						Auto Parts Driveway						Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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	
7:30 AM	0	135	0	1	1	137	1	0	1	0	0	2	0	0	0	0	0	0	0	1	105	3	0	109	0	0	0	1	0	1	249
7:45 AM	1	158	2	2	2	165	3	0	0	0	0	3	0	0	0	0	0	0	3	0	104	1	0	108	2	0	0	0	0	2	278
8:00 AM	0	145	5	1	0	151	5	0	1	0	0	6	0	4	0	4	0	8	2	0	116	0	0	118	0	0	0	0	0	0	283
8:15 AM	0	150	0	1	0	151	1	0	3	0	0	4	0	0	0	0	0	0	1	2	100	0	0	103	0	0	0	0	0	0	258
Total Volume	1	588	7	5	3	604	10	0	5	0	0	15	0	4	0	4	0	8	6	3	425	4	0	438	2	0	0	1	0	3	1068
% Approach Total	0.2	97.4	1.2	0.8	0.5		66.7	0.0	33.3	0.0	0.0		0.0	50.0	0.0	50.0	0.0		1.4	0.7	97.0	0.9	0.0		66.7	0.0	0.0	33.3	0.0		
PHF	0.250	0.930	0.350	0.625	0.375	0.915	0.500	0.000	0.417	0.000	0.000	0.625	0.000	0.250	0.000	0.250	0.000	0.250	0.500	0.375	0.916	0.333	0.000	0.928	0.250	0.000	0.000	0.250	0.000	0.375	0.943
Entering Leg	1	588	7	5	3	604	10	0	5	0	0	15	0	4	0	4	0	8	6	3	425	4	0	438	2	0	0	1	0	3	1068
Exiting Leg	443						8						13						599						5						1068
Total	1047						23						21						1037						8						2136

PDI File #: **239385 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122) NE: Auto Parts Driveway**
 Location: **E: Brandt Lane W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



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

	Grafton Street (Route 122)						Auto Parts Driveway						Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	9	
7:15 AM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	10	
7:30 AM	0	11	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	15	
7:45 AM	0	8	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	9	
Total	0	25	0	0	0	25	0	0	0	0	0	0	0	0	0	0	0	0	18	0	0	18	0	0	0	0	0	0	43		
8:00 AM	0	10	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0	0	14	0	0	0	0	0	0	24	
8:15 AM	0	7	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	10	
8:30 AM	0	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	12	
8:45 AM	0	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	8	
Total	0	27	0	0	0	27	0	0	0	0	0	0	0	0	0	0	0	0	27	0	0	27	0	0	0	0	0	0	54		
Grand Total	0	52	0	0	0	52	0	0	0	0	0	0	0	0	0	0	0	0	45	0	0	45	0	0	0	0	0	0	97		
Approach %	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	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	53.6	0.0	0.0	0.0	53.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	46.4	0.0	0.0	46.4	0.0	0.0	0.0	0.0	0.0	0.0		
Exiting Leg Total						45						0					0						52						0	97	
Buses	0	21	0	0	0	21	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	0	32	
% Buses	0.0	40.4	0.0	0.0	0.0	40.4	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	24.4	0.0	0.0	24.4	0.0	0.0	0.0	0.0	0.0	0.0	33.0	
Exiting Leg Total						11						0					0						21						0	32	
Single-Unit Trucks	0	25	0	0	0	25	0	0	0	0	0	0	0	0	0	0	0	0	0	27	0	0	27	0	0	0	0	0	0	52	
% Single-Unit	0.0	48.1	0.0	0.0	0.0	48.1	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	60.0	0.0	0.0	60.0	0.0	0.0	0.0	0.0	0.0	0.0	53.6	
Exiting Leg Total						27						0					0						27						0	52	
Articulated Trucks	0	6	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	13	
% Articulated	0.0	11.5	0.0	0.0	0.0	11.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.6	0.0	0.0	15.6	0.0	0.0	0.0	0.0	0.0	0.0	13.4	
Exiting Leg Total						7						0					0						7						0	13	

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

	Grafton Street (Route 122)						Auto Parts Driveway						Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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	
7:15 AM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	10	
7:30 AM	0	11	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	15	
7:45 AM	0	8	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	9	
8:00 AM	0	10	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0	0	14	0	0	0	0	0	0	24	
Total Volume	0	32	0	0	0	32	0	0	0	0	0	0	0	0	0	0	0	0	26	0	0	26	0	0	0	0	0	0	58		
% Approach Total	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	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.727	0.000	0.000	0.000	0.727	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	0.464	0.000	0.000	0.464	0.000	0.000	0.000	0.000	0.000	0.000	0.604	
Buses	0	16	0	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	20	
Buses %	0.0	50.0	0.0	0.0	0.0	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	15.4	0.0	0.0	15.4	0.0	0.0	0.0	0.0	0.0	0.0	34.5	
Single-Unit Trucks	0	14	0	0	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	0	29	
Single-Unit %	0.0	43.8	0.0	0.0	0.0	43.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	57.7	0.0	0.0	57.7	0.0	0.0	0.0	0.0	0.0	0.0	50.0	
Articulated Trucks	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	9	
Articulated %	0.0	6.3	0.0	0.0	0.0	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.9	0.0	0.0	26.9	0.0	0.0	0.0	0.0	0.0	0.0	15.5	
Buses	0	16	0	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	20	
Single-Unit Trucks	0	14	0	0	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	0	29	
Articulated Trucks	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	9	
Total Entering Leg	0	32	0	0	0	32	0	0	0	0	0	0	0	0	0	0	0	0	0	26	0	0	26	0	0	0	0	0	0	58	
Buses						4						0					0						16						0	20	

PDI File #: **239385 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122) NE: Auto Parts Driveway**
 Location: **E: Brandt Lane W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**



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

	Grafton Street (Route 122)						Auto Parts Driveway						Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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	
Single-Unit Trucks						15						0						0						14						0	29
Articulated Trucks						7						0						0						2						0	9
Total Exiting Leg						26						0						0						32						0	58

PDI File #: **239385 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122) NE: Auto Parts Driveway**
 Location: **E: Brandt Lane W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Buses

	Grafton Street (Route 122)							Auto Parts Driveway					Brandt Lane					Grafton Street (Route 122)					Roosevelt School Driveway					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
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	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	2	0	0	2	0	0	0	0	0	2
7:30 AM	0	4	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	4	
7:45 AM	0	6	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	7	
Total	0	10	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	15	
8:00 AM	0	6	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	7	
8:15 AM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	3	
8:30 AM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4	
8:45 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3	
Total	0	11	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	17	
Grand Total	0	21	0	0	0	21	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	32	
Approach %	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	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total %	0.0	65.6	0.0	0.0	0.0	65.6	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	34.4	0.0	0.0	34.4	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total						11					0						0						21						32	

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

7:30 AM	Grafton Street (Route 122)							Auto Parts Driveway					Brandt Lane					Grafton Street (Route 122)					Roosevelt School Driveway					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
7:30 AM	0	4	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	4
7:45 AM	0	6	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	7
8:00 AM	0	6	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	7
8:15 AM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	3
Total Volume	0	18	0	0	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	21
% Approach Total	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	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
PHF	0.000	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	0.000	0.000	0.750	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.750
Entering Leg	0	18	0	0	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	21
Exiting Leg						3					0						0						18						21
Total						21					0					0							21						42

PDI File #: **239385 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122) NE: Auto Parts Driveway**
 Location: **E: Brandt Lane W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Single-Unit Trucks

	Grafton Street (Route 122)							Auto Parts Driveway					Brandt Lane					Grafton Street (Route 122)					Roosevelt School Driveway						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	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	6
7:15 AM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	8
7:30 AM	0	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	8
7:45 AM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
Total	0	12	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0	0	12	0	0	0	0	0	0	24	
8:00 AM	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	11
8:15 AM	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	6
8:30 AM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	8
8:45 AM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3
Total	0	13	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	0	28	
Grand Total	0	25	0	0	0	25	0	0	0	0	0	0	0	0	0	0	0	0	0	27	0	0	27	0	0	0	0	0	0	52	
Approach %	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	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	48.1	0.0	0.0	0.0	48.1	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	51.9	0.0	0.0	51.9	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total						27						0						0					25							52	

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

7:15 AM	Grafton Street (Route 122)							Auto Parts Driveway					Brandt Lane					Grafton Street (Route 122)					Roosevelt School Driveway						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
7:15 AM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	8
7:30 AM	0	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	8
7:45 AM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
8:00 AM	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	11
Total Volume	0	14	0	0	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	0	29
% Approach Total	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	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.700	0.000	0.000	0.000	0.700	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	0.536	0.000	0.000	0.536	0.000	0.000	0.000	0.000	0.000	0.000	0.659	
Entering Leg	0	14	0	0	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	0	29
Exiting Leg						15						0						0					14							29	
Total						29						0						0					29							58	

PDI File #: **239385 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122) NE: Auto Parts Driveway**
 Location: **E: Brandt Lane W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Articulated Trucks

	Grafton Street (Route 122)						Auto Parts Driveway						Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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	1	0	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	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		
7:30 AM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	3		
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		
Total	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	4		
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	6		
8:15 AM	0	1	0	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	1		
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	0	0	0	0	0		
8:45 AM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2		
Total	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	9			
Grand Total	0	6	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	13			
Approach %	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	100.0	0.0	0.0		0.0	0.0	0.0	0.0			
Total %	0.0	46.2	0.0	0.0	0.0	46.2	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	53.8	0.0	0.0	53.8	0.0	0.0	0.0	0.0			
Exiting Leg Total						7						0						0					6					0	13		

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

7:30 AM	Grafton Street (Route 122)						Auto Parts Driveway						Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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	
7:30 AM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3		
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		
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	6		
8:15 AM	0	1	0	0	0	1	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	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	10		
% Approach Total	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	100.0	0.0	0.0		0.0	0.0	0.0	0.0			
PHF	0.000	0.375	0.000	0.000	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.292	0.000	0.000	0.292	0.000	0.000	0.000	0.000	0.000	0.417		
Entering Leg	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	10		
Exiting Leg						7						0						0					3					0	10		
Total						10						0						0					10					0	20		

PDI File #: 239385 A
 Location: N: Grafton Street (Route 122) S: Grafton Street (Route 122) NE: Auto Parts Driveway
 Location: E: Brandt Lane W: Roosevelt School Driveway
 City, State: Worcester, MA
 Client: Kimley-Horn/ P. Graham
 Site Code: TBA
 Count Date: Wednesday, June 7, 2023
 Start Time: 7:00 AM
 End Time: 9:00 AM
 Class:



Bicycles (on Roadway and Crosswalks)

	Grafton Street (Route 122)										Auto Parts Driveway						Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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	1	0	0	0	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	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	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	1	0	0	0	0	1	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	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1								
Total	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2	0	0	0	0	0	0	0	0	3								
8:00 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	0	0	0	0	0	0	0	0	0								
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	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	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								
Grand Total	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2	0	0	0	0	0	0	0	0	3								
Approach %	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	0.0	0.0	0.0		0.0	0.0	50.0	0.0	0.0	0.0	50.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0										
Total %	0.0	33.3	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	0.0	0.0	33.3	66.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0									
Exiting Leg Total	1								0								0								2								0								3								

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

	Grafton Street (Route 122)										Auto Parts Driveway						Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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	1	0	0	0	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	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	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	1	0	0	0	0	1	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	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1								
Total Volume	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2	0	0	0	0	0	0	0	0	3								
% Approach Total	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	0.0	0.0	0.0		0.0	0.0	50.0	0.0	0.0	0.0	50.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0										
PHF	0.000	0.250	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	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.250	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750								
Entering Leg	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2	0	0	0	0	0	0	0	0	3								
Exiting Leg	1								0								0								2								0								3								
Total	2								0								0								4								0								6								

PDI File #: **239385 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122) NE: Auto Parts Driveway**
 Location: **E: Brandt Lane W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**



PRECISION
 DATA
 INDUSTRIES, LLC
 157 Washington Street, Suite 2
 Hudson, MA 01749
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Pedestrians

	Grafton Street (Route 122)									Auto Parts Driveway									Brandt Lane									Grafton Street (Route 122)									Roosevelt School Driveway									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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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
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	0	0	0	0	0	0	0	0	0	1	1							
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	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	0	3	0	3	0	0	0	0	31	7	38	0	0	0	0	0	1	3	4	3	4	7						
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	4	0	4	0	0	0	0	31	7	38	0	0	0	0	0	3	4	7	7	50								
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	0	0	33	7	40	0	0	0	0	0	0	1	1	1	44							
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	3	0	3	0	0	0	0	0	0	2	2	2	5							
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4							
8:45 AM	0	0	0	0	0	0	0	0	0	0	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	0	0	4							
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	4	0	0	0	0	0	3	4	7	0	0	0	0	36	7	43	0	0	0	0	0	0	3	3	3	57								
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	5	0	0	0	0	0	7	4	11	0	0	0	0	67	14	81	0	0	0	0	0	3	7	10	10	107								
Approach %	0	0	0	0	0	0	0	0	0	0	0	0	0	20	80		0	0	0	0	0	63.6	36.4		0	0	0	0	82.7	17.3	0	0	0	0	0	30	70												
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0.93	3.74	4.67	0	0	0	0	0	6.54	3.74	10.3	0	0	0	0	62.6	13.1	75.7	0	0	0	0	2.8	6.54	9.35											
Exiting Leg Total	0									5					11					81					10	107																							

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

	Grafton Street (Route 122)									Auto Parts Driveway									Brandt Lane									Grafton Street (Route 122)									Roosevelt School Driveway									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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	31	7	38	0	0	0	0	0	1	3	4	4	45				
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	0	0	33	7	40	0	0	0	0	0	0	1	1	1	44				
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	3	0	3	0	0	0	0	0	0	0	2	2	5				
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4					
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	6	2	8	0	0	0	0	67	14	81	0	0	0	0	0	1	6	7	7	98					
% 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	50.0	50.0		0.0	0.0	0.0	0.0	0.0	75.0	25.0		0.0	0.0	0.0	0.0	82.7	17.3	0.0	0.0	0.0	0.0	0.0	14.3	85.7									
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	0.250	0.250	0.000	0.000	0.000	0.000	0.000	0.500	0.500	0.667	0.000	0.000	0.000	0.000	0.508	0.500	0.506	0.000	0.000	0.000	0.000	0.000	0.250	0.500	0.438	0.544						
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	6	2	8	0	0	0	0	67	14	81	0	0	0	0	0	1	6	7	7	98					
Exiting Leg	0									2					8					81					7	98																				
Total	0									4					16					162					14	196																				

PDI File #: 239385 A

Location: N: Grafton Street (Route 122) S: Grafton Street (Route 122) NE: Auto Parts Driveway

Location: E: Brandt Lane W: Roosevelt School Driveway

City, State: Worcester, MA

Client: Kimley-Horn/ P. Graham

Site Code: TBA

Count Date: Wednesday, June 7, 2023

Start Time: 2:00 PM

End Time: 6:00 PM

Class:



PRECISION
DATA
INDUSTRIES, LLC

157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	Grafton Street (Route 122)						Auto Parts Driveway						Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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	
2:00 PM	0	117	2	0	0	119	4	0	3	0	0	7	0	0	0	0	0	0	1	4	110	0	0	115	0	0	0	1	0	1	242
2:15 PM	0	184	1	1	0	186	5	0	2	0	0	7	0	4	0	2	0	6	0	2	118	0	0	120	1	0	0	0	0	1	320
2:30 PM	1	160	1	0	0	162	7	0	3	0	0	10	0	4	0	0	0	4	2	3	141	0	0	146	2	0	0	1	0	3	325
2:45 PM	0	144	1	0	0	145	1	0	3	0	0	4	0	0	0	0	0	0	2	1	147	0	0	150	0	0	0	0	0	0	299
Total	1	605	5	1	0	612	17	0	11	0	0	28	0	8	0	2	0	10	5	10	516	0	0	531	3	0	0	2	0	5	1186
3:00 PM	0	126	0	0	0	126	2	0	1	0	0	3	0	0	0	0	0	0	1	1	170	0	0	172	0	0	0	1	0	1	302
3:15 PM	0	159	0	0	0	159	1	0	1	0	0	2	0	0	0	0	0	0	2	0	174	1	0	177	1	0	0	0	0	1	339
3:30 PM	0	113	0	1	0	114	3	0	2	0	0	5	0	0	0	0	0	0	2	0	154	0	1	157	0	0	0	0	0	0	276
3:45 PM	1	151	0	3	0	155	2	0	2	0	0	4	0	0	0	0	0	0	1	1	172	0	0	174	0	0	0	0	0	0	333
Total	1	549	0	4	0	554	8	0	6	0	0	14	0	0	0	0	0	0	6	2	670	1	1	680	1	0	0	1	0	2	1250
4:00 PM	0	148	1	2	0	151	7	0	3	0	0	10	0	1	0	0	0	1	2	2	169	0	0	173	0	0	0	0	0	0	335
4:15 PM	0	151	0	1	0	152	1	0	5	0	0	6	0	1	0	1	0	2	0	5	188	0	0	193	0	0	0	0	0	0	353
4:30 PM	0	118	0	2	0	120	2	0	1	0	0	3	0	0	0	1	0	1	1	2	176	0	0	179	0	0	0	0	0	0	303
4:45 PM	1	135	0	3	0	139	2	0	4	0	0	6	0	0	0	0	0	0	2	3	182	0	0	187	1	0	0	0	0	1	333
Total	1	552	1	8	0	562	12	0	13	0	0	25	0	2	0	2	0	4	5	12	715	0	0	732	1	0	0	0	0	1	1324
5:00 PM	0	158	0	1	0	159	4	0	3	0	0	7	0	0	0	1	0	1	2	2	189	0	0	193	0	0	1	0	0	1	361
5:15 PM	0	158	0	0	0	158	2	0	1	0	0	3	0	0	0	0	0	0	3	2	193	0	0	198	2	0	0	2	0	4	363
5:30 PM	0	150	0	0	0	150	1	0	0	0	0	1	0	0	0	1	0	1	1	3	179	1	0	184	1	0	0	0	0	1	337
5:45 PM	0	129	0	1	0	130	2	0	5	0	0	7	0	0	0	2	0	2	0	1	186	0	0	187	0	0	0	1	0	1	327
Total	0	595	0	2	0	597	9	0	9	0	0	18	0	0	0	4	0	4	6	8	747	1	0	762	3	0	1	3	0	7	1388
Grand Total	3	2301	6	15	0	2325	46	0	39	0	0	85	0	10	0	8	0	18	22	32	2648	2	1	2705	8	0	1	6	0	15	5148
Approach %	0.1	99.0	0.3	0.6	0.0		54.1	0.0	45.9	0.0	0.0		0.0	55.6	0.0	44.4	0.0		0.8	1.2	97.9	0.1	0.0		53.3	0.0	6.7	40.0	0.0		
Total %	0.1	44.7	0.1	0.3	0.0	45.2	0.9	0.0	0.8	0.0	0.0	1.7	0.0	0.2	0.0	0.2	0.0	0.3	0.4	0.6	51.4	0.0	0.0	52.5	0.2	0.0	0.0	0.1	0.0	0.3	
Exiting Leg Total						2710						48						28						2357						5	5148
Cars	3	2240	5	15	0	2263	42	0	37	0	0	79	0	8	0	8	0	16	19	32	2588	2	1	2642	8	0	1	6	0	15	5015
% Cars	100.0	97.3	83.3	100.0	0.0	97.3	91.3	0.0	94.9	0.0	0.0	92.9	0.0	80.0	0.0	100.0	0.0	88.9	86.4	100.0	97.7	100.0	100.0	97.7	100.0	0.0	100.0	100.0	0.0	100.0	97.4
Exiting Leg Total						2644						48						24						2294						5	5015
Heavy Vehicles	0	61	1	0	0	62	4	0	2	0	0	6	0	2	0	0	0	2	3	0	60	0	0	63	0	0	0	0	0	0	133
% Heavy Vehicles	0.0	2.7	16.7	0.0	0.0	2.7	8.7	0.0	5.1	0.0	0.0	7.1	0.0	20.0	0.0	0.0	0.0	11.1	13.6	0.0	2.3	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0	2.6
Exiting Leg Total						66						0						4						63						0	133

Peak Hour Analysis from 02:00 PM to 06:00 PM begins at:

	Grafton Street (Route 122)						Auto Parts Driveway						Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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	
4:45 PM	1	135	0	3	0	139	2	0	4	0	0	6	0	0	0	0	0	0	2	3	182	0	0	187	1	0	0	0	0	1	333
5:00 PM	0	158	0	1	0	159	4	0	3	0	0	7	0	0	0	1	0	1	2	2	189	0	0	193	0	0	0	1	0	1	361
5:15 PM	0	158	0	0	0	158	2	0	1	0	0	3	0	0	0	0	0	0	3	2	193	0	0	198	2	0	0	2	0	4	363
5:30 PM	0	150	0	0	0	150	1	0	0	0	0	1	0	0	0	1	0	1	1	3	179	1	0	184	1	0	0	0	0	1	337
Total Volume	1	601	0	4	0	606	9	0	8	0	0	17	0	0	0	2	0	2	8	10	743	1	0	762	4	0	1	2	0	7	1394
% Approach Total	0.2	99.2	0.0	0.7	0.0		52.9	0.0	47.1	0.0	0.0		0.0	0.0	0.0	100.0	0.0		1.0	1.3	97.5	0.1	0.0		57.1	0.0	14.3	28.6	0.0		
PHF	0.250	0.951	0.000	0.333	0.000	0.953	0.563	0.000	0.500	0.000	0.000	0.607	0.000	0.000	0.000	0.500	0.000	0.500	0.667	0.833	0.962	0.250	0.000	0.962	0.500	0.000	0.250	0.250	0.000	0.438	0.960
Cars	1	594	0	4	0	599	9	0	7	0	0	16	0	0	0	2	0	2	6	10	735	1	0	752	4	0	1	2	0	7	1376
Cars %	100.0	98.8	0.0	100.0	0.0	98.8	100.0	0.0	87.5	0.0	0.0	94.1	0.0	0.0	0.0	100.0	0.0	100.0	75.0	100.0	98.9	100.0	0.0	98.7	100.0	0.0	100.0	100.0	0.0	100.0	98.7
Heavy Vehicles	0	7	0	0	0	7	0	0	1	0	0	1	0	0	0	0	0	0	2	0	8	0	0	10	0	0	0	0	0	0	18

PDI File #: **239385 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122) NE: Auto Parts Driveway**
 Location: **E: Brandt Lane W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **2:00 PM**
 End Time: **6:00 PM**



PRECISION
D A T A
INDUSTRIES, LLC

157 Washington Street, Suite 2
 Hudson, MA 01749
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	Grafton Street (Route 122)						Auto Parts Driveway						Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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	
Heavy Vehicles %	0.0	1.2	0.0	0.0	0.0	1.2	0.0	0.0	12.5	0.0	0.0	5.9	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	1.1	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	1.3
Cars Enter Leg	1	594	0	4	0	599	9	0	7	0	0	16	0	0	0	2	0	2	6	10	735	1	0	752	4	0	1	2	0	7	1376
Heavy Enter Leg	0	7	0	0	0	7	0	0	1	0	0	1	0	0	0	0	0	0	2	0	8	0	0	10	0	0	0	0	0	0	18
Total Entering Leg	1	601	0	4	0	606	9	0	8	0	0	17	0	0	0	2	0	2	8	10	743	1	0	762	4	0	1	2	0	7	1394
Cars Exiting Leg	746						15						6						607						2						
Heavy Exiting Leg	8						0						2						8						0						
Total Exiting Leg	754						15						8						615						2						

PDI File #: **239385 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122) NE: Auto Parts Driveway**
 Location: **E: Brandt Lane W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **2:00 PM**
 End Time: **6:00 PM**
 Class:



Cars

	Grafton Street (Route 122)						Auto Parts Driveway						Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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	
2:00 PM	0	109	2	0	0	111	4	0	3	0	0	7	0	0	0	0	0	0	1	4	109	0	0	114	0	0	0	1	0	1	233
2:15 PM	0	176	0	1	0	177	5	0	2	0	0	7	0	4	0	2	0	6	0	2	115	0	0	117	1	0	0	0	0	1	308
2:30 PM	1	154	1	0	0	156	6	0	3	0	0	9	0	3	0	0	0	3	2	3	135	0	0	140	2	0	0	1	0	3	311
2:45 PM	0	136	1	0	0	137	1	0	3	0	0	4	0	0	0	0	0	0	2	1	140	0	0	143	0	0	0	0	0	0	284
Total	1	575	4	1	0	581	16	0	11	0	0	27	0	7	0	2	0	9	5	10	499	0	0	514	3	0	0	2	0	5	1136
3:00 PM	0	122	0	0	0	122	2	0	1	0	0	3	0	0	0	0	0	0	1	1	162	0	0	164	0	0	0	1	0	1	290
3:15 PM	0	153	0	0	0	153	0	0	1	0	0	1	0	0	0	0	0	0	2	0	169	1	0	172	1	0	0	0	0	1	327
3:30 PM	0	112	0	1	0	113	3	0	2	0	0	5	0	0	0	0	0	0	2	0	154	0	1	157	0	0	0	0	0	0	275
3:45 PM	1	148	0	3	0	152	2	0	2	0	0	4	0	0	0	0	0	0	1	1	168	0	0	170	0	0	0	0	0	0	326
Total	1	535	0	4	0	540	7	0	6	0	0	13	0	0	0	0	0	0	6	2	653	1	1	663	1	0	0	1	0	2	1218
4:00 PM	0	146	1	2	0	149	6	0	3	0	0	9	0	1	0	0	0	1	1	2	165	0	0	168	0	0	0	0	0	0	327
4:15 PM	0	146	0	1	0	147	0	0	5	0	0	5	0	0	0	1	0	1	0	5	183	0	0	188	0	0	0	0	0	0	341
4:30 PM	0	117	0	2	0	119	2	0	1	0	0	3	0	0	0	1	0	1	1	2	173	0	0	176	0	0	0	0	0	0	299
4:45 PM	1	134	0	3	0	138	2	0	4	0	0	6	0	0	0	0	0	0	2	3	178	0	0	183	1	0	0	0	0	1	328
Total	1	543	1	8	0	553	10	0	13	0	0	23	0	1	0	2	0	3	4	12	699	0	0	715	1	0	0	0	0	1	1295
5:00 PM	0	155	0	1	0	156	4	0	2	0	0	6	0	0	0	1	0	1	1	2	188	0	0	191	0	0	1	0	0	1	355
5:15 PM	0	158	0	0	0	158	2	0	1	0	0	3	0	0	0	0	0	0	2	2	191	0	0	195	2	0	0	2	0	4	360
5:30 PM	0	147	0	0	0	147	1	0	0	0	0	1	0	0	0	1	0	1	1	3	178	1	0	183	1	0	0	0	0	1	333
5:45 PM	0	127	0	1	0	128	2	0	4	0	0	6	0	0	0	2	0	2	0	1	180	0	0	181	0	0	0	1	0	1	318
Total	0	587	0	2	0	589	9	0	7	0	0	16	0	0	0	4	0	4	4	8	737	1	0	750	3	0	1	3	0	7	1366
Grand Total	3	2240	5	15	0	2263	42	0	37	0	0	79	0	8	0	8	0	16	19	32	2588	2	1	2642	8	0	1	6	0	15	5015
Approach %	0.1	99.0	0.2	0.7	0.0		53.2	0.0	46.8	0.0	0.0		0.0	50.0	0.0	50.0	0.0		0.7	1.2	98.0	0.1	0.0		53.3	0.0	6.7	40.0	0.0		
Total %	0.1	44.7	0.1	0.3	0.0	45.1	0.8	0.0	0.7	0.0	0.0	1.6	0.0	0.2	0.0	0.2	0.0	0.3	0.4	0.6	51.6	0.0	0.0	52.7	0.2	0.0	0.0	0.1	0.0	0.3	
Exiting Leg Total						2644						48						24						2294						5	5015

Peak Hour Analysis from 02:00 PM to 06:00 PM begins at:

4:45 PM	Grafton Street (Route 122)						Auto Parts Driveway						Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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	
4:45 PM	1	134	0	3	0	138	2	0	4	0	0	6	0	0	0	0	0	0	2	3	178	0	0	183	1	0	0	0	0	1	328
5:00 PM	0	155	0	1	0	156	4	0	2	0	0	6	0	0	0	1	0	1	1	2	188	0	0	191	0	0	1	0	0	1	355
5:15 PM	0	158	0	0	0	158	2	0	1	0	0	3	0	0	0	0	0	0	2	2	191	0	0	195	2	0	0	2	0	4	360
5:30 PM	0	147	0	0	0	147	1	0	0	0	0	1	0	0	0	1	0	1	1	3	178	1	0	183	1	0	0	0	0	1	333
Total Volume	1	594	0	4	0	599	9	0	7	0	0	16	0	0	0	2	0	2	6	10	735	1	0	752	4	0	1	2	0	7	1376
% Approach Total	0.2	99.2	0.0	0.7	0.0		56.3	0.0	43.8	0.0	0.0		0.0	0.0	0.0	100.0	0.0		0.8	1.3	97.7	0.1	0.0		57.1	0.0	14.3	28.6	0.0		
PHF	0.250	0.940	0.000	0.333	0.000	0.948	0.563	0.000	0.438	0.000	0.000	0.667	0.000	0.000	0.000	0.500	0.000	0.500	0.750	0.833	0.962	0.250	0.000	0.964	0.500	0.000	0.250	0.250	0.000	0.438	0.956
Entering Leg	1	594	0	4	0	599	9	0	7	0	0	16	0	0	0	2	0	2	6	10	735	1	0	752	4	0	1	2	0	7	1376
Exiting Leg						746						15						6						607						2	1376
Total						1345						31						8						1359						9	2752

PDI File #: **239385 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122) NE: Auto Parts Driveway**
 Location: **E: Brandt Lane W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **2:00 PM**
 End Time: **6:00 PM**
 Class:



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

	Grafton Street (Route 122)						Auto Parts Driveway						Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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	
2:00 PM	0	8	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	9		
2:15 PM	0	8	1	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	12		
2:30 PM	0	6	0	0	0	6	1	0	0	0	0	1	0	1	0	0	0	1	0	6	0	0	6	0	0	0	0	0	14		
2:45 PM	0	8	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	15			
Total	0	30	1	0	0	31	1	0	0	0	0	1	0	1	0	0	0	1	0	17	0	0	17	0	0	0	0	0	50		
3:00 PM	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	12			
3:15 PM	0	6	0	0	0	6	1	0	0	0	0	1	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	12			
3:30 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1			
3:45 PM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	7			
Total	0	14	0	0	0	14	1	0	0	0	0	1	0	0	0	0	0	0	17	0	0	17	0	0	0	0	0	32			
4:00 PM	0	2	0	0	0	2	1	0	0	0	0	1	0	0	0	0	0	1	0	4	0	0	5	0	0	0	0	0	8		
4:15 PM	0	5	0	0	0	5	1	0	0	0	0	1	0	1	0	0	0	1	0	5	0	0	5	0	0	0	0	0	12		
4:30 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	4			
4:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	5			
Total	0	9	0	0	0	9	2	0	0	0	0	2	0	1	0	0	0	1	1	16	0	0	17	0	0	0	0	29			
5:00 PM	0	3	0	0	0	3	0	0	1	0	0	1	0	0	0	0	0	1	0	1	0	0	2	0	0	0	0	0	6		
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0	3	0	0	0	0	3			
5:30 PM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	4			
5:45 PM	0	2	0	0	0	2	0	0	1	0	0	1	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	9			
Total	0	8	0	0	0	8	0	0	2	0	0	2	0	0	0	0	0	2	10	0	0	12	0	0	0	0	0	22			
Grand Total	0	61	1	0	0	62	4	0	2	0	0	6	0	2	0	0	0	2	3	0	60	0	0	63	0	0	0	0	133		
Approach %	0.0	98.4	1.6	0.0	0.0		66.7	0.0	33.3	0.0	0.0		0.0	100.0	0.0	0.0	0.0		4.8	0.0	95.2	0.0	0.0		0.0	0.0	0.0	0.0			
Total %	0.0	45.9	0.8	0.0	0.0	46.6	3.0	0.0	1.5	0.0	0.0	4.5	0.0	1.5	0.0	0.0	0.0	1.5	2.3	0.0	45.1	0.0	0.0	47.4	0.0	0.0	0.0	0.0			
Exiting Leg Total						66						0						4					63					133			
Buses	0	28	0	0	0	28	0	0	0	0	0	0	0	0	0	0	0	0	25	0	0	25	0	0	0	0	0	53			
% Buses	0.0	45.9	0.0	0.0	0.0	45.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	41.7	0.0	0.0	39.7	0.0	0.0	0.0	0.0	39.8			
Exiting Leg Total						25						0						0					28					53			
Single-Unit Trucks	0	26	1	0	0	27	3	0	1	0	0	4	0	1	0	0	0	1	2	0	31	0	0	33	0	0	0	0	65		
% Single-Unit	0.0	42.6	100.0	0.0	0.0	43.5	75.0	0.0	50.0	0.0	0.0	66.7	0.0	50.0	0.0	0.0	0.0	50.0	66.7	0.0	51.7	0.0	0.0	52.4	0.0	0.0	0.0	0.0	48.9		
Exiting Leg Total						35						0						3					27					65			
Articulated Trucks	0	7	0	0	0	7	1	0	1	0	0	2	0	1	0	0	0	1	1	0	4	0	0	5	0	0	0	0	15		
% Articulated	0.0	11.5	0.0	0.0	0.0	11.3	25.0	0.0	50.0	0.0	0.0	33.3	0.0	50.0	0.0	0.0	0.0	50.0	33.3	0.0	6.7	0.0	0.0	7.9	0.0	0.0	0.0	0.0	11.3		
Exiting Leg Total						6						0						1					8					15			

Peak Hour Analysis from 02:00 PM to 06:00 PM begins at:

2:15 PM	Grafton Street (Route 122)						Auto Parts Driveway						Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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	
2:15 PM	0	8	1	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	12			
2:30 PM	0	6	0	0	0	6	1	0	0	0	0	1	0	1	0	0	0	1	0	6	0	0	6	0	0	0	0	14			
2:45 PM	0	8	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	15			
3:00 PM	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	12			
Total Volume	0	26	1	0	0	27	1	0	0	0	0	1	0	1	0	0	0	1	0	24	0	0	24	0	0	0	0	53			
% Approach Total	0.0	96.3	3.7	0.0	0.0		100.0	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		0.0	0.0	0.0	0.0			
PHF	0.000	0.813	0.250	0.000	0.000	0.750	0.250	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.750	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.883			

PDI File #: **239385 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122) NE: Auto Parts Driveway**
 Location: **E: Brandt Lane W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **2:00 PM**
 End Time: **6:00 PM**



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

	Grafton Street (Route 122)						Auto Parts Driveway						Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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	
Buses	0	12	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0	0	13	0	0	0	0	0	0	25
Buses %	0.0	46.2	0.0	0.0	0.0	44.4	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	54.2	0.0	0.0	54.2	0.0	0.0	0.0	0.0	0.0	0.0	47.2
Single-Unit Trucks	0	10	1	0	0	11	1	0	0	0	0	1	0	1	0	0	0	1	0	0	10	0	0	10	0	0	0	0	0	0	23
Single-Unit %	0.0	38.5	100.0	0.0	0.0	40.7	100.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	0.0	0.0	100.0	0.0	0.0	41.7	0.0	0.0	41.7	0.0	0.0	0.0	0.0	0.0	0.0	43.4
Articulated Trucks	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	5
Articulated %	0.0	15.4	0.0	0.0	0.0	14.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.0	0.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	9.4
Buses	0	12	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0	0	13	0	0	0	0	0	0	25
Single-Unit Trucks	0	10	1	0	0	11	1	0	0	0	0	1	0	1	0	0	0	1	0	0	10	0	0	10	0	0	0	0	0	0	23
Articulated Trucks	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	5
Total Entering Leg	0	26	1	0	0	27	1	0	0	0	0	1	0	1	0	0	0	1	0	0	24	0	0	24	0	0	0	0	0	0	53
Buses						13						0						0						12						0	25
Single-Unit Trucks						12						0						1						10						0	23
Articulated Trucks						1						0						0						4						0	5
Total Exiting Leg						26						0						1						26						0	53

PDI File #: **239385 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122) NE: Auto Parts Driveway**
 Location: **E: Brandt Lane W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **2:00 PM**
 End Time: **6:00 PM**
 Class:



Buses

	Grafton Street (Route 122)						Auto Parts Driveway						Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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	
2:00 PM	0	4	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	4		
2:15 PM	0	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	6		
2:30 PM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	8		
2:45 PM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	8		
Total	0	15	0	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	26			
3:00 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3		
3:15 PM	0	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	8		
3:30 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			
3:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	4		
Total	0	7	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	15			
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1		
4:15 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2		
4:30 PM	0	1	0	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	1		
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2		
Total	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	6			
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		
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	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3		
5:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3		
Total	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	6			
Grand Total	0	28	0	0	0	28	0	0	0	0	0	0	0	0	0	0	0	0	25	0	0	25	0	0	0	0	0	53			
Approach %	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	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	52.8	0.0	0.0	0.0	52.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	47.2	0.0	0.0	47.2	0.0	0.0	0.0	0.0	0.0			
Exiting Leg Total						25						0						0					28					0	53		

Peak Hour Analysis from 02:00 PM to 06:00 PM begins at:

	Grafton Street (Route 122)						Auto Parts Driveway						Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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	
2:30 PM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	8		
2:45 PM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	8		
3:00 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3		
3:15 PM	0	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	8		
Total Volume	0	12	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	27			
% Approach Total	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	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.600	0.000	0.000	0.000	0.600	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	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.844			
Entering Leg	0	12	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	27		
Exiting Leg						15						0						0					12					0	27		
Total						27						0						0					27					0	54		

PDI File #: **239385 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122) NE: Auto Parts Driveway**
 Location: **E: Brandt Lane W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **2:00 PM**
 End Time: **6:00 PM**
 Class:



Single-Unit Trucks

	Grafton Street (Route 122)							Auto Parts Driveway					Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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	
2:00 PM	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	5
2:15 PM	0	3	1	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	6
2:30 PM	0	2	0	0	0	2	1	0	0	0	0	1	0	1	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	5	
2:45 PM	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	6	
Total	0	13	1	0	0	14	1	0	0	0	0	1	0	1	0	0	0	1	0	0	6	0	0	6	0	0	0	0	0	22	
3:00 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	6	
3:15 PM	0	1	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4	
3:30 PM	0	1	0	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	1	
3:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	
Total	0	4	0	0	0	4	1	0	0	0	0	1	0	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	13		
4:00 PM	0	2	0	0	0	2	1	0	0	0	0	1	0	0	0	0	0	0	1	0	3	0	0	4	0	0	0	0	0	7	
4:15 PM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	7	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	3	
4:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	
Total	0	6	0	0	0	6	1	0	0	0	0	1	0	0	0	0	0	0	1	0	11	0	0	12	0	0	0	0	0	19	
5:00 PM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	4	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0	3	0	0	0	0	0	3	
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	0	
5:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	4	
Total	0	3	0	0	0	3	0	0	1	0	0	1	0	0	0	0	0	0	1	0	6	0	0	7	0	0	0	0	0	11	
Grand Total	0	26	1	0	0	27	3	0	1	0	0	4	0	1	0	0	0	1	2	0	31	0	0	33	0	0	0	0	0	65	
Approach %	0.0	96.3	3.7	0.0	0.0		75.0	0.0	25.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0		6.1	0.0	93.9	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	40.0	1.5	0.0	0.0	41.5	4.6	0.0	1.5	0.0	0.0	6.2	0.0	1.5	0.0	0.0	0.0	1.5	3.1	0.0	47.7	0.0	0.0	50.8	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total						35						0						3						27						65	

Peak Hour Analysis from 02:00 PM to 06:00 PM begins at:

2:15 PM	Grafton Street (Route 122)							Auto Parts Driveway					Brandt Lane						Grafton Street (Route 122)						Roosevelt School Driveway						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	
2:15 PM	0	3	1	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	6	
2:30 PM	0	2	0	0	0	2	1	0	0	0	0	1	0	1	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	5	
2:45 PM	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	6	
3:00 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	6	
Total Volume	0	10	1	0	0	11	1	0	0	0	0	1	0	1	0	0	0	1	0	0	10	0	0	10	0	0	0	0	0	23	
% Approach Total	0.0	90.9	9.1	0.0	0.0		100.0	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		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.625	0.250	0.000	0.000	0.688	0.250	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.958		
Entering Leg	0	10	1	0	0	11	1	0	0	0	0	1	0	1	0	0	0	1	0	0	10	0	0	10	0	0	0	0	0	23	
Exiting Leg						12						0						1						10					23		
Total						23					1						2							20					0	46	

PDI File #: 239385 A

Location: N: Grafton Street (Route 122) S: Grafton Street (Route 122) NE: Auto Parts Driveway

Location: E: Brandt Lane W: Roosevelt School Driveway

City, State: Worcester, MA

Client: Kimley-Horn/ P. Graham

Site Code: TBA

Count Date: Wednesday, June 7, 2023

Start Time: 2:00 PM

End Time: 6:00 PM

Class:



157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Articulated Trucks

Table with columns for street names (Grafton Street, Auto Parts Driveway, Brandt Lane, Roosevelt School Driveway) and movement directions (from North, Northeast, East, South, West). Rows list times from 2:00 PM to 5:45 PM, Grand Total, Approach %, Total %, and Exiting Leg Total.

Peak Hour Analysis from 02:00 PM to 06:00 PM begins at:

Table for Peak Hour Analysis at 4:15 PM. Columns and structure are identical to the main table, showing traffic counts and percentages for the peak hour.

PDI File #: 239385 A
 Location: N: Grafton Street (Route 122) S: Grafton Street (Route 122) NE: Auto Parts Driveway
 Location: E: Brandt Lane W: Roosevelt School Driveway
 City, State: Worcester, MA
 Client: Kimley-Horn/ P. Graham
 Site Code: TBA
 Count Date: Wednesday, June 7, 2023
 Start Time: 2:00 PM
 End Time: 6:00 PM
 Class:



Pedestrians

	Grafton Street (Route 122)									Auto Parts Driveway									Brandt Lane									Grafton Street (Route 122)									Roosevelt School Driveway									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-SE	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-SE	Total				
2:00 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	2	4	6	0	0	0	0	0	0	0	2	2	4	12									
2:15 PM	0	0	0	0	0	2	2	4		0	0	0	0	0	2	0	2		0	0	0	0	0	4	7	11		0	0	0	0	0	15	85	100		0	0	0	0	0	4	4	8	125			
2:30 PM	0	0	0	0	0	0	0	0		0	0	0	0	0	1	0	1		0	0	0	0	0	2	4	6		0	0	0	0	0	0	0	0	0	0	0	0	3	1	4	11					
2:45 PM	0	0	0	0	0	0	0	0		0	0	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	1			
Total	0	0	0	0	0	2	2	4		0	0	0	0	0	3	0	3		0	0	0	0	0	7	13	20		0	0	0	0	0	17	89	106		0	0	0	0	0	9	7	16	149			
3:00 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	0	0	0	0	0	0	0	0	0	0	0	0		
3:15 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	1	1	1	1	1	1	1		
3:30 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	0	0	0	0	0	0	0	0	0	0	0	0	0	
3:45 PM	0	0	0	0	0	0	0	0		0	0	0	0	0	3	4	7		0	0	0	0	0	3	3	6		0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1
Total	0	0	0	0	0	0	0	0		0	0	0	0	0	3	4	7		0	0	0	0	0	3	3	6		0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	2	2	15	
4:00 PM	0	0	0	0	0	0	0	0		0	0	0	0	0	0	1	1		0	0	0	0	0	2	0	2		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
4:15 PM	0	0	0	0	0	0	0	0		0	0	0	0	0	2	0	2		0	0	0	0	0	0	3	3		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
4:30 PM	0	0	0	0	0	0	0	0		0	0	0	0	0	2	0	2		0	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	3
4:45 PM	0	0	0	0	0	0	0	0		0	0	0	0	0	1	0	1		0	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	2
Total	0	0	0	0	0	0	0	0		0	0	0	0	0	5	1	6		0	0	0	0	0	2	5	7		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
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	1	1		0	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	2	1	3	3	3	3	3		
5:30 PM	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0		0	0	0	0	0	3	0	3		0	0	0	0	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	0	0	0	0	0		0	0	0	0	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	3	1	4		0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	3	3	3	7	
Grand Total	0	0	0	0	0	2	2	4		0	0	0	0	0	11	5	16		0	0	0	0	0	15	22	37		0	0	0	0	0	17	89	106		0	0	0	0	0	11	10	21	21	184		
Approach %	0	0	0	0	0	50	50		0	0	0	0	0	68.8	31.3		0	0	0	0	0	40.5	59.5		0	0	0	0	0	16	84		0	0	0	0	0	52.4	47.6		0	0	0	0	0	0		
Total %	0	0	0	0	0	1.09	1.09	2.17		0	0	0	0	0	5.98	2.72	8.7		0	0	0	0	0	8.15	12	20.1		0	0	0	0	0	9.24	48.4	57.6		0	0	0	0	0	5.98	5.43	11.4		0		
Exiting Leg Total	4									16									37									106									21									184		

Peak Hour Analysis from 02:00 PM to 06:00 PM begins at:

	Grafton Street (Route 122)									Auto Parts Driveway									Brandt Lane									Grafton Street (Route 122)									Roosevelt School Driveway									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-SE	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-SE	Total		
2:00 PM	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0		0	0	0	0	0	0	2	2		0	0	0	0	0	2	4	6		0	0	0	0	0	2	2	4	12	
2:15 PM	0	0	0	0	0	2	2	4		0	0	0	0	0	2	0	2		0	0	0	0	0	4	7	11		0	0	0	0	0	15	85	100		0	0	0	0	0	4	4	8	125	
2:30 PM	0	0	0	0	0	0	0	0		0	0	0	0	0	1	0	1		0	0	0	0	0	2	4	6		0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	4	11		
2:45 PM	0	0	0	0	0	0	0	0		0	0	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	0	0	1
Total Volume	0	0	0	0	0	2	2	4		0	0	0	0	0	3	0	3		0	0	0	0	0	7	13	20		0	0	0	0	0	17	89	106		0	0	0	0	0	9	7	16	149	
% 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	100.0	0.0		0.0	0.0	0.0	0.0	0.0	35.0	65.0		0.0	0.0	0.0	0.0	0.0	16.0	84.0		0.0	0.0	0.0	0.0	0.0	56.3	43.8		0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.250		0.000	0.000	0.000	0.000	0.000	0.375	0.000	0.375		0.000	0.000	0.000	0.000	0.000	0.438	0.464	0.455		0.000	0.000	0.000	0.000	0.000	0.283	0.262	0.265		0.000	0.000	0.000	0.000	0.000	0.563	0.438	0.500	0.298	
Entering Leg	0	0	0	0	0	2	2	4		0	0	0	0	0	3	0	3		0	0	0	0	0	7	13	20		0	0	0	0	0	17	89	106		0	0	0	0	0	9	7	16	149	
Exiting Leg	4									3									20									106									16									149
Total	8									6									40									212									32									298

PDI File #: **239385 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Pine Hill Road W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars and Heavy Vehicles (Combined)

	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	1	105	1	0	107	2	0	5	0	7	3	90	3	0	96	0	0	0	0	0	210
7:15 AM	8	94	6	0	108	2	0	4	0	6	3	88	11	0	102	0	0	0	0	0	216
7:30 AM	18	123	3	0	144	2	0	4	0	6	2	111	12	0	125	0	0	0	0	0	275
7:45 AM	32	120	6	0	158	7	1	4	0	12	12	103	19	0	134	0	0	0	0	0	304
Total	59	442	16	0	517	13	1	17	0	31	20	392	45	0	457	0	0	0	0	0	1005
8:00 AM	39	112	7	0	158	14	2	5	0	21	5	118	22	0	145	0	0	0	0	0	324
8:15 AM	27	132	2	0	161	11	2	4	0	17	5	94	9	0	108	0	0	0	0	0	286
8:30 AM	5	128	3	1	137	6	0	4	0	10	0	102	6	0	108	0	0	0	0	0	255
8:45 AM	5	133	2	0	140	3	0	3	0	6	0	120	4	0	124	0	1	0	0	1	271
Total	76	505	14	1	596	34	4	16	0	54	10	434	41	0	485	0	1	0	0	1	1136
Grand Total	135	947	30	1	1113	47	5	33	0	85	30	826	86	0	942	0	1	0	0	1	2141
Approach %	12.1	85.1	2.7	0.1		55.3	5.9	38.8	0.0		3.2	87.7	9.1	0.0		0.0	100.0	0.0	0.0		
Total %	6.3	44.2	1.4	0.0	52.0	2.2	0.2	1.5	0.0	4.0	1.4	38.6	4.0	0.0	44.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	874					61					980					226					2141
Cars	123	911	28	1	1063	46	4	33	0	83	29	784	84	0	897	0	1	0	0	1	2044
% Cars	91.1	96.2	93.3	100.0	95.5	97.9	80.0	100.0	0.0	97.6	96.7	94.9	97.7	0.0	95.2	0.0	100.0	0.0	0.0	100.0	95.5
Exiting Leg Total	831					58					944					211					2044
Heavy Vehicles	12	36	2	0	50	1	1	0	0	2	1	42	2	0	45	0	0	0	0	0	97
% Heavy Vehicles	8.9	3.8	6.7	0.0	4.5	2.1	20.0	0.0	0.0	2.4	3.3	5.1	2.3	0.0	4.8	0.0	0.0	0.0	0.0	0.0	4.5
Exiting Leg Total	43					3					36					15					97

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

7:30 AM	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	18	123	3	0	144	2	0	4	0	6	2	111	12	0	125	0	0	0	0	0	275
7:45 AM	32	120	6	0	158	7	1	4	0	12	12	103	19	0	134	0	0	0	0	0	304
8:00 AM	39	112	7	0	158	14	2	5	0	21	5	118	22	0	145	0	0	0	0	0	324
8:15 AM	27	132	2	0	161	11	2	4	0	17	5	94	9	0	108	0	0	0	0	0	286
Total Volume	116	487	18	0	621	34	5	17	0	56	24	426	62	0	512	0	0	0	0	0	1189
% Approach Total	18.7	78.4	2.9	0.0		60.7	8.9	30.4	0.0		4.7	83.2	12.1	0.0		0.0	0.0	0.0	0.0		
PHF	0.744	0.922	0.643	0.000	0.964	0.607	0.625	0.850	0.000	0.667	0.500	0.903	0.705	0.000	0.883	0.000	0.000	0.000	0.000	0.000	0.917
Cars	104	465	17	0	586	34	4	17	0	55	23	407	60	0	490	0	0	0	0	0	1131
Cars %	89.7	95.5	94.4	0.0	94.4	100.0	80.0	100.0	0.0	98.2	95.8	95.5	96.8	0.0	95.7	0.0	0.0	0.0	0.0	0.0	95.1
Heavy Vehicles	12	22	1	0	35	0	1	0	0	1	1	19	2	0	22	0	0	0	0	0	58
Heavy Vehicles %	10.3	4.5	5.6	0.0	5.6	0.0	20.0	0.0	0.0	1.8	4.2	4.5	3.2	0.0	4.3	0.0	0.0	0.0	0.0	0.0	4.9
Cars Enter Leg	104	465	17	0	586	34	4	17	0	55	23	407	60	0	490	0	0	0	0	0	1131
Heavy Enter Leg	12	22	1	0	35	0	1	0	0	1	1	19	2	0	22	0	0	0	0	0	58
Total Entering Leg	116	487	18	0	621	34	5	17	0	56	24	426	62	0	512	0	0	0	0	0	1189
Cars Exiting Leg	441					40					482					168					1131
Heavy Exiting Leg	19					2					22					15					58
Total Exiting Leg	460					42					504					183					1189

PDI File #: **239385 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Pine Hill Road W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars

	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	1	102	1	0	104	2	0	5	0	7	3	84	3	0	90	0	0	0	0	0	201
7:15 AM	8	92	6	0	106	2	0	4	0	6	3	81	11	0	95	0	0	0	0	0	207
7:30 AM	15	114	3	0	132	2	0	4	0	6	2	107	12	0	121	0	0	0	0	0	259
7:45 AM	28	117	6	0	151	7	0	4	0	11	11	103	18	0	132	0	0	0	0	0	294
Total	52	425	16	0	493	13	0	17	0	30	19	375	44	0	438	0	0	0	0	0	961
8:00 AM	34	109	6	0	149	14	2	5	0	21	5	106	21	0	132	0	0	0	0	0	302
8:15 AM	27	125	2	0	154	11	2	4	0	17	5	91	9	0	105	0	0	0	0	0	276
8:30 AM	5	124	2	1	132	5	0	4	0	9	0	95	6	0	101	0	0	0	0	0	242
8:45 AM	5	128	2	0	135	3	0	3	0	6	0	117	4	0	121	0	1	0	0	1	263
Total	71	486	12	1	570	33	4	16	0	53	10	409	40	0	459	0	1	0	0	1	1083
Grand Total	123	911	28	1	1063	46	4	33	0	83	29	784	84	0	897	0	1	0	0	1	2044
Approach %	11.6	85.7	2.6	0.1		55.4	4.8	39.8	0.0		3.2	87.4	9.4	0.0		0.0	100.0	0.0	0.0		
Total %	6.0	44.6	1.4	0.0	52.0	2.3	0.2	1.6	0.0	4.1	1.4	38.4	4.1	0.0	43.9	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	831					58					944					211					2044

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

	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	15	114	3	0	132	2	0	4	0	6	2	107	12	0	121	0	0	0	0	0	259
7:45 AM	28	117	6	0	151	7	0	4	0	11	11	103	18	0	132	0	0	0	0	0	294
8:00 AM	34	109	6	0	149	14	2	5	0	21	5	106	21	0	132	0	0	0	0	0	302
8:15 AM	27	125	2	0	154	11	2	4	0	17	5	91	9	0	105	0	0	0	0	0	276
Total Volume	104	465	17	0	586	34	4	17	0	55	23	407	60	0	490	0	0	0	0	0	1131
% Approach Total	17.7	79.4	2.9	0.0		61.8	7.3	30.9	0.0		4.7	83.1	12.2	0.0		0.0	0.0	0.0	0.0		
PHF	0.765	0.930	0.708	0.000	0.951	0.607	0.500	0.850	0.000	0.655	0.523	0.951	0.714	0.000	0.928	0.000	0.000	0.000	0.000	0.000	0.936
Entering Leg	104	465	17	0	586	34	4	17	0	55	23	407	60	0	490	0	0	0	0	0	1131
Exiting Leg	441					40					482					168					1131
Total	1027					95					972					168					2262

PDI File #: **239385 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Pine Hill Road W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**



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

	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	3	0	0	3	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	9
7:15 AM	0	2	0	0	2	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	9
7:30 AM	3	9	0	0	12	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	16
7:45 AM	4	3	0	0	7	0	1	0	0	1	1	0	1	0	2	0	0	0	0	0	10
Total	7	17	0	0	24	0	1	0	0	1	1	17	1	0	19	0	0	0	0	0	44
8:00 AM	5	3	1	0	9	0	0	0	0	0	0	12	1	0	13	0	0	0	0	0	22
8:15 AM	0	7	0	0	7	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	10
8:30 AM	0	4	1	0	5	1	0	0	0	1	0	7	0	0	7	0	0	0	0	0	13
8:45 AM	0	5	0	0	5	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	8
Total	5	19	2	0	26	1	0	0	0	1	0	25	1	0	26	0	0	0	0	0	53
Grand Total	12	36	2	0	50	1	1	0	0	2	1	42	2	0	45	0	0	0	0	0	97
Approach %	24.0	72.0	4.0	0.0		50.0	50.0	0.0	0.0		2.2	93.3	4.4	0.0		0.0	0.0	0.0	0.0		
Total %	12.4	37.1	2.1	0.0	51.5	1.0	1.0	0.0	0.0	2.1	1.0	43.3	2.1	0.0	46.4	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	43					3					36					15					97
Buses	12	8	2	0	22	1	1	0	0	2	1	12	2	0	15	0	0	0	0	0	39
% Buses	100.0	22.2	100.0	0.0	44.0	100.0	100.0	0.0	0.0	100.0	100.0	28.6	100.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	40.2
Exiting Leg Total	13					3					8					15					39
Single-Unit Trucks	0	22	0	0	22	0	0	0	0	0	0	24	0	0	24	0	0	0	0	0	46
% Single-Unit	0.0	61.1	0.0	0.0	44.0	0.0	0.0	0.0	0.0	0.0	0.0	57.1	0.0	0.0	53.3	0.0	0.0	0.0	0.0	0.0	47.4
Exiting Leg Total	24					0					22					0					46
Articulated Trucks	0	6	0	0	6	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	12
% Articulated	0.0	16.7	0.0	0.0	12.0	0.0	0.0	0.0	0.0	0.0	0.0	14.3	0.0	0.0	13.3	0.0	0.0	0.0	0.0	0.0	12.4
Exiting Leg Total	6					0					6					0					12

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

	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	3	9	0	0	12	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	16
7:45 AM	4	3	0	0	7	0	1	0	0	1	1	0	1	0	2	0	0	0	0	0	10
8:00 AM	5	3	1	0	9	0	0	0	0	0	0	12	1	0	13	0	0	0	0	0	22
8:15 AM	0	7	0	0	7	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	10
Total Volume	12	22	1	0	35	0	1	0	0	1	1	19	2	0	22	0	0	0	0	0	58
% Approach Total	34.3	62.9	2.9	0.0		0.0	100.0	0.0	0.0		4.5	86.4	9.1	0.0		0.0	0.0	0.0	0.0		
PHF	0.600	0.611	0.250	0.000	0.729	0.000	0.250	0.000	0.000	0.250	0.250	0.396	0.500	0.000	0.423	0.000	0.000	0.000	0.000	0.000	0.659
Buses	12	6	1	0	19	0	1	0	0	1	1	4	2	0	7	0	0	0	0	0	27
Buses %	100.0	27.3	100.0	0.0	54.3	0.0	100.0	0.0	0.0	100.0	100.0	21.1	100.0	0.0	31.8	0.0	0.0	0.0	0.0	0.0	46.6
Single-Unit Trucks	0	13	0	0	13	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	23
Single-Unit %	0.0	59.1	0.0	0.0	37.1	0.0	0.0	0.0	0.0	0.0	0.0	52.6	0.0	0.0	45.5	0.0	0.0	0.0	0.0	0.0	39.7
Articulated Trucks	0	3	0	0	3	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	8
Articulated %	0.0	13.6	0.0	0.0	8.6	0.0	0.0	0.0	0.0	0.0	0.0	26.3	0.0	0.0	22.7	0.0	0.0	0.0	0.0	0.0	13.8
Buses	12	6	1	0	19	0	1	0	0	1	1	4	2	0	7	0	0	0	0	0	27
Single-Unit Trucks	0	13	0	0	13	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	23
Articulated Trucks	0	3	0	0	3	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	8
Total Entering Leg	12	22	1	0	35	0	1	0	0	1	1	19	2	0	22	0	0	0	0	0	58
Buses	4					2					6					15					27
Single-Unit Trucks	10					0					13					0					23
Articulated Trucks	5					0					3					0					8
Total Exiting Leg	19					2					22					15					58

PDI File #: **239385 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Pine Hill Road W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Buses

	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	2	0	0	2	0	0	0	0	0	2
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	3
7:30 AM	3	2	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
7:45 AM	4	2	0	0	6	0	1	0	0	1	1	0	1	0	2	0	0	0	0	0	9
Total	7	4	0	0	11	0	1	0	0	1	1	5	1	0	7	0	0	0	0	0	19
8:00 AM	5	0	1	0	6	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	10
8:15 AM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
8:30 AM	0	1	1	0	2	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	4
8:45 AM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
Total	5	4	2	0	11	1	0	0	0	1	0	7	1	0	8	0	0	0	0	0	20
Grand Total	12	8	2	0	22	1	1	0	0	2	1	12	2	0	15	0	0	0	0	0	39
Approach %	54.5	36.4	9.1	0.0		50.0	50.0	0.0	0.0		6.7	80.0	13.3	0.0		0.0	0.0	0.0	0.0		
Total %	30.8	20.5	5.1	0.0	56.4	2.6	2.6	0.0	0.0	5.1	2.6	30.8	5.1	0.0	38.5	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	13					3					8					15					39

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

7:15 AM	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	3	0	0	3	0	0	0	0	0	3
7:30 AM	3	2	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
7:45 AM	4	2	0	0	6	0	1	0	0	1	1	0	1	0	2	0	0	0	0	0	9
8:00 AM	5	0	1	0	6	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	10
Total Volume	12	4	1	0	17	0	1	0	0	1	1	6	2	0	9	0	0	0	0	0	27
% Approach Total	70.6	23.5	5.9	0.0		0.0	100.0	0.0	0.0		11.1	66.7	22.2	0.0		0.0	0.0	0.0	0.0		
PHF	0.600	0.500	0.250	0.000	0.708	0.000	0.250	0.000	0.000	0.250	0.250	0.500	0.500	0.000	0.563	0.000	0.000	0.000	0.000	0.000	0.675
Entering Leg	12	4	1	0	17	0	1	0	0	1	1	6	2	0	9	0	0	0	0	0	27
Exiting Leg	6					2					4					15					27
Total	23					3					13					15					54

PDI File #: **239385 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Pine Hill Road W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Single-Unit Trucks

	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	2	0	0	2	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	6
7:15 AM	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	6
7:30 AM	0	5	0	0	5	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	8
7:45 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	10	0	0	10	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	21
8:00 AM	0	3	0	0	3	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	8
8:15 AM	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	6
8:30 AM	0	3	0	0	3	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	9
8:45 AM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	12	0	0	12	0	0	0	0	0	0	13	0	0	13	0	0	0	0	0	25
Grand Total	0	22	0	0	22	0	0	0	0	0	0	24	0	0	24	0	0	0	0	0	46
Approach %	0.0	100.0	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		
Total %	0.0	47.8	0.0	0.0	47.8	0.0	0.0	0.0	0.0	0.0	0.0	52.2	0.0	0.0	52.2	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	24					0					22					0					46

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

8:00 AM	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	3	0	0	3	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	8
8:15 AM	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	6
8:30 AM	0	3	0	0	3	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	9
8:45 AM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total Volume	0	12	0	0	12	0	0	0	0	0	0	13	0	0	13	0	0	0	0	0	25
% Approach Total	0.0	100.0	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		
PHF	0.000	0.750	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.542	0.000	0.000	0.542	0.000	0.000	0.000	0.000	0.000	0.694
Entering Leg	0	12	0	0	12	0	0	0	0	0	0	13	0	0	13	0	0	0	0	0	25
Exiting Leg	13					0					12					0					25
Total	25					0					25					0					50

PDI File #: **239385 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Pine Hill Road W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 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
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Articulated Trucks

	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	1	0	0	1	0	0	0	0	0	0	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
7:30 AM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	3
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
Total	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	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	4	0	0	4	0	0	0	0	0	0	0	0	0	0	4
8:15 AM	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	1
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	0	0
8:45 AM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	3
Total	0	3	0	0	3	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	8
Grand Total	0	6	0	0	6	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	12
Approach %	0.0	100.0	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		
Total %	0.0	50.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	6					0					6					0					12					

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

	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	3
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
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	4
8:15 AM	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	1
Total Volume	0	3	0	0	3	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	8
% Approach Total	0.0	100.0	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		
PHF	0.000	0.375	0.000	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.313	0.000	0.000	0.313	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500
Entering Leg	0	3	0	0	3	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	8
Exiting Leg	5					0					3					0					8					
Total	8					0					8					0					16					

PDI File #: 239385 B
 Location: N: Grafton Street (Route 122) S: Grafton Street (Route 122)
 Location: E: Pine Hill Road W: Roosevelt School Driveway
 City, State: Worcester, MA
 Client: Kimley-Horn/ P. Graham
 Site Code: TBA
 Count Date: Wednesday, June 7, 2023
 Start Time: 7:00 AM
 End Time: 9:00 AM
 Class:



Bicycles (on Roadway and Crosswalks)

	Grafton Street (Route 122)								Pine Hill Road								Grafton Street (Route 122)								Roosevelt School Driveway								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		
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	1	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	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	1	0	0	0	0	0	0	1	0	0	0	0	0	1	
8:00 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		
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	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	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	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		
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	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		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			
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	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Exiting Leg Total	1								0								0								0								1

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

	Grafton Street (Route 122)								Pine Hill Road								Grafton Street (Route 122)								Roosevelt School Driveway								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			
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	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	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	1	0	0	0	0	0	1	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		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	0.000	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	0.000	0.000	0.000	0.250	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	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	1			
Exiting Leg	1								0								0								0								1
Total	1								0								1								0								2

PDI File #: **239385 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Pine Hill Road W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Pedestrians

	Grafton Street (Route 122)								Pine Hill Road								Grafton Street (Route 122)								Roosevelt School Driveway								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	1	0	1	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	0	0	0	0	0	0	0
7:30 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	2	2	3						
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0	6	1	7	7	14						
Total	0	0	0	0	0	0	0	0	0	0	0	1	7	8	0	0	0	0	0	0	0	0	0	0	0	0	7	3	10	10	18						
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	5	4	9	0	0	0	0	5	2	7	0	0	0	0	0	0	0	0	16							
8:15 AM	0	0	0	0	1	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	3							
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2							
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	3							
Total	0	0	0	0	1	0	1	0	0	0	0	6	7	13	0	0	0	0	7	2	9	0	0	0	0	1	0	1	1	24							
Grand Total	0	0	0	0	1	0	1	0	0	0	0	7	14	21	0	0	0	0	7	2	9	0	0	0	0	8	3	11	11	42							
Approach %	0	0	0	0	100	0		0	0	0	0	33.3	66.7		0	0	0	0	77.8	22.2		0	0	0	0	72.7	27.3										
Total %	0	0	0	0	2.38	0	2.38	0	0	0	0	16.7	33.3	50	0	0	0	0	16.7	4.76	21.4	0	0	0	0	19	7.14	26.2	26.2								
Exiting Leg Total	1							21							9							11							42								

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

	Grafton Street (Route 122)								Pine Hill Road								Grafton Street (Route 122)								Roosevelt School Driveway								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		
7:30 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	2	2	2	3		
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0	6	1	7	7	14		
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	5	4	9	0	0	0	0	5	2	7	0	0	0	0	0	0	0	0	16			
8:15 AM	0	0	0	0	1	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	3			
Total Volume	0	0	0	0	1	0	1	0	0	0	0	6	12	18	0	0	0	0	5	2	7	0	0	0	0	7	3	10	10	36			
% Approach Total	0.0	0.0	0.0	0.0	100.0	0.0		0.0	0.0	0.0	0.0	33.3	66.7		0.0	0.0	0.0	0.0	71.4	28.6		0.0	0.0	0.0	0.0	70.0	30.0						
PHF	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.300	0.429	0.500	0.000	0.000	0.000	0.000	0.250	0.250	0.250	0.000	0.000	0.000	0.000	0.292	0.375	0.357	0.563				
Entering Leg	0	0	0	0	1	0	1	0	0	0	0	6	12	18	0	0	0	0	5	2	7	0	0	0	0	7	3	10	10	36			
Exiting Leg	1							18							7							10							36				
Total	2							36							14							20							72				

PDI File #: **239385 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Pine Hill Road W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **2:00 PM**
 End Time: **6:00 PM**
 Class:



Cars and Heavy Vehicles (Combined)

	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	
2:00 PM	15	110	5	0	130	5	0	3	0	8	11	124	2	0	137	0	0	0	0	0	275
2:15 PM	51	135	1	0	187	9	0	7	0	16	17	124	4	0	145	0	0	0	0	0	348
2:30 PM	10	143	6	0	159	7	0	5	0	12	5	139	9	0	153	0	0	0	0	0	324
2:45 PM	5	125	7	0	137	4	0	6	0	10	7	148	1	0	156	0	0	0	0	0	303
Total	81	513	19	0	613	25	0	21	0	46	40	535	16	0	591	0	0	0	0	0	1250
3:00 PM	0	123	3	0	126	6	1	7	0	14	7	165	0	0	172	0	0	0	0	0	312
3:15 PM	0	157	3	0	160	7	0	3	0	10	3	170	1	0	174	0	0	0	0	0	344
3:30 PM	1	111	3	0	115	4	0	4	0	8	6	153	2	0	161	0	0	1	0	1	285
3:45 PM	2	145	3	0	150	4	0	3	0	7	7	170	3	0	180	1	0	0	0	1	338
Total	3	536	12	0	551	21	1	17	0	39	23	658	6	0	687	1	0	1	0	2	1279
4:00 PM	3	142	3	0	148	2	0	2	0	4	9	174	3	0	186	0	0	0	0	0	338
4:15 PM	3	145	6	0	154	4	0	2	0	6	12	189	6	0	207	0	0	0	0	0	367
4:30 PM	3	112	5	0	120	2	0	9	0	11	11	177	2	0	190	0	0	0	0	0	321
4:45 PM	3	131	4	0	138	8	0	4	0	12	7	175	1	0	183	0	0	0	0	0	333
Total	12	530	18	0	560	16	0	17	0	33	39	715	12	0	766	0	0	0	0	0	1359
5:00 PM	5	144	4	0	153	4	0	3	0	7	8	186	2	0	196	1	0	0	0	1	357
5:15 PM	2	150	3	0	155	4	1	3	0	8	7	196	2	0	205	1	0	0	0	1	369
5:30 PM	1	154	3	0	158	1	0	3	0	4	3	186	2	0	191	0	0	0	0	0	353
5:45 PM	0	133	3	0	136	5	0	3	0	8	7	182	0	0	189	0	0	0	0	0	333
Total	8	581	13	0	602	14	1	12	0	27	25	750	6	0	781	2	0	0	0	2	1412
Grand Total	104	2160	62	0	2326	76	2	67	0	145	127	2658	40	0	2825	3	0	1	0	4	5300
Approach %	4.5	92.9	2.7	0.0		52.4	1.4	46.2	0.0		4.5	94.1	1.4	0.0		75.0	0.0	25.0	0.0		
Total %	2.0	40.8	1.2	0.0	43.9	1.4	0.0	1.3	0.0	2.7	2.4	50.2	0.8	0.0	53.3	0.1	0.0	0.0	0.0	0.1	
Exiting Leg Total	2735					189					2230					146					5300
Cars	95	2108	61	0	2264	75	2	64	0	141	123	2604	37	0	2764	3	0	1	0	4	5173
% Cars	91.3	97.6	98.4	0.0	97.3	98.7	100.0	95.5	0.0	97.2	96.9	98.0	92.5	0.0	97.8	100.0	0.0	100.0	0.0	100.0	97.6
Exiting Leg Total	2680					184					2175					134					5173
Heavy Vehicles	9	52	1	0	62	1	0	3	0	4	4	54	3	0	61	0	0	0	0	0	127
% Heavy Vehicles	8.7	2.4	1.6	0.0	2.7	1.3	0.0	4.5	0.0	2.8	3.1	2.0	7.5	0.0	2.2	0.0	0.0	0.0	0.0	0.0	2.4
Exiting Leg Total	55					5					55					12					127

Peak Hour Analysis from 02:00 PM to 06:00 PM begins at:

4:45 PM	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	3	131	4	0	138	8	0	4	0	12	7	175	1	0	183	0	0	0	0	0	333
5:00 PM	5	144	4	0	153	4	0	3	0	7	8	186	2	0	196	1	0	0	0	1	357
5:15 PM	2	150	3	0	155	4	1	3	0	8	7	196	2	0	205	1	0	0	0	1	369
5:30 PM	1	154	3	0	158	1	0	3	0	4	3	186	2	0	191	0	0	0	0	0	353
Total Volume	11	579	14	0	604	17	1	13	0	31	25	743	7	0	775	2	0	0	0	2	1412
% Approach Total	1.8	95.9	2.3	0.0		54.8	3.2	41.9	0.0		3.2	95.9	0.9	0.0		100.0	0.0	0.0	0.0		
PHF	0.550	0.940	0.875	0.000	0.956	0.531	0.250	0.813	0.000	0.646	0.781	0.948	0.875	0.000	0.945	0.500	0.000	0.000	0.000	0.500	0.957
Cars	11	570	14	0	595	17	1	13	0	31	24	734	7	0	765	2	0	0	0	2	1393
Cars %	100.0	98.4	100.0	0.0	98.5	100.0	100.0	100.0	0.0	100.0	96.0	98.8	100.0	0.0	98.7	100.0	0.0	0.0	0.0	100.0	98.7
Heavy Vehicles	0	9	0	0	9	0	0	0	0	0	1	9	0	0	10	0	0	0	0	0	19
Heavy Vehicles %	0.0	1.6	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	4.0	1.2	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	1.3
Cars Enter Leg	11	570	14	0	595	17	1	13	0	31	24	734	7	0	765	2	0	0	0	2	1393
Heavy Enter Leg	0	9	0	0	9	0	0	0	0	0	1	9	0	0	10	0	0	0	0	0	19
Total Entering Leg	11	579	14	0	604	17	1	13	0	31	25	743	7	0	775	2	0	0	0	2	1412
Cars Exiting Leg	751					38					585					19					1393
Heavy Exiting Leg	9					1					9					0					19
Total Exiting Leg	760					39					594					19					1412

PDI File #: **239385 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Pine Hill Road W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **2:00 PM**
 End Time: **6:00 PM**
 Class:



Cars

	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	
2:00 PM	12	106	5	0	123	5	0	3	0	8	11	123	0	0	134	0	0	0	0	0	265
2:15 PM	47	132	1	0	180	9	0	7	0	16	17	122	3	0	142	0	0	0	0	0	338
2:30 PM	9	140	5	0	154	7	0	3	0	10	5	133	9	0	147	0	0	0	0	0	311
2:45 PM	4	118	7	0	129	4	0	6	0	10	7	142	1	0	150	0	0	0	0	0	289
Total	72	496	18	0	586	25	0	19	0	44	40	520	13	0	573	0	0	0	0	0	1203
3:00 PM	0	120	3	0	123	5	1	7	0	13	7	158	0	0	165	0	0	0	0	0	301
3:15 PM	0	151	3	0	154	7	0	3	0	10	3	166	1	0	170	0	0	0	0	0	334
3:30 PM	1	110	3	0	114	4	0	4	0	8	6	152	2	0	160	0	0	1	0	1	283
3:45 PM	2	142	3	0	147	4	0	3	0	7	7	167	3	0	177	1	0	0	0	1	332
Total	3	523	12	0	538	20	1	17	0	38	23	643	6	0	672	1	0	1	0	2	1250
4:00 PM	3	141	3	0	147	2	0	2	0	4	8	171	3	0	182	0	0	0	0	0	333
4:15 PM	3	140	6	0	149	4	0	2	0	6	12	185	6	0	203	0	0	0	0	0	358
4:30 PM	3	111	5	0	119	2	0	8	0	10	10	175	2	0	187	0	0	0	0	0	316
4:45 PM	3	130	4	0	137	8	0	4	0	12	7	172	1	0	180	0	0	0	0	0	329
Total	12	522	18	0	552	16	0	16	0	32	37	703	12	0	752	0	0	0	0	0	1336
5:00 PM	5	140	4	0	149	4	0	3	0	7	7	184	2	0	193	1	0	0	0	1	350
5:15 PM	2	150	3	0	155	4	1	3	0	8	7	193	2	0	202	1	0	0	0	1	366
5:30 PM	1	150	3	0	154	1	0	3	0	4	3	185	2	0	190	0	0	0	0	0	348
5:45 PM	0	127	3	0	130	5	0	3	0	8	6	176	0	0	182	0	0	0	0	0	320
Total	8	567	13	0	588	14	1	12	0	27	23	738	6	0	767	2	0	0	0	2	1384
Grand Total	95	2108	61	0	2264	75	2	64	0	141	123	2604	37	0	2764	3	0	1	0	4	5173
Approach %	4.2	93.1	2.7	0.0		53.2	1.4	45.4	0.0		4.5	94.2	1.3	0.0		75.0	0.0	25.0	0.0		
Total %	1.8	40.8	1.2	0.0	43.8	1.4	0.0	1.2	0.0	2.7	2.4	50.3	0.7	0.0	53.4	0.1	0.0	0.0	0.0	0.1	
Exiting Leg Total	2680					184					2175					134					5173

Peak Hour Analysis from 02:00 PM to 06:00 PM begins at:

	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	3	130	4	0	137	8	0	4	0	12	7	172	1	0	180	0	0	0	0	0	329
5:00 PM	5	140	4	0	149	4	0	3	0	7	7	184	2	0	193	1	0	0	0	1	350
5:15 PM	2	150	3	0	155	4	1	3	0	8	7	193	2	0	202	1	0	0	0	1	366
5:30 PM	1	150	3	0	154	1	0	3	0	4	3	185	2	0	190	0	0	0	0	0	348
Total Volume	11	570	14	0	595	17	1	13	0	31	24	734	7	0	765	2	0	0	0	2	1393
% Approach Total	1.8	95.8	2.4	0.0		54.8	3.2	41.9	0.0		3.1	95.9	0.9	0.0		100.0	0.0	0.0	0.0		
PHF	0.550	0.950	0.875	0.000	0.960	0.531	0.250	0.813	0.000	0.646	0.857	0.951	0.875	0.000	0.947	0.500	0.000	0.000	0.000	0.500	0.952
Entering Leg	11	570	14	0	595	17	1	13	0	31	24	734	7	0	765	2	0	0	0	2	1393
Exiting Leg	751					38					585					19					1393
Total	1346					69					1350					21					2786

PDI File #: **239385 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Pine Hill Road W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **2:00 PM**
 End Time: **6:00 PM**



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

	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	
2:00 PM	3	4	0	0	7	0	0	0	0	0	0	1	2	0	3	0	0	0	0	0	10
2:15 PM	4	3	0	0	7	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	10
2:30 PM	1	3	1	0	5	0	0	2	0	2	0	6	0	0	6	0	0	0	0	0	13
2:45 PM	1	7	0	0	8	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	14
Total	9	17	1	0	27	0	0	2	0	2	0	15	3	0	18	0	0	0	0	0	47
3:00 PM	0	3	0	0	3	1	0	0	0	1	0	7	0	0	7	0	0	0	0	0	11
3:15 PM	0	6	0	0	6	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	10
3:30 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
3:45 PM	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	6
Total	0	13	0	0	13	1	0	0	0	1	0	15	0	0	15	0	0	0	0	0	29
4:00 PM	0	1	0	0	1	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0	5
4:15 PM	0	5	0	0	5	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	9
4:30 PM	0	1	0	0	1	0	0	1	0	1	1	2	0	0	3	0	0	0	0	0	5
4:45 PM	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	4
Total	0	8	0	0	8	0	0	1	0	1	2	12	0	0	14	0	0	0	0	0	23
5:00 PM	0	4	0	0	4	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	7
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	3
5:30 PM	0	4	0	0	4	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	5
5:45 PM	0	6	0	0	6	0	0	0	0	0	1	6	0	0	7	0	0	0	0	0	13
Total	0	14	0	0	14	0	0	0	0	0	2	12	0	0	14	0	0	0	0	0	28
Grand Total	9	52	1	0	62	1	0	3	0	4	4	54	3	0	61	0	0	0	0	0	127
Approach %	14.5	83.9	1.6	0.0		25.0	0.0	75.0	0.0		6.6	88.5	4.9	0.0		0.0	0.0	0.0	0.0		
Total %	7.1	40.9	0.8	0.0	48.8	0.8	0.0	2.4	0.0	3.1	3.1	42.5	2.4	0.0	48.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	55					5					55					12					127
Buses	9	14	1	0	24	1	0	1	0	2	1	22	3	0	26	0	0	0	0	0	52
% Buses	100.0	26.9	100.0	0.0	38.7	100.0	0.0	33.3	0.0	50.0	25.0	40.7	100.0	0.0	42.6	0.0	0.0	0.0	0.0	0.0	40.9
Exiting Leg Total	23					2					15					12					52
Single-Unit Trucks	0	34	0	0	34	0	0	2	0	2	2	27	0	0	29	0	0	0	0	0	65
% Single-Unit	0.0	65.4	0.0	0.0	54.8	0.0	0.0	66.7	0.0	50.0	50.0	50.0	0.0	0.0	47.5	0.0	0.0	0.0	0.0	0.0	51.2
Exiting Leg Total	27					2					36					0					65
Articulated Trucks	0	4	0	0	4	0	0	0	0	0	1	5	0	0	6	0	0	0	0	0	10
% Articulated	0.0	7.7	0.0	0.0	6.5	0.0	0.0	0.0	0.0	0.0	25.0	9.3	0.0	0.0	9.8	0.0	0.0	0.0	0.0	0.0	7.9
Exiting Leg Total	5					1					4					0					10

Peak Hour Analysis from 02:00 PM to 06:00 PM begins at:

2:15 PM	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	
2:15 PM	4	3	0	0	7	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	10
2:30 PM	1	3	1	0	5	0	0	2	0	2	0	6	0	0	6	0	0	0	0	0	13
2:45 PM	1	7	0	0	8	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	14
3:00 PM	0	3	0	0	3	1	0	0	0	1	0	7	0	0	7	0	0	0	0	0	11
Total Volume	6	16	1	0	23	1	0	2	0	3	0	21	1	0	22	0	0	0	0	0	48
% Approach Total	26.1	69.6	4.3	0.0		33.3	0.0	66.7	0.0		0.0	95.5	4.5	0.0		0.0	0.0	0.0	0.0		
PHF	0.375	0.571	0.250	0.000	0.719	0.250	0.000	0.250	0.000	0.375	0.000	0.750	0.250	0.000	0.786	0.000	0.000	0.000	0.000	0.000	0.857
Buses	6	5	1	0	12	1	0	1	0	2	0	11	1	0	12	0	0	0	0	0	26
Buses %	100.0	31.3	100.0	0.0	52.2	100.0	0.0	50.0	0.0	66.7	0.0	52.4	100.0	0.0	54.5	0.0	0.0	0.0	0.0	0.0	54.2
Single-Unit Trucks	0	10	0	0	10	0	0	1	0	1	0	9	0	0	9	0	0	0	0	0	20
Single-Unit %	0.0	62.5	0.0	0.0	43.5	0.0	0.0	50.0	0.0	33.3	0.0	42.9	0.0	0.0	40.9	0.0	0.0	0.0	0.0	0.0	41.7
Articulated Trucks	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
Articulated %	0.0	6.3	0.0	0.0	4.3	0.0	0.0	0.0	0.0	0.0	0.0	4.8	0.0	0.0	4.5	0.0	0.0	0.0	0.0	0.0	4.2
Buses	6	5	1	0	12	1	0	1	0	2	0	11	1	0	12	0	0	0	0	0	26
Single-Unit Trucks	0	10	0	0	10	0	0	1	0	1	0	9	0	0	9	0	0	0	0	0	20
Articulated Trucks	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
Total Entering Leg	6	16	1	0	23	1	0	2	0	3	0	21	1	0	22	0	0	0	0	0	48
Buses	12					1					6					7					26

PDI File #: **239385 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Pine Hill Road W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **2:00 PM**
 End Time: **6:00 PM**
 Class:



**PRECISION
D A T A
INDUSTRIES, LLC**

157 Washington Street, Suite 2
 Hudson, MA 01749
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

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

	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	
Single-Unit Trucks					9					0					11					0	20
Articulated Trucks					1					0					1					0	2
Total Exiting Leg					22					1					18					7	48

PDI File #: **239385 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Pine Hill Road W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **2:00 PM**
 End Time: **6:00 PM**
 Class:



Buses

	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	
2:00 PM	3	1	0	0	4	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	6
2:15 PM	4	1	0	0	5	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	7
2:30 PM	1	1	1	0	3	0	0	1	0	1	0	5	0	0	5	0	0	0	0	0	9
2:45 PM	1	2	0	0	3	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	7
Total	9	5	1	0	15	0	0	1	0	1	0	10	3	0	13	0	0	0	0	0	29
3:00 PM	0	1	0	0	1	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	3
3:15 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
3:45 PM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
Total	0	4	0	0	4	1	0	0	0	1	0	6	0	0	6	0	0	0	0	0	11
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
4:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
4:30 PM	0	1	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	2	0	0	2	0	0	0	0	0	2
Total	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	6
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	3	0	0	3	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	1	2	0	0	3	0	0	0	0	0	3
Total	0	3	0	0	3	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	6
Grand Total	9	14	1	0	24	1	0	1	0	2	1	22	3	0	26	0	0	0	0	0	52
Approach %	37.5	58.3	4.2	0.0		50.0	0.0	50.0	0.0		3.8	84.6	11.5	0.0		0.0	0.0	0.0	0.0		
Total %	17.3	26.9	1.9	0.0	46.2	1.9	0.0	1.9	0.0	3.8	1.9	42.3	5.8	0.0	50.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	23					2					15					12					52

Peak Hour Analysis from 02:00 PM to 06:00 PM begins at:

	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	
2:00 PM	3	1	0	0	4	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	6
2:15 PM	4	1	0	0	5	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	7
2:30 PM	1	1	1	0	3	0	0	1	0	1	0	5	0	0	5	0	0	0	0	0	9
2:45 PM	1	2	0	0	3	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	7
Total Volume	9	5	1	0	15	0	0	1	0	1	0	10	3	0	13	0	0	0	0	0	29
% Approach Total	60.0	33.3	6.7	0.0		0.0	0.0	100.0	0.0		0.0	76.9	23.1	0.0		0.0	0.0	0.0	0.0		
PHF	0.563	0.625	0.250	0.000	0.750	0.000	0.000	0.250	0.000	0.250	0.000	0.500	0.375	0.000	0.650	0.000	0.000	0.000	0.000	0.000	0.806
Entering Leg	9	5	1	0	15	0	0	1	0	1	0	10	3	0	13	0	0	0	0	0	29
Exiting Leg	10					1					6					12					29
Total	25					2					19					12					58

PDI File #: **239385 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Pine Hill Road W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **2:00 PM**
 End Time: **6:00 PM**
 Class:



Single-Unit Trucks

	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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						
2:00 PM	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	4					
2:15 PM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3					
2:30 PM	0	2	0	0	2	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	4					
2:45 PM	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	6					
Total	0	11	0	0	11	0	0	1	0	1	0	5	0	0	5	0	0	0	0	0	17					
3:00 PM	0	2	0	0	2	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	7					
3:15 PM	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	6					
3:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1					
3:45 PM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3					
Total	0	9	0	0	9	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	17					
4:00 PM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3					
4:15 PM	0	4	0	0	4	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	7					
4:30 PM	0	0	0	0	0	0	0	1	0	1	1	2	0	0	3	0	0	0	0	0	4					
4:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1					
Total	0	6	0	0	6	0	0	1	0	1	1	7	0	0	8	0	0	0	0	0	15					
5:00 PM	0	3	0	0	3	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	6					
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2					
5:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1					
5:45 PM	0	4	0	0	4	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	7					
Total	0	8	0	0	8	0	0	0	0	0	1	7	0	0	8	0	0	0	0	0	16					
Grand Total	0	34	0	0	34	0	0	2	0	2	2	27	0	0	29	0	0	0	0	0	65					
Approach %	0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		6.9	93.1	0.0	0.0		0.0	0.0	0.0	0.0							
Total %	0.0	52.3	0.0	0.0	52.3	0.0	0.0	3.1	0.0	3.1	3.1	41.5	0.0	0.0	44.6	0.0	0.0	0.0	0.0	0.0						
Exiting Leg Total						27					2					36					0					65

Peak Hour Analysis from 02:00 PM to 06:00 PM begins at:

	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	
2:30 PM	0	2	0	0	2	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	4
2:45 PM	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	6
3:00 PM	0	2	0	0	2	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	7
3:15 PM	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	6
Total Volume	0	12	0	0	12	0	0	1	0	1	0	10	0	0	10	0	0	0	0	0	23
% Approach Total	0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.750	0.000	0.000	0.750	0.000	0.000	0.250	0.000	0.250	0.000	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.821
Entering Leg	0	12	0	0	12	0	0	1	0	1	0	10	0	0	10	0	0	0	0	0	23
Exiting Leg						10					0					13					0
Total						22					1					23					0

PDI File #: **239385 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Pine Hill Road W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **2:00 PM**
 End Time: **6:00 PM**
 Class:



Articulated Trucks

	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	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	1	0	0	1	0	0	0	0	0	1
4:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
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	1	0	0	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	2
5:00 PM	0	1	0	0	1	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	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	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
Total	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	6
Grand Total	0	4	0	0	4	0	0	0	0	0	1	5	0	0	6	0	0	0	0	0	10
Approach %	0.0	100.0	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		
Total %	0.0	40.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	10.0	50.0	0.0	0.0	60.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	5					1					4					0					10

Peak Hour Analysis from 02:00 PM to 06:00 PM begins at:

5:00 PM	Grafton Street (Route 122)					Pine Hill Road					Grafton Street (Route 122)					Roosevelt School Driveway					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	
5:00 PM	0	1	0	0	1	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	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	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
Total Volume	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	6
% Approach Total	0.0	100.0	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		
PHF	0.000	0.375	0.000	0.000	0.375	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	0.500
Entering Leg	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	6
Exiting Leg	3					0					3					0					6
Total	6					0					6					0					12

PDI File #: **239385 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Pine Hill Road W: Roosevelt School Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ P. Graham**
 Site Code: **TBA**
 Count Date: **Wednesday, June 7, 2023**
 Start Time: **2:00 PM**
 End Time: **6:00 PM**
 Class:



Bicycles (on Roadway and Crosswalks)

	Grafton Street (Route 122)							Pine Hill Road							Grafton Street (Route 122)							Roosevelt School Driveway							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	
2:00 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	
2:15 PM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
2:30 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	
2:45 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	
Total	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1		
3:00 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	
3:15 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	
3:30 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	1	
3:45 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	
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	1		
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	1	
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	
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	
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	1	
Total	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	2		
5:00 PM	0	1	0	0	0	0	1	0	0	0	0	0	1	1	1	0	0	0	0	0	0	1	0	0	0	0	0	3	
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	
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	
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	
Total	0	1	0	0	0	0	1	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	3		
Grand Total	0	2	0	0	0	0	2	0	0	0	0	1	2	3	1	1	0	0	0	0	0	0	0	0	0	0	7		
Approach %	0.0	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	33.3	66.7		50.0	50.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0			
Total %	0.0	28.6	0.0	0.0	0.0	0.0	28.6	0.0	0.0	0.0	0.0	14.3	28.6	42.9	14.3	14.3	0.0	0.0	0.0	0.0		28.6	0.0	0.0	0.0	0.0	0.0		
Exiting Leg Total	1							4							2							0							7

Peak Hour Analysis from 02:00 PM to 06:00 PM begins at:

	Grafton Street (Route 122)							Pine Hill Road							Grafton Street (Route 122)							Roosevelt School Driveway							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	
4:15 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	
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	
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	1	
5:00 PM	0	1	0	0	0	0	1	0	0	0	0	0	1	1	1	0	0	0	0	0	0	1	0	0	0	0	0	3	
Total Volume	0	1	0	0	0	0	1	0	0	0	0	0	2	2	1	0	0	0	0	0	0	1	0	0	0	0	4		
% Approach Total	0.0	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	100.0		100.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0			
PHF	0.000	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.500	0.500		0.250	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.333		
Entering Leg	0	1	0	0	0	0	1	0	0	0	0	0	2	2	1	0	0	0	0	0	1	0	0	0	0	0	4		
Exiting Leg	0							3							1							0							4
Total	1							5							2							0							8

PDI File #: 239385 B
 Location: N: Grafton Street (Route 122) S: Grafton Street (Route 122)
 Location: E: Pine Hill Road W: Roosevelt School Driveway
 City, State: Worcester, MA
 Client: Kimley-Horn/ P. Graham
 Site Code: TBA
 Count Date: Wednesday, June 7, 2023
 Start Time: 2:00 PM
 End Time: 6:00 PM
 Class:



Pedestrians

	Grafton Street (Route 122)								Pine Hill Road								Grafton Street (Route 122)								Roosevelt School Driveway								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		
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6				
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	17	11	28	0	0	0	0	0	0	0	0	0	0	0	0	3	3	31				
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	4	1	5	9					
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3					
Total	0	0	0	0	0	0	0	0	0	0	0	18	23	41	0	0	0	0	0	0	0	0	0	0	4	4	8	49					
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3					
3:15 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	1	1	1	1					
3:30 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	2					
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	4	2	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6					
Total	0	0	0	0	0	0	0	0	0	0	0	8	3	11	0	0	0	0	0	0	0	0	0	0	1	1	1	12					
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	1					
4:15 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	3					
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2					
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					
Total	0	0	0	0	0	0	0	0	0	0	0	1	5	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6					
5:00 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	1					
5:15 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	1	1	2	2					
5:30 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	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					
Total	0	0	0	0	0	0	0	0	0	0	0	3	1	4	0	0	0	0	0	0	0	0	0	0	1	1	1	5					
Grand Total	0	0	0	0	0	0	0	0	0	0	0	30	32	62	0	0	0	0	0	0	0	0	0	4	6	10	72						
Approach %	0	0	0	0	0	0	0	0	0	0	0	48.4	51.6		0	0	0	0	0	0	0	0	0	40	60								
Total %	0	0	0	0	0	0	0	0	0	0	0	41.7	44.4	86.1	0	0	0	0	0	0	0	0	0	5.56	8.33	13.9							
Exiting Leg Total	0								62								0								10								72

Peak Hour Analysis from 02:00 PM to 06:00 PM begins at:

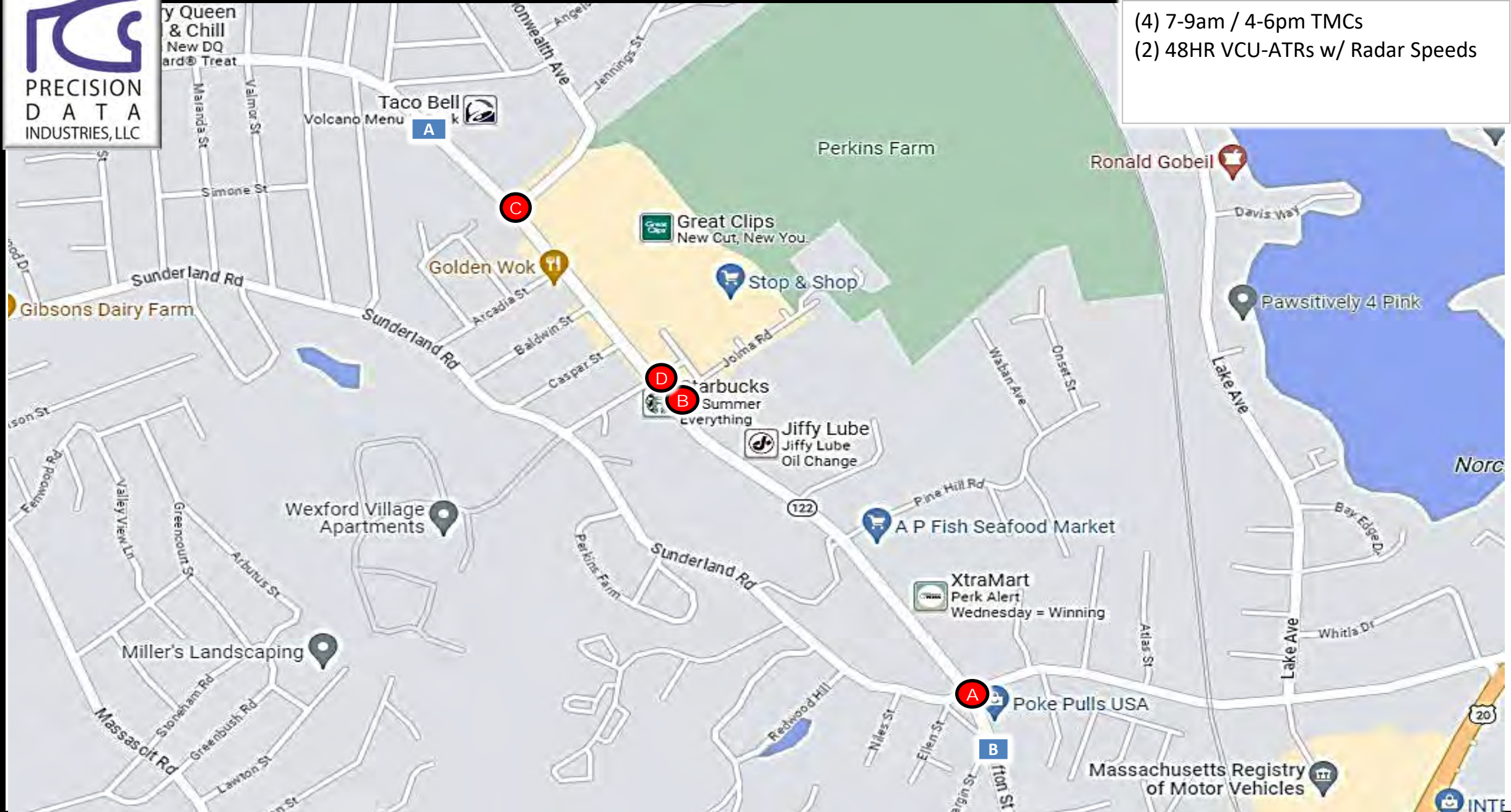
	Grafton Street (Route 122)								Pine Hill Road								Grafton Street (Route 122)								Roosevelt School Driveway								Total
	from North								from East								from South								from West								
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total		Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total		Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total		Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6					
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	17	11	28	0	0	0	0	0	0	0	0	0	0	0	3	3	31					
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	4	1	5	9					
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	2	3	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	18	23	41	0	0	0	0	0	0	0	0	0	0	4	4	8	49					
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	43.9	56.1		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	50.0								
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.265	0.523	0.366	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.333	0.400	0.395						
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	18	23	41	0	0	0	0	0	0	0	0	0	4	4	8	49						
Exiting Leg	0								41								0								8								49
Total	0								82								0								16								98



Location Map: 239484 Worcester, MA

Precision Data Industries, LLC 157 Washington Street, Suite 2, Hudson, MA 01749 ph: 508-875-0100 email: datarequests@pdillc.com

(4) 7-9am / 4-6pm TMCs
(2) 48HR VCU-ATRs w/ Radar Speeds



Client: Kimley Horn	Engineer: L. Juan	Site Code: 112858001	Date: Wed 9/13 thur Thurs 9/14/2023	PDI Job # 239484	City, State: Worcester, MA
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Grafton Street (Route 122)
north of Jennings Street
City, State: Worcester, MA
Client: Kimley-Horn/ L. Juan
Site Code: 112858000-02



PDI File #: 239484 ATR-A

Count Date: **Wednesday, September 13, 2023**
Direction: **NB**

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	28	0	0	0	28
12:15 AM	0	0	21	0	1	0	22
12:30 AM	0	0	19	0	0	0	19
12:45 AM	0	0	12	0	0	0	12
1:00 AM	0	0	14	0	0	0	14
1:15 AM	0	0	13	0	0	0	13
1:30 AM	0	0	9	0	0	0	9
1:45 AM	0	0	9	0	0	0	9
2:00 AM	0	0	6	0	0	0	6
2:15 AM	0	0	3	0	0	0	3
2:30 AM	0	0	3	0	0	0	3
2:45 AM	0	0	6	0	0	0	6
3:00 AM	0	0	3	0	0	0	3
3:15 AM	1	0	5	0	0	0	6
3:30 AM	0	0	3	0	1	1	5
3:45 AM	0	0	6	0	0	0	6
4:00 AM	0	0	10	0	1	0	11
4:15 AM	0	0	5	0	0	0	5
4:30 AM	0	0	6	0	1	0	7
4:45 AM	0	0	8	0	0	0	8
5:00 AM	0	0	9	0	0	0	9
5:15 AM	0	0	16	0	0	1	17
5:30 AM	0	0	23	1	2	0	26
5:45 AM	0	0	31	0	1	0	32
6:00 AM	0	0	48	0	3	0	51
6:15 AM	0	0	46	0	3	0	49
6:30 AM	0	0	61	3	4	1	69
6:45 AM	0	0	79	3	1	0	83
7:00 AM	0	0	69	2	2	0	73
7:15 AM	0	1	103	1	0	1	106
7:30 AM	0	0	109	2	6	2	119
7:45 AM	0	0	97	0	3	1	101
8:00 AM	0	0	106	4	5	0	115
8:15 AM	1	0	134	3	1	0	139
8:30 AM	0	0	122	6	3	4	135
8:45 AM	0	0	104	1	2	0	107
9:00 AM	0	0	104	0	6	0	110
9:15 AM	0	0	118	0	3	0	121
9:30 AM	0	0	99	1	3	0	103
9:45 AM	0	0	103	1	2	2	108
10:00 AM	0	0	112	1	4	4	121
10:15 AM	0	0	114	1	5	1	121
10:30 AM	0	0	105	1	3	1	110
10:45 AM	0	0	125	1	2	1	129
11:00 AM	0	0	121	0	4	1	126
11:15 AM	0	0	107	2	4	1	114
11:30 AM	0	0	104	0	1	0	105
11:45 AM	0	0	94	0	2	0	96

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	0	103	0	0	0	103
12:15 PM	0	0	120	1	3	0	124
12:30 PM	0	0	93	0	2	0	95
12:45 PM	0	0	112	3	3	0	118
1:00 PM	0	0	114	0	1	2	117
1:15 PM	0	0	126	0	1	1	128
1:30 PM	0	0	126	2	1	0	129
1:45 PM	0	0	131	1	1	0	133
2:00 PM	0	0	109	0	3	0	112
2:15 PM	0	0	139	2	3	1	145
2:30 PM	0	0	142	2	0	1	145
2:45 PM	0	1	133	0	1	0	135
3:00 PM	0	0	138	3	1	0	142
3:15 PM	0	0	161	1	0	0	162
3:30 PM	0	0	154	2	1	0	157
3:45 PM	0	0	142	0	1	0	143
4:00 PM	0	0	155	1	2	0	158
4:15 PM	0	0	136	2	0	0	138
4:30 PM	0	0	147	0	1	1	149
4:45 PM	0	0	163	2	1	0	166
5:00 PM	1	0	178	0	1	1	181
5:15 PM	0	0	186	0	0	1	187
5:30 PM	0	0	170	1	1	0	172
5:45 PM	0	0	157	2	0	0	159
6:00 PM	0	0	154	0	1	0	155
6:15 PM	0	1	163	1	1	0	166
6:30 PM	0	0	112	1	1	0	114
6:45 PM	0	0	144	0	0	0	144
7:00 PM	0	0	132	0	0	0	132
7:15 PM	0	0	107	1	0	0	108
7:30 PM	0	0	115	2	1	0	118
7:45 PM	0	0	113	1	0	0	114
8:00 PM	0	0	112	0	0	0	112
8:15 PM	0	0	113	1	0	0	114
8:30 PM	0	0	94	0	0	0	94
8:45 PM	0	0	69	1	1	0	71
9:00 PM	0	0	82	0	0	0	82
9:15 PM	0	0	72	1	0	0	73
9:30 PM	0	1	64	0	1	0	66
9:45 PM	0	0	69	0	1	0	70
10:00 PM	0	0	59	0	0	0	59
10:15 PM	0	0	51	0	0	0	51
10:30 PM	0	0	34	0	0	0	34
10:45 PM	0	0	44	0	0	0	44
11:00 PM	0	0	48	0	0	0	48
11:15 PM	0	0	41	0	0	0	41
11:30 PM	1	0	36	0	0	0	37
11:45 PM	0	0	19	0	0	0	19

AM Total	2	1	2652	34	79	22	2790
Percentage	0.07%	0.04%	95.05%	1.22%	2.83%	0.79%	
AM Peak	2:30 AM	6:30 AM	8:00 AM	8:00 AM	7:30 AM	9:45 AM	8:00 AM
Volume	1	1	466	14	15	8	496

PM Total	2	3	5382	34	35	8	5464
Percentage	0.04%	0.05%	98.50%	0.62%	0.64%	0.15%	
PM Peak	4:15 PM	2:00 PM	4:45 PM	2:15 PM	12:15 PM	12:30 PM	4:45 PM
Volume	1	1	697	7	9	3	706
Day Total	4	4	8034	68	114	30	8254
Percentage	0.05%	0.05%	97.33%	0.82%	1.38%	0.36%	

Grafton Street (Route 122)
north of Jennings Street
City, State: Worcester, MA
Client: Kimley-Horn/ L. Juan
Site Code: 112858000-02



PDI File #: 239484 ATR-A

Count Date: Thursday, September 14, 2023
Direction: NB

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	35	0	0	0	35
12:15 AM	0	0	29	0	0	1	30
12:30 AM	0	0	13	0	0	0	13
12:45 AM	0	0	18	0	0	0	18
1:00 AM	0	0	13	0	0	0	13
1:15 AM	0	0	10	0	0	0	10
1:30 AM	0	0	9	0	0	0	9
1:45 AM	0	0	9	0	0	0	9
2:00 AM	0	0	6	0	0	0	6
2:15 AM	0	0	11	0	0	0	11
2:30 AM	0	0	6	0	0	0	6
2:45 AM	0	0	10	0	0	0	10
3:00 AM	0	0	6	0	1	0	7
3:15 AM	1	0	5	0	1	0	7
3:30 AM	0	0	3	0	0	0	3
3:45 AM	0	0	9	0	3	0	12
4:00 AM	0	0	8	0	0	0	8
4:15 AM	0	0	7	0	0	0	7
4:30 AM	0	0	10	0	0	0	10
4:45 AM	0	0	13	0	0	0	13
5:00 AM	0	0	9	0	0	0	9
5:15 AM	0	0	26	0	0	0	26
5:30 AM	0	0	22	1	0	0	23
5:45 AM	0	0	41	0	2	0	43
6:00 AM	0	0	52	1	1	1	55
6:15 AM	0	0	53	0	5	1	59
6:30 AM	1	0	69	2	2	0	74
6:45 AM	0	0	59	4	3	1	67
7:00 AM	0	2	70	0	2	0	74
7:15 AM	0	0	114	3	3	1	121
7:30 AM	0	0	107	1	4	0	112
7:45 AM	0	0	97	0	0	1	98
8:00 AM	0	0	115	6	0	0	121
8:15 AM	0	0	111	2	1	1	115
8:30 AM	0	0	98	3	4	1	106
8:45 AM	0	0	125	2	4	0	131
9:00 AM	0	0	134	0	1	0	135
9:15 AM	0	2	109	2	2	1	116
9:30 AM	0	0	95	0	2	1	98
9:45 AM	0	0	123	1	4	1	129
10:00 AM	0	0	113	1	1	0	115
10:15 AM	0	0	106	1	2	1	110
10:30 AM	0	1	125	0	4	2	132
10:45 AM	0	0	110	2	5	0	117
11:00 AM	0	1	123	1	2	1	128
11:15 AM	0	2	116	2	3	3	126
11:30 AM	0	0	106	0	1	0	107
11:45 AM	0	0	106	2	1	0	109

AM Total	2	8	2764	37	64	18	2893
Percentage	0.07%	0.28%	95.54%	1.28%	2.21%	0.62%	
AM Peak	2:30 AM	10:30 AM	10:30 AM	8:00 AM	10:30 AM	10:30 AM	10:30 AM
Volume	1	4	474	13	14	6	503

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	0	141	0	3	0	144
12:15 PM	0	0	144	0	0	1	145
12:30 PM	0	0	135	0	2	0	137
12:45 PM	0	0	141	4	5	1	151
1:00 PM	0	1	128	0	2	0	131
1:15 PM	0	0	134	0	3	0	137
1:30 PM	0	0	154	2	3	1	160
1:45 PM	0	1	153	0	2	1	157
2:00 PM	0	0	122	1	2	2	127
2:15 PM	0	2	154	3	3	1	163
2:30 PM	1	0	129	5	4	0	139
2:45 PM	0	0	139	0	3	1	143
3:00 PM	0	0	158	2	3	0	163
3:15 PM	0	0	149	2	0	0	151
3:30 PM	3	1	162	1	0	0	167
3:45 PM	1	2	156	0	3	0	162
4:00 PM	1	1	158	1	3	0	164
4:15 PM	0	0	145	1	0	0	146
4:30 PM	0	1	169	0	1	0	171
4:45 PM	1	2	163	2	2	1	171
5:00 PM	1	1	212	0	1	0	215
5:15 PM	0	0	183	0	2	0	185
5:30 PM	1	2	175	0	1	0	179
5:45 PM	0	1	170	2	0	1	174
6:00 PM	1	1	167	0	0	0	169
6:15 PM	0	0	194	0	1	0	195
6:30 PM	1	2	159	2	1	1	166
6:45 PM	0	0	155	0	0	0	155
7:00 PM	0	1	141	0	0	0	142
7:15 PM	0	2	148	1	0	0	151
7:30 PM	0	0	146	1	0	0	147
7:45 PM	0	0	147	1	1	0	149
8:00 PM	0	0	124	0	1	0	125
8:15 PM	0	1	116	1	2	0	120
8:30 PM	0	0	105	0	0	0	105
8:45 PM	0	0	94	1	1	3	99
9:00 PM	0	0	81	1	0	0	82
9:15 PM	0	0	88	0	0	0	88
9:30 PM	0	0	83	0	1	1	85
9:45 PM	0	0	64	0	0	0	64
10:00 PM	0	0	52	0	0	0	52
10:15 PM	0	0	64	0	0	0	64
10:30 PM	0	0	55	0	0	0	55
10:45 PM	0	0	42	0	0	1	43
11:00 PM	0	0	56	0	0	0	56
11:15 PM	0	0	38	0	0	0	38
11:30 PM	1	0	41	0	0	0	42
11:45 PM	0	0	24	0	0	0	24

PM Total	12	22	6058	34	56	16	6198
Percentage	0.19%	0.35%	97.74%	0.55%	0.90%	0.26%	
PM Peak	3:15 PM	4:45 PM	5:00 PM	2:15 PM	12:45 PM	1:30 PM	5:00 PM
Volume	5	5	740	10	13	5	753

Day Total	14	30	8822	71	120	34	9091
Percentage	0.15%	0.33%	97.04%	0.78%	1.32%	0.37%	

Grafton Street (Route 122)
north of Jennings Street
City, State: Worcester, MA
Client: Kimley-Horn/ L. Juan
Site Code: 112858000-02



PDI File #: 239484 ATR-A

Count Date: **Wednesday, September 13, 2023**
Direction: **SB**

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	13	0	0	0	13
12:15 AM	0	0	8	0	1	0	9
12:30 AM	0	0	13	0	0	0	13
12:45 AM	0	0	12	0	0	0	12
1:00 AM	0	0	5	0	0	0	5
1:15 AM	0	0	4	0	0	0	4
1:30 AM	0	0	2	0	2	0	4
1:45 AM	0	0	7	0	0	1	8
2:00 AM	0	0	3	0	0	0	3
2:15 AM	0	0	3	0	0	0	3
2:30 AM	0	0	3	0	0	0	3
2:45 AM	0	0	6	0	0	0	6
3:00 AM	0	0	9	0	0	0	9
3:15 AM	0	0	6	0	0	0	6
3:30 AM	0	0	3	0	0	0	3
3:45 AM	0	0	4	0	1	0	5
4:00 AM	0	0	5	0	0	0	5
4:15 AM	0	0	17	0	2	0	19
4:30 AM	0	0	25	0	0	0	25
4:45 AM	0	0	33	0	2	0	35
5:00 AM	0	0	42	1	0	1	44
5:15 AM	0	0	46	0	1	0	47
5:30 AM	0	0	60	0	2	0	62
5:45 AM	0	0	75	0	1	0	76
6:00 AM	0	0	76	0	1	0	77
6:15 AM	0	0	75	1	2	0	78
6:30 AM	0	0	86	3	1	0	90
6:45 AM	0	0	95	0	2	0	97
7:00 AM	0	0	99	0	1	1	101
7:15 AM	0	0	123	1	1	0	125
7:30 AM	0	0	87	0	1	0	88
7:45 AM	0	0	111	3	1	0	115
8:00 AM	1	0	106	5	1	0	113
8:15 AM	0	0	93	3	4	0	100
8:30 AM	0	0	106	1	1	0	108
8:45 AM	0	0	99	1	1	0	101
9:00 AM	0	0	115	0	1	1	117
9:15 AM	0	0	103	0	5	0	108
9:30 AM	0	0	98	1	1	0	100
9:45 AM	0	0	111	1	2	0	114
10:00 AM	0	0	90	2	3	0	95
10:15 AM	0	1	111	0	4	0	116
10:30 AM	0	0	100	0	1	0	101
10:45 AM	0	0	99	3	2	2	106
11:00 AM	0	0	110	0	4	0	114
11:15 AM	0	0	100	0	2	0	102
11:30 AM	0	0	88	2	1	0	91
11:45 AM	0	0	105	2	3	0	110

AM Total	1	1	2790	30	58	6	2886
Percentage	0.03%	0.03%	96.67%	1.04%	2.01%	0.21%	
AM Peak	7:15 AM	9:30 AM	7:15 AM	7:45 AM	9:15 AM	10:00 AM	7:15 AM
Volume	1	1	427	12	11	2	441

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	0	87	0	6	2	95
12:15 PM	0	0	100	2	3	1	106
12:30 PM	0	0	97	0	3	0	100
12:45 PM	0	0	103	0	1	0	104
1:00 PM	0	0	91	2	0	0	93
1:15 PM	0	0	121	0	0	0	121
1:30 PM	0	0	97	1	1	0	99
1:45 PM	0	0	89	2	1	0	92
2:00 PM	0	0	108	1	2	1	112
2:15 PM	0	0	123	2	2	0	127
2:30 PM	0	1	129	1	0	0	131
2:45 PM	0	0	137	2	0	0	139
3:00 PM	1	0	106	0	2	0	109
3:15 PM	0	0	115	1	3	1	120
3:30 PM	0	0	107	2	4	1	114
3:45 PM	0	0	101	1	0	0	102
4:00 PM	0	0	109	2	1	0	112
4:15 PM	0	0	110	2	1	0	113
4:30 PM	0	0	94	0	1	0	95
4:45 PM	0	0	140	0	2	0	142
5:00 PM	0	0	127	0	0	0	127
5:15 PM	1	0	117	2	0	0	120
5:30 PM	0	0	142	2	0	0	144
5:45 PM	0	0	124	1	2	1	128
6:00 PM	0	0	102	1	0	0	103
6:15 PM	0	0	92	0	1	0	93
6:30 PM	0	0	80	1	0	0	81
6:45 PM	0	0	83	1	0	0	84
7:00 PM	0	0	77	1	1	0	79
7:15 PM	0	0	96	0	0	0	96
7:30 PM	0	0	82	2	0	0	84
7:45 PM	0	0	87	0	1	0	88
8:00 PM	0	0	75	1	0	0	76
8:15 PM	0	0	51	1	1	0	53
8:30 PM	0	0	45	0	1	0	46
8:45 PM	0	0	55	1	0	0	56
9:00 PM	0	0	45	0	0	0	45
9:15 PM	0	0	54	0	1	1	56
9:30 PM	0	0	52	0	0	1	53
9:45 PM	0	0	38	0	0	0	38
10:00 PM	1	0	34	0	0	0	35
10:15 PM	0	0	35	0	0	0	35
10:30 PM	0	0	26	0	0	0	26
10:45 PM	0	0	31	0	0	0	31
11:00 PM	0	0	29	0	0	0	29
11:15 PM	0	0	26	0	0	0	26
11:30 PM	0	0	20	0	0	0	20
11:45 PM	0	0	19	0	0	0	19

PM Total	3	1	4008	35	41	9	4097
Percentage	0.07%	0.02%	97.83%	0.85%	1.00%	0.22%	
PM Peak	2:15 PM	1:45 PM	4:45 PM	3:30 PM	12:00 PM	12:00 PM	4:45 PM
Volume	1	1	526	7	13	3	533
Day Total	4	2	6798	65	99	15	6983
Percentage	0.06%	0.03%	97.35%	0.93%	1.42%	0.21%	

Grafton Street (Route 122)
north of Jennings Street
City, State: Worcester, MA
Client: Kimley-Horn/ L. Juan
Site Code: 112858000-02



PDI File #: 239484 ATR-A

Count Date: Thursday, September 14, 2023
Direction: SB

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	11	0	0	0	11
12:15 AM	0	0	7	0	0	1	8
12:30 AM	0	0	10	0	0	0	10
12:45 AM	0	0	7	0	0	0	7
1:00 AM	0	0	7	0	0	0	7
1:15 AM	0	0	7	0	2	0	9
1:30 AM	0	0	8	0	1	0	9
1:45 AM	0	0	4	0	0	0	4
2:00 AM	0	0	5	0	0	0	5
2:15 AM	0	0	6	0	0	2	8
2:30 AM	0	0	4	0	0	0	4
2:45 AM	0	0	6	0	0	0	6
3:00 AM	0	0	5	0	2	0	7
3:15 AM	0	0	2	0	1	0	3
3:30 AM	0	0	3	0	0	0	3
3:45 AM	0	0	5	0	0	0	5
4:00 AM	0	0	13	0	0	0	13
4:15 AM	0	0	21	0	0	0	21
4:30 AM	0	0	24	0	0	0	24
4:45 AM	0	0	27	0	0	0	27
5:00 AM	0	0	41	1	0	0	42
5:15 AM	0	0	43	0	0	0	43
5:30 AM	0	0	63	0	1	0	64
5:45 AM	0	0	73	1	1	1	76
6:00 AM	0	1	72	0	2	0	75
6:15 AM	0	0	93	3	0	0	96
6:30 AM	0	1	100	0	1	0	102
6:45 AM	1	0	86	1	1	1	90
7:00 AM	0	0	101	0	2	2	105
7:15 AM	0	2	107	0	2	0	111
7:30 AM	0	0	106	0	1	1	108
7:45 AM	0	0	129	5	1	0	135
8:00 AM	0	0	104	2	3	1	110
8:15 AM	0	0	109	3	2	1	115
8:30 AM	0	0	102	1	0	0	103
8:45 AM	0	0	118	1	2	0	121
9:00 AM	0	0	99	0	2	0	101
9:15 AM	0	2	99	0	2	1	104
9:30 AM	0	0	124	2	1	0	127
9:45 AM	0	0	111	1	0	0	112
10:00 AM	1	0	102	1	1	1	106
10:15 AM	0	1	108	0	2	1	112
10:30 AM	0	0	109	2	4	0	115
10:45 AM	0	1	102	0	4	0	107
11:00 AM	0	1	102	1	1	1	106
11:15 AM	1	0	126	1	3	0	131
11:30 AM	0	1	102	1	2	0	106
11:45 AM	1	0	111	1	3	1	117

AM Total	4	10	2924	28	50	15	3031
Percentage	0.13%	0.33%	96.47%	0.92%	1.65%	0.49%	
AM Peak	11:00 AM	6:30 AM	7:30 AM	7:45 AM	10:30 AM	6:45 AM	7:30 AM
Volume	2	3	448	11	12	4	468

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	0	90	1	4	3	98
12:15 PM	0	1	124	1	4	1	131
12:30 PM	0	0	120	1	3	0	124
12:45 PM	0	0	102	0	3	1	106
1:00 PM	0	1	109	2	1	0	113
1:15 PM	0	0	133	0	2	1	136
1:30 PM	1	0	135	0	0	0	136
1:45 PM	0	0	128	3	3	1	135
2:00 PM	1	0	119	3	0	1	124
2:15 PM	0	0	115	2	2	0	119
2:30 PM	0	0	130	0	1	0	131
2:45 PM	0	1	142	2	4	1	150
3:00 PM	0	0	139	0	1	0	140
3:15 PM	0	1	119	1	1	0	122
3:30 PM	0	0	110	1	1	0	112
3:45 PM	0	0	104	0	2	0	106
4:00 PM	1	1	123	2	2	0	129
4:15 PM	0	0	113	3	0	0	116
4:30 PM	0	0	142	1	2	0	145
4:45 PM	0	0	127	0	0	0	127
5:00 PM	0	2	145	0	1	0	148
5:15 PM	0	0	124	2	0	0	126
5:30 PM	0	0	140	0	1	1	142
5:45 PM	0	0	125	0	0	0	125
6:00 PM	1	0	127	0	0	0	128
6:15 PM	0	0	85	2	0	0	87
6:30 PM	0	0	121	0	0	0	121
6:45 PM	0	0	118	0	0	2	120
7:00 PM	0	1	99	2	1	0	103
7:15 PM	0	0	100	0	0	0	100
7:30 PM	0	0	100	1	1	0	102
7:45 PM	0	0	94	0	1	0	95
8:00 PM	0	1	58	0	0	0	59
8:15 PM	0	0	80	1	1	0	82
8:30 PM	0	0	68	1	0	0	69
8:45 PM	0	0	82	0	0	1	83
9:00 PM	0	1	71	0	1	0	73
9:15 PM	0	0	58	0	0	0	58
9:30 PM	0	0	55	0	0	0	55
9:45 PM	0	1	52	0	0	0	53
10:00 PM	0	0	50	0	0	0	50
10:15 PM	0	0	38	0	0	0	38
10:30 PM	0	0	39	0	0	0	39
10:45 PM	0	0	33	0	0	0	33
11:00 PM	0	0	27	0	0	0	27
11:15 PM	0	0	19	0	0	0	19
11:30 PM	0	0	15	0	0	0	15
11:45 PM	0	0	13	0	0	0	13

PM Total	4	11	4560	32	43	13	4663
Percentage	0.09%	0.24%	97.79%	0.69%	0.92%	0.28%	
PM Peak	1:15 PM	12:15 PM	4:30 PM	1:30 PM	12:00 PM	12:00 PM	4:30 PM
Volume	2	2	538	8	14	5	546
Day Total	8	21	7484	60	93	28	7694
Percentage	0.10%	0.27%	97.27%	0.78%	1.21%	0.36%	

Grafton Street (Route 122)
north of Jennings Street
City, State: Worcester, MA
Client: Kimley-Horn/ L. Juan
Site Code: 112858000-02



PRECISION
DATA
INDUSTRIES, LLC

157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

PDI File # 239484 ATR-A

Direction: NB

Weekly Report

Day Date	Wednesday 09/13/23		Thursday 09/14/23												Week Ave			
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM		
12:00	28	103	35	144	0	0	0	0	0	0	0	0	0	0	32	124		
12:15	22	124	30	145	0	0	0	0	0	0	0	0	0	0	26	135		
12:30	19	95	13	137	0	0	0	0	0	0	0	0	0	0	16	116		
12:45	12	118	18	151	0	0	0	0	0	0	0	0	0	0	15	135		
1:00	14	117	13	131	0	0	0	0	0	0	0	0	0	0	14	124		
1:15	13	128	10	137	0	0	0	0	0	0	0	0	0	0	12	133		
1:30	9	129	9	160	0	0	0	0	0	0	0	0	0	0	9	145		
1:45	9	133	9	157	0	0	0	0	0	0	0	0	0	0	9	145		
2:00	6	112	6	127	0	0	0	0	0	0	0	0	0	0	6	120		
2:15	3	145	11	163	0	0	0	0	0	0	0	0	0	0	7	154		
2:30	3	145	6	139	0	0	0	0	0	0	0	0	0	0	5	142		
2:45	6	135	10	143	0	0	0	0	0	0	0	0	0	0	8	139		
3:00	3	142	7	163	0	0	0	0	0	0	0	0	0	0	5	153		
3:15	6	162	7	151	0	0	0	0	0	0	0	0	0	0	7	157		
3:30	5	157	3	167	0	0	0	0	0	0	0	0	0	0	4	162		
3:45	6	143	12	162	0	0	0	0	0	0	0	0	0	0	9	153		
4:00	11	158	8	164	0	0	0	0	0	0	0	0	0	0	10	161		
4:15	5	138	7	146	0	0	0	0	0	0	0	0	0	0	6	142		
4:30	7	149	10	171	0	0	0	0	0	0	0	0	0	0	9	160		
4:45	8	166	13	171	0	0	0	0	0	0	0	0	0	0	11	169		
5:00	9	181	9	215	0	0	0	0	0	0	0	0	0	0	9	198		
5:15	17	187	26	185	0	0	0	0	0	0	0	0	0	0	22	186		
5:30	26	172	23	179	0	0	0	0	0	0	0	0	0	0	25	176		
5:45	32	159	43	174	0	0	0	0	0	0	0	0	0	0	38	167		
6:00	51	155	55	169	0	0	0	0	0	0	0	0	0	0	53	162		
6:15	49	166	59	195	0	0	0	0	0	0	0	0	0	0	54	181		
6:30	69	114	74	166	0	0	0	0	0	0	0	0	0	0	72	140		
6:45	83	144	67	155	0	0	0	0	0	0	0	0	0	0	75	150		
7:00	73	132	74	142	0	0	0	0	0	0	0	0	0	0	74	137		
7:15	106	108	121	151	0	0	0	0	0	0	0	0	0	0	114	130		
7:30	119	118	112	147	0	0	0	0	0	0	0	0	0	0	116	133		
7:45	101	114	98	149	0	0	0	0	0	0	0	0	0	0	100	132		
8:00	115	112	121	125	0	0	0	0	0	0	0	0	0	0	118	119		
8:15	139	114	115	120	0	0	0	0	0	0	0	0	0	0	127	117		
8:30	135	94	106	105	0	0	0	0	0	0	0	0	0	0	121	100		
8:45	107	71	131	99	0	0	0	0	0	0	0	0	0	0	119	85		
9:00	110	82	135	82	0	0	0	0	0	0	0	0	0	0	123	82		
9:15	121	73	116	88	0	0	0	0	0	0	0	0	0	0	119	81		
9:30	103	66	98	85	0	0	0	0	0	0	0	0	0	0	101	76		
9:45	108	70	129	64	0	0	0	0	0	0	0	0	0	0	119	67		
10:00	121	59	115	52	0	0	0	0	0	0	0	0	0	0	118	56		
10:15	121	51	110	64	0	0	0	0	0	0	0	0	0	0	116	58		
10:30	110	34	132	55	0	0	0	0	0	0	0	0	0	0	121	45		
10:45	129	44	117	43	0	0	0	0	0	0	0	0	0	0	123	44		
11:00	126	48	128	56	0	0	0	0	0	0	0	0	0	0	127	52		
11:15	114	41	126	38	0	0	0	0	0	0	0	0	0	0	120	40		
11:30	105	37	107	42	0	0	0	0	0	0	0	0	0	0	106	40		
11:45	96	19	109	24	0	0	0	0	0	0	0	0	0	0	103	22		
Total	2790	5464	2893	6198	0	0	0	0	0	0	0	0	0	0	2842	5831		
Day Total	8254		9091		0		0		0		0		0		8673			
Peak HR	8:00 AM	4:45 PM	10:30 AM	5:00 PM													10:30 AM	4:45 PM
Volume	496	706	503	753													491	728

Grafton Street (Route 122)
north of Jennings Street
City, State: Worcester, MA
Client: Kimley-Horn/ L. Juan
Site Code: 112858000-02



PRECISION
DATA
INDUSTRIES, LLC

157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

PDI File # 239484 ATR-A

Direction: SB

Weekly Report

Day Date	Wednesday 09/13/23		Thursday 09/14/23												Week Ave			
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM		
12:00	13	95	11	98	0	0	0	0	0	0	0	0	0	0	12	97		
12:15	9	106	8	131	0	0	0	0	0	0	0	0	0	0	9	119		
12:30	13	100	10	124	0	0	0	0	0	0	0	0	0	0	12	112		
12:45	12	104	7	106	0	0	0	0	0	0	0	0	0	0	10	105		
1:00	5	93	7	113	0	0	0	0	0	0	0	0	0	0	6	103		
1:15	4	121	9	136	0	0	0	0	0	0	0	0	0	0	7	129		
1:30	4	99	9	136	0	0	0	0	0	0	0	0	0	0	7	118		
1:45	8	92	4	135	0	0	0	0	0	0	0	0	0	0	6	114		
2:00	3	112	5	124	0	0	0	0	0	0	0	0	0	0	4	118		
2:15	3	127	8	119	0	0	0	0	0	0	0	0	0	0	6	123		
2:30	3	131	4	131	0	0	0	0	0	0	0	0	0	0	4	131		
2:45	6	139	6	150	0	0	0	0	0	0	0	0	0	0	6	145		
3:00	9	109	7	140	0	0	0	0	0	0	0	0	0	0	8	125		
3:15	6	120	3	122	0	0	0	0	0	0	0	0	0	0	5	121		
3:30	3	114	3	112	0	0	0	0	0	0	0	0	0	0	3	113		
3:45	5	102	5	106	0	0	0	0	0	0	0	0	0	0	5	104		
4:00	5	112	13	129	0	0	0	0	0	0	0	0	0	0	9	121		
4:15	19	113	21	116	0	0	0	0	0	0	0	0	0	0	20	115		
4:30	25	95	24	145	0	0	0	0	0	0	0	0	0	0	25	120		
4:45	35	142	27	127	0	0	0	0	0	0	0	0	0	0	31	135		
5:00	44	127	42	148	0	0	0	0	0	0	0	0	0	0	43	138		
5:15	47	120	43	126	0	0	0	0	0	0	0	0	0	0	45	123		
5:30	62	144	64	142	0	0	0	0	0	0	0	0	0	0	63	143		
5:45	76	128	76	125	0	0	0	0	0	0	0	0	0	0	76	127		
6:00	77	103	75	128	0	0	0	0	0	0	0	0	0	0	76	116		
6:15	78	93	96	87	0	0	0	0	0	0	0	0	0	0	87	90		
6:30	90	81	102	121	0	0	0	0	0	0	0	0	0	0	96	101		
6:45	97	84	90	120	0	0	0	0	0	0	0	0	0	0	94	102		
7:00	101	79	105	103	0	0	0	0	0	0	0	0	0	0	103	91		
7:15	125	96	111	100	0	0	0	0	0	0	0	0	0	0	118	98		
7:30	88	84	108	102	0	0	0	0	0	0	0	0	0	0	98	93		
7:45	115	88	135	95	0	0	0	0	0	0	0	0	0	0	125	92		
8:00	113	76	110	59	0	0	0	0	0	0	0	0	0	0	112	68		
8:15	100	53	115	82	0	0	0	0	0	0	0	0	0	0	108	68		
8:30	108	46	103	69	0	0	0	0	0	0	0	0	0	0	106	58		
8:45	101	56	121	83	0	0	0	0	0	0	0	0	0	0	111	70		
9:00	117	45	101	73	0	0	0	0	0	0	0	0	0	0	109	59		
9:15	108	56	104	58	0	0	0	0	0	0	0	0	0	0	106	57		
9:30	100	53	127	55	0	0	0	0	0	0	0	0	0	0	114	54		
9:45	114	38	112	53	0	0	0	0	0	0	0	0	0	0	113	46		
10:00	95	35	106	50	0	0	0	0	0	0	0	0	0	0	101	43		
10:15	116	35	112	38	0	0	0	0	0	0	0	0	0	0	114	37		
10:30	101	26	115	39	0	0	0	0	0	0	0	0	0	0	108	33		
10:45	106	31	107	33	0	0	0	0	0	0	0	0	0	0	107	32		
11:00	114	29	106	27	0	0	0	0	0	0	0	0	0	0	110	28		
11:15	102	26	131	19	0	0	0	0	0	0	0	0	0	0	117	23		
11:30	91	20	106	15	0	0	0	0	0	0	0	0	0	0	99	18		
11:45	110	19	117	13	0	0	0	0	0	0	0	0	0	0	114	16		
Total	2886	4097	3031	4663	0	0	0	0	0	0	0	0	0	0	2959	4380		
Day Total	6983		7694		0		0		0		0		0		7339			
Peak HR	7:15 AM	4:45 PM	7:30 AM	4:30 PM													7:15 AM	4:45 PM
Volume	441	533	468	546													453	538

Grafton Street (Route 122)
north of Jennings Street
City, State: Worcester, MA
Client: Kimley-Horn/ L. Juan
Site Code: 112858000-02



PDI File #: 239484 ATR-A (Speed)

Count Date
Wednesday, September 13, 2023

Speed (60-minute)

NB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	1	4	16	32	21	5	3	0	0	0	0	0	82	38.0	32.8
1:00 AM	0	0	2	5	16	15	5	1	0	0	0	0	0	44	38.0	34.1
2:00 AM	0	0	1	0	7	5	4	0	0	0	0	0	0	17	40.0	34.6
3:00 AM	0	0	0	2	5	9	2	1	0	1	0	0	0	20	40.6	36.8
4:00 AM	0	1	0	4	14	6	7	0	0	0	0	0	0	32	41.0	34.3
5:00 AM	0	0	4	18	34	19	6	1	0	0	0	0	0	82	37.0	32.6
6:00 AM	0	2	12	34	114	62	6	0	0	0	0	0	0	230	36.0	32.2
7:00 AM	0	1	10	65	180	86	6	1	0	0	0	0	0	349	36.0	32.2
8:00 AM	2	9	21	90	210	75	2	0	0	0	0	0	0	409	35.0	30.9
9:00 AM	0	2	14	76	212	73	4	1	0	0	0	0	1	383	35.0	31.7
10:00 AM	0	1	9	104	241	63	4	1	0	0	0	0	0	423	35.0	31.5
11:00 AM	3	5	15	139	177	44	3	1	0	0	0	0	0	387	34.0	30.0
12:00 PM	3	5	24	126	176	39	5	1	1	0	0	0	0	380	34.0	30.1
1:00 PM	3	1	18	135	229	59	5	1	0	0	0	0	0	451	34.0	30.8
2:00 PM	4	12	30	143	205	34	1	0	0	0	0	0	0	429	33.0	29.5
3:00 PM	1	2	25	200	234	43	1	0	1	1	0	0	0	508	34.0	30.1
4:00 PM	2	4	26	161	258	43	2	0	0	0	0	0	0	496	34.0	30.1
5:00 PM	0	4	32	228	239	54	6	0	0	0	0	0	0	563	33.0	29.9
6:00 PM	0	1	18	133	278	83	8	0	0	0	0	0	0	521	35.0	31.4
7:00 PM	0	2	11	100	262	49	9	0	0	0	0	0	0	433	34.0	31.3
8:00 PM	0	0	9	101	177	58	5	1	1	0	0	0	0	352	35.0	31.4
9:00 PM	1	0	16	57	133	58	6	1	0	0	0	0	0	272	35.0	31.6
10:00 PM	0	0	3	39	91	46	4	2	0	0	0	0	0	185	36.4	32.4
11:00 PM	0	0	6	20	68	40	8	2	1	0	0	0	0	145	37.0	33.2
Total	19	53	310	1996	3592	1084	114	18	4	2	0	0	1	7193	35.0	31.0
Percent	0.26%	0.74%	4.31%	27.75%	49.94%	15.07%	1.58%	0.25%	0.06%	0.03%	0.00%	0.00%	0.01%			

AM Peak	11:00 AM	8:00 AM	8:00 AM	11:00 AM	10:00 AM	7:00 AM	4:00 AM	12:00 AM		3:00 AM		9:00 AM	10:00 AM	
Volume	3	9	21	139	241	86	7	3	0	1	0	0	1	423

PM Peak	2:00 PM	2:00 PM	5:00 PM	5:00 PM	6:00 PM	6:00 PM	7:00 PM	10:00 PM	12:00 PM	3:00 PM			5:00 PM	
Volume	4	12	32	228	278	83	9	2	1	1	0	0	0	563

15th Percentile:	27.0 MPH	Average Speed:	31.0 MPH	Posted Speed Limit:	35 MPH
50th Percentile:	31.0 MPH	10 MPH Pace:	27 to 36 MPH	Number of Vehicles > 35 MPH:	814
85th Percentile:	35.0 MPH	Number in Pace:	5900	Percent of Vehicles > 35 MPH:	11.3%
95th Percentile:	37.0 MPH	Percent in Pace:	82.0%		

Grafton Street (Route 122)
north of Jennings Street
City, State: Worcester, MA
Client: Kimley-Horn/ L. Juan
Site Code: 112858000-02



PDI File #: 239484 ATR-A (Speed)

Count Date
Wednesday, September 13, 2023

Speed (60-minute)

SB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	1	3	20	15	6	1	0	0	0	0	0	46	39.3	34.9
1:00 AM	0	0	0	1	4	11	3	1	0	0	0	0	0	20	40.3	36.8
2:00 AM	0	0	1	0	3	7	3	1	0	0	0	0	0	15	40.9	36.7
3:00 AM	0	0	0	2	7	9	4	1	0	0	0	0	0	23	40.7	36.0
4:00 AM	0	0	1	2	22	44	12	1	0	0	0	0	0	82	39.9	36.1
5:00 AM	0	0	1	5	78	119	20	5	1	0	0	0	0	229	39.0	35.7
6:00 AM	0	1	2	13	128	156	46	5	0	0	0	0	0	351	39.0	35.4
7:00 AM	0	0	1	28	169	180	50	2	0	0	0	0	0	430	39.0	35.0
8:00 AM	1	1	8	36	174	172	26	4	2	0	0	0	0	424	38.0	34.3
9:00 AM	0	2	7	23	193	183	25	3	1	0	0	0	0	437	38.0	34.5
10:00 AM	0	1	5	21	219	160	19	0	0	0	0	0	0	425	37.0	33.9
11:00 AM	0	0	3	38	220	143	9	2	0	0	0	0	0	415	37.0	33.4
12:00 PM	1	0	7	67	209	96	9	0	0	0	0	0	0	389	36.0	32.3
1:00 PM	0	0	2	55	188	128	24	0	0	0	0	0	0	397	37.0	33.5
2:00 PM	0	1	8	85	268	122	10	2	0	0	0	0	0	496	36.0	32.4
3:00 PM	1	0	3	55	236	130	16	0	1	0	0	0	0	442	37.0	33.1
4:00 PM	0	1	4	57	239	130	17	0	0	0	0	0	0	448	37.0	33.2
5:00 PM	0	1	5	55	273	170	15	1	0	0	0	0	0	520	37.0	33.3
6:00 PM	0	0	1	18	158	162	17	1	2	0	0	0	0	359	38.0	34.4
7:00 PM	0	0	0	40	166	120	12	5	0	0	0	0	0	343	37.0	33.8
8:00 PM	0	0	1	14	113	85	15	5	0	0	0	0	0	233	38.0	34.4
9:00 PM	1	0	0	21	80	76	12	1	2	0	0	0	0	193	38.0	34.2
10:00 PM	0	0	2	11	45	52	12	4	2	0	0	0	0	128	39.0	35.3
11:00 PM	0	0	0	5	32	42	10	3	1	0	0	0	0	93	39.2	35.7
Total	4	8	63	655	3244	2512	392	48	12	0	0	0	0	6938	38.0	33.9
Percent	0.06%	0.12%	0.91%	9.44%	46.76%	36.21%	5.65%	0.69%	0.17%	0.00%	0.00%	0.00%	0.00%			

AM Peak	8:00 AM	9:00 AM	8:00 AM	11:00 AM	11:00 AM	9:00 AM	7:00 AM	5:00 AM	8:00 AM							9:00 AM
Volume	1	2	8	38	220	183	50	5	2	0	0	0	0	0	0	437

PM Peak	12:00 PM	2:00 PM	2:00 PM	2:00 PM	5:00 PM	5:00 PM	1:00 PM	7:00 PM	6:00 PM							5:00 PM
Volume	1	1	8	85	273	170	24	5	2	0	0	0	0	0	0	520

15th Percentile:	30.0 MPH	Average Speed:	33.9 MPH	Posted Speed Limit:	35 MPH
50th Percentile:	34.0 MPH	10 MPH Pace:	30 to 39 MPH	Number of Vehicles > 35 MPH:	2207
85th Percentile:	38.0 MPH	Number in Pace:	5756	Percent of Vehicles > 35 MPH:	31.8%
95th Percentile:	40.0 MPH	Percent in Pace:	83.0%		

Grafton Street (Route 122)
north of Jennings Street
City, State: Worcester, MA
Client: Kimley-Horn/ L. Juan
Site Code: 112858000-02



PDI File #: 239484 ATR-A (Speed)

Count Date
Wednesday, September 13, 2023

Speed (60-minute)
Combined NB and SB

Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	1	5	19	52	36	11	4	0	0	0	0	0	128	38.0	33.6
1:00 AM	0	0	2	6	20	26	8	2	0	0	0	0	0	64	39.6	34.9
2:00 AM	0	0	2	0	10	12	7	1	0	0	0	0	0	32	40.0	35.6
3:00 AM	0	0	0	4	12	18	6	2	0	1	0	0	0	43	40.7	36.4
4:00 AM	0	1	1	6	36	50	19	1	0	0	0	0	0	114	40.0	35.6
5:00 AM	0	0	5	23	112	138	26	6	1	0	0	0	0	311	39.0	34.9
6:00 AM	0	3	14	47	242	218	52	5	0	0	0	0	0	581	38.0	34.1
7:00 AM	0	1	11	93	349	266	56	3	0	0	0	0	0	779	38.0	33.8
8:00 AM	3	10	29	126	384	247	28	4	2	0	0	0	0	833	37.0	32.6
9:00 AM	0	4	21	99	405	256	29	4	1	0	0	0	1	820	37.0	33.2
10:00 AM	0	2	14	125	460	223	23	1	0	0	0	0	0	848	36.0	32.7
11:00 AM	3	5	18	177	397	187	12	3	0	0	0	0	0	802	36.0	31.8
12:00 PM	4	5	31	193	385	135	14	1	1	0	0	0	0	769	35.0	31.2
1:00 PM	3	1	20	190	417	187	29	1	0	0	0	0	0	848	36.0	32.0
2:00 PM	4	13	38	228	473	156	11	2	0	0	0	0	0	925	35.0	31.1
3:00 PM	2	2	28	255	470	173	17	0	2	1	0	0	0	950	35.0	31.5
4:00 PM	2	5	30	218	497	173	19	0	0	0	0	0	0	944	35.0	31.6
5:00 PM	0	5	37	283	512	224	21	1	0	0	0	0	0	1083	35.0	31.5
6:00 PM	0	1	19	151	436	245	25	1	2	0	0	0	0	880	36.0	32.6
7:00 PM	0	2	11	140	428	169	21	5	0	0	0	0	0	776	36.0	32.4
8:00 PM	0	0	10	115	290	143	20	6	1	0	0	0	0	585	36.0	32.6
9:00 PM	2	0	16	78	213	134	18	2	2	0	0	0	0	465	36.0	32.7
10:00 PM	0	0	5	50	136	98	16	6	2	0	0	0	0	313	38.0	33.6
11:00 PM	0	0	6	25	100	82	18	5	2	0	0	0	0	238	38.0	34.2
Total	23	61	373	2651	6836	3596	506	66	16	2	0	0	1	14131	36.0	32.4
Percent	0.16%	0.43%	2.64%	18.76%	48.38%	25.45%	3.58%	0.47%	0.11%	0.01%	0.00%	0.00%	0.01%			

AM Peak	8:00 AM	8:00 AM	8:00 AM	11:00 AM	10:00 AM	7:00 AM	7:00 AM	5:00 AM	8:00 AM	3:00 AM				9:00 AM	10:00 AM
Volume	3	10	29	177	460	266	56	6	2	1	0	0		1	848
PM Peak	12:00 PM	2:00 PM	2:00 PM	5:00 PM	5:00 PM	6:00 PM	1:00 PM	8:00 PM	3:00 PM	3:00 PM					5:00 PM
Volume	4	13	38	283	512	245	29	6	2	1	0	0		0	1083

15th Percentile:	28.0 MPH	Average Speed:	32.4 MPH	Posted Speed Limit:	35 MPH
50th Percentile:	32.0 MPH	10 MPH Pace:	28 to 37 MPH	Number of Vehicles > 35 MPH:	3021
85th Percentile:	36.0 MPH	Number in Pace:	11235	Percent of Vehicles > 35 MPH:	21.4%
95th Percentile:	39.0 MPH	Percent in Pace:	79.5%		

Grafton Street (Route 122)
north of Jennings Street
City, State: Worcester, MA
Client: Kimley-Horn/ L. Juan
Site Code: 112858000-02



PDI File #: 239484 ATR-A (Speed)

Count Date
Thursday, September 14, 2023

Speed (60-minute)

NB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	2	3	14	34	31	9	1	0	0	0	0	0	94	38.1	33.1
1:00 AM	0	0	4	8	9	11	9	0	1	0	0	0	0	42	40.0	34.0
2:00 AM	0	0	2	4	14	10	3	0	0	0	0	0	0	33	37.2	33.0
3:00 AM	0	0	0	3	8	13	3	0	0	1	0	0	0	28	38.0	35.6
4:00 AM	0	0	1	10	9	14	4	0	0	0	0	0	0	38	39.0	33.7
5:00 AM	0	0	5	16	36	31	5	1	1	0	0	0	0	95	38.0	33.3
6:00 AM	3	4	5	39	119	53	11	1	0	0	0	0	0	235	36.0	32.3
7:00 AM	0	1	7	65	184	79	9	1	0	0	0	0	0	346	36.0	32.3
8:00 AM	3	5	22	128	169	66	5	0	1	0	0	0	0	399	35.0	30.5
9:00 AM	0	0	9	102	228	82	5	1	1	0	0	0	0	428	35.0	31.8
10:00 AM	0	2	11	131	210	48	5	1	0	0	0	0	0	408	34.0	30.6
11:00 AM	2	9	21	150	200	44	2	3	0	0	0	0	0	431	34.0	30.1
12:00 PM	2	4	15	169	235	55	5	0	0	0	0	0	0	485	34.0	30.5
1:00 PM	1	3	33	173	205	51	4	0	0	1	0	0	0	471	34.0	30.1
2:00 PM	4	11	45	171	174	41	2	0	0	0	0	0	0	448	33.0	29.1
3:00 PM	0	6	30	142	255	74	11	0	0	0	0	0	0	518	35.0	30.9
4:00 PM	0	4	23	151	268	71	6	0	0	0	0	0	0	523	34.0	30.8
5:00 PM	3	4	25	207	312	65	5	1	0	0	0	0	0	622	34.0	30.5
6:00 PM	2	5	12	177	305	67	3	0	0	0	0	0	0	571	34.0	30.7
7:00 PM	1	2	15	183	239	66	0	1	0	0	0	0	0	507	34.0	30.5
8:00 PM	1	3	21	109	229	51	3	1	0	0	0	0	0	418	34.0	30.8
9:00 PM	0	2	17	61	178	38	5	2	2	0	0	0	0	305	35.0	31.4
10:00 PM	0	0	6	41	94	56	15	1	0	0	0	0	0	213	37.0	33.0
11:00 PM	0	2	14	21	66	36	13	1	0	0	0	0	0	153	37.0	32.3
Total	22	69	346	2275	3780	1153	142	16	6	2	0	0	0	7811	35.0	30.9
Percent	0.28%	0.88%	4.43%	29.13%	48.39%	14.76%	1.82%	0.20%	0.08%	0.03%	0.00%	0.00%	0.00%			

AM Peak	6:00 AM	11:00 AM	8:00 AM	11:00 AM	9:00 AM	9:00 AM	6:00 AM	11:00 AM	1:00 AM	3:00 AM					11:00 AM
Volume	3	9	22	150	228	82	11	3	1	1	0	0	0	431	
PM Peak	2:00 PM	2:00 PM	2:00 PM	5:00 PM	5:00 PM	3:00 PM	10:00 PM	9:00 PM	9:00 PM	1:00 PM				5:00 PM	
Volume	4	11	45	207	312	74	15	2	2	1	0	0	0	622	

15th Percentile:	27.0 MPH	Average Speed:	30.9 MPH	Posted Speed Limit:	35 MPH
50th Percentile:	31.0 MPH	10 MPH Pace:	27 to 36 MPH	Number of Vehicles > 35 MPH:	885
85th Percentile:	35.0 MPH	Number in Pace:	6374	Percent of Vehicles > 35 MPH:	11.3%
95th Percentile:	37.0 MPH	Percent in Pace:	81.6%		

Grafton Street (Route 122)

north of Jennings Street

City, State: Worcester, MA

Client: Kimley-Horn/ L. Juan

Site Code: 112858000-02



PRECISION
D A T A
INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

PDI File #: 239484 ATR-A (Speed)

Count Date

Thursday, September 14, 2023

Speed (60-minute)

SB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	0	2	9	18	4	2	0	0	0	0	0	35	39.9	36.1
1:00 AM	0	0	2	0	8	16	2	1	0	0	0	1	0	30	39.0	36.4
2:00 AM	2	0	1	2	8	8	3	0	0	0	0	0	0	24	38.0	32.0
3:00 AM	0	0	0	1	6	6	2	2	0	0	0	0	0	17	40.6	36.3
4:00 AM	0	0	0	5	21	39	19	2	1	1	0	0	0	88	42.0	36.8
5:00 AM	0	0	3	12	67	111	23	5	0	0	0	0	0	221	39.0	35.4
6:00 AM	0	0	2	21	100	179	51	4	0	0	0	0	0	357	40.0	35.7
7:00 AM	0	1	2	24	143	244	44	7	1	0	0	0	0	466	39.0	35.3
8:00 AM	0	2	2	45	201	168	31	2	0	0	0	0	0	451	38.0	34.0
9:00 AM	0	0	4	46	200	171	27	1	0	0	0	0	0	449	37.0	33.9
10:00 AM	0	0	1	33	221	150	28	4	0	0	0	0	0	437	37.0	34.0
11:00 AM	0	6	8	50	222	142	25	1	0	0	0	0	0	454	37.0	33.2
12:00 PM	0	0	0	40	235	160	28	2	1	0	0	0	0	466	38.0	34.0
1:00 PM	0	0	1	51	274	169	18	2	0	0	0	0	0	515	37.0	33.5
2:00 PM	0	0	9	72	289	146	17	1	0	0	0	0	0	534	36.0	32.9
3:00 PM	0	0	1	42	218	187	24	3	1	0	0	0	0	476	37.0	34.2
4:00 PM	0	2	8	55	240	181	34	1	1	0	0	0	0	522	37.0	33.7
5:00 PM	0	0	4	47	252	214	34	3	0	0	0	0	0	554	38.0	34.1
6:00 PM	0	0	7	45	228	140	27	1	0	0	0	0	0	448	38.0	33.6
7:00 PM	0	0	5	37	213	119	17	3	1	0	0	0	0	395	37.0	33.5
8:00 PM	0	1	2	26	143	102	16	3	0	0	0	0	0	293	37.0	33.7
9:00 PM	0	1	3	15	105	92	17	1	2	0	0	0	0	236	38.0	34.2
10:00 PM	0	0	0	7	67	68	16	5	0	0	0	0	0	163	39.0	35.3
11:00 PM	0	0	3	5	28	26	10	3	0	0	0	0	0	75	40.0	34.8
Total	2	13	68	683	3498	2856	517	59	8	1	0	1	0	7706	38.0	34.1
Percent	0.03%	0.17%	0.88%	8.86%	45.39%	37.06%	6.71%	0.77%	0.10%	0.01%	0.00%	0.01%	0.00%			

AM Peak	2:00 AM	11:00 AM	11:00 AM	11:00 AM	11:00 AM	7:00 AM	6:00 AM	7:00 AM	4:00 AM	4:00 AM		1:00 AM		7:00 AM
Volume	2	6	8	50	222	244	51	7	1	1	0	1	0	466

PM Peak		4:00 PM	2:00 PM	2:00 PM	2:00 PM	5:00 PM	4:00 PM	10:00 PM	9:00 PM					5:00 PM
Volume	0	2	9	72	289	214	34	5	2	0	0	0	0	554

15th Percentile:	30.0 MPH	Average Speed:	34.1 MPH	Posted Speed Limit:	35 MPH
50th Percentile:	34.0 MPH	10 MPH Pace:	30 to 39 MPH	Number of Vehicles > 35 MPH:	2538
85th Percentile:	38.0 MPH	Number in Pace:	6354	Percent of Vehicles > 35 MPH:	32.9%
95th Percentile:	40.0 MPH	Percent in Pace:	82.5%		

Grafton Street (Route 122)
north of Jennings Street
City, State: Worcester, MA
Client: Kimley-Horn/ L. Juan
Site Code: 112858000-02



PDI File #: 239484 ATR-A (Speed)

Count Date
Thursday, September 14, 2023

Speed (60-minute)

Combined NB and SB

Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	2	3	16	43	49	13	3	0	0	0	0	0	129	39.0	33.9
1:00 AM	0	0	6	8	17	27	11	1	1	0	0	1	0	72	40.0	35.0
2:00 AM	2	0	3	6	22	18	6	0	0	0	0	0	0	57	38.0	32.6
3:00 AM	0	0	0	4	14	19	5	2	0	1	0	0	0	45	40.4	35.9
4:00 AM	0	0	1	15	30	53	23	2	1	1	0	0	0	126	41.0	35.8
5:00 AM	0	0	8	28	103	142	28	6	1	0	0	0	0	316	39.0	34.8
6:00 AM	3	4	7	60	219	232	62	5	0	0	0	0	0	592	39.0	34.3
7:00 AM	0	2	9	89	327	323	53	8	1	0	0	0	0	812	38.0	34.0
8:00 AM	3	7	24	173	370	234	36	2	1	0	0	0	0	850	37.0	32.4
9:00 AM	0	0	13	148	428	253	32	2	1	0	0	0	0	877	36.0	32.9
10:00 AM	0	2	12	164	431	198	33	5	0	0	0	0	0	845	36.0	32.3
11:00 AM	2	15	29	200	422	186	27	4	0	0	0	0	0	885	36.0	31.7
12:00 PM	2	4	15	209	470	215	33	2	1	0	0	0	0	951	36.0	32.2
1:00 PM	1	3	34	224	479	220	22	2	0	1	0	0	0	986	36.0	31.8
2:00 PM	4	11	54	243	463	187	19	1	0	0	0	0	0	982	35.0	31.2
3:00 PM	0	6	31	184	473	261	35	3	1	0	0	0	0	994	36.0	32.4
4:00 PM	0	6	31	206	508	252	40	1	1	0	0	0	0	1045	36.0	32.2
5:00 PM	3	4	29	254	564	279	39	4	0	0	0	0	0	1176	36.0	32.2
6:00 PM	2	5	19	222	533	207	30	1	0	0	0	0	0	1019	36.0	32.0
7:00 PM	1	2	20	220	452	185	17	4	1	0	0	0	0	902	36.0	31.8
8:00 PM	1	4	23	135	372	153	19	4	0	0	0	0	0	711	36.0	32.0
9:00 PM	0	3	20	76	283	130	22	3	4	0	0	0	0	541	36.0	32.7
10:00 PM	0	0	6	48	161	124	31	6	0	0	0	0	0	376	38.0	34.0
11:00 PM	0	2	17	26	94	62	23	4	0	0	0	0	0	228	38.0	33.1
Total	24	82	414	2958	7278	4009	659	75	14	3	0	1	0	15517	37.0	32.5
Percent	0.15%	0.53%	2.67%	19.06%	46.90%	25.84%	4.25%	0.48%	0.09%	0.02%	0.00%	0.01%	0.00%			

AM Peak	6:00 AM	11:00 AM	11:00 AM	11:00 AM	10:00 AM	7:00 AM	6:00 AM	7:00 AM	1:00 AM	3:00 AM		1:00 AM		11:00 AM
Volume	3	15	29	200	431	323	62	8	1	1	0	1	0	885
PM Peak	2:00 PM	2:00 PM	2:00 PM	5:00 PM	5:00 PM	5:00 PM	4:00 PM	10:00 PM	9:00 PM	1:00 PM				5:00 PM
Volume	4	11	54	254	564	279	40	6	4	1	0	0	0	1176

15th Percentile:	28.0 MPH	Average Speed:	32.5 MPH	Posted Speed Limit:	35 MPH
50th Percentile:	33.0 MPH	10 MPH Pace:	28 to 37 MPH	Number of Vehicles > 35 MPH:	3423
85th Percentile:	37.0 MPH	Number in Pace:	12216	Percent of Vehicles > 35 MPH:	22.1%
95th Percentile:	39.0 MPH	Percent in Pace:	78.7%		

Grafton Street (Route 122)
 south of Sunderland Road
 City, State: Worcester, MA
 Client: Kimley-Horn/ L. Juan
 Site Code: 112858000-02



PDI File #: 239484 ATR-B

Count Date: **Wednesday, September 13, 2023**
 Direction: **NB**

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	17	0	0	0	17
12:15 AM	0	0	18	0	1	1	20
12:30 AM	0	0	12	0	0	0	12
12:45 AM	0	0	6	0	0	1	7
1:00 AM	0	0	11	0	1	0	12
1:15 AM	0	0	5	0	0	0	5
1:30 AM	0	0	7	0	0	1	8
1:45 AM	0	0	4	0	0	0	4
2:00 AM	0	0	5	0	0	0	5
2:15 AM	0	0	5	0	0	0	5
2:30 AM	0	0	1	0	1	1	3
2:45 AM	0	0	4	0	0	0	4
3:00 AM	0	0	4	0	0	0	4
3:15 AM	0	0	2	0	0	0	2
3:30 AM	0	0	0	0	1	1	2
3:45 AM	0	0	5	0	0	1	6
4:00 AM	0	0	5	0	1	0	6
4:15 AM	0	0	7	0	0	0	7
4:30 AM	0	0	16	0	0	0	16
4:45 AM	0	0	15	0	0	1	16
5:00 AM	0	0	24	0	0	0	24
5:15 AM	0	0	27	1	1	0	29
5:30 AM	0	0	33	0	2	0	35
5:45 AM	0	0	42	0	1	0	43
6:00 AM	0	0	50	0	2	2	54
6:15 AM	0	1	65	2	4	0	72
6:30 AM	0	0	82	5	3	0	90
6:45 AM	0	0	114	0	0	1	115
7:00 AM	0	1	121	3	2	0	127
7:15 AM	0	0	149	0	2	1	152
7:30 AM	0	0	168	2	3	3	176
7:45 AM	0	0	179	5	4	2	190
8:00 AM	0	0	180	3	3	1	187
8:15 AM	0	0	186	0	4	2	192
8:30 AM	0	0	152	2	4	2	160
8:45 AM	0	0	143	1	1	2	147
9:00 AM	1	0	119	0	8	0	128
9:15 AM	0	0	103	0	2	1	106
9:30 AM	0	0	126	1	1	1	129
9:45 AM	0	0	114	1	2	2	119
10:00 AM	0	0	129	0	1	4	134
10:15 AM	0	0	112	1	5	2	120
10:30 AM	0	0	87	0	1	4	92
10:45 AM	0	0	94	0	0	1	95
11:00 AM	0	0	107	1	2	1	111
11:15 AM	0	0	91	1	5	1	98
11:30 AM	0	0	86	0	2	0	88
11:45 AM	0	0	110	1	2	0	113

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	0	116	0	1	5	122
12:15 PM	0	0	114	0	3	3	120
12:30 PM	0	0	105	1	2	1	109
12:45 PM	0	0	100	0	4	2	106
1:00 PM	0	0	106	0	0	3	109
1:15 PM	0	0	114	1	0	2	117
1:30 PM	0	0	107	0	3	1	111
1:45 PM	0	0	128	0	2	0	130
2:00 PM	0	0	126	2	2	0	130
2:15 PM	0	0	106	2	3	3	114
2:30 PM	0	0	113	2	0	1	116
2:45 PM	0	0	113	1	3	0	117
3:00 PM	0	0	134	6	1	1	142
3:15 PM	0	0	131	2	1	0	134
3:30 PM	0	0	139	0	1	0	140
3:45 PM	0	0	125	1	1	1	128
4:00 PM	0	0	120	1	3	0	124
4:15 PM	0	0	114	3	0	1	118
4:30 PM	0	0	148	2	3	2	155
4:45 PM	0	0	134	0	2	0	136
5:00 PM	0	0	120	0	0	3	123
5:15 PM	0	0	150	0	4	2	156
5:30 PM	0	0	140	1	1	0	142
5:45 PM	0	0	139	0	2	0	141
6:00 PM	0	1	132	0	1	1	135
6:15 PM	0	0	131	1	1	0	133
6:30 PM	0	0	110	0	1	2	113
6:45 PM	0	0	127	0	1	2	130
7:00 PM	0	0	97	0	0	1	98
7:15 PM	0	0	98	2	0	1	101
7:30 PM	0	0	89	0	3	0	92
7:45 PM	0	0	78	1	0	0	79
8:00 PM	0	0	66	0	1	0	67
8:15 PM	0	0	75	0	0	0	75
8:30 PM	0	0	69	0	0	1	70
8:45 PM	0	0	63	1	0	0	64
9:00 PM	0	0	47	0	1	0	48
9:15 PM	0	0	45	0	0	0	45
9:30 PM	0	0	59	0	0	0	59
9:45 PM	0	0	39	0	0	1	40
10:00 PM	0	0	36	0	0	0	36
10:15 PM	0	0	29	0	1	0	30
10:30 PM	0	0	26	0	0	1	27
10:45 PM	0	0	24	0	0	1	25
11:00 PM	0	0	28	0	0	1	29
11:15 PM	0	0	23	0	1	1	25
11:30 PM	0	0	14	0	0	0	14
11:45 PM	0	0	18	0	0	0	18

AM Total	1	2	3142	30	72	40	3287
Percentage	0.03%	0.06%	95.59%	0.91%	2.19%	1.22%	
AM Peak	8:15 AM	6:15 AM	7:30 AM	6:15 AM	8:15 AM	9:45 AM	7:30 AM
Volume	1	2	713	10	17	12	745

PM Total	0	1	4465	30	53	44	4593
Percentage	0.00%	0.02%	97.21%	0.65%	1.15%	0.96%	
PM Peak	12:00 PM	5:15 PM	5:15 PM	2:15 PM	12:00 PM	12:00 PM	5:15 PM
Volume	0	1	561	11	10	11	574
Day Total	1	3	7607	60	125	84	7880
Percentage	0.01%	0.04%	96.54%	0.76%	1.59%	1.07%	

Grafton Street (Route 122)
south of Sunderland Road
City, State: Worcester, MA
Client: Kimley-Horn/ L. Juan
Site Code: 112858000-02



PDI File #: 239484 ATR-B

Count Date: Thursday, September 14, 2023
Direction: NB

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	24	0	0	0	24
12:15 AM	0	0	22	0	1	2	25
12:30 AM	0	0	18	0	0	0	18
12:45 AM	0	0	12	0	0	0	12
1:00 AM	0	0	15	0	1	0	16
1:15 AM	0	0	11	0	0	0	11
1:30 AM	0	0	9	0	0	0	9
1:45 AM	0	0	7	0	0	0	7
2:00 AM	0	0	3	0	0	1	4
2:15 AM	0	0	6	0	0	0	6
2:30 AM	0	0	7	0	0	1	8
2:45 AM	0	0	7	0	0	0	7
3:00 AM	0	0	6	0	0	1	7
3:15 AM	0	0	3	0	1	0	4
3:30 AM	0	0	1	0	2	0	3
3:45 AM	0	0	7	0	1	0	8
4:00 AM	0	0	5	0	0	1	6
4:15 AM	0	0	8	0	0	0	8
4:30 AM	0	0	13	0	0	0	13
4:45 AM	0	0	16	0	0	0	16
5:00 AM	0	0	22	0	0	0	22
5:15 AM	0	0	25	1	1	0	27
5:30 AM	0	1	29	0	1	0	31
5:45 AM	0	0	40	0	1	0	41
6:00 AM	0	0	56	0	2	2	60
6:15 AM	0	0	77	3	6	2	88
6:30 AM	0	0	86	3	1	0	90
6:45 AM	0	0	101	1	3	1	106
7:00 AM	0	0	112	2	2	2	118
7:15 AM	0	0	156	1	2	1	160
7:30 AM	0	0	146	2	2	2	152
7:45 AM	0	0	161	5	1	1	168
8:00 AM	0	0	172	1	0	1	174
8:15 AM	0	0	164	0	5	1	170
8:30 AM	0	0	134	1	1	2	138
8:45 AM	0	0	135	1	3	1	140
9:00 AM	0	0	123	0	4	1	128
9:15 AM	0	2	111	0	5	1	119
9:30 AM	1	0	122	0	4	2	129
9:45 AM	0	0	100	1	6	4	111
10:00 AM	1	0	104	1	4	4	114
10:15 AM	0	0	93	1	4	4	102
10:30 AM	0	0	93	0	7	0	100
10:45 AM	0	1	108	0	1	2	112
11:00 AM	1	0	108	0	1	0	110
11:15 AM	0	0	111	2	2	4	119
11:30 AM	0	0	115	0	3	2	120
11:45 AM	0	0	115	1	2	1	119

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	0	121	0	3	1	125
12:15 PM	0	0	132	0	3	1	136
12:30 PM	0	0	122	0	3	1	126
12:45 PM	0	0	124	1	2	3	130
1:00 PM	0	0	98	0	1	0	99
1:15 PM	0	0	133	1	4	1	139
1:30 PM	0	0	133	0	2	4	139
1:45 PM	0	0	111	1	4	3	119
2:00 PM	0	1	120	2	1	4	128
2:15 PM	0	0	113	2	3	3	121
2:30 PM	0	0	112	1	3	1	117
2:45 PM	0	0	113	5	4	3	125
3:00 PM	0	0	144	3	2	0	149
3:15 PM	0	0	150	3	3	0	156
3:30 PM	1	2	138	1	4	0	146
3:45 PM	0	1	130	2	5	0	138
4:00 PM	0	0	136	1	0	0	137
4:15 PM	0	0	147	1	3	2	153
4:30 PM	0	1	149	0	1	1	152
4:45 PM	0	2	166	1	3	0	172
5:00 PM	0	0	158	0	3	0	161
5:15 PM	2	0	154	0	3	0	159
5:30 PM	0	0	160	1	0	0	161
5:45 PM	0	1	141	1	1	0	144
6:00 PM	1	0	127	0	0	1	129
6:15 PM	0	3	157	1	2	0	163
6:30 PM	0	2	134	0	2	1	139
6:45 PM	0	1	135	0	0	0	136
7:00 PM	0	1	114	0	0	2	117
7:15 PM	0	2	113	1	0	0	116
7:30 PM	0	0	88	0	0	2	90
7:45 PM	0	1	94	1	0	0	96
8:00 PM	0	0	74	0	1	0	75
8:15 PM	0	0	74	0	2	7	83
8:30 PM	0	0	82	1	0	1	84
8:45 PM	0	1	63	0	3	2	69
9:00 PM	0	0	49	0	0	0	49
9:15 PM	0	0	51	0	0	1	52
9:30 PM	0	1	57	0	0	0	58
9:45 PM	0	0	43	0	0	0	43
10:00 PM	0	0	40	0	0	0	40
10:15 PM	0	0	34	0	0	0	34
10:30 PM	0	0	29	0	0	0	29
10:45 PM	0	0	31	0	0	1	32
11:00 PM	0	0	29	0	0	0	29
11:15 PM	0	0	28	0	0	0	28
11:30 PM	0	0	20	0	0	3	23
11:45 PM	0	0	16	0	0	0	16

AM Total	3	4	3119	27	80	47	3280
Percentage	0.09%	0.12%	95.09%	0.82%	2.44%	1.43%	
AM Peak	9:15 AM	8:30 AM	7:30 AM	7:00 AM	9:45 AM	9:30 AM	7:30 AM
Volume	2	2	643	10	21	14	664

PM Total	4	20	4887	31	71	49	5062
Percentage	0.08%	0.40%	96.54%	0.61%	1.40%	0.97%	
PM Peak	5:15 PM	6:15 PM	4:45 PM	2:30 PM	3:00 PM	1:30 PM	4:45 PM
Volume	3	7	638	12	14	14	653

Day Total	7	24	8006	58	151	96	8342
Percentage	0.08%	0.29%	95.97%	0.70%	1.81%	1.15%	

Grafton Street (Route 122)
 south of Sunderland Road
 City, State: Worcester, MA
 Client: Kimley-Horn/ L. Juan
 Site Code: 112858000-02



PDI File #: 239484 ATR-B

Count Date: **Wednesday, September 13, 2023**
 Direction: **SB**

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	9	0	0	1	10
12:15 AM	0	0	8	0	1	0	9
12:30 AM	0	0	11	0	0	0	11
12:45 AM	0	0	6	0	0	1	7
1:00 AM	0	0	6	0	0	0	6
1:15 AM	0	0	6	0	0	2	8
1:30 AM	0	0	5	0	1	0	6
1:45 AM	0	0	3	0	0	1	4
2:00 AM	0	0	2	0	0	2	4
2:15 AM	0	0	4	0	0	0	4
2:30 AM	0	0	2	0	0	0	2
2:45 AM	0	0	4	0	1	1	6
3:00 AM	0	0	8	0	0	0	8
3:15 AM	0	0	6	0	0	0	6
3:30 AM	0	0	4	0	0	0	4
3:45 AM	0	0	6	0	1	0	7
4:00 AM	0	0	9	0	1	1	11
4:15 AM	0	0	11	0	1	1	13
4:30 AM	0	0	13	0	0	0	13
4:45 AM	0	0	27	0	0	0	27
5:00 AM	0	0	36	1	2	2	41
5:15 AM	0	0	50	0	0	0	50
5:30 AM	0	0	68	0	2	0	70
5:45 AM	0	0	84	0	2	0	86
6:00 AM	0	0	93	0	2	0	95
6:15 AM	0	0	63	1	3	0	67
6:30 AM	0	0	81	4	1	2	88
6:45 AM	0	1	111	3	0	0	115
7:00 AM	0	0	86	0	2	1	89
7:15 AM	0	0	124	0	4	1	129
7:30 AM	0	0	95	0	0	2	97
7:45 AM	0	0	108	4	2	3	117
8:00 AM	0	0	106	2	1	1	110
8:15 AM	0	0	119	0	2	2	123
8:30 AM	0	0	135	4	4	0	143
8:45 AM	0	1	109	0	1	2	113
9:00 AM	0	0	109	1	1	1	112
9:15 AM	0	0	90	0	5	2	97
9:30 AM	0	0	121	1	3	1	126
9:45 AM	0	0	124	0	3	2	129
10:00 AM	0	0	99	1	2	1	103
10:15 AM	0	0	110	0	2	1	113
10:30 AM	0	0	106	0	3	1	110
10:45 AM	0	0	110	0	0	1	111
11:00 AM	0	0	112	2	3	2	119
11:15 AM	0	0	114	1	2	0	117
11:30 AM	0	0	100	1	3	2	106
11:45 AM	0	0	118	0	3	1	122

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	0	119	0	5	1	125
12:15 PM	0	0	114	0	6	1	121
12:30 PM	0	1	111	1	3	2	118
12:45 PM	0	0	104	0	2	1	107
1:00 PM	0	0	106	1	1	2	110
1:15 PM	0	0	112	0	2	3	117
1:30 PM	0	0	120	0	3	1	124
1:45 PM	0	0	96	1	3	3	103
2:00 PM	0	0	103	1	0	2	106
2:15 PM	0	0	146	3	3	2	154
2:30 PM	1	0	182	4	2	1	190
2:45 PM	0	0	154	3	0	1	158
3:00 PM	0	0	150	1	5	1	157
3:15 PM	0	0	141	1	4	1	147
3:30 PM	0	0	129	1	3	1	134
3:45 PM	0	0	151	0	2	1	154
4:00 PM	0	0	173	0	3	0	176
4:15 PM	0	0	194	4	2	0	200
4:30 PM	0	0	174	0	5	1	180
4:45 PM	0	0	193	1	1	0	195
5:00 PM	0	0	174	0	1	0	175
5:15 PM	0	0	185	1	1	1	188
5:30 PM	0	0	164	0	4	0	168
5:45 PM	0	0	171	1	1	0	173
6:00 PM	0	0	134	0	0	1	135
6:15 PM	0	0	113	0	3	0	116
6:30 PM	0	0	111	0	1	0	112
6:45 PM	0	0	109	0	0	1	110
7:00 PM	0	0	96	1	0	1	98
7:15 PM	0	0	115	0	1	1	117
7:30 PM	0	0	103	1	0	0	104
7:45 PM	0	0	75	1	0	1	77
8:00 PM	0	0	87	0	3	0	90
8:15 PM	0	0	68	1	1	0	70
8:30 PM	0	0	48	0	0	0	48
8:45 PM	0	0	45	0	0	0	45
9:00 PM	0	0	57	0	0	1	58
9:15 PM	0	0	44	0	1	0	45
9:30 PM	0	0	47	0	1	0	48
9:45 PM	0	0	44	0	0	1	45
10:00 PM	0	0	40	0	0	1	41
10:15 PM	0	0	28	0	0	0	28
10:30 PM	0	0	33	0	0	0	33
10:45 PM	0	0	28	0	0	2	30
11:00 PM	0	0	32	0	1	0	33
11:15 PM	0	0	12	0	0	0	12
11:30 PM	0	0	24	0	0	0	24
11:45 PM	0	0	18	0	1	1	20

AM Total	0	2	2931	26	64	41	3064
Percentage	0.00%	0.07%	95.66%	0.85%	2.09%	1.34%	
AM Peak	12:00 AM	6:00 AM	8:15 AM	7:45 AM	9:15 AM	7:30 AM	7:45 AM
Volume	0	1	472	10	13	8	493

PM Total	1	1	4977	28	75	37	5119
Percentage	0.02%	0.02%	97.23%	0.55%	1.47%	0.72%	
PM Peak	1:45 PM	12:00 PM	4:15 PM	2:00 PM	12:00 PM	1:00 PM	4:00 PM
Volume	1	1	735	11	16	9	751
Day Total	1	3	7908	54	139	78	8183
Percentage	0.01%	0.04%	96.64%	0.66%	1.70%	0.95%	

Grafton Street (Route 122)
south of Sunderland Road
City, State: Worcester, MA
Client: Kimley-Horn/ L. Juan
Site Code: 112858000-02



PDI File #: 239484 ATR-B

Count Date: Thursday, September 14, 2023
Direction: SB

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	13	0	0	0	13
12:15 AM	0	0	9	0	0	0	9
12:30 AM	0	0	4	0	0	0	4
12:45 AM	0	0	4	0	0	0	4
1:00 AM	0	0	9	0	0	1	10
1:15 AM	0	0	7	0	1	0	8
1:30 AM	0	0	4	0	2	0	6
1:45 AM	0	0	4	0	0	0	4
2:00 AM	0	0	6	0	0	2	8
2:15 AM	0	0	6	0	0	3	9
2:30 AM	0	0	6	0	0	1	7
2:45 AM	0	0	2	0	0	0	2
3:00 AM	0	0	11	0	2	0	13
3:15 AM	0	0	3	0	1	1	5
3:30 AM	0	0	4	0	0	0	4
3:45 AM	0	0	3	0	0	0	3
4:00 AM	0	0	14	0	0	0	14
4:15 AM	0	0	12	0	0	0	12
4:30 AM	0	0	18	0	0	0	18
4:45 AM	0	0	23	0	0	1	24
5:00 AM	0	0	34	0	0	0	34
5:15 AM	0	0	46	1	0	0	47
5:30 AM	0	1	54	0	1	0	56
5:45 AM	0	0	91	0	1	1	93
6:00 AM	0	1	86	0	3	0	90
6:15 AM	0	0	81	2	0	2	85
6:30 AM	0	1	91	2	3	1	98
6:45 AM	0	0	108	2	1	0	111
7:00 AM	0	0	105	1	3	2	111
7:15 AM	0	0	108	1	5	2	116
7:30 AM	0	0	131	0	4	1	136
7:45 AM	0	0	105	3	4	2	114
8:00 AM	0	0	107	2	1	1	111
8:15 AM	1	0	109	1	2	2	115
8:30 AM	0	0	131	3	4	4	142
8:45 AM	0	1	115	0	1	4	121
9:00 AM	0	0	100	1	3	2	106
9:15 AM	0	0	109	0	7	2	118
9:30 AM	0	2	105	1	2	1	111
9:45 AM	0	1	120	0	1	3	125
10:00 AM	0	1	104	1	2	1	109
10:15 AM	0	0	120	0	4	1	125
10:30 AM	0	0	85	0	3	2	90
10:45 AM	0	0	116	0	4	0	120
11:00 AM	0	1	121	2	1	3	128
11:15 AM	1	0	104	0	2	1	108
11:30 AM	0	0	117	1	2	4	124
11:45 AM	0	0	110	0	7	3	120

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	0	132	0	6	2	140
12:15 PM	0	0	149	0	4	0	153
12:30 PM	0	0	136	1	2	0	139
12:45 PM	0	0	113	0	6	1	120
1:00 PM	0	0	127	1	1	2	131
1:15 PM	0	0	130	0	1	0	131
1:30 PM	0	0	140	0	1	0	141
1:45 PM	0	1	117	0	4	0	122
2:00 PM	0	0	126	4	2	2	134
2:15 PM	0	0	129	1	2	1	133
2:30 PM	0	0	167	2	2	4	175
2:45 PM	1	0	157	1	2	3	164
3:00 PM	0	0	166	2	1	2	171
3:15 PM	0	0	200	0	4	2	206
3:30 PM	0	1	167	2	0	0	170
3:45 PM	0	1	182	1	5	0	189
4:00 PM	0	0	171	1	2	1	175
4:15 PM	0	1	179	1	4	0	185
4:30 PM	0	0	186	3	2	0	191
4:45 PM	0	0	202	0	1	1	204
5:00 PM	0	1	204	0	1	1	207
5:15 PM	0	0	187	1	1	1	190
5:30 PM	0	1	209	0	0	0	210
5:45 PM	0	0	164	0	1	0	165
6:00 PM	0	1	150	0	0	1	152
6:15 PM	0	2	155	1	1	2	161
6:30 PM	0	1	113	0	0	0	114
6:45 PM	0	0	161	0	0	1	162
7:00 PM	2	0	134	1	1	0	138
7:15 PM	0	0	138	0	0	1	139
7:30 PM	0	0	91	1	0	0	92
7:45 PM	0	0	87	0	0	0	87
8:00 PM	0	2	82	0	0	1	85
8:15 PM	0	2	72	1	0	0	75
8:30 PM	0	0	70	0	0	1	71
8:45 PM	0	2	62	0	0	2	66
9:00 PM	0	0	64	0	1	1	66
9:15 PM	0	0	58	0	0	0	58
9:30 PM	0	0	51	0	0	0	51
9:45 PM	0	0	55	0	0	0	55
10:00 PM	0	1	35	0	0	0	36
10:15 PM	0	0	34	0	0	1	35
10:30 PM	0	0	40	0	0	0	40
10:45 PM	0	0	24	0	0	0	24
11:00 PM	0	0	31	0	0	0	31
11:15 PM	0	0	15	0	0	0	15
11:30 PM	0	0	21	0	0	1	22
11:45 PM	0	0	16	0	0	0	16

AM Total	2	9	2975	24	77	54	3141
Percentage	0.06%	0.29%	94.72%	0.76%	2.45%	1.72%	
AM Peak	7:30 AM	9:15 AM	8:00 AM	7:45 AM	7:00 AM	8:15 AM	8:00 AM
Volume	1	4	462	9	16	12	489

PM Total	3	17	5599	25	58	35	5737
Percentage	0.05%	0.30%	97.59%	0.44%	1.01%	0.61%	
PM Peak	6:15 PM	8:00 PM	4:45 PM	2:00 PM	12:00 PM	2:30 PM	4:45 PM
Volume	2	6	802	8	18	11	811

Day Total	5	26	8574	49	135	89	8878
Percentage	0.06%	0.29%	96.58%	0.55%	1.52%	1.00%	

Grafton Street (Route 122)
 south of Sunderland Road
 City, State: Worcester, MA
 Client: Kimley-Horn/ L. Juan
 Site Code: 112858000-02



PRECISION
 DATA
 INDUSTRIES, LLC

157 Washington Street, Suite 2
 Hudson, MA 01749
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

PDI File # 239484 ATR-B

Direction: NB

Weekly Report

Day Date	Wednesday 09/13/23		Thursday 09/14/23												Week Ave			
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM		
12:00	17	122	24	125	0	0	0	0	0	0	0	0	0	0	21	124		
12:15	20	120	25	136	0	0	0	0	0	0	0	0	0	0	23	128		
12:30	12	109	18	126	0	0	0	0	0	0	0	0	0	0	15	118		
12:45	7	106	12	130	0	0	0	0	0	0	0	0	0	0	10	118		
1:00	12	109	16	99	0	0	0	0	0	0	0	0	0	0	14	104		
1:15	5	117	11	139	0	0	0	0	0	0	0	0	0	0	8	128		
1:30	8	111	9	139	0	0	0	0	0	0	0	0	0	0	9	125		
1:45	4	130	7	119	0	0	0	0	0	0	0	0	0	0	6	125		
2:00	5	130	4	128	0	0	0	0	0	0	0	0	0	0	5	129		
2:15	5	114	6	121	0	0	0	0	0	0	0	0	0	0	6	118		
2:30	3	116	8	117	0	0	0	0	0	0	0	0	0	0	6	117		
2:45	4	117	7	125	0	0	0	0	0	0	0	0	0	0	6	121		
3:00	4	142	7	149	0	0	0	0	0	0	0	0	0	0	6	146		
3:15	2	134	4	156	0	0	0	0	0	0	0	0	0	0	3	145		
3:30	2	140	3	146	0	0	0	0	0	0	0	0	0	0	3	143		
3:45	6	128	8	138	0	0	0	0	0	0	0	0	0	0	7	133		
4:00	6	124	6	137	0	0	0	0	0	0	0	0	0	0	6	131		
4:15	7	118	8	153	0	0	0	0	0	0	0	0	0	0	8	136		
4:30	16	155	13	152	0	0	0	0	0	0	0	0	0	0	15	154		
4:45	16	136	16	172	0	0	0	0	0	0	0	0	0	0	16	154		
5:00	24	123	22	161	0	0	0	0	0	0	0	0	0	0	23	142		
5:15	29	156	27	159	0	0	0	0	0	0	0	0	0	0	28	158		
5:30	35	142	31	161	0	0	0	0	0	0	0	0	0	0	33	152		
5:45	43	141	41	144	0	0	0	0	0	0	0	0	0	0	42	143		
6:00	54	135	60	129	0	0	0	0	0	0	0	0	0	0	57	132		
6:15	72	133	88	163	0	0	0	0	0	0	0	0	0	0	80	148		
6:30	90	113	90	139	0	0	0	0	0	0	0	0	0	0	90	126		
6:45	115	130	106	136	0	0	0	0	0	0	0	0	0	0	111	133		
7:00	127	98	118	117	0	0	0	0	0	0	0	0	0	0	123	108		
7:15	152	101	160	116	0	0	0	0	0	0	0	0	0	0	156	109		
7:30	176	92	152	90	0	0	0	0	0	0	0	0	0	0	164	91		
7:45	190	79	168	96	0	0	0	0	0	0	0	0	0	0	179	88		
8:00	187	67	174	75	0	0	0	0	0	0	0	0	0	0	181	71		
8:15	192	75	170	83	0	0	0	0	0	0	0	0	0	0	181	79		
8:30	160	70	138	84	0	0	0	0	0	0	0	0	0	0	149	77		
8:45	147	64	140	69	0	0	0	0	0	0	0	0	0	0	144	67		
9:00	128	48	128	49	0	0	0	0	0	0	0	0	0	0	128	49		
9:15	106	45	119	52	0	0	0	0	0	0	0	0	0	0	113	49		
9:30	129	59	129	58	0	0	0	0	0	0	0	0	0	0	129	59		
9:45	119	40	111	43	0	0	0	0	0	0	0	0	0	0	115	42		
10:00	134	36	114	40	0	0	0	0	0	0	0	0	0	0	124	38		
10:15	120	30	102	34	0	0	0	0	0	0	0	0	0	0	111	32		
10:30	92	27	100	29	0	0	0	0	0	0	0	0	0	0	96	28		
10:45	95	25	112	32	0	0	0	0	0	0	0	0	0	0	104	29		
11:00	111	29	110	29	0	0	0	0	0	0	0	0	0	0	111	29		
11:15	98	25	119	28	0	0	0	0	0	0	0	0	0	0	109	27		
11:30	88	14	120	23	0	0	0	0	0	0	0	0	0	0	104	19		
11:45	113	18	119	16	0	0	0	0	0	0	0	0	0	0	116	17		
Total	3287	4593	3280	5062	0	0	0	0	0	0	0	0	0	0	3284	4828		
Day Total	7880		8342		0		0		0		0		0		8111			
Peak HR	7:30 AM	5:15 PM	7:30 AM	4:45 PM													7:30 AM	4:30 PM
Volume	745	574	664	653													705	607

Grafton Street (Route 122)
 south of Sunderland Road
 City, State: Worcester, MA
 Client: Kimley-Horn/ L. Juan
 Site Code: 112858000-02



PRECISION
 DATA
 INDUSTRIES, LLC

157 Washington Street, Suite 2
 Hudson, MA 01749
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

PDI File # 239484 ATR-B

Direction: SB

Weekly Report

Day Date	Wednesday 09/13/23		Thursday 09/14/23												Week Ave			
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM		
12:00	10	125	13	140	0	0	0	0	0	0	0	0	0	0	12	133		
12:15	9	121	9	153	0	0	0	0	0	0	0	0	0	0	9	137		
12:30	11	118	4	139	0	0	0	0	0	0	0	0	0	0	8	129		
12:45	7	107	4	120	0	0	0	0	0	0	0	0	0	0	6	114		
1:00	6	110	10	131	0	0	0	0	0	0	0	0	0	0	8	121		
1:15	8	117	8	131	0	0	0	0	0	0	0	0	0	0	8	124		
1:30	6	124	6	141	0	0	0	0	0	0	0	0	0	0	6	133		
1:45	4	103	4	122	0	0	0	0	0	0	0	0	0	0	4	113		
2:00	4	106	8	134	0	0	0	0	0	0	0	0	0	0	6	120		
2:15	4	154	9	133	0	0	0	0	0	0	0	0	0	0	7	144		
2:30	2	190	7	175	0	0	0	0	0	0	0	0	0	0	5	183		
2:45	6	158	2	164	0	0	0	0	0	0	0	0	0	0	4	161		
3:00	8	157	13	171	0	0	0	0	0	0	0	0	0	0	11	164		
3:15	6	147	5	206	0	0	0	0	0	0	0	0	0	0	6	177		
3:30	4	134	4	170	0	0	0	0	0	0	0	0	0	0	4	152		
3:45	7	154	3	189	0	0	0	0	0	0	0	0	0	0	5	172		
4:00	11	176	14	175	0	0	0	0	0	0	0	0	0	0	13	176		
4:15	13	200	12	185	0	0	0	0	0	0	0	0	0	0	13	193		
4:30	13	180	18	191	0	0	0	0	0	0	0	0	0	0	16	186		
4:45	27	195	24	204	0	0	0	0	0	0	0	0	0	0	26	200		
5:00	41	175	34	207	0	0	0	0	0	0	0	0	0	0	38	191		
5:15	50	188	47	190	0	0	0	0	0	0	0	0	0	0	49	189		
5:30	70	168	56	210	0	0	0	0	0	0	0	0	0	0	63	189		
5:45	86	173	93	165	0	0	0	0	0	0	0	0	0	0	90	169		
6:00	95	135	90	152	0	0	0	0	0	0	0	0	0	0	93	144		
6:15	67	116	85	161	0	0	0	0	0	0	0	0	0	0	76	139		
6:30	88	112	98	114	0	0	0	0	0	0	0	0	0	0	93	113		
6:45	115	110	111	162	0	0	0	0	0	0	0	0	0	0	113	136		
7:00	89	98	111	138	0	0	0	0	0	0	0	0	0	0	100	118		
7:15	129	117	116	139	0	0	0	0	0	0	0	0	0	0	123	128		
7:30	97	104	136	92	0	0	0	0	0	0	0	0	0	0	117	98		
7:45	117	77	114	87	0	0	0	0	0	0	0	0	0	0	116	82		
8:00	110	90	111	85	0	0	0	0	0	0	0	0	0	0	111	88		
8:15	123	70	115	75	0	0	0	0	0	0	0	0	0	0	119	73		
8:30	143	48	142	71	0	0	0	0	0	0	0	0	0	0	143	60		
8:45	113	45	121	66	0	0	0	0	0	0	0	0	0	0	117	56		
9:00	112	58	106	66	0	0	0	0	0	0	0	0	0	0	109	62		
9:15	97	45	118	58	0	0	0	0	0	0	0	0	0	0	108	52		
9:30	126	48	111	51	0	0	0	0	0	0	0	0	0	0	119	50		
9:45	129	45	125	55	0	0	0	0	0	0	0	0	0	0	127	50		
10:00	103	41	109	36	0	0	0	0	0	0	0	0	0	0	106	39		
10:15	113	28	125	35	0	0	0	0	0	0	0	0	0	0	119	32		
10:30	110	33	90	40	0	0	0	0	0	0	0	0	0	0	100	37		
10:45	111	30	120	24	0	0	0	0	0	0	0	0	0	0	116	27		
11:00	119	33	128	31	0	0	0	0	0	0	0	0	0	0	124	32		
11:15	117	12	108	15	0	0	0	0	0	0	0	0	0	0	113	14		
11:30	106	24	124	22	0	0	0	0	0	0	0	0	0	0	115	23		
11:45	122	20	120	16	0	0	0	0	0	0	0	0	0	0	121	18		
Total	3064	5119	3141	5737	0	0	0	0	0	0	0	0	0	0	3103	5428		
Day Total	8183		8878		0		0		0		0		0		8531			
Peak HR	7:45 AM	4:00 PM	8:00 AM	4:45 PM													8:00 AM	4:15 PM
Volume	493	751	489	811													489	769

Grafton Street (Route 122)
 south of Sunderland Road
 City, State: Worcester, MA
 Client: Kimley-Horn/ L. Juan
 Site Code: 112858000-02



PDI File #: 239484 ATR-B (Speed)

Count Date
 Wednesday, September 13, 2023

Speed (60-minute)

NB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	2	6	26	18	5	0	0	0	0	0	0	57	37.0	33.4
1:00 AM	0	0	0	8	12	9	2	0	0	0	0	0	0	31	37.5	32.9
2:00 AM	0	0	0	2	9	4	2	0	0	0	0	0	0	17	36.6	33.9
3:00 AM	0	0	0	2	4	4	4	1	0	0	0	0	0	15	41.0	36.5
4:00 AM	0	0	1	13	19	8	4	1	0	0	0	0	0	46	38.3	32.6
5:00 AM	2	0	3	24	55	34	8	0	1	0	0	0	0	127	37.0	32.5
6:00 AM	4	10	25	86	111	35	7	2	0	0	0	0	0	280	35.0	29.9
7:00 AM	11	28	76	132	164	59	11	0	1	0	0	0	0	482	34.0	28.6
8:00 AM	15	50	90	157	134	45	5	0	0	0	0	0	0	496	33.0	27.1
9:00 AM	1	11	45	130	131	44	4	0	0	0	0	0	0	366	34.0	29.3
10:00 AM	9	22	51	111	128	34	7	2	1	0	0	0	0	365	34.0	28.6
11:00 AM	10	15	45	108	93	26	6	0	0	0	0	0	0	303	33.0	28.0
12:00 PM	5	12	55	114	128	32	6	1	1	0	0	1	0	355	34.0	28.9
1:00 PM	3	12	45	116	135	38	9	1	0	0	0	0	0	359	34.0	29.3
2:00 PM	14	30	44	120	109	31	9	0	0	0	0	0	0	357	34.0	27.7
3:00 PM	20	64	96	79	67	18	4	0	0	0	0	0	0	348	32.0	24.5
4:00 PM	30	53	81	71	68	20	3	0	0	0	0	0	0	326	32.0	24.4
5:00 PM	45	84	63	60	54	16	4	0	0	0	0	0	0	326	31.0	22.8
6:00 PM	20	38	61	111	112	27	8	1	1	0	0	0	0	379	33.0	27.0
7:00 PM	6	19	40	94	113	24	9	1	0	1	0	0	0	307	34.0	28.8
8:00 PM	0	2	22	73	113	36	7	1	0	0	0	0	0	254	35.0	30.7
9:00 PM	0	1	11	48	77	29	5	1	0	0	0	0	0	172	35.0	31.1
10:00 PM	0	0	5	38	45	24	4	2	0	0	1	0	0	119	36.0	31.9
11:00 PM	0	0	4	22	33	22	6	1	1	0	0	0	0	89	37.0	32.8
Total	195	451	865	1725	1940	637	139	15	6	1	1	1	0	5976	34.0	28.2
Percent	3.26%	7.55%	14.47%	28.87%	32.46%	10.66%	2.33%	0.25%	0.10%	0.02%	0.02%	0.02%	0.00%			

AM Peak	8:00 AM	8:00 AM	8:00 AM	8:00 AM	7:00 AM	7:00 AM	7:00 AM	6:00 AM	5:00 AM						8:00 AM
Volume	15	50	90	157	164	59	11	2	1	0	0	0	0	0	496
PM Peak	5:00 PM	5:00 PM	3:00 PM	2:00 PM	1:00 PM	1:00 PM	1:00 PM	10:00 PM	12:00 PM	7:00 PM	10:00 PM	12:00 PM			6:00 PM
Volume	45	84	96	120	135	38	9	2	1	1	1	1	0	379	

15th Percentile:	21.0 MPH	Average Speed:	28.2 MPH	Posted Speed Limit:	35 MPH
50th Percentile:	29.0 MPH	10 MPH Pace:	25 to 34 MPH	Number of Vehicles > 35 MPH:	600
85th Percentile:	34.0 MPH	Number in Pace:	3665	Percent of Vehicles > 35 MPH:	10.0%
95th Percentile:	38.0 MPH	Percent in Pace:	61.3%		

Grafton Street (Route 122)
 south of Sunderland Road
 City, State: Worcester, MA
 Client: Kimley-Horn/ L. Juan
 Site Code: 112858000-02



PDI File #: 239484 ATR-B (Speed)

Count Date
 Wednesday, September 13, 2023

Speed (60-minute)

Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	2	3	15	13	2	0	0	0	0	0	0	35	37.8	33.5
1:00 AM	0	0	1	7	8	7	1	0	0	0	0	0	0	24	37.0	31.9
2:00 AM	0	0	0	0	9	4	2	1	0	0	0	0	0	16	39.3	35.4
3:00 AM	0	0	0	3	4	10	4	1	1	0	0	0	0	23	40.7	36.7
4:00 AM	0	0	0	7	18	29	8	2	1	0	0	0	0	65	40.0	35.6
5:00 AM	0	1	1	11	87	84	27	7	0	1	0	0	0	219	40.0	35.4
6:00 AM	1	1	4	24	162	134	24	1	1	0	0	0	0	352	37.0	34.0
7:00 AM	0	0	11	57	186	121	19	3	2	0	0	0	0	399	37.0	33.2
8:00 AM	0	1	6	68	253	134	25	3	0	0	0	0	0	490	37.0	33.1
9:00 AM	1	2	5	52	218	124	39	2	0	0	0	0	0	443	38.0	33.6
10:00 AM	0	1	1	64	224	128	21	5	0	0	0	0	0	444	36.0	33.3
11:00 AM	0	0	7	88	238	98	18	0	0	0	0	0	0	449	36.0	32.3
12:00 PM	0	0	3	73	207	95	10	2	1	0	0	0	0	391	36.0	32.5
1:00 PM	1	0	14	65	192	124	16	3	0	0	0	0	0	415	37.0	32.7
2:00 PM	0	0	14	136	292	122	7	1	0	0	0	0	0	572	36.0	31.8
3:00 PM	0	1	5	114	335	117	10	0	1	0	0	0	0	583	36.0	32.1
4:00 PM	0	0	8	145	435	144	11	0	1	0	0	0	0	744	35.0	32.1
5:00 PM	0	1	13	141	389	128	12	4	1	0	0	0	0	689	35.0	31.9
6:00 PM	0	0	4	58	269	127	14	1	0	0	0	0	0	473	36.0	33.2
7:00 PM	0	1	3	74	193	91	14	1	0	0	0	0	0	377	36.0	32.6
8:00 PM	0	1	3	34	135	50	8	0	0	0	0	0	0	231	36.0	32.7
9:00 PM	0	0	3	27	82	67	10	4	0	0	0	0	0	193	37.0	33.6
10:00 PM	0	0	1	16	57	39	9	0	0	0	0	0	0	122	37.0	33.5
11:00 PM	0	0	1	11	37	30	7	1	1	0	0	0	0	88	38.0	34.0
Total	3	10	110	1278	4045	2020	318	42	10	1	0	0	0	7837	36.0	32.8
Percent	0.04%	0.13%	1.40%	16.31%	51.61%	25.78%	4.06%	0.54%	0.13%	0.01%	0.00%	0.00%	0.00%			

AM Peak	6:00 AM	9:00 AM	7:00 AM	11:00 AM	8:00 AM	6:00 AM	9:00 AM	5:00 AM	7:00 AM	5:00 AM					8:00 AM
Volume	1	2	11	88	253	134	39	7	2	1	0	0	0	490	
PM Peak	1:00 PM	3:00 PM	1:00 PM	4:00 PM	4:00 PM	4:00 PM	1:00 PM	5:00 PM	12:00 PM					4:00 PM	
Volume	1	1	14	145	435	144	16	4	1	0	0	0	0	744	

15th Percentile:	29.0 MPH	Average Speed:	32.8 MPH	Posted Speed Limit:	35 MPH
50th Percentile:	33.0 MPH	10 MPH Pace:	28 to 37 MPH	Number of Vehicles > 35 MPH:	1697
85th Percentile:	36.0 MPH	Number in Pace:	6459	Percent of Vehicles > 35 MPH:	21.7%
95th Percentile:	39.0 MPH	Percent in Pace:	82.4%		

Grafton Street (Route 122)
 south of Sunderland Road
 City, State: Worcester, MA
 Client: Kimley-Horn/ L. Juan
 Site Code: 112858000-02



PDI File #: 239484 ATR-B (Speed)

Count Date
 Wednesday, September 13, 2023

Speed (60-minute)
Combined NB and SB

Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	4	9	41	31	7	0	0	0	0	0	0	92	37.4	33.5
1:00 AM	0	0	1	15	20	16	3	0	0	0	0	0	0	55	37.0	32.5
2:00 AM	0	0	0	2	18	8	4	1	0	0	0	0	0	33	37.6	34.7
3:00 AM	0	0	0	5	8	14	8	2	1	0	0	0	0	38	41.0	36.6
4:00 AM	0	0	1	20	37	37	12	3	1	0	0	0	0	111	39.0	34.4
5:00 AM	2	1	4	35	142	118	35	7	1	1	0	0	0	346	39.0	34.4
6:00 AM	5	11	29	110	273	169	31	3	1	0	0	0	0	632	37.0	32.2
7:00 AM	11	28	87	189	350	180	30	3	3	0	0	0	0	881	36.0	30.7
8:00 AM	15	51	96	225	387	179	30	3	0	0	0	0	0	986	36.0	30.1
9:00 AM	2	13	50	182	349	168	43	2	0	0	0	0	0	809	37.0	31.6
10:00 AM	9	23	52	175	352	162	28	7	1	0	0	0	0	809	36.0	31.2
11:00 AM	10	15	52	196	331	124	24	0	0	0	0	0	0	752	35.0	30.6
12:00 PM	5	12	58	187	335	127	16	3	2	0	0	1	0	746	35.0	30.8
1:00 PM	4	12	59	181	327	162	25	4	0	0	0	0	0	774	36.0	31.1
2:00 PM	14	30	58	256	401	153	16	1	0	0	0	0	0	929	35.0	30.2
3:00 PM	20	65	101	193	402	135	14	0	1	0	0	0	0	931	35.0	29.3
4:00 PM	30	53	89	216	503	164	14	0	1	0	0	0	0	1070	35.0	29.7
5:00 PM	45	85	76	201	443	144	16	4	1	0	0	0	0	1015	35.0	29.0
6:00 PM	20	38	65	169	381	154	22	2	1	0	0	0	0	852	35.0	30.4
7:00 PM	6	20	43	168	306	115	23	2	0	1	0	0	0	684	35.6	30.9
8:00 PM	0	3	25	107	248	86	15	1	0	0	0	0	0	485	36.0	31.7
9:00 PM	0	1	14	75	159	96	15	5	0	0	0	0	0	365	37.0	32.5
10:00 PM	0	0	6	54	102	63	13	2	0	0	1	0	0	241	37.0	32.7
11:00 PM	0	0	5	33	70	52	13	2	2	0	0	0	0	177	37.0	33.4
Total	198	461	975	3003	5985	2657	457	57	16	2	1	1	0	13813	36.0	30.8
Percent	1.43%	3.34%	7.06%	21.74%	43.33%	19.24%	3.31%	0.41%	0.12%	0.01%	0.01%	0.01%	0.00%			

AM Peak	8:00 AM	8:00 AM	8:00 AM	8:00 AM	8:00 AM	7:00 AM	9:00 AM	5:00 AM	7:00 AM	5:00 AM					8:00 AM
Volume	15	51	96	225	387	180	43	7	3	1	0	0	0	986	
PM Peak	5:00 PM	5:00 PM	3:00 PM	2:00 PM	4:00 PM	4:00 PM	1:00 PM	9:00 PM	12:00 PM	7:00 PM	10:00 PM	12:00 PM		4:00 PM	
Volume	45	85	101	256	503	164	25	5	2	1	1	1	0	1070	

15th Percentile:	26.0 MPH	Average Speed:	30.8 MPH	Posted Speed Limit:	35 MPH
50th Percentile:	32.0 MPH	10 MPH Pace:	27 to 36 MPH	Number of Vehicles > 35 MPH:	2297
85th Percentile:	36.0 MPH	Number in Pace:	9873	Percent of Vehicles > 35 MPH:	16.6%
95th Percentile:	39.0 MPH	Percent in Pace:	71.5%		

Grafton Street (Route 122)

south of Sunderland Road

City, State: Worcester, MA

Client: Kimley-Horn/ L. Juan

Site Code: 112858000-02



PRECISION
D A T A
INDUSTRIES, LLC

157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

PDI File #: 239484 ATR-B (Speed)

Count Date

Thursday, September 14, 2023

Speed (60-minute)

NB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	2	14	29	24	10	0	0	1	0	0	0	80	39.0	34.1
1:00 AM	0	0	2	6	15	15	4	0	0	0	0	0	0	42	39.0	34.0
2:00 AM	0	0	0	4	9	4	6	0	0	0	0	0	0	23	40.7	34.8
3:00 AM	0	0	0	5	10	3	3	1	1	0	0	0	0	23	42.1	35.0
4:00 AM	0	0	0	3	18	13	9	1	0	0	0	0	0	44	40.0	35.4
5:00 AM	0	1	4	18	44	41	6	1	0	0	0	0	0	115	38.0	33.3
6:00 AM	0	13	27	70	117	49	9	0	1	0	0	0	0	286	35.3	30.4
7:00 AM	7	18	59	93	163	60	11	0	0	0	0	0	0	411	35.0	29.5
8:00 AM	9	44	79	135	158	41	9	1	0	0	0	0	0	476	33.0	27.8
9:00 AM	7	15	52	116	150	44	9	3	0	0	1	0	0	397	34.0	29.2
10:00 AM	3	10	34	118	149	41	3	1	2	0	0	0	0	361	34.0	29.7
11:00 AM	11	16	53	109	141	45	6	2	0	0	0	0	0	383	34.0	28.7
12:00 PM	9	19	55	115	135	47	7	1	1	0	0	0	0	389	34.0	28.7
1:00 PM	9	24	60	131	110	49	4	2	0	1	0	0	0	390	34.0	28.2
2:00 PM	15	34	59	108	97	21	5	0	1	1	0	0	0	341	33.0	26.8
3:00 PM	38	78	108	62	31	11	2	0	0	0	0	0	0	330	29.0	22.0
4:00 PM	43	88	95	70	49	16	0	0	0	0	0	0	0	361	30.0	22.4
5:00 PM	34	75	91	71	54	23	4	0	0	0	0	0	0	352	32.0	23.7
6:00 PM	19	66	73	112	74	29	8	0	0	0	0	0	0	381	32.0	25.5
7:00 PM	4	18	53	120	125	37	8	0	0	0	0	0	0	365	34.0	28.7
8:00 PM	9	8	38	80	110	26	9	0	0	0	0	0	0	280	34.0	28.9
9:00 PM	3	3	14	57	83	29	3	1	0	0	0	0	0	193	35.0	30.2
10:00 PM	0	1	9	27	60	31	4	2	0	0	0	0	0	134	36.0	32.0
11:00 PM	0	2	3	33	36	18	4	2	1	0	0	0	0	99	37.3	31.8
Total	220	533	970	1677	1967	717	143	18	7	3	1	0	0	6256	34.0	28.0
Percent	3.52%	8.52%	15.51%	26.81%	31.44%	11.46%	2.29%	0.29%	0.11%	0.05%	0.02%	0.00%	0.00%			

AM Peak	11:00 AM	8:00 AM	8:00 AM	8:00 AM	7:00 AM	7:00 AM	7:00 AM	9:00 AM	10:00 AM	12:00 AM	9:00 AM					8:00 AM
Volume	11	44	79	135	163	60	11	3	2	1	1	0	0			476

PM Peak	4:00 PM	4:00 PM	3:00 PM	1:00 PM	12:00 PM	1:00 PM	8:00 PM	1:00 PM	12:00 PM	1:00 PM						1:00 PM
Volume	43	88	108	131	135	49	9	2	1	1	0	0	0			390

15th Percentile:	21.0 MPH	Average Speed:	28.0 MPH	Posted Speed Limit:	35 MPH
50th Percentile:	29.0 MPH	10 MPH Pace:	25 to 34 MPH	Number of Vehicles > 35 MPH:	659
85th Percentile:	34.0 MPH	Number in Pace:	3644	Percent of Vehicles > 35 MPH:	10.5%
95th Percentile:	38.0 MPH	Percent in Pace:	58.2%		

Grafton Street (Route 122)

south of Sunderland Road

City, State: Worcester, MA

Client: Kimley-Horn/ L. Juan

Site Code: 112858000-02



PRECISION
D A T A
INDUSTRIES, LLC

157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

PDI File #: 239484 ATR-B (Speed)

Count Date

Thursday, September 14, 2023

Speed (60-minute)

SB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	1	6	12	6	3	2	0	0	0	0	0	30	39.7	34.0
1:00 AM	0	0	0	2	8	13	3	1	1	0	0	0	0	28	40.0	36.0
2:00 AM	0	0	2	8	9	4	1	1	0	0	0	0	0	25	35.4	31.4
3:00 AM	0	0	1	3	10	5	4	0	0	0	0	0	0	23	39.7	33.8
4:00 AM	0	0	0	3	18	35	11	1	0	0	0	0	0	68	40.0	36.3
5:00 AM	0	1	5	13	67	103	29	6	2	0	0	0	0	226	40.0	35.6
6:00 AM	0	1	1	19	173	131	35	4	2	1	0	0	0	367	39.0	34.7
7:00 AM	0	7	6	29	227	179	26	4	0	0	0	0	0	478	37.0	33.9
8:00 AM	0	0	7	59	238	147	25	1	1	1	0	0	0	479	37.0	33.4
9:00 AM	1	1	15	66	188	140	30	1	0	0	0	0	0	442	37.0	33.1
10:00 AM	0	1	7	41	202	149	23	1	0	0	0	0	0	424	37.0	33.5
11:00 AM	1	1	15	72	228	108	10	1	0	0	0	0	0	436	36.0	32.2
12:00 PM	0	2	15	102	232	104	11	2	1	0	0	0	0	469	36.0	32.0
1:00 PM	0	1	9	62	263	122	19	1	0	0	0	0	0	477	36.0	32.6
2:00 PM	0	4	40	155	252	93	12	2	0	0	0	0	0	558	35.0	30.9
3:00 PM	0	1	18	133	405	113	15	0	0	0	0	0	0	685	35.0	31.7
4:00 PM	1	1	23	166	354	121	14	0	0	0	0	0	0	680	35.0	31.6
5:00 PM	0	3	21	139	368	122	20	4	0	0	1	0	0	678	35.0	31.9
6:00 PM	0	0	15	78	303	125	12	1	0	0	0	0	0	534	36.0	32.3
7:00 PM	0	1	5	92	224	86	6	1	1	0	1	0	0	417	35.0	32.0
8:00 PM	1	0	7	43	139	66	10	0	0	1	0	0	0	267	36.0	32.5
9:00 PM	0	0	1	31	107	64	13	2	0	0	0	0	0	218	37.0	33.4
10:00 PM	0	1	1	15	77	29	7	1	0	0	0	0	0	131	36.5	33.0
11:00 PM	0	0	2	9	35	25	6	2	0	1	0	0	0	80	38.2	34.1
Total	4	26	217	1346	4139	2090	345	39	8	4	2	0	0	8220	36.0	32.6
Percent	0.05%	0.32%	2.64%	16.37%	50.35%	25.43%	4.20%	0.47%	0.10%	0.05%	0.02%	0.00%	0.00%			

AM Peak	9:00 AM	7:00 AM	9:00 AM	11:00 AM	8:00 AM	7:00 AM	6:00 AM	5:00 AM	5:00 AM	6:00 AM						8:00 AM
Volume	1	7	15	72	238	179	35	6	2	1	0	0	0	0	0	479

PM Peak	4:00 PM	2:00 PM	2:00 PM	4:00 PM	3:00 PM	6:00 PM	5:00 PM	5:00 PM	12:00 PM	8:00 PM	5:00 PM					3:00 PM
Volume	1	4	40	166	405	125	20	4	1	1	1	0	0	0	0	685

15th Percentile:	29.0 MPH	Average Speed:	32.6 MPH	Posted Speed Limit:	35 MPH
50th Percentile:	33.0 MPH	10 MPH Pace:	28 to 37 MPH	Number of Vehicles > 35 MPH:	1766
85th Percentile:	36.0 MPH	Number in Pace:	6638	Percent of Vehicles > 35 MPH:	21.5%
95th Percentile:	39.0 MPH	Percent in Pace:	80.8%		

Grafton Street (Route 122)

south of Sunderland Road

City, State: Worcester, MA

Client: Kimley-Horn/ L. Juan

Site Code: 112858000-02



PRECISION
D A T A
INDUSTRIES, LLC

157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

PDI File #: 239484 ATR-B (Speed)

Count Date

Thursday, September 14, 2023

Speed (60-minute)

Combined NB and SB

Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	3	20	41	30	13	2	0	1	0	0	0	110	39.0	34.0
1:00 AM	0	0	2	8	23	28	7	1	1	0	0	0	0	70	39.0	34.8
2:00 AM	0	0	2	12	18	8	7	1	0	0	0	0	0	48	39.9	33.0
3:00 AM	0	0	1	8	20	8	7	1	1	0	0	0	0	46	40.0	34.4
4:00 AM	0	0	0	6	36	48	20	2	0	0	0	0	0	112	40.0	35.9
5:00 AM	0	2	9	31	111	144	35	7	2	0	0	0	0	341	39.0	34.8
6:00 AM	0	14	28	89	290	180	44	4	3	1	0	0	0	653	37.0	32.8
7:00 AM	7	25	65	122	390	239	37	4	0	0	0	0	0	889	37.0	31.9
8:00 AM	9	44	86	194	396	188	34	2	1	1	0	0	0	955	36.0	30.6
9:00 AM	8	16	67	182	338	184	39	4	0	0	1	0	0	839	36.0	31.3
10:00 AM	3	11	41	159	351	190	26	2	2	0	0	0	0	785	36.0	31.8
11:00 AM	12	17	68	181	369	153	16	3	0	0	0	0	0	819	36.0	30.6
12:00 PM	9	21	70	217	367	151	18	3	2	0	0	0	0	858	35.0	30.5
1:00 PM	9	25	69	193	373	171	23	3	0	1	0	0	0	867	35.0	30.6
2:00 PM	15	38	99	263	349	114	17	2	1	1	0	0	0	899	34.3	29.3
3:00 PM	38	79	126	195	436	124	17	0	0	0	0	0	0	1015	34.0	28.5
4:00 PM	44	89	118	236	403	137	14	0	0	0	0	0	0	1041	34.0	28.4
5:00 PM	34	78	112	210	422	145	24	4	0	0	1	0	0	1030	35.0	29.1
6:00 PM	19	66	88	190	377	154	20	1	0	0	0	0	0	915	35.0	29.5
7:00 PM	4	19	58	212	349	123	14	1	1	0	1	0	0	782	35.0	30.5
8:00 PM	10	8	45	123	249	92	19	0	0	1	0	0	0	547	35.0	30.6
9:00 PM	3	3	15	88	190	93	16	3	0	0	0	0	0	411	36.0	31.9
10:00 PM	0	2	10	42	137	60	11	3	0	0	0	0	0	265	36.0	32.5
11:00 PM	0	2	5	42	71	43	10	4	1	1	0	0	0	179	38.0	32.9
Total	224	559	1187	3023	6106	2807	488	57	15	7	3	0	0	14476	36.0	30.6
Percent	1.55%	3.86%	8.20%	20.88%	42.18%	19.39%	3.37%	0.39%	0.10%	0.05%	0.02%	0.00%	0.00%			

AM Peak	11:00 AM	8:00 AM	8:00 AM	8:00 AM	8:00 AM	7:00 AM	6:00 AM	5:00 AM	6:00 AM	12:00 AM	9:00 AM			8:00 AM
Volume	12	44	86	194	396	239	44	7	3	1	1	0	0	955

PM Peak	4:00 PM	4:00 PM	3:00 PM	2:00 PM	3:00 PM	1:00 PM	5:00 PM	5:00 PM	12:00 PM	1:00 PM	5:00 PM			4:00 PM
Volume	44	89	126	263	436	171	24	4	2	1	1	0	0	1041

15th Percentile:	25.0 MPH	Average Speed:	30.6 MPH	Posted Speed Limit:	35 MPH
50th Percentile:	31.0 MPH	10 MPH Pace:	27 to 36 MPH	Number of Vehicles > 35 MPH:	2425
85th Percentile:	36.0 MPH	Number in Pace:	10095	Percent of Vehicles > 35 MPH:	16.8%
95th Percentile:	39.0 MPH	Percent in Pace:	69.7%		

PDI File #: **239484 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Sunderland Road W: Sunderland Road**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars and Heavy Vehicles (Combined)

	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	59	63	0	122	26	14	26	0	66	70	63	0	0	133	5	24	0	0	29	350
7:15 AM	0	80	55	0	135	52	18	41	0	111	65	78	0	0	143	9	47	2	0	58	447
7:30 AM	2	65	42	0	109	45	22	23	0	90	76	99	1	0	176	9	39	2	0	50	425
7:45 AM	0	74	42	0	116	69	13	34	0	116	97	93	0	0	190	8	35	3	0	46	468
Total	2	278	202	0	482	192	67	124	0	383	308	333	1	0	642	31	145	7	0	183	1690
8:00 AM	2	60	36	0	98	41	15	39	0	95	100	81	0	0	181	11	45	6	0	62	436
8:15 AM	0	81	48	0	129	47	24	29	0	100	92	102	0	0	194	15	35	4	0	54	477
8:30 AM	1	76	32	0	109	38	25	40	0	103	75	84	1	0	160	22	41	0	0	63	435
8:45 AM	3	77	40	0	120	34	28	32	0	94	76	72	0	0	148	4	34	3	0	41	403
Total	6	294	156	0	456	160	92	140	0	392	343	339	1	0	683	52	155	13	0	220	1751
Grand Total	8	572	358	0	938	352	159	264	0	775	651	672	2	0	1325	83	300	20	0	403	3441
Approach %	0.9	61.0	38.2	0.0		45.4	20.5	34.1	0.0		49.1	50.7	0.2	0.0		20.6	74.4	5.0	0.0		
Total %	0.2	16.6	10.4	0.0	27.3	10.2	4.6	7.7	0.0	22.5	18.9	19.5	0.1	0.0	38.5	2.4	8.7	0.6	0.0	11.7	
Exiting Leg Total	1044					1309					919					169					3441
Cars	8	549	348	0	905	337	156	250	0	743	636	636	2	0	1274	82	293	18	0	393	3315
% Cars	100.0	96.0	97.2	0.0	96.5	95.7	98.1	94.7	0.0	95.9	97.7	94.6	100.0	0.0	96.2	98.8	97.7	90.0	0.0	97.5	96.3
Exiting Leg Total	991					1277					881					166					3315
Heavy Vehicles	0	23	10	0	33	15	3	14	0	32	15	36	0	0	51	1	7	2	0	10	126
% Heavy Vehicles	0.0	4.0	2.8	0.0	3.5	4.3	1.9	5.3	0.0	4.1	2.3	5.4	0.0	0.0	3.8	1.2	2.3	10.0	0.0	2.5	3.7
Exiting Leg Total	53					32					38					3					126

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

7:45 AM	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	74	42	0	116	69	13	34	0	116	97	93	0	0	190	8	35	3	0	46	468
8:00 AM	2	60	36	0	98	41	15	39	0	95	100	81	0	0	181	11	45	6	0	62	436
8:15 AM	0	81	48	0	129	47	24	29	0	100	92	102	0	0	194	15	35	4	0	54	477
8:30 AM	1	76	32	0	109	38	25	40	0	103	75	84	1	0	160	22	41	0	0	63	435
Total Volume	3	291	158	0	452	195	77	142	0	414	364	360	1	0	725	56	156	13	0	225	1816
% Approach Total	0.7	64.4	35.0	0.0		47.1	18.6	34.3	0.0		50.2	49.7	0.1	0.0		24.9	69.3	5.8	0.0		
PHF	0.375	0.898	0.823	0.000	0.876	0.707	0.770	0.888	0.000	0.892	0.910	0.882	0.250	0.000	0.934	0.636	0.867	0.542	0.000	0.893	0.952
Cars	3	279	152	0	434	187	76	132	0	395	353	341	1	0	695	55	151	11	0	217	1741
Cars %	100.0	95.9	96.2	0.0	96.0	95.9	98.7	93.0	0.0	95.4	97.0	94.7	100.0	0.0	95.9	98.2	96.8	84.6	0.0	96.4	95.9
Heavy Vehicles	0	12	6	0	18	8	1	10	0	19	11	19	0	0	30	1	5	2	0	8	75
Heavy Vehicles %	0.0	4.1	3.8	0.0	4.0	4.1	1.3	7.0	0.0	4.6	3.0	5.3	0.0	0.0	4.1	1.8	3.2	15.4	0.0	3.6	4.1
Cars Enter Leg	3	279	152	0	434	187	76	132	0	395	353	341	1	0	695	55	151	11	0	217	1741
Heavy Enter Leg	0	12	6	0	18	8	1	10	0	19	11	19	0	0	30	1	5	2	0	8	75
Total Entering Leg	3	291	158	0	452	195	77	142	0	414	364	360	1	0	725	56	156	13	0	225	1816
Cars Exiting Leg	539					656					466					80					1741
Heavy Exiting Leg	29					22					23					1					75
Total Exiting Leg	568					678					489					81					1816

PDI File #: **239484 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Sunderland Road W: Sunderland Road**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars

	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	56	61	0	117	23	13	26	0	62	69	59	0	0	128	5	24	0	0	29	336
7:15 AM	0	76	54	0	130	50	18	40	0	108	64	76	0	0	140	9	45	2	0	56	434
7:30 AM	2	63	41	0	106	44	21	22	0	87	76	90	1	0	167	9	39	2	0	50	410
7:45 AM	0	70	40	0	110	66	13	30	0	109	91	88	0	0	179	8	34	3	0	45	443
Total	2	265	196	0	463	183	65	118	0	366	300	313	1	0	614	31	142	7	0	180	1623
8:00 AM	2	58	33	0	93	38	15	37	0	90	97	78	0	0	175	11	44	5	0	60	418
8:15 AM	0	79	48	0	127	46	23	27	0	96	92	98	0	0	190	15	33	3	0	51	464
8:30 AM	1	72	31	0	104	37	25	38	0	100	73	77	1	0	151	21	40	0	0	61	416
8:45 AM	3	75	40	0	118	33	28	30	0	91	74	70	0	0	144	4	34	3	0	41	394
Total	6	284	152	0	442	154	91	132	0	377	336	323	1	0	660	51	151	11	0	213	1692
Grand Total	8	549	348	0	905	337	156	250	0	743	636	636	2	0	1274	82	293	18	0	393	3315
Approach %	0.9	60.7	38.5	0.0		45.4	21.0	33.6	0.0		49.9	49.9	0.2	0.0		20.9	74.6	4.6	0.0		
Total %	0.2	16.6	10.5	0.0	27.3	10.2	4.7	7.5	0.0	22.4	19.2	19.2	0.1	0.0	38.4	2.5	8.8	0.5	0.0	11.9	
Exiting Leg Total	991					1277					881					166					3315

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

	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	70	40	0	110	66	13	30	0	109	91	88	0	0	179	8	34	3	0	45	443
8:00 AM	2	58	33	0	93	38	15	37	0	90	97	78	0	0	175	11	44	5	0	60	418
8:15 AM	0	79	48	0	127	46	23	27	0	96	92	98	0	0	190	15	33	3	0	51	464
8:30 AM	1	72	31	0	104	37	25	38	0	100	73	77	1	0	151	21	40	0	0	61	416
Total Volume	3	279	152	0	434	187	76	132	0	395	353	341	1	0	695	55	151	11	0	217	1741
% Approach Total	0.7	64.3	35.0	0.0		47.3	19.2	33.4	0.0		50.8	49.1	0.1	0.0		25.3	69.6	5.1	0.0		
PHF	0.375	0.883	0.792	0.000	0.854	0.708	0.760	0.868	0.000	0.906	0.910	0.870	0.250	0.000	0.914	0.655	0.858	0.550	0.000	0.889	0.938
Entering Leg	3	279	152	0	434	187	76	132	0	395	353	341	1	0	695	55	151	11	0	217	1741
Exiting Leg	539					656					466					80					1741
Total	973					1051					1161					297					3482

PDI File #: **239484 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Sunderland Road W: Sunderland Road**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**



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

	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	3	2	0	5	3	1	0	0	4	1	4	0	0	5	0	0	0	0	0	14
7:15 AM	0	4	1	0	5	2	0	1	0	3	1	2	0	0	3	0	2	0	0	2	13
7:30 AM	0	2	1	0	3	1	1	1	0	3	0	9	0	0	9	0	0	0	0	0	15
7:45 AM	0	4	2	0	6	3	0	4	0	7	6	5	0	0	11	0	1	0	0	1	25
Total	0	13	6	0	19	9	2	6	0	17	8	20	0	0	28	0	3	0	0	3	67
8:00 AM	0	2	3	0	5	3	0	2	0	5	3	3	0	0	6	0	1	1	0	2	18
8:15 AM	0	2	0	0	2	1	1	2	0	4	0	4	0	0	4	0	2	1	0	3	13
8:30 AM	0	4	1	0	5	1	0	2	0	3	2	7	0	0	9	1	1	0	0	2	19
8:45 AM	0	2	0	0	2	1	0	2	0	3	2	2	0	0	4	0	0	0	0	0	9
Total	0	10	4	0	14	6	1	8	0	15	7	16	0	0	23	1	4	2	0	7	59
Grand Total	0	23	10	0	33	15	3	14	0	32	15	36	0	0	51	1	7	2	0	10	126
Approach %	0.0	69.7	30.3	0.0		46.9	9.4	43.8	0.0		29.4	70.6	0.0	0.0		10.0	70.0	20.0	0.0		
Total %	0.0	18.3	7.9	0.0	26.2	11.9	2.4	11.1	0.0	25.4	11.9	28.6	0.0	0.0	40.5	0.8	5.6	1.6	0.0	7.9	
Exiting Leg Total	53					32					38					3					126
Buses	0	5	3	0	8	8	1	4	0	13	3	12	0	0	15	1	5	2	0	8	44
% Buses	0.0	21.7	30.0	0.0	24.2	53.3	33.3	28.6	0.0	40.6	20.0	33.3	0.0	0.0	29.4	100.0	71.4	100.0	0.0	80.0	34.9
Exiting Leg Total	22					11					10					1					44
Single-Unit Trucks	0	13	4	0	17	6	2	2	0	10	8	16	0	0	24	0	2	0	0	2	53
% Single-Unit	0.0	56.5	40.0	0.0	51.5	40.0	66.7	14.3	0.0	31.3	53.3	44.4	0.0	0.0	47.1	0.0	28.6	0.0	0.0	20.0	42.1
Exiting Leg Total	22					14					15					2					53
Articulated Trucks	0	5	3	0	8	1	0	8	0	9	4	8	0	0	12	0	0	0	0	0	29
% Articulated	0.0	21.7	30.0	0.0	24.2	6.7	0.0	57.1	0.0	28.1	26.7	22.2	0.0	0.0	23.5	0.0	0.0	0.0	0.0	0.0	23.0
Exiting Leg Total	9					7					13					0					29

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

	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	4	2	0	6	3	0	4	0	7	6	5	0	0	11	0	1	0	0	1	25
8:00 AM	0	2	3	0	5	3	0	2	0	5	3	3	0	0	6	0	1	1	0	2	18
8:15 AM	0	2	0	0	2	1	1	2	0	4	0	4	0	0	4	0	2	1	0	3	13
8:30 AM	0	4	1	0	5	1	0	2	0	3	2	7	0	0	9	1	1	0	0	2	19
Total Volume	0	12	6	0	18	8	1	10	0	19	11	19	0	0	30	1	5	2	0	8	75
% Approach Total	0.0	66.7	33.3	0.0		42.1	5.3	52.6	0.0		36.7	63.3	0.0	0.0		12.5	62.5	25.0	0.0		
PHF	0.000	0.750	0.500	0.000	0.750	0.667	0.250	0.625	0.000	0.679	0.458	0.679	0.000	0.000	0.682	0.250	0.625	0.500	0.000	0.667	0.750
Buses	0	5	2	0	7	5	0	4	0	9	3	7	0	0	10	1	3	2	0	6	32
Buses %	0.0	41.7	33.3	0.0	38.9	62.5	0.0	40.0	0.0	47.4	27.3	36.8	0.0	0.0	33.3	100.0	60.0	100.0	0.0	75.0	42.7
Single-Unit Trucks	0	5	3	0	8	3	1	2	0	6	5	8	0	0	13	0	2	0	0	2	29
Single-Unit %	0.0	41.7	50.0	0.0	44.4	37.5	100.0	20.0	0.0	31.6	45.5	42.1	0.0	0.0	43.3	0.0	40.0	0.0	0.0	25.0	38.7
Articulated Trucks	0	2	1	0	3	0	0	4	0	4	3	4	0	0	7	0	0	0	0	0	14
Articulated %	0.0	16.7	16.7	0.0	16.7	0.0	0.0	40.0	0.0	21.1	27.3	21.1	0.0	0.0	23.3	0.0	0.0	0.0	0.0	0.0	18.7
Buses	0	5	2	0	7	5	0	4	0	9	3	7	0	0	10	1	3	2	0	6	32
Single-Unit Trucks	0	5	3	0	8	3	1	2	0	6	5	8	0	0	13	0	2	0	0	2	29
Articulated Trucks	0	2	1	0	3	0	0	4	0	4	3	4	0	0	7	0	0	0	0	0	14
Total Entering Leg	0	12	6	0	18	8	1	10	0	19	11	19	0	0	30	1	5	2	0	8	75
Buses	14					8					10					0					32
Single-Unit Trucks	11					10					7					1					29
Articulated Trucks	4					4					6					0					14
Total Exiting Leg	29					22					23					1					75

PDI File #: **239484 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Sunderland Road W: Sunderland Road**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Buses

	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	1	1	0	0	2	0	2	0	0	2	0	0	0	0	0	4
7:15 AM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	2	0	0	2	3
7:30 AM	0	0	1	0	1	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	4
7:45 AM	0	2	2	0	4	2	0	2	0	4	3	2	0	0	5	0	1	0	0	1	14
Total	0	2	3	0	5	5	1	2	0	8	3	6	0	0	9	0	3	0	0	3	25
8:00 AM	0	1	0	0	1	2	0	1	0	3	0	2	0	0	2	0	1	1	0	2	8
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1	0	2	3
8:30 AM	0	2	0	0	2	1	0	1	0	2	0	2	0	0	2	1	0	0	0	1	7
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total	0	3	0	0	3	3	0	2	0	5	0	6	0	0	6	1	2	2	0	5	19
Grand Total	0	5	3	0	8	8	1	4	0	13	3	12	0	0	15	1	5	2	0	8	44
Approach %	0.0	62.5	37.5	0.0		61.5	7.7	30.8	0.0		20.0	80.0	0.0	0.0		12.5	62.5	25.0	0.0		
Total %	0.0	11.4	6.8	0.0	18.2	18.2	2.3	9.1	0.0	29.5	6.8	27.3	0.0	0.0	34.1	2.3	11.4	4.5	0.0	18.2	
Exiting Leg Total	22					11					10					1					44

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

	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	2	2	0	4	2	0	2	0	4	3	2	0	0	5	0	1	0	0	1	14
8:00 AM	0	1	0	0	1	2	0	1	0	3	0	2	0	0	2	0	1	1	0	2	8
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1	0	2	3
8:30 AM	0	2	0	0	2	1	0	1	0	2	0	2	0	0	2	1	0	0	0	1	7
Total Volume	0	5	2	0	7	5	0	4	0	9	3	7	0	0	10	1	3	2	0	6	32
% Approach Total	0.0	71.4	28.6	0.0		55.6	0.0	44.4	0.0		30.0	70.0	0.0	0.0		16.7	50.0	33.3	0.0		
PHF	0.000	0.625	0.250	0.000	0.438	0.625	0.000	0.500	0.000	0.563	0.250	0.875	0.000	0.000	0.500	0.250	0.750	0.500	0.000	0.750	0.571
Entering Leg	0	5	2	0	7	5	0	4	0	9	3	7	0	0	10	1	3	2	0	6	32
Exiting Leg	14					8					10					0					32
Total	21					17					20					6					64

PDI File #: **239484 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Sunderland Road W: Sunderland Road**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Single-Unit Trucks

	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	2	0	0	2	2	0	0	0	2	1	2	0	0	3	0	0	0	0	0	7	
7:15 AM	0	4	1	0	5	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	7	
7:30 AM	0	0	0	0	0	0	1	0	0	1	0	4	0	0	4	0	0	0	0	0	5	
7:45 AM	0	1	0	0	1	1	0	0	0	1	3	2	0	0	5	0	0	0	0	0	7	
Total	0	7	1	0	8	3	1	0	0	4	5	9	0	0	14	0	0	0	0	0	26	
8:00 AM	0	1	2	0	3	1	0	0	0	1	2	1	0	0	3	0	0	0	0	0	7	
8:15 AM	0	1	0	0	1	1	1	1	0	3	0	3	0	0	3	0	1	0	0	1	8	
8:30 AM	0	2	1	0	3	0	0	1	0	1	0	2	0	0	2	0	1	0	0	1	7	
8:45 AM	0	2	0	0	2	1	0	0	0	1	1	1	0	0	2	0	0	0	0	0	5	
Total	0	6	3	0	9	3	1	2	0	6	3	7	0	0	10	0	2	0	0	2	27	
Grand Total	0	13	4	0	17	6	2	2	0	10	8	16	0	0	24	0	2	0	0	2	53	
Approach %	0.0	76.5	23.5	0.0		60.0	20.0	20.0	0.0		33.3	66.7	0.0	0.0		0.0	100.0	0.0	0.0			
Total %	0.0	24.5	7.5	0.0	32.1	11.3	3.8	3.8	0.0	18.9	15.1	30.2	0.0	0.0	45.3	0.0	3.8	0.0	0.0	3.8		
Exiting Leg Total						22					14					15					2	53

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

	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	1	0	0	1	1	0	0	0	1	3	2	0	0	5	0	0	0	0	0	7	
8:00 AM	0	1	2	0	3	1	0	0	0	1	2	1	0	0	3	0	0	0	0	0	7	
8:15 AM	0	1	0	0	1	1	1	1	0	3	0	3	0	0	3	0	1	0	0	1	8	
8:30 AM	0	2	1	0	3	0	0	1	0	1	0	2	0	0	2	0	1	0	0	1	7	
Total Volume	0	5	3	0	8	3	1	2	0	6	5	8	0	0	13	0	2	0	0	2	29	
% Approach Total	0.0	62.5	37.5	0.0		50.0	16.7	33.3	0.0		38.5	61.5	0.0	0.0		0.0	100.0	0.0	0.0			
PHF	0.000	0.625	0.375	0.000	0.667	0.750	0.250	0.500	0.000	0.500	0.417	0.667	0.000	0.000	0.650	0.000	0.500	0.000	0.000	0.500	0.906	
Entering Leg	0	5	3	0	8	3	1	2	0	6	5	8	0	0	13	0	2	0	0	2	29	
Exiting Leg						11					10					7					1	29
Total						19					16					20					3	58

PDI File #: **239484 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Sunderland Road W: Sunderland Road**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Articulated Trucks

	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	1	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
7:15 AM	0	0	0	0	0	1	0	1	0	2	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	3
7:30 AM	0	2	0	0	2	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	6
7:45 AM	0	1	0	0	1	0	0	2	0	2	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	4
Total	0	4	2	0	6	1	0	4	0	5	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	16
8:00 AM	0	0	1	0	1	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3
8:15 AM	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	2	3	0	0	5	0	0	0	0	0	0	0	0	0	0	5
8:45 AM	0	0	0	0	0	0	0	2	0	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3
Total	0	1	1	0	2	0	0	4	0	4	4	3	0	0	7	0	0	0	0	0	0	0	0	0	0	13
Grand Total	0	5	3	0	8	1	0	8	0	9	4	8	0	0	12	0	0	0	0	0	0	0	0	0	0	29
Approach %	0.0	62.5	37.5	0.0		11.1	0.0	88.9	0.0		33.3	66.7	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	17.2	10.3	0.0	27.6	3.4	0.0	27.6	0.0	31.0	13.8	27.6	0.0	0.0	41.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	9					7					13					0					29					

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

	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	1	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
7:15 AM	0	0	0	0	0	1	0	1	0	2	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	3
7:30 AM	0	2	0	0	2	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	6
7:45 AM	0	1	0	0	1	0	0	2	0	2	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	4
Total Volume	0	4	2	0	6	1	0	4	0	5	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	16
% Approach Total	0.0	66.7	33.3	0.0		20.0	0.0	80.0	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		
PHF	0.000	0.500	0.250	0.000	0.500	0.250	0.000	0.500	0.000	0.625	0.000	0.417	0.000	0.000	0.417	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.667
Entering Leg	0	4	2	0	6	1	0	4	0	5	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	16
Exiting Leg	6					2					8					0					16					
Total	12					7					13					0					32					

PDI File #: **239484 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Sunderland Road W: Sunderland Road**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Bicycles (on Roadway and Crosswalks)

	Grafton Street (Route 122)								Sunderland Road								Grafton Street (Route 122)								Sunderland 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	1	1	0	0	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	0		
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	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	0		
Total	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	3		
8:00 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		
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	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	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	0	0	0	0	0	0	0	0	0	0		
Total	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2		
Grand Total	0	0	0	0	0	0	0	0	0	0	0	2	2	4	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	5		
Approach %	0.0	0.0	0.0	0.0	0.0	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	100.0	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	40.0	40.0	80.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	0.0	0.0	0.0	0.0	20.0					
Exiting Leg Total	0							5							0							0	5										

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

	Grafton Street (Route 122)								Sunderland Road								Grafton Street (Route 122)								Sunderland 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		
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	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	0		
8:00 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		
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2		
Total Volume	0	0	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	4		
% Approach Total	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	0.0	0.0	0.0	0.0		0.0	100.0	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	0.500	0.250	0.375	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	0.250	0.500				
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	0	0	0	0	0	1	0	0	0	0	1	4				
Exiting Leg	0							4							0							0	4										
Total	0							7							0							1	8										

PDI File #: **239484 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Sunderland Road W: Sunderland Road**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Pedestrians

	Grafton Street (Route 122)								Sunderland Road								Grafton Street (Route 122)								Sunderland 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	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	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	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	6								
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	2	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4							
Total	0	0	0	0	0	0	0	0	0	0	0	3	4	7	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	10								
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	9								
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	3	4	0	0	0	0	0	0	0	0	0	0	0	0	2	2	4	8								
8:30 AM	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	4	3	7	8								
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2								
Total	0	0	0	0	1	0	1	0	0	0	0	2	11	13	0	0	0	0	0	0	0	0	0	0	0	0	7	6	13	27								
Grand Total	0	0	0	0	1	0	1	0	0	0	0	5	15	20	0	0	0	0	0	0	0	0	0	0	0	0	9	7	16	37								
Approach %	0	0	0	0	100	0		0	0	0	0	25	75		0	0	0	0	0	0	0		0	0	0	0	56.3	43.8										
Total %	0	0	0	0	2.7	0	2.7	0	0	0	0	13.5	40.5	54.1	0	0	0	0	0	0	0		0	0	0	0	24.3	18.9	43.2									
Exiting Leg Total	1							20							0							16							37									

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

	Grafton Street (Route 122)								Sunderland Road								Grafton Street (Route 122)								Sunderland 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		
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	2	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	9			
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	3	4	0	0	0	0	0	0	0	0	0	0	0	0	2	2	4	8			
8:30 AM	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	4	3	7	8			
Total Volume	0	0	0	0	1	0	1	0	0	0	0	3	12	15	0	0	0	0	0	0	0	0	0	0	0	0	7	6	13	29			
% Approach Total	0.0	0.0	0.0	0.0	100.0	0.0		0.0	0.0	0.0	0.0	20.0	80.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	53.8	46.2					
PHF	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.375	0.429	0.536	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.438	0.500	0.464	0.806			
Entering Leg	0	0	0	0	1	0	1	0	0	0	0	3	12	15	0	0	0	0	0	0	0	0	0	0	0	0	7	6	13	29			
Exiting Leg	1							15							0							13							29				
Total	2							30							0							26							58				

PDI File #: **239484 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Sunderland Road W: Sunderland Road**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars and Heavy Vehicles (Combined)

	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	4	79	49	0	132	71	50	87	0	208	36	90	0	0	126	11	31	0	0	42	508
4:15 PM	2	82	53	0	137	69	48	109	0	226	29	84	1	0	114	5	24	0	0	29	506
4:30 PM	4	76	31	0	111	70	65	101	0	236	45	106	1	0	152	7	31	3	0	41	540
4:45 PM	1	89	46	0	136	64	56	98	0	218	40	97	2	0	139	8	22	3	0	33	526
Total	11	326	179	0	516	274	219	395	0	888	150	377	4	0	531	31	108	6	0	145	2080
5:00 PM	2	92	45	0	139	83	57	79	0	219	26	102	0	0	128	10	30	3	0	43	529
5:15 PM	4	100	53	0	157	75	54	86	0	215	43	110	1	0	154	4	31	1	0	36	562
5:30 PM	1	84	54	0	139	63	62	77	0	202	27	110	1	0	138	5	30	4	0	39	518
5:45 PM	1	100	46	0	147	54	49	73	0	176	25	118	0	0	143	9	21	1	0	31	497
Total	8	376	198	0	582	275	222	315	0	812	121	440	2	0	563	28	112	9	0	149	2106
Grand Total	19	702	377	0	1098	549	441	710	0	1700	271	817	6	0	1094	59	220	15	0	294	4186
Approach %	1.7	63.9	34.3	0.0		32.3	25.9	41.8	0.0		24.8	74.7	0.5	0.0		20.1	74.8	5.1	0.0		
Total %	0.5	16.8	9.0	0.0	26.2	13.1	10.5	17.0	0.0	40.6	6.5	19.5	0.1	0.0	26.1	1.4	5.3	0.4	0.0	7.0	
Exiting Leg Total	1381					868					1471					466					4186
Cars	19	691	372	0	1082	545	434	699	0	1678	262	794	6	0	1062	57	216	15	0	288	4110
% Cars	100.0	98.4	98.7	0.0	98.5	99.3	98.4	98.5	0.0	98.7	96.7	97.2	100.0	0.0	97.1	96.6	98.2	100.0	0.0	98.0	98.2
Exiting Leg Total	1354					850					1447					459					4110
Heavy Vehicles	0	11	5	0	16	4	7	11	0	22	9	23	0	0	32	2	4	0	0	6	76
% Heavy Vehicles	0.0	1.6	1.3	0.0	1.5	0.7	1.6	1.5	0.0	1.3	3.3	2.8	0.0	0.0	2.9	3.4	1.8	0.0	0.0	2.0	1.8
Exiting Leg Total	27					18					24					7					76

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

	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	
4:30 PM	4	76	31	0	111	70	65	101	0	236	45	106	1	0	152	7	31	3	0	41	540
4:45 PM	1	89	46	0	136	64	56	98	0	218	40	97	2	0	139	8	22	3	0	33	526
5:00 PM	2	92	45	0	139	83	57	79	0	219	26	102	0	0	128	10	30	3	0	43	529
5:15 PM	4	100	53	0	157	75	54	86	0	215	43	110	1	0	154	4	31	1	0	36	562
Total Volume	11	357	175	0	543	292	232	364	0	888	154	415	4	0	573	29	114	10	0	153	2157
% Approach Total	2.0	65.7	32.2	0.0		32.9	26.1	41.0	0.0		26.9	72.4	0.7	0.0		19.0	74.5	6.5	0.0		
PHF	0.688	0.893	0.825	0.000	0.865	0.880	0.892	0.901	0.000	0.941	0.856	0.943	0.500	0.000	0.930	0.725	0.919	0.833	0.000	0.890	0.960
Cars	11	353	173	0	537	291	230	358	0	879	148	402	4	0	554	28	114	10	0	152	2122
Cars %	100.0	98.9	98.9	0.0	98.9	99.7	99.1	98.4	0.0	99.0	96.1	96.9	100.0	0.0	96.7	96.6	100.0	100.0	0.0	99.3	98.4
Heavy Vehicles	0	4	2	0	6	1	2	6	0	9	6	13	0	0	19	1	0	0	0	1	35
Heavy Vehicles %	0.0	1.1	1.1	0.0	1.1	0.3	0.9	1.6	0.0	1.0	3.9	3.1	0.0	0.0	3.3	3.4	0.0	0.0	0.0	0.7	1.6
Cars Enter Leg	11	353	173	0	537	291	230	358	0	879	148	402	4	0	554	28	114	10	0	152	2122
Heavy Enter Leg	0	4	2	0	6	1	2	6	0	9	6	13	0	0	19	1	0	0	0	1	35
Total Entering Leg	11	357	175	0	543	292	232	364	0	888	154	415	4	0	573	29	114	10	0	153	2157
Cars Exiting Leg	703					435					739					245					2122
Heavy Exiting Leg	14					8					11					2					35
Total Exiting Leg	717					443					750					247					2157

PDI File #: **239484 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Sunderland Road W: Sunderland Road**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars

	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	4	78	49	0	131	71	48	86	0	205	35	87	0	0	122	11	30	0	0	41	499
4:15 PM	2	80	52	0	134	69	47	107	0	223	27	81	1	0	109	4	22	0	0	26	492
4:30 PM	4	73	31	0	108	70	65	98	0	233	43	101	1	0	145	6	31	3	0	40	526
4:45 PM	1	89	45	0	135	63	54	98	0	215	40	96	2	0	138	8	22	3	0	33	521
Total	11	320	177	0	508	273	214	389	0	876	145	365	4	0	514	29	105	6	0	140	2038
5:00 PM	2	92	45	0	139	83	57	78	0	218	25	99	0	0	124	10	30	3	0	43	524
5:15 PM	4	99	52	0	155	75	54	84	0	213	40	106	1	0	147	4	31	1	0	36	551
5:30 PM	1	82	53	0	136	62	61	75	0	198	27	108	1	0	136	5	29	4	0	38	508
5:45 PM	1	98	45	0	144	52	48	73	0	173	25	116	0	0	141	9	21	1	0	31	489
Total	8	371	195	0	574	272	220	310	0	802	117	429	2	0	548	28	111	9	0	148	2072
Grand Total	19	691	372	0	1082	545	434	699	0	1678	262	794	6	0	1062	57	216	15	0	288	4110
Approach %	1.8	63.9	34.4	0.0		32.5	25.9	41.7	0.0		24.7	74.8	0.6	0.0		19.8	75.0	5.2	0.0		
Total %	0.5	16.8	9.1	0.0	26.3	13.3	10.6	17.0	0.0	40.8	6.4	19.3	0.1	0.0	25.8	1.4	5.3	0.4	0.0	7.0	
Exiting Leg Total	1354					850					1447					459					4110

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

	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	
4:30 PM	4	73	31	0	108	70	65	98	0	233	43	101	1	0	145	6	31	3	0	40	526
4:45 PM	1	89	45	0	135	63	54	98	0	215	40	96	2	0	138	8	22	3	0	33	521
5:00 PM	2	92	45	0	139	83	57	78	0	218	25	99	0	0	124	10	30	3	0	43	524
5:15 PM	4	99	52	0	155	75	54	84	0	213	40	106	1	0	147	4	31	1	0	36	551
Total Volume	11	353	173	0	537	291	230	358	0	879	148	402	4	0	554	28	114	10	0	152	2122
% Approach Total	2.0	65.7	32.2	0.0		33.1	26.2	40.7	0.0		26.7	72.6	0.7	0.0		18.4	75.0	6.6	0.0		
PHF	0.688	0.891	0.832	0.000	0.866	0.877	0.885	0.913	0.000	0.943	0.860	0.948	0.500	0.000	0.942	0.700	0.919	0.833	0.000	0.884	0.963
Entering Leg	11	353	173	0	537	291	230	358	0	879	148	402	4	0	554	28	114	10	0	152	2122
Exiting Leg	703					435					739					245					2122
Total	1240					1314					1293					397					4244

PDI File #: **239484 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Sunderland Road W: Sunderland Road**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



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

	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	1	0	0	1	0	2	1	0	3	1	3	0	0	4	0	1	0	0	1	9
4:15 PM	0	2	1	0	3	0	1	2	0	3	2	3	0	0	5	1	2	0	0	3	14
4:30 PM	0	3	0	0	3	0	0	3	0	3	2	5	0	0	7	1	0	0	0	1	14
4:45 PM	0	0	1	0	1	1	2	0	0	3	0	1	0	0	1	0	0	0	0	0	5
Total	0	6	2	0	8	1	5	6	0	12	5	12	0	0	17	2	3	0	0	5	42
5:00 PM	0	0	0	0	0	0	0	1	0	1	1	3	0	0	4	0	0	0	0	0	5
5:15 PM	0	1	1	0	2	0	0	2	0	2	3	4	0	0	7	0	0	0	0	0	11
5:30 PM	0	2	1	0	3	1	1	2	0	4	0	2	0	0	2	0	1	0	0	1	10
5:45 PM	0	2	1	0	3	2	1	0	0	3	0	2	0	0	2	0	0	0	0	0	8
Total	0	5	3	0	8	3	2	5	0	10	4	11	0	0	15	0	1	0	0	1	34
Grand Total	0	11	5	0	16	4	7	11	0	22	9	23	0	0	32	2	4	0	0	6	76
Approach %	0.0	68.8	31.3	0.0		18.2	31.8	50.0	0.0		28.1	71.9	0.0	0.0		33.3	66.7	0.0	0.0		
Total %	0.0	14.5	6.6	0.0	21.1	5.3	9.2	14.5	0.0	28.9	11.8	30.3	0.0	0.0	42.1	2.6	5.3	0.0	0.0	7.9	
Exiting Leg Total	27					18					24					7					76
Buses	0	4	4	0	8	3	1	3	0	7	2	5	0	0	7	1	1	0	0	2	24
% Buses	0.0	36.4	80.0	0.0	50.0	75.0	14.3	27.3	0.0	31.8	22.2	21.7	0.0	0.0	21.9	50.0	25.0	0.0	0.0	33.3	31.6
Exiting Leg Total	8					7					8					1					24
Single-Unit Trucks	0	6	1	0	7	1	6	6	0	13	2	15	0	0	17	1	3	0	0	4	41
% Single-Unit	0.0	54.5	20.0	0.0	43.8	25.0	85.7	54.5	0.0	59.1	22.2	65.2	0.0	0.0	53.1	50.0	75.0	0.0	0.0	66.7	53.9
Exiting Leg Total	16					6					13					6					41
Articulated Trucks	0	1	0	0	1	0	0	2	0	2	5	3	0	0	8	0	0	0	0	0	11
% Articulated	0.0	9.1	0.0	0.0	6.3	0.0	0.0	18.2	0.0	9.1	55.6	13.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	14.5
Exiting Leg Total	3					5					3					0					11

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

	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	1	0	0	1	0	2	1	0	3	1	3	0	0	4	0	1	0	0	1	9
4:15 PM	0	2	1	0	3	0	1	2	0	3	2	3	0	0	5	1	2	0	0	3	14
4:30 PM	0	3	0	0	3	0	0	3	0	3	2	5	0	0	7	1	0	0	0	1	14
4:45 PM	0	0	1	0	1	1	2	0	0	3	0	1	0	0	1	0	0	0	0	0	5
Total Volume	0	6	2	0	8	1	5	6	0	12	5	12	0	0	17	2	3	0	0	5	42
% Approach Total	0.0	75.0	25.0	0.0		8.3	41.7	50.0	0.0		29.4	70.6	0.0	0.0		40.0	60.0	0.0	0.0		
PHF	0.000	0.500	0.500	0.000	0.667	0.250	0.625	0.500	0.000	1.000	0.625	0.600	0.000	0.000	0.607	0.500	0.375	0.000	0.000	0.417	0.750
Buses	0	2	1	0	3	1	0	3	0	4	2	4	0	0	6	1	1	0	0	2	15
Buses %	0.0	33.3	50.0	0.0	37.5	100.0	0.0	50.0	0.0	33.3	40.0	33.3	0.0	0.0	35.3	50.0	33.3	0.0	0.0	40.0	35.7
Single-Unit Trucks	0	3	1	0	4	0	5	2	0	7	1	7	0	0	8	1	2	0	0	3	22
Single-Unit %	0.0	50.0	50.0	0.0	50.0	0.0	100.0	33.3	0.0	58.3	20.0	58.3	0.0	0.0	47.1	50.0	66.7	0.0	0.0	60.0	52.4
Articulated Trucks	0	1	0	0	1	0	0	1	0	1	2	1	0	0	3	0	0	0	0	0	5
Articulated %	0.0	16.7	0.0	0.0	12.5	0.0	0.0	16.7	0.0	8.3	40.0	8.3	0.0	0.0	17.6	0.0	0.0	0.0	0.0	0.0	11.9
Buses	0	2	1	0	3	1	0	3	0	4	2	4	0	0	6	1	1	0	0	2	15
Single-Unit Trucks	0	3	1	0	4	0	5	2	0	7	1	7	0	0	8	1	2	0	0	3	22
Articulated Trucks	0	1	0	0	1	0	0	1	0	1	2	1	0	0	3	0	0	0	0	0	5
Total Entering Leg	0	6	2	0	8	1	5	6	0	12	5	12	0	0	17	2	3	0	0	5	42
Buses	5					4					6					0					15
Single-Unit Trucks	7					4					6					5					22
Articulated Trucks	1					2					2					0					5
Total Exiting Leg	13					10					14					5					42

PDI File #: **239484 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Sunderland Road W: Sunderland Road**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Buses

	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	1	0	0	1	0	1	0	0	1	2
4:15 PM	0	1	1	0	2	0	0	2	0	2	1	2	0	0	3	1	0	0	0	1	8
4:30 PM	0	1	0	0	1	0	0	1	0	1	1	1	0	0	2	0	0	0	0	0	4
4:45 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	2	1	0	3	1	0	3	0	4	2	4	0	0	6	1	1	0	0	2	15
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	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:30 PM	0	0	1	0	1	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	3
5:45 PM	0	1	1	0	2	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	4
Total	0	2	3	0	5	2	1	0	0	3	0	1	0	0	1	0	0	0	0	0	9
Grand Total	0	4	4	0	8	3	1	3	0	7	2	5	0	0	7	1	1	0	0	2	24
Approach %	0.0	50.0	50.0	0.0		42.9	14.3	42.9	0.0		28.6	71.4	0.0	0.0		50.0	50.0	0.0	0.0		
Total %	0.0	16.7	16.7	0.0	33.3	12.5	4.2	12.5	0.0	29.2	8.3	20.8	0.0	0.0	29.2	4.2	4.2	0.0	0.0	8.3	
Exiting Leg Total	8					7					8					1					24

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

	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	1	0	0	1	0	1	0	0	1	2
4:15 PM	0	1	1	0	2	0	0	2	0	2	1	2	0	0	3	1	0	0	0	1	8
4:30 PM	0	1	0	0	1	0	0	1	0	1	1	1	0	0	2	0	0	0	0	0	4
4:45 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	2	1	0	3	1	0	3	0	4	2	4	0	0	6	1	1	0	0	2	15
% Approach Total	0.0	66.7	33.3	0.0		25.0	0.0	75.0	0.0		33.3	66.7	0.0	0.0		50.0	50.0	0.0	0.0		
PHF	0.000	0.500	0.250	0.000	0.375	0.250	0.000	0.375	0.000	0.500	0.500	0.500	0.000	0.000	0.500	0.250	0.250	0.000	0.000	0.500	0.469
Entering Leg	0	2	1	0	3	1	0	3	0	4	2	4	0	0	6	1	1	0	0	2	15
Exiting Leg	5					4					6					0					15
Total	8					8					12					2					30

PDI File #: **239484 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Sunderland Road W: Sunderland Road**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Single-Unit Trucks

	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	1	0	3	1	2	0	0	3	0	0	0	0	0	6
4:15 PM	0	1	0	0	1	0	1	0	0	1	0	1	0	0	1	0	2	0	0	2	5
4:30 PM	0	2	0	0	2	0	0	1	0	1	0	3	0	0	3	1	0	0	0	1	7
4:45 PM	0	0	1	0	1	0	2	0	0	2	0	1	0	0	1	0	0	0	0	0	4
Total	0	3	1	0	4	0	5	2	0	7	1	7	0	0	8	1	2	0	0	3	22
5:00 PM	0	0	0	0	0	0	0	1	0	1	0	2	0	0	2	0	0	0	0	0	3
5:15 PM	0	0	0	0	0	0	0	1	0	1	1	3	0	0	4	0	0	0	0	0	5
5:30 PM	0	2	0	0	2	0	1	2	0	3	0	1	0	0	1	0	1	0	0	1	7
5:45 PM	0	1	0	0	1	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	4
Total	0	3	0	0	3	1	1	4	0	6	1	8	0	0	9	0	1	0	0	1	19
Grand Total	0	6	1	0	7	1	6	6	0	13	2	15	0	0	17	1	3	0	0	4	41
Approach %	0.0	85.7	14.3	0.0		7.7	46.2	46.2	0.0		11.8	88.2	0.0	0.0		25.0	75.0	0.0	0.0		
Total %	0.0	14.6	2.4	0.0	17.1	2.4	14.6	14.6	0.0	31.7	4.9	36.6	0.0	0.0	41.5	2.4	7.3	0.0	0.0	9.8	
Exiting Leg Total	16					6					13					6					41

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

	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	1	0	3	1	2	0	0	3	0	0	0	0	0	6
4:15 PM	0	1	0	0	1	0	1	0	0	1	0	1	0	0	1	0	2	0	0	2	5
4:30 PM	0	2	0	0	2	0	0	1	0	1	0	3	0	0	3	1	0	0	0	1	7
4:45 PM	0	0	1	0	1	0	2	0	0	2	0	1	0	0	1	0	0	0	0	0	4
Total Volume	0	3	1	0	4	0	5	2	0	7	1	7	0	0	8	1	2	0	0	3	22
% Approach Total	0.0	75.0	25.0	0.0		0.0	71.4	28.6	0.0		12.5	87.5	0.0	0.0		33.3	66.7	0.0	0.0		
PHF	0.000	0.375	0.250	0.000	0.500	0.000	0.625	0.500	0.000	0.583	0.250	0.583	0.000	0.000	0.667	0.250	0.250	0.000	0.000	0.375	0.786
Entering Leg	0	3	1	0	4	0	5	2	0	7	1	7	0	0	8	1	2	0	0	3	22
Exiting Leg	7					4					6					5					22
Total	11					11					14					8					44

PDI File #: **239484 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Sunderland Road W: Sunderland Road**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Articulated Trucks

	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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	1	0	0	1	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	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	1	0	1	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	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	0	0	0	0	0
Total	0	1	0	0	1	0	0	1	0	1	2	1	0	0	3	0	0	0	0	0	0	0	0	0	0	5
5:00 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	2
5:15 PM	0	0	0	0	0	0	0	1	0	1	2	1	0	0	3	0	0	0	0	0	0	0	0	0	0	4
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
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
Total	0	0	0	0	0	0	0	1	0	1	3	2	0	0	5	0	0	0	0	0	0	0	0	0	0	6
Grand Total	0	1	0	0	1	0	0	2	0	2	5	3	0	0	8	0	0	0	0	0	0	0	0	0	0	11
Approach %	0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		62.5	37.5	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	9.1	0.0	0.0	9.1	0.0	0.0	18.2	0.0	18.2	45.5	27.3	0.0	0.0	72.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	3					5					3					0					11					

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

	Grafton Street (Route 122)					Sunderland Road					Grafton Street (Route 122)					Sunderland 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						
4:30 PM	0	0	0	0	0	0	0	1	0	1	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	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	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	2
5:15 PM	0	0	0	0	0	0	0	1	0	1	2	1	0	0	3	0	0	0	0	0	0	0	0	0	0	4
Total Volume	0	0	0	0	0	0	0	2	0	2	4	3	0	0	7	0	0	0	0	0	0	0	0	0	0	9
% Approach Total	0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		57.1	42.9	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	0.500	0.000	0.500	0.500	0.750	0.000	0.000	0.583	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.563
Entering Leg	0	0	0	0	0	0	0	2	0	2	4	3	0	0	7	0	0	0	0	0	0	0	0	0	0	9
Exiting Leg	3					4					2					0					9					
Total	3					6					9					0					18					

PDI File #: **239484 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Sunderland Road W: Sunderland Road**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Bicycles (on Roadway and Crosswalks)

	Grafton Street (Route 122)								Sunderland Road								Grafton Street (Route 122)								Sunderland 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	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	0	0		
4:30 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		
4:45 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	0		
Total	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		
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		
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		
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	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	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		
Grand Total	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		
Approach %	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				
Total %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	100.0	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				
Exiting Leg Total	0							1							0							0							1				

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

	Grafton Street (Route 122)								Sunderland Road								Grafton Street (Route 122)								Sunderland 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	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	0	0		
4:30 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		
4:45 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	0		
Total Volume	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		
% Approach Total	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				
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	0.000	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	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1		
Exiting Leg	0							1							0							0							1				
Total	0							2							0							0							2				

PDI File #: **239484 A**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Sunderland Road W: Sunderland Road**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Pedestrians

	Grafton Street (Route 122)								Sunderland Road								Grafton Street (Route 122)								Sunderland 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	0	0	1	1	0	0	0	0	0	2	0	2	0	0	0	0	0	1	1	4		
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2	2	0	0	0	0	0	2	2	5		
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	1	1	2	2			
4:45 PM	0	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	3			
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	0	0	0	0	0	2	2	4	0	0	0	0	1	4	5	14		
5:00 PM	0	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	2		
5:15 PM	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2			
5:30 PM	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	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	0	0	0	0	0	0	0	0	0			
Total	0	0	0	0	1	0	1	0	0	0	0	2	0	2	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	5			
Grand Total	0	0	0	0	1	0	1	0	0	0	0	2	5	7	0	0	0	0	3	3	6	0	0	0	0	1	4	5	19				
Approach %	0	0	0	0	100	0		0	0	0	0	28.6	71.4		0	0	0	0	50	50		0	0	0	0	20	80						
Total %	0	0	0	0	5.26	0	5.26	0	0	0	0	10.5	26.3	36.8	0	0	0	0	15.8	15.8	31.6	0	0	0	0	5.26	21.1	26.3					
Exiting Leg Total	1								7								6								5								19

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

	Grafton Street (Route 122)								Sunderland Road								Grafton Street (Route 122)								Sunderland 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	0	0	1	1	0	0	0	0	0	2	0	2	0	0	0	0	0	1	1	4		
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2	2	0	0	0	0	0	2	2	5			
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	1	1	2	2				
4:45 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	3				
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	5	5	0	0	0	0	2	2	4	0	0	0	0	1	4	5	14				
% Approach Total	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	50.0	50.0		0.0	0.0	0.0	0.0	20.0	80.0						
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.417	0.417		0.000	0.000	0.000	0.000	0.250	0.250	0.500	0.000	0.000	0.000	0.000	0.250	0.500	0.625	0.700				
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	5	5	0	0	0	0	2	2	4	0	0	0	0	1	4	5	14					
Exiting Leg	0								5								4								5								14
Total	0								10								8								10								28

PDI File #: **239484 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jolma Road W: Starbucks Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars and Heavy Vehicles (Combined)

	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	11	106	3	0	120	0	0	3	0	3	6	74	5	0	85	0	0	0	0	0	208
7:15 AM	6	153	1	0	160	0	0	3	0	3	7	116	11	0	134	0	0	0	0	0	297
7:30 AM	13	118	0	0	131	1	0	1	0	2	10	126	11	0	147	0	0	0	0	0	280
7:45 AM	16	158	3	0	177	3	0	1	0	4	10	115	14	0	139	0	0	0	0	0	320
Total	46	535	7	0	588	4	0	8	0	12	33	431	41	0	505	0	0	0	0	0	1105
8:00 AM	14	132	0	0	146	3	0	6	0	9	12	110	8	0	130	0	0	0	0	0	285
8:15 AM	16	149	0	0	165	0	0	2	0	2	22	135	14	0	171	0	0	0	0	0	338
8:30 AM	15	115	2	0	132	3	1	5	0	9	15	137	10	0	162	0	0	0	0	0	303
8:45 AM	8	109	4	0	121	1	1	1	0	3	11	105	9	0	125	0	0	0	0	0	249
Total	53	505	6	0	564	7	2	14	0	23	60	487	41	0	588	0	0	0	0	0	1175
Grand Total	99	1040	13	0	1152	11	2	22	0	35	93	918	82	0	1093	0	0	0	0	0	2280
Approach %	8.6	90.3	1.1	0.0		31.4	5.7	62.9	0.0		8.5	84.0	7.5	0.0		0.0	0.0	0.0	0.0		
Total %	4.3	45.6	0.6	0.0	50.5	0.5	0.1	1.0	0.0	1.5	4.1	40.3	3.6	0.0	47.9	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	929					106					1062					183					2280
Cars	99	1006	12	0	1117	5	2	13	0	20	86	879	82	0	1047	0	0	0	0	0	2184
% Cars	100.0	96.7	92.3	0.0	97.0	45.5	100.0	59.1	0.0	57.1	92.5	95.8	100.0	0.0	95.8	0.0	0.0	0.0	0.0	0.0	95.8
Exiting Leg Total	884					98					1019					183					2184
Heavy Vehicles	0	34	1	0	35	6	0	9	0	15	7	39	0	0	46	0	0	0	0	0	96
% Heavy Vehicles	0.0	3.3	7.7	0.0	3.0	54.5	0.0	40.9	0.0	42.9	7.5	4.2	0.0	0.0	4.2	0.0	0.0	0.0	0.0	0.0	4.2
Exiting Leg Total	45					8					43					0					96

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

7:45 AM	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	16	158	3	0	177	3	0	1	0	4	10	115	14	0	139	0	0	0	0	0	320
8:00 AM	14	132	0	0	146	3	0	6	0	9	12	110	8	0	130	0	0	0	0	0	285
8:15 AM	16	149	0	0	165	0	0	2	0	2	22	135	14	0	171	0	0	0	0	0	338
8:30 AM	15	115	2	0	132	3	1	5	0	9	15	137	10	0	162	0	0	0	0	0	303
Total Volume	61	554	5	0	620	9	1	14	0	24	59	497	46	0	602	0	0	0	0	0	1246
% Approach Total	9.8	89.4	0.8	0.0		37.5	4.2	58.3	0.0		9.8	82.6	7.6	0.0		0.0	0.0	0.0	0.0		
PHF	0.953	0.877	0.417	0.000	0.876	0.750	0.250	0.583	0.000	0.667	0.670	0.907	0.821	0.000	0.880	0.000	0.000	0.000	0.000	0.000	0.922
Cars	61	531	5	0	597	4	1	10	0	15	55	477	46	0	578	0	0	0	0	0	1190
Cars %	100.0	95.8	100.0	0.0	96.3	44.4	100.0	71.4	0.0	62.5	93.2	96.0	100.0	0.0	96.0	0.0	0.0	0.0	0.0	0.0	95.5
Heavy Vehicles	0	23	0	0	23	5	0	4	0	9	4	20	0	0	24	0	0	0	0	0	56
Heavy Vehicles %	0.0	4.2	0.0	0.0	3.7	55.6	0.0	28.6	0.0	37.5	6.8	4.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	4.5
Cars Enter Leg	61	531	5	0	597	4	1	10	0	15	55	477	46	0	578	0	0	0	0	0	1190
Heavy Enter Leg	0	23	0	0	23	5	0	4	0	9	4	20	0	0	24	0	0	0	0	0	56
Total Entering Leg	61	554	5	0	620	9	1	14	0	24	59	497	46	0	602	0	0	0	0	0	1246
Cars Exiting Leg	481					60					541					108					1190
Heavy Exiting Leg	25					4					27					0					56
Total Exiting Leg	506					64					568					108					1246

PDI File #: **239484 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jolma Road W: Starbucks Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars

	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	11	104	3	0	118	0	0	1	0	1	4	70	5	0	79	0	0	0	0	0	198
7:15 AM	6	149	1	0	156	0	0	1	0	1	7	113	11	0	131	0	0	0	0	0	288
7:30 AM	13	115	0	0	128	0	0	0	0	0	10	115	11	0	136	0	0	0	0	0	264
7:45 AM	16	151	3	0	170	2	0	1	0	3	10	110	14	0	134	0	0	0	0	0	307
Total	46	519	7	0	572	2	0	3	0	5	31	408	41	0	480	0	0	0	0	0	1057
8:00 AM	14	125	0	0	139	1	0	4	0	5	11	108	8	0	127	0	0	0	0	0	271
8:15 AM	16	143	0	0	159	0	0	1	0	1	21	131	14	0	166	0	0	0	0	0	326
8:30 AM	15	112	2	0	129	1	1	4	0	6	13	128	10	0	151	0	0	0	0	0	286
8:45 AM	8	107	3	0	118	1	1	1	0	3	10	104	9	0	123	0	0	0	0	0	244
Total	53	487	5	0	545	3	2	10	0	15	55	471	41	0	567	0	0	0	0	0	1127
Grand Total	99	1006	12	0	1117	5	2	13	0	20	86	879	82	0	1047	0	0	0	0	0	2184
Approach %	8.9	90.1	1.1	0.0		25.0	10.0	65.0	0.0		8.2	84.0	7.8	0.0		0.0	0.0	0.0	0.0	0.0	
Total %	4.5	46.1	0.5	0.0	51.1	0.2	0.1	0.6	0.0	0.9	3.9	40.2	3.8	0.0	47.9	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	884					98					1019					183					2184

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

	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	16	151	3	0	170	2	0	1	0	3	10	110	14	0	134	0	0	0	0	0	307
8:00 AM	14	125	0	0	139	1	0	4	0	5	11	108	8	0	127	0	0	0	0	0	271
8:15 AM	16	143	0	0	159	0	0	1	0	1	21	131	14	0	166	0	0	0	0	0	326
8:30 AM	15	112	2	0	129	1	1	4	0	6	13	128	10	0	151	0	0	0	0	0	286
Total Volume	61	531	5	0	597	4	1	10	0	15	55	477	46	0	578	0	0	0	0	0	1190
% Approach Total	10.2	88.9	0.8	0.0		26.7	6.7	66.7	0.0		9.5	82.5	8.0	0.0		0.0	0.0	0.0	0.0	0.0	
PHF	0.953	0.879	0.417	0.000	0.878	0.500	0.250	0.625	0.000	0.625	0.655	0.910	0.821	0.000	0.870	0.000	0.000	0.000	0.000	0.000	0.913
Entering Leg	61	531	5	0	597	4	1	10	0	15	55	477	46	0	578	0	0	0	0	0	1190
Exiting Leg	481					60					541					108					1190
Total	1078					75					1119					108					2380

PDI File #: **239484 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jolma Road W: Starbucks Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**



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

	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	2	0	0	2	0	0	2	0	2	2	4	0	0	6	0	0	0	0	0	10
7:15 AM	0	4	0	0	4	0	0	2	0	2	0	3	0	0	3	0	0	0	0	0	9
7:30 AM	0	3	0	0	3	1	0	1	0	2	0	11	0	0	11	0	0	0	0	0	16
7:45 AM	0	7	0	0	7	1	0	0	0	1	0	5	0	0	5	0	0	0	0	0	13
Total	0	16	0	0	16	2	0	5	0	7	2	23	0	0	25	0	0	0	0	0	48
8:00 AM	0	7	0	0	7	2	0	2	0	4	1	2	0	0	3	0	0	0	0	0	14
8:15 AM	0	6	0	0	6	0	0	1	0	1	1	4	0	0	5	0	0	0	0	0	12
8:30 AM	0	3	0	0	3	2	0	1	0	3	2	9	0	0	11	0	0	0	0	0	17
8:45 AM	0	2	1	0	3	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	5
Total	0	18	1	0	19	4	0	4	0	8	5	16	0	0	21	0	0	0	0	0	48
Grand Total	0	34	1	0	35	6	0	9	0	15	7	39	0	0	46	0	0	0	0	0	96
Approach %	0.0	97.1	2.9	0.0		40.0	0.0	60.0	0.0		15.2	84.8	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	35.4	1.0	0.0	36.5	6.3	0.0	9.4	0.0	15.6	7.3	40.6	0.0	0.0	47.9	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	45					8					43					0					96
Buses	0	18	0	0	18	1	0	0	0	1	4	13	0	0	17	0	0	0	0	0	36
% Buses	0.0	52.9	0.0	0.0	51.4	16.7	0.0	0.0	0.0	6.7	57.1	33.3	0.0	0.0	37.0	0.0	0.0	0.0	0.0	0.0	37.5
Exiting Leg Total	14					4					18					0					36
Single-Unit Trucks	0	15	1	0	16	4	0	4	0	8	3	18	0	0	21	0	0	0	0	0	45
% Single-Unit	0.0	44.1	100.0	0.0	45.7	66.7	0.0	44.4	0.0	53.3	42.9	46.2	0.0	0.0	45.7	0.0	0.0	0.0	0.0	0.0	46.9
Exiting Leg Total	22					4					19					0					45
Articulated Trucks	0	1	0	0	1	1	0	5	0	6	0	8	0	0	8	0	0	0	0	0	15
% Articulated	0.0	2.9	0.0	0.0	2.9	16.7	0.0	55.6	0.0	40.0	0.0	20.5	0.0	0.0	17.4	0.0	0.0	0.0	0.0	0.0	15.6
Exiting Leg Total	9					0					6					0					15

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

	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	7	0	0	7	1	0	0	0	1	0	5	0	0	5	0	0	0	0	0	13
8:00 AM	0	7	0	0	7	2	0	2	0	4	1	2	0	0	3	0	0	0	0	0	14
8:15 AM	0	6	0	0	6	0	0	1	0	1	1	4	0	0	5	0	0	0	0	0	12
8:30 AM	0	3	0	0	3	2	0	1	0	3	2	9	0	0	11	0	0	0	0	0	17
Total Volume	0	23	0	0	23	5	0	4	0	9	4	20	0	0	24	0	0	0	0	0	56
% Approach Total	0.0	100.0	0.0	0.0		55.6	0.0	44.4	0.0		16.7	83.3	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.821	0.000	0.000	0.821	0.625	0.000	0.500	0.000	0.563	0.500	0.556	0.000	0.000	0.545	0.000	0.000	0.000	0.000	0.000	0.824
Buses	0	16	0	0	16	1	0	0	0	1	2	7	0	0	9	0	0	0	0	0	26
Buses %	0.0	69.6	0.0	0.0	69.6	20.0	0.0	0.0	0.0	11.1	50.0	35.0	0.0	0.0	37.5	0.0	0.0	0.0	0.0	0.0	46.4
Single-Unit Trucks	0	7	0	0	7	3	0	2	0	5	2	9	0	0	11	0	0	0	0	0	23
Single-Unit %	0.0	30.4	0.0	0.0	30.4	60.0	0.0	50.0	0.0	55.6	50.0	45.0	0.0	0.0	45.8	0.0	0.0	0.0	0.0	0.0	41.1
Articulated Trucks	0	0	0	0	0	1	0	2	0	3	0	4	0	0	4	0	0	0	0	0	7
Articulated %	0.0	0.0	0.0	0.0	0.0	20.0	0.0	50.0	0.0	33.3	0.0	20.0	0.0	0.0	16.7	0.0	0.0	0.0	0.0	0.0	12.5
Buses	0	16	0	0	16	1	0	0	0	1	2	7	0	0	9	0	0	0	0	0	26
Single-Unit Trucks	0	7	0	0	7	3	0	2	0	5	2	9	0	0	11	0	0	0	0	0	23
Articulated Trucks	0	0	0	0	0	1	0	2	0	3	0	4	0	0	4	0	0	0	0	0	7
Total Entering Leg	0	23	0	0	23	5	0	4	0	9	4	20	0	0	24	0	0	0	0	0	56
Buses	8					2					16					0					26
Single-Unit Trucks	12					2					9					0					23
Articulated Trucks	5					0					2					0					7
Total Exiting Leg	25					4					27					0					56

PDI File #: **239484 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jolma Road W: Starbucks Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Buses

	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	1	2	0	0	3	0	0	0	0	0	3
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
7:30 AM	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	5
7:45 AM	0	6	0	0	6	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	7
Total	0	8	0	0	8	0	0	0	0	0	1	7	0	0	8	0	0	0	0	0	16
8:00 AM	0	5	0	0	5	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	7
8:15 AM	0	4	0	0	4	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	5
8:30 AM	0	1	0	0	1	1	0	0	0	1	1	4	0	0	5	0	0	0	0	0	7
8:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
Total	0	10	0	0	10	1	0	0	0	1	3	6	0	0	9	0	0	0	0	0	20
Grand Total	0	18	0	0	18	1	0	0	0	1	4	13	0	0	17	0	0	0	0	0	36
Approach %	0.0	100.0	0.0	0.0		100.0	0.0	0.0	0.0		23.5	76.5	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	50.0	0.0	0.0	50.0	2.8	0.0	0.0	0.0	2.8	11.1	36.1	0.0	0.0	47.2	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	14					4					18					0					36

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

	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	6	0	0	6	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	7
7:45 AM	0	6	0	0	6	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	7
8:00 AM	0	5	0	0	5	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	7
8:15 AM	0	4	0	0	4	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	5
8:30 AM	0	1	0	0	1	1	0	0	0	1	1	4	0	0	5	0	0	0	0	0	7
Total Volume	0	16	0	0	16	1	0	0	0	1	2	7	0	0	9	0	0	0	0	0	26
% Approach Total	0.0	100.0	0.0	0.0		100.0	0.0	0.0	0.0		22.2	77.8	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.667	0.000	0.000	0.667	0.250	0.000	0.000	0.000	0.250	0.500	0.438	0.000	0.000	0.450	0.000	0.000	0.000	0.000	0.000	0.929
Entering Leg	0	16	0	0	16	1	0	0	0	1	2	7	0	0	9	0	0	0	0	0	26
Exiting Leg	8					2					16					0					26
Total	24					3					25					0					52

PDI File #: **239484 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jolma Road W: Starbucks Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Single-Unit Trucks

	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	1	0	0	1	0	0	1	0	1	1	2	0	0	3	0	0	0	0	0	5
7:15 AM	0	4	0	0	4	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	6
7:30 AM	0	1	0	0	1	1	0	0	0	1	0	5	0	0	5	0	0	0	0	0	7
7:45 AM	0	1	0	0	1	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	5
Total	0	7	0	0	7	2	0	2	0	4	1	11	0	0	12	0	0	0	0	0	23
8:00 AM	0	2	0	0	2	2	0	1	0	3	0	1	0	0	1	0	0	0	0	0	6
8:15 AM	0	2	0	0	2	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0	6
8:30 AM	0	2	0	0	2	0	0	1	0	1	1	2	0	0	3	0	0	0	0	0	6
8:45 AM	0	2	1	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	4
Total	0	8	1	0	9	2	0	2	0	4	2	7	0	0	9	0	0	0	0	0	22
Grand Total	0	15	1	0	16	4	0	4	0	8	3	18	0	0	21	0	0	0	0	0	45
Approach %	0.0	93.8	6.3	0.0		50.0	0.0	50.0	0.0		14.3	85.7	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	33.3	2.2	0.0	35.6	8.9	0.0	8.9	0.0	17.8	6.7	40.0	0.0	0.0	46.7	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	22					4					19					0					45

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

	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	4	0	0	4	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	6
7:30 AM	0	1	0	0	1	1	0	0	0	1	0	5	0	0	5	0	0	0	0	0	7
7:45 AM	0	1	0	0	1	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	5
8:00 AM	0	2	0	0	2	2	0	1	0	3	0	1	0	0	1	0	0	0	0	0	6
Total Volume	0	8	0	0	8	4	0	2	0	6	0	10	0	0	10	0	0	0	0	0	24
% Approach Total	0.0	100.0	0.0	0.0		66.7	0.0	33.3	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.500	0.000	0.000	0.500	0.500	0.000	0.500	0.000	0.500	0.000	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.857
Entering Leg	0	8	0	0	8	4	0	2	0	6	0	10	0	0	10	0	0	0	0	0	24
Exiting Leg	14					0					10					0					24
Total	22					6					20					0					48

PDI File #: **239484 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jolma Road W: Starbucks Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Articulated Trucks

	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2
7:15 AM	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	2
7:30 AM	0	0	0	0	0	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	4
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total	0	1	0	0	1	0	0	3	0	3	0	5	0	0	5	0	0	0	0	0	9
8:00 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	4
8:45 AM	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	1	0	2	0	3	0	3	0	0	3	0	0	0	0	0	6
Grand Total	0	1	0	0	1	1	0	5	0	6	0	8	0	0	8	0	0	0	0	0	15
Approach %	0.0	100.0	0.0	0.0		16.7	0.0	83.3	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	6.7	0.0	0.0	6.7	6.7	0.0	33.3	0.0	40.0	0.0	53.3	0.0	0.0	53.3	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	9					0					6					0					15

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

	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2
7:15 AM	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	2
7:30 AM	0	0	0	0	0	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	4
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total Volume	0	1	0	0	1	0	0	3	0	3	0	5	0	0	5	0	0	0	0	0	9
% Approach Total	0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.750	0.000	0.750	0.000	0.417	0.000	0.000	0.417	0.000	0.000	0.000	0.000	0.000	0.563
Entering Leg	0	1	0	0	1	0	0	3	0	3	0	5	0	0	5	0	0	0	0	0	9
Exiting Leg	5					0					4					0					9
Total	6					3					9					0					18

PDI File #: **239484 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jolma Road W: Starbucks Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Bicycles (on Roadway and Crosswalks)

	Grafton Street (Route 122)								Jolma Road								Grafton Street (Route 122)								Starbucks Driveway								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	1	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	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	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	0	
Total	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	1	2		
8:00 AM	0	1	0	0	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	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	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	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	0	0	0	0	0	0	0	0	0	0		
Total	0	1	0	0	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	1		
Grand Total	0	1	0	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	3		
Approach %	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	100.0					
Total %	0.0	33.3	0.0	0.0	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	33.3	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	0.0	33.3	33.3				
Exiting Leg Total	0							1							1							1							3				

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

	Grafton Street (Route 122)								Jolma Road								Grafton Street (Route 122)								Starbucks Driveway								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	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	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		
Total Volume	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	1	2		
% Approach Total	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	100.0					
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	0.250	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	0.250	0.250	0.250			
Entering Leg	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	1	2		
Exiting Leg	0							1							0							1							2				
Total	0							2							0							2							4				

PDI File #: **239484 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jolma Road W: Starbucks Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Pedestrians

	Grafton Street (Route 122)								Jolma Road								Grafton Street (Route 122)								Starbucks Driveway								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	0	0	0	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	3	3	3	3	
7:45 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	1	1	2	3	3		
Total	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	1	4	5	6	6		
8:00 AM	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	1	0	1	2	2		
8:15 AM	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	1	1		
8:30 AM	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	3	1	4	5	5		
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	1	1	1	1		
Total	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	4	2	6	9	9		
Grand Total	0	0	0	0	0	0	0	0	0	0	0	1	3	4	0	0	0	0	0	0	0	0	0	0	0	0	5	6	11	15	15		
Approach %	0	0	0	0	0	0	0	0	0	0	0	25	75	0	0	0	0	0	0	0	0	0	0	0	0	45.5	54.5						
Total %	0	0	0	0	0	0	0	0	0	0	0	6.67	20	26.7	0	0	0	0	0	0	0	0	0	0	0	0	33.3	40	73.3				
Exiting Leg Total	0							4							0							11							15				

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

	Grafton Street (Route 122)								Jolma Road								Grafton Street (Route 122)								Starbucks Driveway								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		
7:45 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	1	1	2	3	3		
8:00 AM	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	1	0	1	2	2		
8:15 AM	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	1	1		
8:30 AM	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	3	1	4	5	5		
Total Volume	0	0	0	0	0	0	0	0	0	0	0	1	3	4	0	0	0	0	0	0	0	0	0	0	0	0	5	2	7	11	11		
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	75.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	71.4	28.6						
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	0.750	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.417	0.500	0.438	0.550			
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	1	3	4	0	0	0	0	0	0	0	0	0	0	0	0	5	2	7	11	11		
Exiting Leg	0							4							0							7							11				
Total	0							8							0							14							22				

PDI File #: **239484 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jolma Road W: Starbucks Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars and Heavy Vehicles (Combined)

	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	4	120	1	0	125	3	0	8	0	11	23	125	4	0	152	0	0	0	0	0	288
4:15 PM	5	127	1	0	133	4	0	8	0	12	14	133	3	0	150	0	0	0	0	0	295
4:30 PM	4	115	0	0	119	2	0	6	0	8	28	151	2	0	181	0	0	0	0	0	308
4:45 PM	2	138	0	0	140	4	0	6	0	10	17	147	3	0	167	0	0	0	0	0	317
Total	15	500	2	0	517	13	0	28	0	41	82	556	12	0	650	0	0	0	0	0	1208
5:00 PM	1	145	0	0	146	3	0	10	0	13	20	166	2	0	188	0	0	0	0	0	347
5:15 PM	3	126	1	0	130	3	0	7	0	10	17	155	2	0	174	0	0	0	0	0	314
5:30 PM	1	145	1	0	147	1	0	4	0	5	20	167	3	0	190	0	0	0	0	0	342
5:45 PM	4	137	1	0	142	3	0	9	0	12	26	140	2	0	168	0	0	0	0	0	322
Total	9	553	3	0	565	10	0	30	0	40	83	628	9	0	720	0	0	0	0	0	1325
Grand Total	24	1053	5	0	1082	23	0	58	0	81	165	1184	21	0	1370	0	0	0	0	0	2533
Approach %	2.2	97.3	0.5	0.0		28.4	0.0	71.6	0.0		12.0	86.4	1.5	0.0		0.0	0.0	0.0	0.0		
Total %	0.9	41.6	0.2	0.0	42.7	0.9	0.0	2.3	0.0	3.2	6.5	46.7	0.8	0.0	54.1	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	1207					170					1111					45					2533
Cars	24	1036	4	0	1064	22	0	56	0	78	156	1171	21	0	1348	0	0	0	0	0	2490
% Cars	100.0	98.4	80.0	0.0	98.3	95.7	0.0	96.6	0.0	96.3	94.5	98.9	100.0	0.0	98.4	0.0	0.0	0.0	0.0	0.0	98.3
Exiting Leg Total	1193					160					1092					45					2490
Heavy Vehicles	0	17	1	0	18	1	0	2	0	3	9	13	0	0	22	0	0	0	0	0	43
% Heavy Vehicles	0.0	1.6	20.0	0.0	1.7	4.3	0.0	3.4	0.0	3.7	5.5	1.1	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	1.7
Exiting Leg Total	14					10					19					0					43

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

5:00 PM	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	
5:00 PM	1	145	0	0	146	3	0	10	0	13	20	166	2	0	188	0	0	0	0	0	347
5:15 PM	3	126	1	0	130	3	0	7	0	10	17	155	2	0	174	0	0	0	0	0	314
5:30 PM	1	145	1	0	147	1	0	4	0	5	20	167	3	0	190	0	0	0	0	0	342
5:45 PM	4	137	1	0	142	3	0	9	0	12	26	140	2	0	168	0	0	0	0	0	322
Total Volume	9	553	3	0	565	10	0	30	0	40	83	628	9	0	720	0	0	0	0	0	1325
% Approach Total	1.6	97.9	0.5	0.0		25.0	0.0	75.0	0.0		11.5	87.2	1.3	0.0		0.0	0.0	0.0	0.0		
PHF	0.563	0.953	0.750	0.000	0.961	0.833	0.000	0.750	0.000	0.769	0.798	0.940	0.750	0.000	0.947	0.000	0.000	0.000	0.000	0.000	0.955
Cars	9	546	2	0	557	10	0	28	0	38	77	624	9	0	710	0	0	0	0	0	1305
Cars %	100.0	98.7	66.7	0.0	98.6	100.0	0.0	93.3	0.0	95.0	92.8	99.4	100.0	0.0	98.6	0.0	0.0	0.0	0.0	0.0	98.5
Heavy Vehicles	0	7	1	0	8	0	0	2	0	2	6	4	0	0	10	0	0	0	0	0	20
Heavy Vehicles %	0.0	1.3	33.3	0.0	1.4	0.0	0.0	6.7	0.0	5.0	7.2	0.6	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	1.5
Cars Enter Leg	9	546	2	0	557	10	0	28	0	38	77	624	9	0	710	0	0	0	0	0	1305
Heavy Enter Leg	0	7	1	0	8	0	0	2	0	2	6	4	0	0	10	0	0	0	0	0	20
Total Entering Leg	9	553	3	0	565	10	0	30	0	40	83	628	9	0	720	0	0	0	0	0	1325
Cars Exiting Leg	634					79					574					18					1305
Heavy Exiting Leg	4					7					9					0					20
Total Exiting Leg	638					86					583					18					1325

PDI File #: **239484 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jolma Road W: Starbucks Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars

	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	4	118	1	0	123	3	0	8	0	11	22	123	4	0	149	0	0	0	0	0	283	
4:15 PM	5	123	1	0	129	4	0	8	0	12	14	130	3	0	147	0	0	0	0	0	288	
4:30 PM	4	112	0	0	116	2	0	6	0	8	27	149	2	0	178	0	0	0	0	0	302	
4:45 PM	2	137	0	0	139	3	0	6	0	9	16	145	3	0	164	0	0	0	0	0	312	
Total	15	490	2	0	507	12	0	28	0	40	79	547	12	0	638	0	0	0	0	0	1185	
5:00 PM	1	145	0	0	146	3	0	10	0	13	20	164	2	0	186	0	0	0	0	0	345	
5:15 PM	3	124	1	0	128	3	0	7	0	10	16	153	2	0	171	0	0	0	0	0	309	
5:30 PM	1	143	1	0	145	1	0	3	0	4	18	167	3	0	188	0	0	0	0	0	337	
5:45 PM	4	134	0	0	138	3	0	8	0	11	23	140	2	0	165	0	0	0	0	0	314	
Total	9	546	2	0	557	10	0	28	0	38	77	624	9	0	710	0	0	0	0	0	1305	
Grand Total	24	1036	4	0	1064	22	0	56	0	78	156	1171	21	0	1348	0	0	0	0	0	2490	
Approach %	2.3	97.4	0.4	0.0		28.2	0.0	71.8	0.0		11.6	86.9	1.6	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	1.0	41.6	0.2	0.0	42.7	0.9	0.0	2.2	0.0	3.1	6.3	47.0	0.8	0.0	54.1	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total						1193					160					1092					45	2490

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

	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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		
5:00 PM	1	145	0	0	146	3	0	10	0	13	20	164	2	0	186	0	0	0	0	0	345	
5:15 PM	3	124	1	0	128	3	0	7	0	10	16	153	2	0	171	0	0	0	0	0	309	
5:30 PM	1	143	1	0	145	1	0	3	0	4	18	167	3	0	188	0	0	0	0	0	337	
5:45 PM	4	134	0	0	138	3	0	8	0	11	23	140	2	0	165	0	0	0	0	0	314	
Total Volume	9	546	2	0	557	10	0	28	0	38	77	624	9	0	710	0	0	0	0	0	1305	
% Approach Total	1.6	98.0	0.4	0.0		26.3	0.0	73.7	0.0		10.8	87.9	1.3	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.563	0.941	0.500	0.000	0.954	0.833	0.000	0.700	0.000	0.731	0.837	0.934	0.750	0.000	0.944	0.000	0.000	0.000	0.000	0.000	0.946	
Entering Leg	9	546	2	0	557	10	0	28	0	38	77	624	9	0	710	0	0	0	0	0	1305	
Exiting Leg						634					79					574					18	1305
Total						1191					117					1284					18	2610

PDI File #: **239484 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jolma Road W: Starbucks Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



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

	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	2	0	0	2	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	5
4:15 PM	0	4	0	0	4	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	7
4:30 PM	0	3	0	0	3	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	6
4:45 PM	0	1	0	0	1	1	0	0	0	1	1	2	0	0	3	0	0	0	0	0	5
Total	0	10	0	0	10	1	0	0	0	1	3	9	0	0	12	0	0	0	0	0	23
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	2	0	0	2	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	5
5:30 PM	0	2	0	0	2	0	0	1	0	1	2	0	0	0	2	0	0	0	0	0	5
5:45 PM	0	3	1	0	4	0	0	1	0	1	3	0	0	0	3	0	0	0	0	0	8
Total	0	7	1	0	8	0	0	2	0	2	6	4	0	0	10	0	0	0	0	0	20
Grand Total	0	17	1	0	18	1	0	2	0	3	9	13	0	0	22	0	0	0	0	0	43
Approach %	0.0	94.4	5.6	0.0		33.3	0.0	66.7	0.0		40.9	59.1	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	39.5	2.3	0.0	41.9	2.3	0.0	4.7	0.0	7.0	20.9	30.2	0.0	0.0	51.2	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	14					10					19					0					43
Buses	0	8	0	0	8	1	0	0	0	1	5	2	0	0	7	0	0	0	0	0	16
% Buses	0.0	47.1	0.0	0.0	44.4	100.0	0.0	0.0	0.0	33.3	55.6	15.4	0.0	0.0	31.8	0.0	0.0	0.0	0.0	0.0	37.2
Exiting Leg Total	3					5					8					0					16
Single-Unit Trucks	0	8	1	0	9	0	0	2	0	2	4	9	0	0	13	0	0	0	0	0	24
% Single-Unit	0.0	47.1	100.0	0.0	50.0	0.0	0.0	100.0	0.0	66.7	44.4	69.2	0.0	0.0	59.1	0.0	0.0	0.0	0.0	0.0	55.8
Exiting Leg Total	9					5					10					0					24
Articulated Trucks	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
% Articulated	0.0	5.9	0.0	0.0	5.6	0.0	0.0	0.0	0.0	0.0	0.0	15.4	0.0	0.0	9.1	0.0	0.0	0.0	0.0	0.0	7.0
Exiting Leg Total	2					0					1					0					3

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

	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	2	0	0	2	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	5
4:15 PM	0	4	0	0	4	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	7
4:30 PM	0	3	0	0	3	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	6
4:45 PM	0	1	0	0	1	1	0	0	0	1	1	2	0	0	3	0	0	0	0	0	5
Total Volume	0	10	0	0	10	1	0	0	0	1	3	9	0	0	12	0	0	0	0	0	23
% Approach Total	0.0	100.0	0.0	0.0		100.0	0.0	0.0	0.0		25.0	75.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.625	0.000	0.000	0.625	0.250	0.000	0.000	0.000	0.250	0.750	0.750	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.821
Buses	0	3	0	0	3	1	0	0	0	1	3	2	0	0	5	0	0	0	0	0	9
Buses %	0.0	30.0	0.0	0.0	30.0	100.0	0.0	0.0	0.0	100.0	100.0	22.2	0.0	0.0	41.7	0.0	0.0	0.0	0.0	0.0	39.1
Single-Unit Trucks	0	7	0	0	7	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	14
Single-Unit %	0.0	70.0	0.0	0.0	70.0	0.0	0.0	0.0	0.0	0.0	0.0	77.8	0.0	0.0	58.3	0.0	0.0	0.0	0.0	0.0	60.9
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	0	3	0	0	3	1	0	0	0	1	3	2	0	0	5	0	0	0	0	0	9
Single-Unit Trucks	0	7	0	0	7	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	14
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	10					1					12					0					23
Buses	3					3					3					0					9
Single-Unit Trucks	7					7					7					0					14
Articulated Trucks	0					0					0					0					0
Total Exiting Leg	10					3					10					0					23

PDI File #: **239484 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jolma Road W: Starbucks Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Buses

	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	1	0	0	0	1	0	0	0	0	0	1
4:15 PM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	2
Total	0	3	0	0	3	1	0	0	0	1	3	2	0	0	5	0	0	0	0	0	9
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	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:30 PM	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2
5:45 PM	0	2	0	0	2	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	3
Total	0	5	0	0	5	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	7
Grand Total	0	8	0	0	8	1	0	0	0	1	5	2	0	0	7	0	0	0	0	0	16
Approach %	0.0	100.0	0.0	0.0		100.0	0.0	0.0	0.0		71.4	28.6	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	50.0	0.0	0.0	50.0	6.3	0.0	0.0	0.0	6.3	31.3	12.5	0.0	0.0	43.8	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	3					5					8					0					16

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

	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	1	0	0	0	1	0	0	0	0	0	1
4:15 PM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	2
Total Volume	0	3	0	0	3	1	0	0	0	1	3	2	0	0	5	0	0	0	0	0	9
% Approach Total	0.0	100.0	0.0	0.0		100.0	0.0	0.0	0.0		60.0	40.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.250	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.250	0.750	0.250	0.000	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.450
Entering Leg	0	3	0	0	3	1	0	0	0	1	3	2	0	0	5	0	0	0	0	0	9
Exiting Leg	3					3					3					0					9
Total	6					4					8					0					18

PDI File #: **239484 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jolma Road W: Starbucks Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Single-Unit Trucks

	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
4:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
4:30 PM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	5
4:45 PM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
Total	0	7	0	0	7	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	14
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	1	1	0	0	2	0	0	0	0	0	2
5:30 PM	0	1	0	0	1	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	3
5:45 PM	0	0	1	0	1	0	0	1	0	1	2	0	0	0	2	0	0	0	0	0	4
Total	0	1	1	0	2	0	0	2	0	2	4	2	0	0	6	0	0	0	0	0	10
Grand Total	0	8	1	0	9	0	0	2	0	2	4	9	0	0	13	0	0	0	0	0	24
Approach %	0.0	88.9	11.1	0.0		0.0	0.0	100.0	0.0		30.8	69.2	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	33.3	4.2	0.0	37.5	0.0	0.0	8.3	0.0	8.3	16.7	37.5	0.0	0.0	54.2	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	9					5					10					0					24

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

4:00 PM	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
4:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
4:30 PM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	5
4:45 PM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
Total Volume	0	7	0	0	7	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	14
% Approach Total	0.0	100.0	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		
PHF	0.000	0.583	0.000	0.000	0.583	0.000	0.000	0.000	0.000	0.000	0.000	0.875	0.000	0.000	0.875	0.000	0.000	0.000	0.000	0.000	0.700
Entering Leg	0	7	0	0	7	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	14
Exiting Leg	7					0					7					0					14
Total	14					0					14					0					28

PDI File #: **239484 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jolma Road W: Starbucks Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Articulated Trucks

	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	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	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	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
Grand Total	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
Approach %	0.0	100.0	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		
Total %	0.0	33.3	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	0.0	66.7	0.0	0.0	66.7	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total	2					0					1					0					3

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

5:00 PM	Grafton Street (Route 122)					Jolma Road					Grafton Street (Route 122)					Starbucks Driveway					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	
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	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
% Approach Total	0.0	100.0	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		
PHF	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.750
Entering Leg	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
Exiting Leg	2					0					1					0					3
Total	3					0					3					0					6

PDI File #: **239484 B**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jolma Road W: Starbucks Driveway**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Pedestrians

	Grafton Street (Route 122)								Jolma Road								Grafton Street (Route 122)								Starbucks Driveway								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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	3		
4:15 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	1	1	2	3			
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	1	1	2	2			
4:45 PM	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	1				
Total	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	3	4	7	9					
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	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1			
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	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	0			
Total	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	1			
Grand Total	0	0	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	3	4	7	10			
Approach %	0	0	0	0	0	0	0	0	0	0	0	33.3	66.7	0	0	0	0	0	0	0	0	0	0	0	0	42.9	57.1						
Total %	0	0	0	0	0	0	0	0	0	0	0	10	20	30	0	0	0	0	0	0	0	0	0	0	0	0	30	40	70				
Exiting Leg Total	0							3							0							7							10				

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

	Grafton Street (Route 122)								Jolma Road								Grafton Street (Route 122)								Starbucks Driveway								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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	3			
4:15 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	1	1	2	3			
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	1	1	2	2			
4:45 PM	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	1				
Total Volume	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	3	4	7	9				
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	42.9	57.1						
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	0.250	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	0.750	0.500	0.583	0.750			
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	3	4	7	9			
Exiting Leg	0							2							0							7							9				
Total	0							4							0							14							18				

PDI File #: **239484 C**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jennings Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars and Heavy Vehicles (Combined)

	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	88	6	0	94	8	17	0	25	14	67	0	81	200
7:15 AM	116	11	0	127	6	22	0	28	11	98	0	109	264
7:30 AM	85	3	0	88	7	20	0	27	13	113	0	126	241
7:45 AM	112	8	0	120	6	24	0	30	14	99	0	113	263
Total	401	28	0	429	27	83	0	110	52	377	0	429	968
8:00 AM	100	10	0	110	11	16	0	27	17	104	0	121	258
8:15 AM	90	4	0	94	9	15	0	24	15	130	0	145	263
8:30 AM	101	7	0	108	10	16	0	26	15	129	0	144	278
8:45 AM	87	20	0	107	7	12	0	19	5	100	0	105	231
Total	378	41	0	419	37	59	0	96	52	463	0	515	1030
Grand Total	779	69	0	848	64	142	0	206	104	840	0	944	1998
Approach %	91.9	8.1	0.0		31.1	68.9	0.0		11.0	89.0	0.0		
Total %	39.0	3.5	0.0	42.4	3.2	7.1	0.0	10.3	5.2	42.0	0.0	47.2	
Exiting Leg Total				904				173				921	1998
Cars	754	66	0	820	63	136	0	199	97	793	0	890	1909
% Cars	96.8	95.7	0.0	96.7	98.4	95.8	0.0	96.6	93.3	94.4	0.0	94.3	95.5
Exiting Leg Total				856				163				890	1909
Heavy Vehicles	25	3	0	28	1	6	0	7	7	47	0	54	89
% Heavy Vehicles	3.2	4.3	0.0	3.3	1.6	4.2	0.0	3.4	6.7	5.6	0.0	5.7	4.5
Exiting Leg Total				48				10				31	89

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

	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:45 AM	112	8	0	120	6	24	0	30	14	99	0	113	263
8:00 AM	100	10	0	110	11	16	0	27	17	104	0	121	258
8:15 AM	90	4	0	94	9	15	0	24	15	130	0	145	263
8:30 AM	101	7	0	108	10	16	0	26	15	129	0	144	278
Total Volume	403	29	0	432	36	71	0	107	61	462	0	523	1062
% Approach Total	93.3	6.7	0.0		33.6	66.4	0.0		11.7	88.3	0.0		
PHF	0.900	0.725	0.000	0.900	0.818	0.740	0.000	0.892	0.897	0.888	0.000	0.902	0.955
Cars	386	27	0	413	35	68	0	103	56	433	0	489	1005
Cars %	95.8	93.1	0.0	95.6	97.2	95.8	0.0	96.3	91.8	93.7	0.0	93.5	94.6
Heavy Vehicles	17	2	0	19	1	3	0	4	5	29	0	34	57
Heavy Vehicles %	4.2	6.9	0.0	4.4	2.8	4.2	0.0	3.7	8.2	6.3	0.0	6.5	5.4
Cars Enter Leg	386	27	0	413	35	68	0	103	56	433	0	489	1005
Heavy Enter Leg	17	2	0	19	1	3	0	4	5	29	0	34	57
Total Entering Leg	403	29	0	432	36	71	0	107	61	462	0	523	1062
Cars Exiting Leg				468				83				454	1005
Heavy Exiting Leg				30				7				20	57
Total Exiting Leg				498				90				474	1062

PDI File #: **239484 C**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jennings Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars

	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	86	6	0	92	8	17	0	25	13	64	0	77	194
7:15 AM	113	10	0	123	6	20	0	26	11	95	0	106	255
7:30 AM	84	3	0	87	7	20	0	27	12	103	0	115	229
7:45 AM	108	8	0	116	6	22	0	28	14	95	0	109	253
Total	391	27	0	418	27	79	0	106	50	357	0	407	931
8:00 AM	94	10	0	104	11	16	0	27	15	96	0	111	242
8:15 AM	85	2	0	87	8	15	0	23	13	126	0	139	249
8:30 AM	99	7	0	106	10	15	0	25	14	116	0	130	261
8:45 AM	85	20	0	105	7	11	0	18	5	98	0	103	226
Total	363	39	0	402	36	57	0	93	47	436	0	483	978
Grand Total	754	66	0	820	63	136	0	199	97	793	0	890	1909
Approach %	92.0	8.0	0.0		31.7	68.3	0.0		10.9	89.1	0.0		
Total %	39.5	3.5	0.0	43.0	3.3	7.1	0.0	10.4	5.1	41.5	0.0	46.6	
Exiting Leg Total				856				163				890	1909

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

	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:45 AM	108	8	0	116	6	22	0	28	14	95	0	109	253
8:00 AM	94	10	0	104	11	16	0	27	15	96	0	111	242
8:15 AM	85	2	0	87	8	15	0	23	13	126	0	139	249
8:30 AM	99	7	0	106	10	15	0	25	14	116	0	130	261
Total Volume	386	27	0	413	35	68	0	103	56	433	0	489	1005
% Approach Total	93.5	6.5	0.0		34.0	66.0	0.0		11.5	88.5	0.0		
PHF	0.894	0.675	0.000	0.890	0.795	0.773	0.000	0.920	0.933	0.859	0.000	0.879	0.963
Entering Leg	386	27	0	413	35	68	0	103	56	433	0	489	1005
Exiting Leg				468				83				454	1005
Total				881				186				943	2010

PDI File #: **239484 C**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jennings Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**



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

	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	2	0	0	2	0	0	0	0	1	3	0	4	6
7:15 AM	3	1	0	4	0	2	0	2	0	3	0	3	9
7:30 AM	1	0	0	1	0	0	0	0	1	10	0	11	12
7:45 AM	4	0	0	4	0	2	0	2	0	4	0	4	10
Total	10	1	0	11	0	4	0	4	2	20	0	22	37
8:00 AM	6	0	0	6	0	0	0	0	2	8	0	10	16
8:15 AM	5	2	0	7	1	0	0	1	2	4	0	6	14
8:30 AM	2	0	0	2	0	1	0	1	1	13	0	14	17
8:45 AM	2	0	0	2	0	1	0	1	0	2	0	2	5
Total	15	2	0	17	1	2	0	3	5	27	0	32	52
Grand Total	25	3	0	28	1	6	0	7	7	47	0	54	89
Approach %	89.3	10.7	0.0		14.3	85.7	0.0		13.0	87.0	0.0		
Total %	28.1	3.4	0.0	31.5	1.1	6.7	0.0	7.9	7.9	52.8	0.0	60.7	
Exiting Leg Total				48				10				31	89
Buses	13	1	0	14	1	2	0	3	7	18	0	25	42
% Buses	52.0	33.3	0.0	50.0	100.0	33.3	0.0	42.9	100.0	38.3	0.0	46.3	47.2
Exiting Leg Total				19				8				15	42
Single-Unit Trucks	11	2	0	13	0	4	0	4	0	21	0	21	38
% Single-Unit	44.0	66.7	0.0	46.4	0.0	66.7	0.0	57.1	0.0	44.7	0.0	38.9	42.7
Exiting Leg Total				21				2				15	38
Articulated Trucks	1	0	0	1	0	0	0	0	0	8	0	8	9
% Articulated	4.0	0.0	0.0	3.6	0.0	0.0	0.0	0.0	0.0	17.0	0.0	14.8	10.1
Exiting Leg Total				8				0				1	9

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

	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:45 AM	4	0	0	4	0	2	0	2	0	4	0	4	10
8:00 AM	6	0	0	6	0	0	0	0	2	8	0	10	16
8:15 AM	5	2	0	7	1	0	0	1	2	4	0	6	14
8:30 AM	2	0	0	2	0	1	0	1	1	13	0	14	17
Total Volume	17	2	0	19	1	3	0	4	5	29	0	34	57
% Approach Total	89.5	10.5	0.0		25.0	75.0	0.0		14.7	85.3	0.0		
PHF	0.708	0.250	0.000	0.679	0.250	0.375	0.000	0.500	0.625	0.558	0.000	0.607	0.838
Buses	12	0	0	12	1	2	0	3	5	12	0	17	32
Buses %	70.6	0.0	0.0	63.2	100.0	66.7	0.0	75.0	100.0	41.4	0.0	50.0	56.1
Single-Unit Trucks	5	2	0	7	0	1	0	1	0	12	0	12	20
Single-Unit %	29.4	100.0	0.0	36.8	0.0	33.3	0.0	25.0	0.0	41.4	0.0	35.3	35.1
Articulated Trucks	0	0	0	0	0	0	0	0	0	5	0	5	5
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.2	0.0	14.7	8.8
Buses	12	0	0	12	1	2	0	3	5	12	0	17	32
Single-Unit Trucks	5	2	0	7	0	1	0	1	0	12	0	12	20
Articulated Trucks	0	0	0	0	0	0	0	0	0	5	0	5	5
Total Entering Leg	17	2	0	19	1	3	0	4	5	29	0	34	57
Buses				13				5				14	32
Single-Unit Trucks				12				2				6	20
Articulated Trucks				5				0				0	5
Total Exiting Leg				30				7				20	57

PDI File #: **239484 C**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jennings Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Buses

	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	1	2	0	3	3
7:15 AM	0	1	0	1	0	0	0	0	0	1	0	1	2
7:30 AM	0	0	0	0	0	0	0	0	1	2	0	3	3
7:45 AM	3	0	0	3	0	2	0	2	0	0	0	0	5
Total	3	1	0	4	0	2	0	2	2	5	0	7	13
8:00 AM	5	0	0	5	0	0	0	0	2	4	0	6	11
8:15 AM	3	0	0	3	1	0	0	1	2	2	0	4	8
8:30 AM	1	0	0	1	0	0	0	0	1	6	0	7	8
8:45 AM	1	0	0	1	0	0	0	0	0	1	0	1	2
Total	10	0	0	10	1	0	0	1	5	13	0	18	29
Grand Total	13	1	0	14	1	2	0	3	7	18	0	25	42
Approach %	92.9	7.1	0.0		33.3	66.7	0.0		28.0	72.0	0.0		
Total %	31.0	2.4	0.0	33.3	2.4	4.8	0.0	7.1	16.7	42.9	0.0	59.5	
Exiting Leg Total				19				8				15	42

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

7:45 AM	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:45 AM	3	0	0	3	0	2	0	2	0	0	0	0	5
8:00 AM	5	0	0	5	0	0	0	0	2	4	0	6	11
8:15 AM	3	0	0	3	1	0	0	1	2	2	0	4	8
8:30 AM	1	0	0	1	0	0	0	0	1	6	0	7	8
Total Volume	12	0	0	12	1	2	0	3	5	12	0	17	32
% Approach Total	100.0	0.0	0.0		33.3	66.7	0.0		29.4	70.6	0.0		
PHF	0.600	0.000	0.000	0.600	0.250	0.250	0.000	0.375	0.625	0.500	0.000	0.607	0.727
Entering Leg	12	0	0	12	1	2	0	3	5	12	0	17	32
Exiting Leg				13				5				14	32
Total				25				8				31	64

PDI File #: **239484 C**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jennings Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Single-Unit Trucks

	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	1	0	0	1	0	0	0	0	0	1	0	1	2
7:15 AM	3	0	0	3	0	2	0	2	0	1	0	1	6
7:30 AM	1	0	0	1	0	0	0	0	0	6	0	6	7
7:45 AM	1	0	0	1	0	0	0	0	0	3	0	3	4
Total	6	0	0	6	0	2	0	2	0	11	0	11	19
8:00 AM	1	0	0	1	0	0	0	0	0	4	0	4	5
8:15 AM	2	2	0	4	0	0	0	0	0	2	0	2	6
8:30 AM	1	0	0	1	0	1	0	1	0	3	0	3	5
8:45 AM	1	0	0	1	0	1	0	1	0	1	0	1	3
Total	5	2	0	7	0	2	0	2	0	10	0	10	19
Grand Total	11	2	0	13	0	4	0	4	0	21	0	21	38
Approach %	84.6	15.4	0.0		0.0	100.0	0.0		0.0	100.0	0.0		
Total %	28.9	5.3	0.0	34.2	0.0	10.5	0.0	10.5	0.0	55.3	0.0	55.3	
Exiting Leg Total				21				2				15	38

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

7:15 AM	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:15 AM	3	0	0	3	0	2	0	2	0	1	0	1	6
7:30 AM	1	0	0	1	0	0	0	0	0	6	0	6	7
7:45 AM	1	0	0	1	0	0	0	0	0	3	0	3	4
8:00 AM	1	0	0	1	0	0	0	0	0	4	0	4	5
Total Volume	6	0	0	6	0	2	0	2	0	14	0	14	22
% Approach Total	100.0	0.0	0.0		0.0	100.0	0.0		0.0	100.0	0.0		
PHF	0.500	0.000	0.000	0.500	0.000	0.250	0.000	0.250	0.000	0.583	0.000	0.583	0.786
Entering Leg	6	0	0	6	0	2	0	2	0	14	0	14	22
Exiting Leg				14				0				8	22
Total				20				2				22	44

PDI File #: **239484 C**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jennings Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Articulated Trucks

	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
7:30 AM	0	0	0	0	0	0	0	0	0	2	0	2	2
7:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	1	0	0	1	0	0	0	0	0	4	0	4	5
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	4	0	4	4
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	4	0	4	4
Grand Total	1	0	0	1	0	0	0	0	0	8	0	8	9
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	11.1	0.0	0.0	11.1	0.0	0.0	0.0	0.0	0.0	88.9	0.0	88.9	
Exiting Leg Total				8				0				1	9

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

7:00 AM	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
7:30 AM	0	0	0	0	0	0	0	0	0	2	0	2	2
7:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
Total Volume	1	0	0	1	0	0	0	0	0	4	0	4	5
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.500	0.625
Entering Leg	1	0	0	1	0	0	0	0	0	4	0	4	5
Exiting Leg				4				0				1	5
Total				5				0				5	10

PDI File #: **239484 C**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jennings Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**



**PRECISION
D A T A
INDUSTRIES, LLC**
 157 Washington Street, Suite 2
 Hudson, MA 01749
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilc.com

Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**

Class: **Bicycles (on Roadway and Crosswalks)**

	Grafton Street (Route 122)						Jennings Street						Grafton Street (Route 122)						Total
	from North						from East						from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	
7:00 AM	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	1	1	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
7:45 AM	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	1	1	0	0	0	0	0	0	1
8:00 AM	1	0	0	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	1	0	0	0	1	1
8:30 AM	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
Total	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	2
Grand Total	1	0	0	0	0	1	0	0	0	0	1	1	0	1	0	0	0	1	3
Approach %	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	100.0		0.0	100.0	0.0	0.0	0.0		
Total %	33.3	0.0	0.0	0.0	0.0	33.3	0.0	0.0	0.0	0.0	33.3	33.3	0.0	33.3	0.0	0.0	0.0	33.3	
Exiting Leg Total	1						1						1						3

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

7:15 AM	Grafton Street (Route 122)						Jennings Street						Grafton Street (Route 122)						Total
	from North						from East						from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	
7:15 AM	0	0	0	0	0	0	0	0	0	0	1	1	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
7:45 AM	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	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	1	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	2
% Approach Total	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	0.0		
PHF	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.500
Entering Leg	1	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	2
Exiting Leg	0						0						1						2
Total	1						2						1						4

PDI File #: **239484 C**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jennings Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Pedestrians

	Grafton Street (Route 122)						Jennings Street						Grafton Street (Route 122)						Total
	from North						from East						from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	3
7:15 AM	0	0	0	0	0	0	0	0	0	0	1	1	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
7:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	4	1	5	0	0	0	0	0	0	5
8:00 AM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	4	2	6	0	0	0	0	0	0	6
Grand Total	0	0	0	0	0	0	0	0	0	8	3	11	0	0	0	0	0	0	11
Approach %	0	0	0	0	0	0	0	0	0	72.727	27.273		0	0	0	0	0	0	
Total %	0	0	0	0	0	0	0	0	0	72.727	27.273	100	0	0	0	0	0	0	
Exiting Leg Total	0						11						0						11

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

	Grafton Street (Route 122)						Jennings Street						Grafton Street (Route 122)						Total
	from North						from East						from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	
7:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	0	0	0	4	2	6	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	66.7	33.3		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	1.000	0.500	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.750
Entering Leg	0	0	0	0	0	0	0	0	0	4	2	6	0	0	0	0	0	0	6
Exiting Leg	0						6						0						6
Total	0						12						0						12

PDI File #: **239484 C**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jennings Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars and Heavy Vehicles (Combined)

	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	104	10	0	114	10	7	0	17	9	148	0	157	288
4:15 PM	99	13	0	112	10	14	0	24	17	128	0	145	281
4:30 PM	86	7	0	93	9	11	0	20	16	144	0	160	273
4:45 PM	119	15	0	134	6	14	0	20	14	155	0	169	323
Total	408	45	0	453	35	46	0	81	56	575	0	631	1165
5:00 PM	115	17	0	132	15	8	0	23	16	163	0	179	334
5:15 PM	107	10	0	117	10	13	0	23	14	174	0	188	328
5:30 PM	134	11	0	145	12	16	0	28	14	154	0	168	341
5:45 PM	109	17	0	126	8	13	0	21	14	146	0	160	307
Total	465	55	0	520	45	50	0	95	58	637	0	695	1310
Grand Total	873	100	0	973	80	96	0	176	114	1212	0	1326	2475
Approach %	89.7	10.3	0.0		45.5	54.5	0.0		8.6	91.4	0.0		
Total %	35.3	4.0	0.0	39.3	3.2	3.9	0.0	7.1	4.6	49.0	0.0	53.6	
Exiting Leg Total				1292				214				969	2475
Cars	858	99	0	957	79	93	0	172	113	1194	0	1307	2436
% Cars	98.3	99.0	0.0	98.4	98.8	96.9	0.0	97.7	99.1	98.5	0.0	98.6	98.4
Exiting Leg Total				1273				212				951	2436
Heavy Vehicles	15	1	0	16	1	3	0	4	1	18	0	19	39
% Heavy Vehicles	1.7	1.0	0.0	1.6	1.3	3.1	0.0	2.3	0.9	1.5	0.0	1.4	1.6
Exiting Leg Total				19				2				18	39

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

4:45 PM	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:45 PM	119	15	0	134	6	14	0	20	14	155	0	169	323
5:00 PM	115	17	0	132	15	8	0	23	16	163	0	179	334
5:15 PM	107	10	0	117	10	13	0	23	14	174	0	188	328
5:30 PM	134	11	0	145	12	16	0	28	14	154	0	168	341
Total Volume	475	53	0	528	43	51	0	94	58	646	0	704	1326
% Approach Total	90.0	10.0	0.0		45.7	54.3	0.0		8.2	91.8	0.0		
PHF	0.886	0.779	0.000	0.910	0.717	0.797	0.000	0.839	0.906	0.928	0.000	0.936	0.972
Cars	469	53	0	522	42	51	0	93	58	638	0	696	1311
Cars %	98.7	100.0	0.0	98.9	97.7	100.0	0.0	98.9	100.0	98.8	0.0	98.9	98.9
Heavy Vehicles	6	0	0	6	1	0	0	1	0	8	0	8	15
Heavy Vehicles %	1.3	0.0	0.0	1.1	2.3	0.0	0.0	1.1	0.0	1.2	0.0	1.1	1.1
Cars Enter Leg	469	53	0	522	42	51	0	93	58	638	0	696	1311
Heavy Enter Leg	6	0	0	6	1	0	0	1	0	8	0	8	15
Total Entering Leg	475	53	0	528	43	51	0	94	58	646	0	704	1326
Cars Exiting Leg				680				111				520	1311
Heavy Exiting Leg				9				0				6	15
Total Exiting Leg				689				111				526	1326

PDI File #: **239484 C**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jennings Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars

	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	102	9	0	111	10	6	0	16	9	144	0	153	280
4:15 PM	96	13	0	109	10	13	0	23	16	126	0	142	274
4:30 PM	85	7	0	92	9	10	0	19	16	142	0	158	269
4:45 PM	117	15	0	132	6	14	0	20	14	151	0	165	317
Total	400	44	0	444	35	43	0	78	55	563	0	618	1140
5:00 PM	115	17	0	132	15	8	0	23	16	161	0	177	332
5:15 PM	105	10	0	115	10	13	0	23	14	173	0	187	325
5:30 PM	132	11	0	143	11	16	0	27	14	153	0	167	337
5:45 PM	106	17	0	123	8	13	0	21	14	144	0	158	302
Total	458	55	0	513	44	50	0	94	58	631	0	689	1296
Grand Total	858	99	0	957	79	93	0	172	113	1194	0	1307	2436
Approach %	89.7	10.3	0.0		45.9	54.1	0.0		8.6	91.4	0.0		
Total %	35.2	4.1	0.0	39.3	3.2	3.8	0.0	7.1	4.6	49.0	0.0	53.7	
Exiting Leg Total				1273				212				951	2436

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

	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:45 PM	117	15	0	132	6	14	0	20	14	151	0	165	317
5:00 PM	115	17	0	132	15	8	0	23	16	161	0	177	332
5:15 PM	105	10	0	115	10	13	0	23	14	173	0	187	325
5:30 PM	132	11	0	143	11	16	0	27	14	153	0	167	337
Total Volume	469	53	0	522	42	51	0	93	58	638	0	696	1311
% Approach Total	89.8	10.2	0.0		45.2	54.8	0.0		8.3	91.7	0.0		
PHF	0.888	0.779	0.000	0.913	0.700	0.797	0.000	0.861	0.906	0.922	0.000	0.930	0.973
Entering Leg	469	53	0	522	42	51	0	93	58	638	0	696	1311
Exiting Leg				680				111				520	1311
Total				1202				204				1216	2622

PDI File #: **239484 C**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jennings Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



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

	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	2	1	0	3	0	1	0	1	0	4	0	4	8
4:15 PM	3	0	0	3	0	1	0	1	1	2	0	3	7
4:30 PM	1	0	0	1	0	1	0	1	0	2	0	2	4
4:45 PM	2	0	0	2	0	0	0	0	0	4	0	4	6
Total	8	1	0	9	0	3	0	3	1	12	0	13	25
5:00 PM	0	0	0	0	0	0	0	0	0	2	0	2	2
5:15 PM	2	0	0	2	0	0	0	0	0	1	0	1	3
5:30 PM	2	0	0	2	1	0	0	1	0	1	0	1	4
5:45 PM	3	0	0	3	0	0	0	0	0	2	0	2	5
Total	7	0	0	7	1	0	0	1	0	6	0	6	14
Grand Total	15	1	0	16	1	3	0	4	1	18	0	19	39
Approach %	93.8	6.3	0.0		25.0	75.0	0.0		5.3	94.7	0.0		
Total %	38.5	2.6	0.0	41.0	2.6	7.7	0.0	10.3	2.6	46.2	0.0	48.7	
Exiting Leg Total				19				2				18	39
Buses	8	1	0	9	1	2	0	3	0	7	0	7	19
% Buses	53.3	100.0	0.0	56.3	100.0	66.7	0.0	75.0	0.0	38.9	0.0	36.8	48.7
Exiting Leg Total				8				1				10	19
Single-Unit Trucks	5	0	0	5	0	1	0	1	1	9	0	10	16
% Single-Unit	33.3	0.0	0.0	31.3	0.0	33.3	0.0	25.0	100.0	50.0	0.0	52.6	41.0
Exiting Leg Total				9				1				6	16
Articulated Trucks	2	0	0	2	0	0	0	0	0	2	0	2	4
% Articulated	13.3	0.0	0.0	12.5	0.0	0.0	0.0	0.0	0.0	11.1	0.0	10.5	10.3
Exiting Leg Total				2				0				2	4

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

4:00 PM	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	2	1	0	3	0	1	0	1	0	4	0	4	8
4:15 PM	3	0	0	3	0	1	0	1	1	2	0	3	7
4:30 PM	1	0	0	1	0	1	0	1	0	2	0	2	4
4:45 PM	2	0	0	2	0	0	0	0	0	4	0	4	6
Total Volume	8	1	0	9	0	3	0	3	1	12	0	13	25
% Approach Total	88.9	11.1	0.0		0.0	100.0	0.0		7.7	92.3	0.0		
PHF	0.667	0.250	0.000	0.750	0.000	0.750	0.000	0.750	0.250	0.750	0.000	0.813	0.781
Buses	3	1	0	4	0	2	0	2	0	5	0	5	11
Buses %	37.5	100.0	0.0	44.4	0.0	66.7	0.0	66.7	0.0	41.7	0.0	38.5	44.0
Single-Unit Trucks	4	0	0	4	0	1	0	1	1	7	0	8	13
Single-Unit %	50.0	0.0	0.0	44.4	0.0	33.3	0.0	33.3	100.0	58.3	0.0	61.5	52.0
Articulated Trucks	1	0	0	1	0	0	0	0	0	0	0	0	1
Articulated %	12.5	0.0	0.0	11.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0
Buses	3	1	0	4	0	2	0	2	0	5	0	5	11
Single-Unit Trucks	4	0	0	4	0	1	0	1	1	7	0	8	13
Articulated Trucks	1	0	0	1	0	0	0	0	0	0	0	0	1
Total Entering Leg	8	1	0	9	0	3	0	3	1	12	0	13	25
Buses				5				1				5	11
Single-Unit Trucks				7				1				5	13
Articulated Trucks				0				0				1	1
Total Exiting Leg				12				2				11	25

PDI File #: **239484 C**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jennings Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Buses

	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	1	1	0	2	0	1	0	1	0	1	0	1	4
4:15 PM	2	0	0	2	0	1	0	1	0	2	0	2	5
4:30 PM	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	2	0	2	2
Total	3	1	0	4	0	2	0	2	0	5	0	5	11
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	2	0	0	2	0	0	0	0	0	0	0	0	2
5:30 PM	2	0	0	2	1	0	0	1	0	0	0	0	3
5:45 PM	1	0	0	1	0	0	0	0	0	2	0	2	3
Total	5	0	0	5	1	0	0	1	0	2	0	2	8
Grand Total	8	1	0	9	1	2	0	3	0	7	0	7	19
Approach %	88.9	11.1	0.0		33.3	66.7	0.0		0.0	100.0	0.0		
Total %	42.1	5.3	0.0	47.4	5.3	10.5	0.0	15.8	0.0	36.8	0.0	36.8	
Exiting Leg Total				8				1				10	19

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

	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	1	1	0	2	0	1	0	1	0	1	0	1	4
4:15 PM	2	0	0	2	0	1	0	1	0	2	0	2	5
4:30 PM	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	2	0	2	2
Total Volume	3	1	0	4	0	2	0	2	0	5	0	5	11
% Approach Total	75.0	25.0	0.0		0.0	100.0	0.0		0.0	100.0	0.0		
PHF	0.375	0.250	0.000	0.500	0.000	0.500	0.000	0.500	0.000	0.625	0.000	0.625	0.550
Entering Leg	3	1	0	4	0	2	0	2	0	5	0	5	11
Exiting Leg				5				1				5	11
Total				9				3				10	22

PDI File #: **239484 C**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jennings Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Single-Unit Trucks

	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	3	0	3	3
4:15 PM	1	0	0	1	0	0	0	0	1	0	0	1	2
4:30 PM	1	0	0	1	0	1	0	1	0	2	0	2	4
4:45 PM	2	0	0	2	0	0	0	0	0	2	0	2	4
Total	4	0	0	4	0	1	0	1	1	7	0	8	13
5:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
5:15 PM	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	1	0	1	1
5:45 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
Total	1	0	0	1	0	0	0	0	0	2	0	2	3
Grand Total	5	0	0	5	0	1	0	1	1	9	0	10	16
Approach %	100.0	0.0	0.0		0.0	100.0	0.0		10.0	90.0	0.0		
Total %	31.3	0.0	0.0	31.3	0.0	6.3	0.0	6.3	6.3	56.3	0.0	62.5	
Exiting Leg Total				9				1				6	16

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

	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	3	0	3	3
4:15 PM	1	0	0	1	0	0	0	0	1	0	0	1	2
4:30 PM	1	0	0	1	0	1	0	1	0	2	0	2	4
4:45 PM	2	0	0	2	0	0	0	0	0	2	0	2	4
Total Volume	4	0	0	4	0	1	0	1	1	7	0	8	13
% Approach Total	100.0	0.0	0.0		0.0	100.0	0.0		12.5	87.5	0.0		
PHF	0.500	0.000	0.000	0.500	0.000	0.250	0.000	0.250	0.250	0.583	0.000	0.667	0.813
Entering Leg	4	0	0	4	0	1	0	1	1	7	0	8	13
Exiting Leg				7				1				5	13
Total				11				2				13	26

PDI File #: **239484 C**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jennings Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Articulated Trucks

	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
4:15 PM	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
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	1	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
5:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
Total	1	0	0	1	0	0	0	0	0	2	0	2	3
Grand Total	2	0	0	2	0	0	0	0	0	2	0	2	4
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	50.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	50.0	
Exiting Leg Total				2				0				2	4

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

	Grafton Street (Route 122)				Jennings Street				Grafton Street (Route 122)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
5:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
5:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
Total Volume	1	0	0	1	0	0	0	0	0	2	0	2	3
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.500	0.750
Entering Leg	1	0	0	1	0	0	0	0	0	2	0	2	3
Exiting Leg				2				0				1	3
Total				3				0				3	6

PDI File #: **239484 C**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jennings Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**



**PRECISION
D A T A
INDUSTRIES, LLC**
 157 Washington Street, Suite 2
 Hudson, MA 01749
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilc.com

Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**

Class:

Bicycles (on Roadway and Crosswalks)

	Grafton Street (Route 122)						Jennings Street						Grafton Street (Route 122)						Total
	from North						from East						from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	
4:00 PM	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
4:30 PM	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
Total	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	1	0	0	0	1	1
5:15 PM	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	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
Total	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	2
Grand Total	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	2
Approach %	100.0	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		
Total %	50.0	0.0	0.0	0.0	0.0	50.0	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	1						0						1						2

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

4:30 PM	Grafton Street (Route 122)						Jennings Street						Grafton Street (Route 122)						Total
	from North						from East						from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	
4:30 PM	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
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
5:15 PM	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	2
% Approach Total	100.0	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		
PHF	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.250	0.500
Entering Leg	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	2
Exiting Leg	1						0						1						2
Total	2						0						2						4

PDI File #: **239484 C**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Jennings Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**



**PRECISION
D A T A
INDUSTRIES, LLC**
 157 Washington Street, Suite 2
 Hudson, MA 01749
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdilc.com

Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**

Class: **Pedestrians**

	Grafton Street (Route 122)						Jennings Street						Grafton Street (Route 122)						Total
	from North						from East						from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	
4:00 PM	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
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
Total	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3
5:00 PM	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
5:30 PM	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
Total	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	3	0	0	0	0	0	0	3
Approach %	0	0	0	0	0	0	0	0	0	0	100	3	0	0	0	0	0	0	3
Total %	0	0	0	0	0	0	0	0	0	0	100	3	0	0	0	0	0	0	3
Exiting Leg Total	0						3						0						3

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

4:00 PM	Grafton Street (Route 122)						Jennings Street						Grafton Street (Route 122)						Total
	from North						from East						from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	
4:00 PM	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
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
Total Volume	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3
% Approach Total	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	3
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.375	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.375
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3
Exiting Leg	0						3						0						3
Total	0						6						0						6

PDI File #: **239484 D**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Stop and Shop Driveway W: Dalton Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars and Heavy Vehicles (Combined)

	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	4	107	3	0	114	0	3	1	0	4	3	66	7	0	76	11	1	8	0	20	214
7:15 AM	5	132	4	0	141	2	2	9	0	13	4	103	9	0	116	20	1	5	0	26	296
7:30 AM	1	107	2	0	110	6	1	5	0	12	4	117	5	0	126	18	0	5	0	23	271
7:45 AM	4	138	5	0	147	2	3	11	0	16	4	108	7	0	119	28	4	5	0	37	319
Total	14	484	14	0	512	10	9	26	0	45	15	394	28	0	437	77	6	23	0	106	1100
8:00 AM	5	98	2	0	105	3	6	11	0	20	4	103	8	0	115	41	6	13	0	60	300
8:15 AM	5	111	3	0	119	3	5	9	0	17	8	116	11	0	135	41	6	19	0	66	337
8:30 AM	1	100	5	0	106	5	2	11	0	18	7	125	8	0	140	21	4	10	0	35	299
8:45 AM	3	91	4	0	98	3	2	14	0	19	4	91	11	0	106	15	3	2	0	20	243
Total	14	400	14	0	428	14	15	45	0	74	23	435	38	0	496	118	19	44	0	181	1179
Grand Total	28	884	28	0	940	24	24	71	0	119	38	829	66	0	933	195	25	67	0	287	2279
Approach %	3.0	94.0	3.0	0.0		20.2	20.2	59.7	0.0		4.1	88.9	7.1	0.0		67.9	8.7	23.3	0.0		
Total %	1.2	38.8	1.2	0.0	41.2	1.1	1.1	3.1	0.0	5.2	1.7	36.4	2.9	0.0	40.9	8.6	1.1	2.9	0.0	12.6	
Exiting Leg Total	920					91					1150					118					2279
Cars	25	857	28	0	910	23	24	70	0	117	35	788	64	0	887	190	24	60	0	274	2188
% Cars	89.3	96.9	100.0	0.0	96.8	95.8	100.0	98.6	0.0	98.3	92.1	95.1	97.0	0.0	95.1	97.4	96.0	89.6	0.0	95.5	96.0
Exiting Leg Total	871					87					1117					113					2188
Heavy Vehicles	3	27	0	0	30	1	0	1	0	2	3	41	2	0	46	5	1	7	0	13	91
% Heavy Vehicles	10.7	3.1	0.0	0.0	3.2	4.2	0.0	1.4	0.0	1.7	7.9	4.9	3.0	0.0	4.9	2.6	4.0	10.4	0.0	4.5	4.0
Exiting Leg Total	49					4					33					5					91

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

7:45 AM	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	4	138	5	0	147	2	3	11	0	16	4	108	7	0	119	28	4	5	0	37	319
8:00 AM	5	98	2	0	105	3	6	11	0	20	4	103	8	0	115	41	6	13	0	60	300
8:15 AM	5	111	3	0	119	3	5	9	0	17	8	116	11	0	135	41	6	19	0	66	337
8:30 AM	1	100	5	0	106	5	2	11	0	18	7	125	8	0	140	21	4	10	0	35	299
Total Volume	15	447	15	0	477	13	16	42	0	71	23	452	34	0	509	131	20	47	0	198	1255
% Approach Total	3.1	93.7	3.1	0.0		18.3	22.5	59.2	0.0		4.5	88.8	6.7	0.0		66.2	10.1	23.7	0.0		
PHF	0.750	0.810	0.750	0.000	0.811	0.650	0.667	0.955	0.000	0.888	0.719	0.904	0.773	0.000	0.909	0.799	0.833	0.618	0.000	0.750	0.931
Cars	12	430	15	0	457	12	16	42	0	70	23	428	33	0	484	126	19	40	0	185	1196
Cars %	80.0	96.2	100.0	0.0	95.8	92.3	100.0	100.0	0.0	98.6	100.0	94.7	97.1	0.0	95.1	96.2	95.0	85.1	0.0	93.4	95.3
Heavy Vehicles	3	17	0	0	20	1	0	0	0	1	0	24	1	0	25	5	1	7	0	13	59
Heavy Vehicles %	20.0	3.8	0.0	0.0	4.2	7.7	0.0	0.0	0.0	1.4	0.0	5.3	2.9	0.0	4.9	3.8	5.0	14.9	0.0	6.6	4.7
Cars Enter Leg	12	430	15	0	457	12	16	42	0	70	23	428	33	0	484	126	19	40	0	185	1196
Heavy Enter Leg	3	17	0	0	20	1	0	0	0	1	0	24	1	0	25	5	1	7	0	13	59
Total Entering Leg	15	447	15	0	477	13	16	42	0	71	23	452	34	0	509	131	20	47	0	198	1255
Cars Exiting Leg	480					57					598					61					1196
Heavy Exiting Leg	32					1					22					4					59
Total Exiting Leg	512					58					620					65					1255

PDI File #: **239484 D**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Stop and Shop Driveway W: Dalton Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars

	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	4	105	3	0	112	0	3	1	0	4	2	64	6	0	72	11	1	8	0	20	208					
7:15 AM	5	129	4	0	138	2	2	9	0	13	3	101	9	0	113	20	1	5	0	26	290					
7:30 AM	1	104	2	0	107	6	1	5	0	12	3	106	5	0	114	18	0	5	0	23	256					
7:45 AM	3	133	5	0	141	2	3	11	0	16	4	102	7	0	113	26	4	5	0	35	305					
Total	13	471	14	0	498	10	9	26	0	45	12	373	27	0	412	75	6	23	0	104	1059					
8:00 AM	4	92	2	0	98	3	6	11	0	20	4	99	8	0	111	40	6	10	0	56	285					
8:15 AM	4	108	3	0	115	3	5	9	0	17	8	114	10	0	132	39	6	16	0	61	325					
8:30 AM	1	97	5	0	103	4	2	11	0	17	7	113	8	0	128	21	3	9	0	33	281					
8:45 AM	3	89	4	0	96	3	2	13	0	18	4	89	11	0	104	15	3	2	0	20	238					
Total	12	386	14	0	412	13	15	44	0	72	23	415	37	0	475	115	18	37	0	170	1129					
Grand Total	25	857	28	0	910	23	24	70	0	117	35	788	64	0	887	190	24	60	0	274	2188					
Approach %	2.7	94.2	3.1	0.0		19.7	20.5	59.8	0.0		3.9	88.8	7.2	0.0		69.3	8.8	21.9	0.0							
Total %	1.1	39.2	1.3	0.0	41.6	1.1	1.1	3.2	0.0	5.3	1.6	36.0	2.9	0.0	40.5	8.7	1.1	2.7	0.0	12.5						
Exiting Leg Total						871					87					1117					113					2188

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

	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	3	133	5	0	141	2	3	11	0	16	4	102	7	0	113	26	4	5	0	35	305					
8:00 AM	4	92	2	0	98	3	6	11	0	20	4	99	8	0	111	40	6	10	0	56	285					
8:15 AM	4	108	3	0	115	3	5	9	0	17	8	114	10	0	132	39	6	16	0	61	325					
8:30 AM	1	97	5	0	103	4	2	11	0	17	7	113	8	0	128	21	3	9	0	33	281					
Total Volume	12	430	15	0	457	12	16	42	0	70	23	428	33	0	484	126	19	40	0	185	1196					
% Approach Total	2.6	94.1	3.3	0.0		17.1	22.9	60.0	0.0		4.8	88.4	6.8	0.0		68.1	10.3	21.6	0.0							
PHF	0.750	0.808	0.750	0.000	0.810	0.750	0.667	0.955	0.000	0.875	0.719	0.939	0.825	0.000	0.917	0.788	0.792	0.625	0.000	0.758	0.920					
Entering Leg	12	430	15	0	457	12	16	42	0	70	23	428	33	0	484	126	19	40	0	185	1196					
Exiting Leg						480					57					598					61					1196
Total						937					127					1082					246					2392

PDI File #: **239484 D**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Stop and Shop Driveway W: Dalton Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**



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

	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	2	0	0	2	0	0	0	0	0	1	2	1	0	4	0	0	0	0	0	6
7:15 AM	0	3	0	0	3	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	6
7:30 AM	0	3	0	0	3	0	0	0	0	0	1	11	0	0	12	0	0	0	0	0	15
7:45 AM	1	5	0	0	6	0	0	0	0	0	0	6	0	0	6	2	0	0	0	2	14
Total	1	13	0	0	14	0	0	0	0	0	3	21	1	0	25	2	0	0	0	2	41
8:00 AM	1	6	0	0	7	0	0	0	0	0	0	4	0	0	4	1	0	3	0	4	15
8:15 AM	1	3	0	0	4	0	0	0	0	0	0	2	1	0	3	2	0	3	0	5	12
8:30 AM	0	3	0	0	3	1	0	0	0	1	0	12	0	0	12	0	1	1	0	2	18
8:45 AM	0	2	0	0	2	0	0	1	0	1	0	2	0	0	2	0	0	0	0	0	5
Total	2	14	0	0	16	1	0	1	0	2	0	20	1	0	21	3	1	7	0	11	50
Grand Total	3	27	0	0	30	1	0	1	0	2	3	41	2	0	46	5	1	7	0	13	91
Approach %	10.0	90.0	0.0	0.0		50.0	0.0	50.0	0.0		6.5	89.1	4.3	0.0		38.5	7.7	53.8	0.0		
Total %	3.3	29.7	0.0	0.0	33.0	1.1	0.0	1.1	0.0	2.2	3.3	45.1	2.2	0.0	50.5	5.5	1.1	7.7	0.0	14.3	
Exiting Leg Total	49					4					33					5					91
Buses	2	15	0	0	17	1	0	0	0	1	2	11	1	0	14	3	1	6	0	10	42
% Buses	66.7	55.6	0.0	0.0	56.7	100.0	0.0	0.0	0.0	50.0	66.7	26.8	50.0	0.0	30.4	60.0	100.0	85.7	0.0	76.9	46.2
Exiting Leg Total	18					3					18					3					42
Single-Unit Trucks	1	11	0	0	12	0	0	1	0	1	0	22	1	0	23	2	0	1	0	3	39
% Single-Unit	33.3	40.7	0.0	0.0	40.0	0.0	0.0	100.0	0.0	50.0	0.0	53.7	50.0	0.0	50.0	40.0	0.0	14.3	0.0	23.1	42.9
Exiting Leg Total	23					0					14					2					39
Articulated Trucks	0	1	0	0	1	0	0	0	0	0	1	8	0	0	9	0	0	0	0	0	10
% Articulated	0.0	3.7	0.0	0.0	3.3	0.0	0.0	0.0	0.0	0.0	33.3	19.5	0.0	0.0	19.6	0.0	0.0	0.0	0.0	0.0	11.0
Exiting Leg Total	8					1					1					0					10

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

	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	1	5	0	0	6	0	0	0	0	0	0	6	0	0	6	2	0	0	0	2	14
8:00 AM	1	6	0	0	7	0	0	0	0	0	0	4	0	0	4	1	0	3	0	4	15
8:15 AM	1	3	0	0	4	0	0	0	0	0	0	2	1	0	3	2	0	3	0	5	12
8:30 AM	0	3	0	0	3	1	0	0	0	1	0	12	0	0	12	0	1	1	0	2	18
Total Volume	3	17	0	0	20	1	0	0	0	1	0	24	1	0	25	5	1	7	0	13	59
% Approach Total	15.0	85.0	0.0	0.0		100.0	0.0	0.0	0.0		0.0	96.0	4.0	0.0		38.5	7.7	53.8	0.0		
PHF	0.750	0.708	0.000	0.000	0.714	0.250	0.000	0.000	0.000	0.250	0.000	0.500	0.250	0.000	0.521	0.625	0.250	0.583	0.000	0.650	0.819
Buses	2	13	0	0	15	1	0	0	0	1	0	7	1	0	8	3	1	6	0	10	34
Buses %	66.7	76.5	0.0	0.0	75.0	100.0	0.0	0.0	0.0	100.0	0.0	29.2	100.0	0.0	32.0	60.0	100.0	85.7	0.0	76.9	57.6
Single-Unit Trucks	1	4	0	0	5	0	0	0	0	0	0	13	0	0	13	2	0	1	0	3	21
Single-Unit %	33.3	23.5	0.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	54.2	0.0	0.0	52.0	40.0	0.0	14.3	0.0	23.1	35.6
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	4
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.7	0.0	0.0	16.0	0.0	0.0	0.0	0.0	0.0	6.8
Buses	2	13	0	0	15	1	0	0	0	1	0	7	1	0	8	3	1	6	0	10	34
Single-Unit Trucks	1	4	0	0	5	0	0	0	0	0	0	13	0	0	13	2	0	1	0	3	21
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	4
Total Entering Leg	3	17	0	0	20	1	0	0	0	1	0	24	1	0	25	5	1	7	0	13	59
Buses	14					1					16					3					34
Single-Unit Trucks	14					0					6					1					21
Articulated Trucks	4					0					0					0					4
Total Exiting Leg	32					1					22					4					59

PDI File #: **239484 D**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Stop and Shop Driveway W: Dalton Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Buses

	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	1	1	0	0	2	0	0	0	0	0	2
7:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
7:30 AM	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	5
7:45 AM	0	5	0	0	5	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	7
Total	0	7	0	0	7	0	0	0	0	0	2	5	0	0	7	1	0	0	0	1	15
8:00 AM	1	5	0	0	6	0	0	0	0	0	0	1	0	0	1	0	0	3	0	3	10
8:15 AM	1	2	0	0	3	0	0	0	0	0	0	0	1	0	1	2	0	3	0	5	9
8:30 AM	0	1	0	0	1	1	0	0	0	1	0	5	0	0	5	0	1	0	0	1	8
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	2	8	0	0	10	1	0	0	0	1	0	6	1	0	7	2	1	6	0	9	27
Grand Total	2	15	0	0	17	1	0	0	0	1	2	11	1	0	14	3	1	6	0	10	42
Approach %	11.8	88.2	0.0	0.0		100.0	0.0	0.0	0.0		14.3	78.6	7.1	0.0		30.0	10.0	60.0	0.0		
Total %	4.8	35.7	0.0	0.0	40.5	2.4	0.0	0.0	0.0	2.4	4.8	26.2	2.4	0.0	33.3	7.1	2.4	14.3	0.0	23.8	
Exiting Leg Total	18					3					18					3					42

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

	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	5	0	0	5	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	7
7:45 AM	0	5	0	0	5	0	0	0	0	0	0	1	0	0	1	0	0	3	0	3	10
8:00 AM	1	5	0	0	6	0	0	0	0	0	0	0	1	0	1	2	0	3	0	5	9
8:15 AM	1	2	0	0	3	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	8
8:30 AM	0	1	0	0	1	1	0	0	0	1	0	5	0	0	5	0	1	0	0	1	8
Total Volume	2	13	0	0	15	1	0	0	0	1	0	7	1	0	8	3	1	6	0	10	34
% Approach Total	13.3	86.7	0.0	0.0		100.0	0.0	0.0	0.0		0.0	87.5	12.5	0.0		30.0	10.0	60.0	0.0		
PHF	0.500	0.650	0.000	0.000	0.625	0.250	0.000	0.000	0.000	0.250	0.000	0.350	0.250	0.000	0.400	0.375	0.250	0.500	0.000	0.500	0.850
Entering Leg	2	13	0	0	15	1	0	0	0	1	0	7	1	0	8	3	1	6	0	10	34
Exiting Leg	14					1					16					3					34
Total	29					2					24					13					68

PDI File #: **239484 D**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Stop and Shop Driveway W: Dalton Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Single-Unit Trucks

	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	1	0	0	1	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	3
7:15 AM	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	4
7:30 AM	0	1	0	0	1	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	7
7:45 AM	1	0	0	0	1	0	0	0	0	0	0	4	0	0	4	1	0	0	0	1	6
Total	1	5	0	0	6	0	0	0	0	0	0	12	1	0	13	1	0	0	0	1	20
8:00 AM	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	1	0	0	0	1	5
8:15 AM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
8:30 AM	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	0	0	1	0	1	7
8:45 AM	0	2	0	0	2	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	4
Total	0	6	0	0	6	0	0	1	0	1	0	10	0	0	10	1	0	1	0	2	19
Grand Total	1	11	0	0	12	0	0	1	0	1	0	22	1	0	23	2	0	1	0	3	39
Approach %	8.3	91.7	0.0	0.0		0.0	0.0	100.0	0.0		0.0	95.7	4.3	0.0		66.7	0.0	33.3	0.0		
Total %	2.6	28.2	0.0	0.0	30.8	0.0	0.0	2.6	0.0	2.6	0.0	56.4	2.6	0.0	59.0	5.1	0.0	2.6	0.0	7.7	
Exiting Leg Total	23					0					14					2					39

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

7:15 AM	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	4
7:30 AM	0	1	0	0	1	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	7
7:45 AM	1	0	0	0	1	0	0	0	0	0	0	4	0	0	4	1	0	0	0	1	6
8:00 AM	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	1	0	0	0	1	5
Total Volume	1	5	0	0	6	0	0	0	0	0	0	14	0	0	14	2	0	0	0	2	22
% Approach Total	16.7	83.3	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		100.0	0.0	0.0	0.0		
PHF	0.250	0.417	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.583	0.000	0.000	0.583	0.500	0.000	0.000	0.000	0.500	0.786
Entering Leg	1	5	0	0	6	0	0	0	0	0	0	14	0	0	14	2	0	0	0	2	22
Exiting Leg	14					0					7					1					22
Total	20					0					21					3					44

PDI File #: **239484 D**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Stop and Shop Driveway W: Dalton Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Articulated Trucks

	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	1	0	0	1	0	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	1	0	0	1	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	3
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total	0	1	0	0	1	0	0	0	0	0	1	4	0	0	5	0	0	0	0	0	6
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	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	3	0	0	3	0	0	0	0	0	3
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	4
Grand Total	0	1	0	0	1	0	0	0	0	0	1	8	0	0	9	0	0	0	0	0	10
Approach %	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		11.1	88.9	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	10.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0	0.0	10.0	80.0	0.0	0.0	90.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total	8					1					1					0					10

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

	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	1	0	0	1	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	1	0	0	1	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	3
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total Volume	0	1	0	0	1	0	0	0	0	0	1	4	0	0	5	0	0	0	0	0	6
% Approach Total	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		20.0	80.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.250	0.500	0.000	0.000	0.417	0.000	0.000	0.000	0.000	0.000	0.500
Entering Leg	0	1	0	0	1	0	0	0	0	0	1	4	0	0	5	0	0	0	0	0	6
Exiting Leg	4					1					1					0					6
Total	5					1					6					0					12

PDI File #: **239484 D**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Stop and Shop Driveway W: Dalton Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Bicycles (on Roadway and Crosswalks)

	Grafton Street (Route 122)								Stop and Shop Driveway								Grafton Street (Route 122)								Dalton Street								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	1	1	0	0	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	0		
7:30 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	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	0	0	0	0	0	0	0	0	0	0		
Total	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2		
8:00 AM	0	1	0	0	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	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	1	0	0	0	0	1	1		
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	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	0	0	0	0	0	0	0	0	0	0		
Total	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	2		
Grand Total	0	1	0	0	0	0	1	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	4		
Approach %	0.0	100.0	0.0	0.0	0.0	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		0.0	0.0	100.0	0.0	0.0	0.0	0.0				
Total %	0.0	25.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0	25.0	25.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	25.0				
Exiting Leg Total	1							2							1							0							4				

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

	Grafton Street (Route 122)								Stop and Shop Driveway								Grafton Street (Route 122)								Dalton Street								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		
7:30 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	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	0	0	0	0	0	0	0	0	0	0		
8:00 AM	0	1	0	0	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	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	1	0	0	0	0	1	1		
Total Volume	0	1	0	0	0	0	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	3		
% Approach Total	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	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				
PHF	0.000	0.250	0.000	0.000	0.000	0.000	0.250	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	0.000	0.000	0.250	0.000	0.000	0.000	0.250	0.750			
Entering Leg	0	1	0	0	0	0	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	3		
Exiting Leg	1							1							1							0							3				
Total	2							2							1							1							6				

PDI File #: **239484 D**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Stop and Shop Driveway W: Dalton Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars and Heavy Vehicles (Combined)

	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	6	93	9	0	108	13	10	17	0	40	6	117	6	0	129	18	11	4	0	33	310
4:15 PM	6	101	6	0	113	5	3	18	0	26	5	120	11	0	136	14	6	0	0	20	295
4:30 PM	5	80	6	0	91	9	14	26	0	49	8	134	10	0	152	13	7	3	0	23	315
4:45 PM	5	110	6	0	121	13	5	12	0	30	12	125	15	0	152	16	11	5	0	32	335
Total	22	384	27	0	433	40	32	73	0	145	31	496	42	0	569	61	35	12	0	108	1255
5:00 PM	6	111	4	0	121	7	9	25	0	41	10	146	14	0	170	10	14	8	1	33	365
5:15 PM	6	98	5	0	109	11	15	22	0	48	10	132	14	0	156	11	12	6	0	29	342
5:30 PM	10	118	9	0	137	9	10	18	0	37	11	143	14	0	168	10	7	3	0	20	362
5:45 PM	3	104	9	0	116	15	8	27	0	50	11	124	9	0	144	11	11	3	0	25	335
Total	25	431	27	0	483	42	42	92	0	176	42	545	51	0	638	42	44	20	1	107	1404
Grand Total	47	815	54	0	916	82	74	165	0	321	73	1041	93	0	1207	103	79	32	1	215	2659
Approach %	5.1	89.0	5.9	0.0		25.5	23.1	51.4	0.0		6.0	86.2	7.7	0.0		47.9	36.7	14.9	0.5		
Total %	1.8	30.7	2.0	0.0	34.4	3.1	2.8	6.2	0.0	12.1	2.7	39.2	3.5	0.0	45.4	3.9	3.0	1.2	0.0	8.1	
Exiting Leg Total	1155					206					1083					215					2659
Cars	46	801	52	0	899	82	74	163	0	319	73	1029	91	0	1193	102	79	32	1	214	2625
% Cars	97.9	98.3	96.3	0.0	98.1	100.0	100.0	98.8	0.0	99.4	100.0	98.8	97.8	0.0	98.8	99.0	100.0	100.0	100.0	99.5	98.7
Exiting Leg Total	1143					204					1066					212					2625
Heavy Vehicles	1	14	2	0	17	0	0	2	0	2	0	12	2	0	14	1	0	0	0	1	34
% Heavy Vehicles	2.1	1.7	3.7	0.0	1.9	0.0	0.0	1.2	0.0	0.6	0.0	1.2	2.2	0.0	1.2	1.0	0.0	0.0	0.0	0.5	1.3
Exiting Leg Total	12					2					17					3					34

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

4:45 PM	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	5	110	6	0	121	13	5	12	0	30	12	125	15	0	152	16	11	5	0	32	335
5:00 PM	6	111	4	0	121	7	9	25	0	41	10	146	14	0	170	10	14	8	1	33	365
5:15 PM	6	98	5	0	109	11	15	22	0	48	10	132	14	0	156	11	12	6	0	29	342
5:30 PM	10	118	9	0	137	9	10	18	0	37	11	143	14	0	168	10	7	3	0	20	362
Total Volume	27	437	24	0	488	40	39	77	0	156	43	546	57	0	646	47	44	22	1	114	1404
% Approach Total	5.5	89.5	4.9	0.0		25.6	25.0	49.4	0.0		6.7	84.5	8.8	0.0		41.2	38.6	19.3	0.9		
PHF	0.675	0.926	0.667	0.000	0.891	0.769	0.650	0.770	0.000	0.813	0.896	0.935	0.950	0.000	0.950	0.734	0.786	0.688	0.250	0.864	0.962
Cars	27	433	23	0	483	40	39	76	0	155	43	541	55	0	639	47	44	22	1	114	1391
Cars %	100.0	99.1	95.8	0.0	99.0	100.0	100.0	98.7	0.0	99.4	100.0	99.1	96.5	0.0	98.9	100.0	100.0	100.0	100.0	100.0	99.1
Heavy Vehicles	0	4	1	0	5	0	0	1	0	1	0	5	2	0	7	0	0	0	0	0	13
Heavy Vehicles %	0.0	0.9	4.2	0.0	1.0	0.0	0.0	1.3	0.0	0.6	0.0	0.9	3.5	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.9
Cars Enter Leg	27	433	23	0	483	40	39	76	0	155	43	541	55	0	639	47	44	22	1	114	1391
Heavy Enter Leg	0	4	1	0	5	0	0	1	0	1	0	5	2	0	7	0	0	0	0	0	13
Total Entering Leg	27	437	24	0	488	40	39	77	0	156	43	546	57	0	646	47	44	22	1	114	1404
Cars Exiting Leg	603					110					556					122					1391
Heavy Exiting Leg	5					1					5					2					13
Total Exiting Leg	608					111					561					124					1404

PDI File #: **239484 D**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Stop and Shop Driveway W: Dalton Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars

	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	5	92	9	0	106	13	10	17	0	40	6	114	6	0	126	18	11	4	0	33	305
4:15 PM	6	97	6	0	109	5	3	18	0	26	5	118	11	0	134	14	6	0	0	20	289
4:30 PM	5	78	6	0	89	9	14	26	0	49	8	132	10	0	150	12	7	3	0	22	310
4:45 PM	5	109	5	0	119	13	5	12	0	30	12	122	15	0	149	16	11	5	0	32	330
Total	21	376	26	0	423	40	32	73	0	145	31	486	42	0	559	60	35	12	0	107	1234
5:00 PM	6	111	4	0	121	7	9	25	0	41	10	145	13	0	168	10	14	8	1	33	363
5:15 PM	6	96	5	0	107	11	15	22	0	48	10	131	13	0	154	11	12	6	0	29	338
5:30 PM	10	117	9	0	136	9	10	17	0	36	11	143	14	0	168	10	7	3	0	20	360
5:45 PM	3	101	8	0	112	15	8	26	0	49	11	124	9	0	144	11	11	3	0	25	330
Total	25	425	26	0	476	42	42	90	0	174	42	543	49	0	634	42	44	20	1	107	1391
Grand Total	46	801	52	0	899	82	74	163	0	319	73	1029	91	0	1193	102	79	32	1	214	2625
Approach %	5.1	89.1	5.8	0.0		25.7	23.2	51.1	0.0		6.1	86.3	7.6	0.0		47.7	36.9	15.0	0.5		
Total %	1.8	30.5	2.0	0.0	34.2	3.1	2.8	6.2	0.0	12.2	2.8	39.2	3.5	0.0	45.4	3.9	3.0	1.2	0.0	8.2	
Exiting Leg Total	1143					204					1066					212					2625

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

	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	5	109	5	0	119	13	5	12	0	30	12	122	15	0	149	16	11	5	0	32	330
5:00 PM	6	111	4	0	121	7	9	25	0	41	10	145	13	0	168	10	14	8	1	33	363
5:15 PM	6	96	5	0	107	11	15	22	0	48	10	131	13	0	154	11	12	6	0	29	338
5:30 PM	10	117	9	0	136	9	10	17	0	36	11	143	14	0	168	10	7	3	0	20	360
Total Volume	27	433	23	0	483	40	39	76	0	155	43	541	55	0	639	47	44	22	1	114	1391
% Approach Total	5.6	89.6	4.8	0.0		25.8	25.2	49.0	0.0		6.7	84.7	8.6	0.0		41.2	38.6	19.3	0.9		
PHF	0.675	0.925	0.639	0.000	0.888	0.769	0.650	0.760	0.000	0.807	0.896	0.933	0.917	0.000	0.951	0.734	0.786	0.688	0.250	0.864	0.958
Entering Leg	27	433	23	0	483	40	39	76	0	155	43	541	55	0	639	47	44	22	1	114	1391
Exiting Leg	603					110					556					122					1391
Total	1086					265					1195					236					2782

PDI File #: **239484 D**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Stop and Shop Driveway W: Dalton Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



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

	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	3	0	0	3	0	0	0	0	0	5
4:15 PM	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	6
4:30 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	5
4:45 PM	0	1	1	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	5
Total	1	8	1	0	10	0	0	0	0	0	0	10	0	0	10	1	0	0	0	1	21
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	2
5:15 PM	0	2	0	0	2	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	4
5:30 PM	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2
5:45 PM	0	3	1	0	4	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	5
Total	0	6	1	0	7	0	0	2	0	2	0	2	2	0	4	0	0	0	0	0	13
Grand Total	1	14	2	0	17	0	0	2	0	2	0	12	2	0	14	1	0	0	0	1	34
Approach %	5.9	82.4	11.8	0.0		0.0	0.0	100.0	0.0		0.0	85.7	14.3	0.0		100.0	0.0	0.0	0.0		
Total %	2.9	41.2	5.9	0.0	50.0	0.0	0.0	5.9	0.0	5.9	0.0	35.3	5.9	0.0	41.2	2.9	0.0	0.0	0.0	2.9	
Exiting Leg Total	12					2					17					3					34
Buses	1	7	0	0	8	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	12
% Buses	100.0	50.0	0.0	0.0	47.1	0.0	0.0	50.0	0.0	50.0	0.0	25.0	0.0	0.0	21.4	0.0	0.0	0.0	0.0	0.0	35.3
Exiting Leg Total	3					0					8					1					12
Single-Unit Trucks	0	5	2	0	7	0	0	1	0	1	0	7	2	0	9	1	0	0	0	1	18
% Single-Unit	0.0	35.7	100.0	0.0	41.2	0.0	0.0	50.0	0.0	50.0	0.0	58.3	100.0	0.0	64.3	100.0	0.0	0.0	0.0	100.0	52.9
Exiting Leg Total	7					2					7					2					18
Articulated Trucks	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
% Articulated	0.0	14.3	0.0	0.0	11.8	0.0	0.0	0.0	0.0	0.0	0.0	16.7	0.0	0.0	14.3	0.0	0.0	0.0	0.0	0.0	11.8
Exiting Leg Total	2					0					2					0					4

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

	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	3	0	0	3	0	0	0	0	0	5
4:15 PM	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	6
4:30 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	5
4:45 PM	0	1	1	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	5
Total Volume	1	8	1	0	10	0	0	0	0	0	0	10	0	0	10	1	0	0	0	1	21
% Approach Total	10.0	80.0	10.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		100.0	0.0	0.0	0.0		
PHF	0.250	0.500	0.250	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.000	0.833	0.000	0.000	0.833	0.250	0.000	0.000	0.000	0.250	0.875
Buses	1	3	0	0	4	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	7
Buses %	100.0	37.5	0.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	30.0	0.0	0.0	30.0	0.0	0.0	0.0	0.0	0.0	33.3
Single-Unit Trucks	0	4	1	0	5	0	0	0	0	0	0	7	0	0	7	1	0	0	0	1	13
Single-Unit %	0.0	50.0	100.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	70.0	0.0	0.0	70.0	100.0	0.0	0.0	0.0	100.0	61.9
Articulated Trucks	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Articulated %	0.0	12.5	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	0.0	4.8
Buses	1	3	0	0	4	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	7
Single-Unit Trucks	0	4	1	0	5	0	0	0	0	0	0	7	0	0	7	1	0	0	0	1	13
Articulated Trucks	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Entering Leg	1	8	1	0	10	0	0	0	0	0	0	10	0	0	10	1	0	0	0	1	21
Buses	3					0					3					1					7
Single-Unit Trucks	7					1					5					0					13
Articulated Trucks	0					0					1					0					1
Total Exiting Leg	10					1					9					1					21

PDI File #: **239484 D**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Stop and Shop Driveway W: Dalton Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Buses

	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	0
4:15 PM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	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	1	0	0	1	0	0	0	0	0	0
Total	1	3	0	0	4	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	7
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	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2
Total	0	4	0	0	4	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	5
Grand Total	1	7	0	0	8	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	12
Approach %	12.5	87.5	0.0	0.0		0.0	0.0	100.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	8.3	58.3	0.0	0.0	66.7	0.0	0.0	8.3	0.0	8.3	0.0	25.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	3					0					8					1					12

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

4:00 PM	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	0
4:15 PM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	5
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	1	0	0	1	0	0	0	0	0	1
Total Volume	1	3	0	0	4	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	7
% Approach Total	25.0	75.0	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		
PHF	0.250	0.250	0.000	0.000	0.333	0.000	0.000	0.000	0.000	0.000	0.000	0.375	0.000	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.350
Entering Leg	1	3	0	0	4	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	7
Exiting Leg	3					0					3					1					7
Total	7					0					6					1					14

PDI File #: **239484 D**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Stop and Shop Driveway W: Dalton Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Single-Unit Trucks

	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	3	0	0	3	0	0	0	0	0	3
4:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	1	0	0	0	0	1
4:45 PM	0	1	1	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0
Total	0	4	1	0	5	0	0	0	0	0	0	7	0	0	7	1	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	0	2	0	0	1	0	1	0	0	2	0	2	0	0	0	0	0	0
Grand Total	0	5	2	0	7	0	0	1	0	1	0	7	2	0	9	1	0	0	0	0	1
Approach %	0.0	71.4	28.6	0.0		0.0	0.0	100.0	0.0		0.0	77.8	22.2	0.0		100.0	0.0	0.0	0.0		
Total %	0.0	27.8	11.1	0.0	38.9	0.0	0.0	5.6	0.0	5.6	0.0	38.9	11.1	0.0	50.0	5.6	0.0	0.0	0.0		5.6
Exiting Leg Total	7					2					7					2					18

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

4:00 PM	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	3	0	0	3	0	0	0	0	0	0
4:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	1	0	0	0	0	1
4:45 PM	0	1	1	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0
Total Volume	0	4	1	0	5	0	0	0	0	0	0	7	0	0	7	1	0	0	0	0	1
% Approach Total	0.0	80.0	20.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		100.0	0.0	0.0	0.0		
PHF	0.000	0.500	0.250	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.000	0.583	0.000	0.000	0.583	0.250	0.000	0.000	0.000	0.250	0.650
Entering Leg	0	4	1	0	5	0	0	0	0	0	0	7	0	0	7	1	0	0	0	0	1
Exiting Leg	7					1					5					0					13
Total	12					1					12					1					26

PDI File #: **239484 D**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Stop and Shop Driveway W: Dalton Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Articulated Trucks

	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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	1	0	0	1	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	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
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
Total	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	1
5:00 PM	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	1
5:15 PM	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	1
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
5:45 PM	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	1
Total	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	3
Grand Total	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	4
Approach %	0.0	100.0	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		
Total %	0.0	50.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	2					0					2					0					4					

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

5:00 PM	Grafton Street (Route 122)					Stop and Shop Driveway					Grafton Street (Route 122)					Dalton Street					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						
5:00 PM	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	1
5:15 PM	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	1
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
5:45 PM	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	1
Total Volume	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	3
% Approach Total	0.0	100.0	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		
PHF	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750
Entering Leg	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	3
Exiting Leg	2					0					1					0					3					
Total	3					0					3					0					6					

PDI File #: **239484 D**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Stop and Shop Driveway W: Dalton Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Bicycles (on Roadway and Crosswalks)

	Grafton Street (Route 122)								Stop and Shop Driveway								Grafton Street (Route 122)								Dalton Street								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	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	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	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	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		
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		
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		
5:30 PM	1	0	0	0	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	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	0	0	0	0	0	0	0	0	0	0		
Total	1	0	0	0	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	1		
Grand Total	1	0	0	0	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	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	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	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	0.0	0.0	0.0	0.0	0.0					
Exiting Leg Total	0								0								0								1	1							

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

	Grafton Street (Route 122)								Stop and Shop Driveway								Grafton Street (Route 122)								Dalton Street								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	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	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	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	0	0	0	0	0	0	0	0	0	0		
5:30 PM	1	0	0	0	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	1		
Total Volume	1	0	0	0	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	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	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	0.000	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	0.000	0.000	0.000	0.000	0.000	0.250					
Entering Leg	1	0	0	0	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	1		
Exiting Leg	0								0								0								1	1							
Total	1								0								0								1	2							

PDI File #: **239484 D**
 Location: **N: Grafton Street (Route 122) S: Grafton Street (Route 122)**
 Location: **E: Stop and Shop Driveway W: Dalton Street**
 City, State: **Worcester, MA**
 Client: **Kimley-Horn/ L. Juan**
 Site Code: **112858000-02**
 Count Date: **Wednesday, September 13, 2023**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Pedestrians

	Grafton Street (Route 122)								Stop and Shop Driveway								Grafton Street (Route 122)								Dalton Street								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	0	0	0	0	0	0	0	0	1	0	1		0	0	0	0	0	0	0		1	
4:15 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	1	1		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	1	1	2		2		
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0		1		
Total	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1	2		0	0	0	0	1	2	3		6		
5:00 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		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		
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		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		0		
Total	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		1		
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	1	1	2		0	0	0	0	1	2	3		7		
Approach %	0	0	0	0	0	0	0	0	0	0	0	0	100		0	0	0	0	50	50			0	0	0	0	33.3	66.7					
Total %	0	0	0	0	0	0	0	0	0	0	0	0	28.6	28.6	0	0	0	0	14.3	14.3	28.6		0	0	0	0	14.3	28.6	42.9				
Exiting Leg Total	0								2								2								3								7

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

	Grafton Street (Route 122)								Stop and Shop Driveway								Grafton Street (Route 122)								Dalton Street								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	0	0	0	0	0	0	0	1	0	1		0	0	0	0	0	0	0		1		
4:15 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	1	1		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	1	1	2		2		
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0		1		
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1	2		0	0	0	0	1	2	3		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	0.0	100.0		0.0	0.0	0.0	0.0	50.0	50.0			0.0	0.0	0.0	0.0	33.3	66.7					
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	0.250	0.000	0.000	0.000	0.000	0.250	0.250	0.500		0.000	0.000	0.000	0.000	0.250	0.500	0.375		0.750		
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1	2		0	0	0	0	1	2	3		6		
Exiting Leg	0								1								2								3								6
Total	0								2								4								6								12

APPENDIX B

Crash Data

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : _____ COUNT DATE : _____

DISTRICT : _____ UNSIGNALIZED : SIGNALIZED :

~ INTERSECTION DATA ~

MAJOR STREET : _____

MINOR STREET(S) : _____



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :						
PEAK HOURLY VOLUMES (AM/PM):						

" K " FACTOR : INTERSECTION ADT (V) = TOTAL DAILY APPROACH VOLUME :

TOTAL # OF CRASHES : # OF YEARS : AVERAGE # OF CRASHES PER YEAR (A) :

CRASH RATE CALCULATION :

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

Comments : _____

Project Title & Date: _____

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : _____ COUNT DATE : _____

DISTRICT : _____ UNSIGNALIZED : SIGNALIZED :

~ INTERSECTION DATA ~

MAJOR STREET : _____

MINOR STREET(S) : _____



**INTERSECTION
 DIAGRAM**
 (Label Approaches)

PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :						
PEAK HOURLY VOLUMES (AM/PM):						

" K " FACTOR : INTERSECTION ADT (V) = TOTAL DAILY APPROACH VOLUME :

TOTAL # OF CRASHES : # OF YEARS : AVERAGE # OF CRASHES PER YEAR (A) :

CRASH RATE CALCULATION :

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

Comments : _____

Project Title & Date: _____

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : _____ COUNT DATE : _____

DISTRICT : _____ UNSIGNALIZED : SIGNALIZED :

~ INTERSECTION DATA ~

MAJOR STREET : _____

MINOR STREET(S) : _____

**INTERSECTION
 DIAGRAM
 (Label Approaches)**



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :						
PEAK HOURLY VOLUMES (AM/PM):						

" K " FACTOR : INTERSECTION ADT (V) = TOTAL DAILY APPROACH VOLUME :

TOTAL # OF CRASHES : # OF YEARS : AVERAGE # OF CRASHES PER YEAR (A) :

CRASH RATE CALCULATION :

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

Comments : _____

Project Title & Date: _____

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : _____ COUNT DATE : _____

DISTRICT : _____ UNSIGNALIZED : SIGNALIZED :

~ INTERSECTION DATA ~

MAJOR STREET : _____

MINOR STREET(S) : _____



**INTERSECTION
 DIAGRAM**
 (Label Approaches)

PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :						
PEAK HOURLY VOLUMES (AM/PM):						

" K " FACTOR : INTERSECTION ADT (V) = TOTAL DAILY APPROACH VOLUME :

TOTAL # OF CRASHES : # OF YEARS : AVERAGE # OF CRASHES PER YEAR (A) :

CRASH RATE CALCULATION :

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

Comments : _____

Project Title & Date: _____

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : _____ COUNT DATE : _____

DISTRICT : _____ UNSIGNALIZED : SIGNALIZED :

~ INTERSECTION DATA ~

MAJOR STREET : _____

MINOR STREET(S) : _____



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :						
PEAK HOURLY VOLUMES (AM/PM):						

" K " FACTOR : INTERSECTION ADT (V) = TOTAL DAILY APPROACH VOLUME :

TOTAL # OF CRASHES : # OF YEARS : AVERAGE # OF CRASHES PER YEAR (A) :

CRASH RATE CALCULATION :

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

Comments : _____

Project Title & Date: _____

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : _____ COUNT DATE : _____

DISTRICT : _____ UNSIGNALIZED : SIGNALIZED :

~ INTERSECTION DATA ~

MAJOR STREET : _____

MINOR STREET(S) : _____



**INTERSECTION
 DIAGRAM**
 (Label Approaches)

PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :						
PEAK HOURLY VOLUMES (AM/PM):						

" K " FACTOR : INTERSECTION ADT (V) = TOTAL DAILY APPROACH VOLUME :

TOTAL # OF CRASHES : # OF YEARS : AVERAGE # OF CRASHES PER YEAR (A) :

CRASH RATE CALCULATION :

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

Comments : _____

Project Title & Date: _____

APPENDIX C

Growth Rate Calculations

Project Name:
Project Number:

Grafton Woods
 112858000

Data Source:
Local District:

MassDOT
 3

The table below summarizes traffic count data from MassDOT traffic count maps. The locations chosen are in the general vicinity of the project site. Five years worth of data was evaluated and the growth averaged over the five year period.

MassDOT Historical Daily Traffic Volumes							
Location	Count Station	2018	2019	2020	2021	2022	Average Annual Growth
Grafton Street north of Sunderland Road	250921	18,140	18,213	15,008	16,899	17,152	-0.8%
Sunderland Road east of Grafton Street	-348-2117	12,373	12,324	10,167	11,387	11,376	-1.5%
Grafton Street south of Ernest Avenue	237266	13,428	13,482	11,109	12,509	12,697	-0.8%
Average Annual Growth Rate							-1.0%
Proposed Annual Growth Rate							0.50%

Current Year **2023**
 Project Year **2030**
 Synchro Growth Factor **1.04**
 Growth Years 7

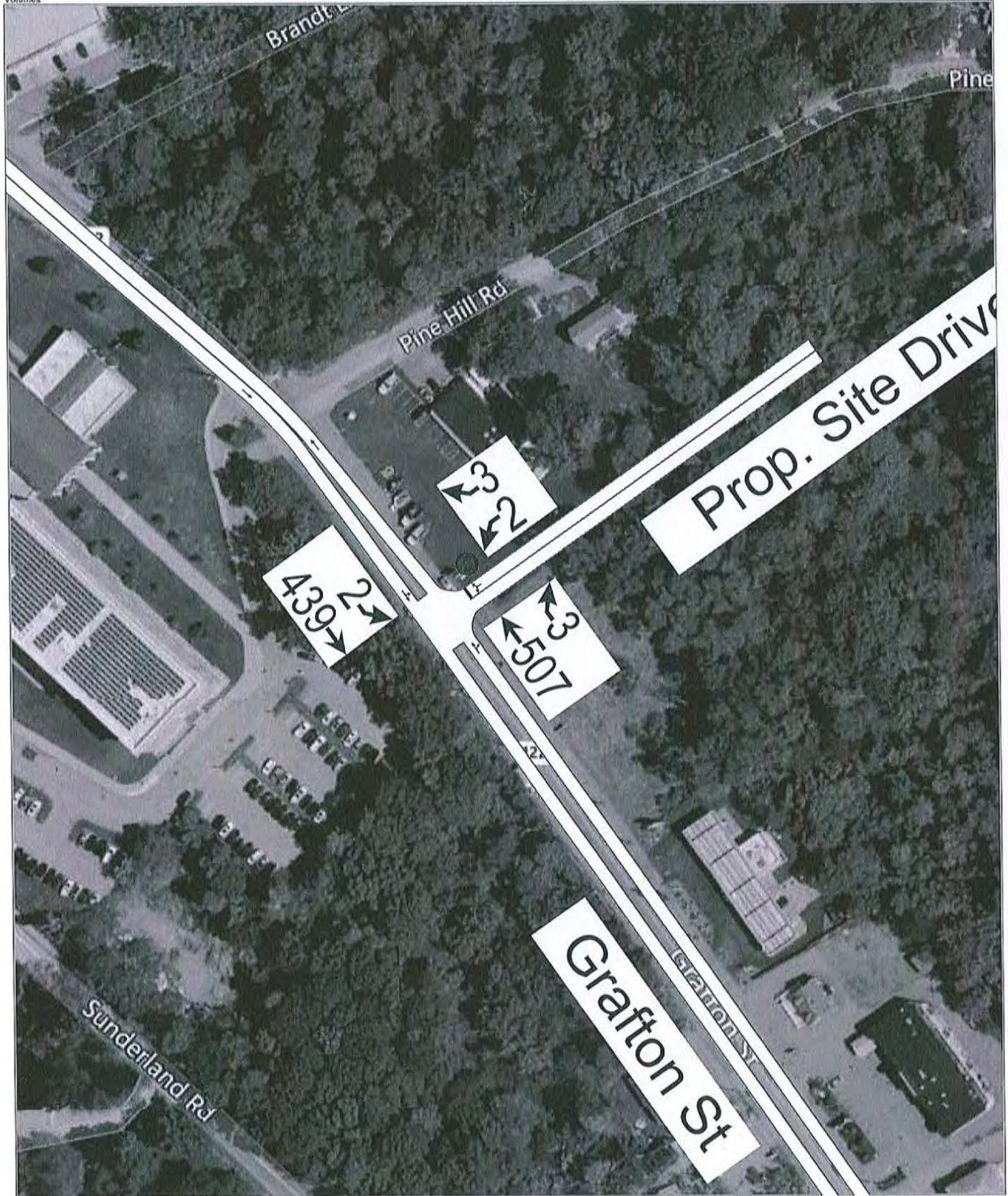
Census Population			
Municipality	2010	2020	Average Annual
Worcester	181,045	206,518	1.4%
Millbury	13,261	13,831	0.4%
Grafton	17,765	19,664	1.1%
Average Annual Growth Rate			1.0%

Regional MPO			
Municipality	2010	2040	Average Annual
Worcester	181,045	196,501	0.3%

Current Year
 Project Year **2023**
 Synchro Growth Factor **2030**
 Growth Years **1.07**

APPENDIX D

Vicinity Development





APPENDIX E

Trip Generation

Project Name:
Project Number:

Grafton Woods
112858000

Peak Period 1:
Peak Period 2:

AM
PM

Trip Generation										
Land Use	Amount	Units	ITE Code	Daily One-Way Trips	AM Peak Hour One-Way Trips			PM Peak Hour One-Way Trips		
					IN	OUT	TOTAL	IN	OUT	TOTAL
Multifamily Housing (Mid-Rise)	491	DU	221	2230	20	118	138	95	33	128
Strip Retail Plaza (<40k)	4,500	SF	822	420	6	5	11	15	15	30
Net New External Trips:				2,650	26	123	149	110	48	158

APPENDIX F

Volume Development

Intersection (North/South and East/West)	Direction	Movement SYNCHRO	Existing 2023		Existing PHF 2023		Existing HV 2023		1059 Grafton Street		No Build 2030		Trip Distribution AM		Trip Assignments AM		Trip Distribution PM		Trip Assignments PM		Total Trips		Build Out 2030		
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	%IN	%OUT	AM	PM	%IN	%OUT	AM	PM	AM	PM	AM	PM	
1	Grafton Street (Route 122)	SB	29	53	0.90	0.91	4	0			30	55			0	0			0	0	0	0	30	55	
	and Jennings Street	(Grafton Street (Route 122))	SBT	403	475	0.90	0.91	7	1	2	9	419	501	43		8	37	42		8	37	11	47	430	548
	September (7:45-8:45) (4:45-5:45)	WB (Jennings Street)	WBL	71	51	0.89	0.84	4	0			74	53	7		1	6	7		1	6	2	8	76	61
			WBT	0	0	0.89	0.84					0	0			0	0			0	0	0	0	0	0
			WBR	36	43	0.89	0.84	3	2			37	45			0	0			0	0	0	0	37	45
			WBR	0	0	0.90	0.94					0	0			0	0			0	0	0	0	0	0
		NB (Grafton Street (Route 122))	NBL	0	0	0.90	0.94					0	0			0	0			0	0	0	0	0	0
			NBT	422	646	0.90	0.94	6	0	3	12	440	681	43		47	13	42		46	13	53	20	493	701
			NBR	61	58	0.90	0.94	8	1			63	60	7		8	2	7		8	2	9	3	72	63
			NBR	0	0							0	0			0	0			0	0	0	0	0	0
EB (Jennings Street)	EBL	0	0							0	0			0	0			0	0	0	0	0	0		
	EBT	0	0							0	0			0	0			0	0	0	0	0	0		
	EBR	0	0							0	0			0	0			0	0	0	0	0	0		
	EBR	0	0							0	0			0	0			0	0	0	0	0	0		
2	Grafton Street (Route 122)	SB	15	24	0.81	0.81	4	4			16	25			0	0			0	0	0	0	16	25	
	and Dalton Street/Stop & Shop Driveway	(Grafton Street (Route 122))	SBT	447	437	0.81	0.81	4	1	2	9	465	462	50		9	44	49		9	43	13	54	478	516
	September (7:45-8:45) (4:45-5:45)	WB ton Street/Stop & Shop Driv	WBL	42	77	0.89	0.89		1			43	80			0	0	1		0	1	0	1	43	81
			WBT	16	39	0.89	0.89					17	40			0	0			0	0	0	0	17	40
			WBR	13	40	0.89	0.89		8			13	41			0	0			0	0	0	0	13	41
			WBR	0	0							0	0			0	0			0	0	0	0	0	0
		NB (Grafton Street (Route 122))	NBL	34	57	0.91	0.91	3	4			35	59	5		5	2	5		5	2	6	3	41	62
			NBT	412	546	0.91	0.91	5	1	3	12	430	577	50		55	16	49		53	15	62	24	492	601
			NBR	23	43	0.91	0.91					24	45			0	0	1		1	0	0	0	24	45
			NBR	0	0							0	0			0	0			0	0	0	0	0	0
EB (Dalton Street/Stop & Shop Driv	EBL	47	23	0.75	0.75	15				49	24			0	0			0	0	0	0	49	24		
	EBT	20	44	0.75	0.75	5				21	46			0	0			0	0	0	0	21	46		
	EBR	131	47	0.75	0.75	4				136	49	5		1	4	5		1	4	1	5	137	54		
	EBR	0	0							0	0			0	0			0	0	0	0	0	0		
3	Grafton Street (Route 122)	SB	5	3	0.88	0.96		33			5	3			0	0			0	0	0	0	5	3	
	and Jolma Road/Starbucks Driveway	(Grafton Street (Route 122))	SBT	554	553	0.88	0.96	4	1	2	9	576	582	55		10	48	55		10	48	14	61	590	643
	September (7:45-8:45) (5:00-6:00)	WB Jolma Road/Starbucks Drivewa	WBL	14	30	0.67	0.77	29	7			14	31			0	0			0	0	0	0	14	31
			WBT	1	0	0.67	0.77					1	0			0	0			0	0	0	0	1	0
			WBR	9	10	0.67	0.77	56				9	10			0	0			0	0	0	0	9	10
			WBR	0	0							0	0			0	0			0	0	0	0	0	0
		NB (Grafton Street (Route 122))	NBL	46	9	0.88	0.95					48	9			0	0			0	0	0	0	48	9
			NBT	460	628	0.88	0.95	4	1	3	12	479	662	55		60	17	55		60	17	68	26	547	688
			NBR	59	83	0.88	0.95	7	7			61	86			0	0			0	0	0	0	61	86
			NBR	0	0							0	0			0	0			0	0	0	0	0	0
EB (Jolma Road/Starbucks Drivewa	EBL	0	0	0.00	0.00					0	0			0	0			0	0	0	0	0	0		
	EBT	0	0	0.00	0.00					0	0			0	0			0	0	0	0	0	0		
	EBR	0	0	0.00	0.00					0	0			0	0			0	0	0	0	0	0		
	EBR	5	4	0.93	0.95					5	4			0	0			0	0	0	0	5	4		
4	Grafton Street (Route 122)	SB	612	602	0.93	0.95	6	1	2	9	636	632	55		10	48	55		10	48	14	61	650	693	
	and Auto Parts Driveway	(Grafton Street (Route 122))	SBT	612	602	0.93	0.95	6	1	2	9	636	632	55		10	48	55		10	48	14	61	650	693
	June (7:30-8:30) (4:45-5:45)	WB (Auto Parts Driveway)	WBL	5	8	0.63	0.61	13				5	8			0	0			0	0	0	0	5	8
			WBT	0	0	0.63	0.61					0	0			0	0			0	0	0	0	0	0
			WBR	10	9	0.63	0.61					10	9			0	0			0	0	0	0	10	9
			WBR	0	0							0	0			0	0			0	0	0	0	0	0
		NB (Grafton Street (Route 122))	NBL	0	0	0.87	0.96					0	0			0	0			0	0	0	0	0	0
			NBT	555	745	0.87	0.96	5	1	3	12	578	783	55		60	17	55		60	17	68	26	646	809
			NBR	3	11	0.87	0.96					3	11			0	0			0	0	0	0	3	11
			NBR	0	0							0	0			0	0			0	0	0	0	0	0
EB (Auto Parts Driveway)	EBL	0	0							0	0			0	0			0	0	0	0	0	0		
	EBT	0	0							0	0			0	0			0	0	0	0	0	0		
	EBR	0	0							0	0			0	0			0	0	0	0	0	0		
	EBR	1	0	0.93	0.95					1	0			10	48	55		10	48	14	60	15	60		
5	Grafton Street (Route 122)	SB	609	609	0.93	0.95	6	1	2	9	633	640	55		10	48	55		10	48	14	60	15	60	
	and Brandt Lane/Roosevelt Elementary Service	(Grafton Street (Route 122))	SBT	609	609	0.93	0.95	6	1	2	9	633	640	55		10	48	55		10	48	14	60	15	60
	June (7:30-8:30) (4:45-5:45)	WB Lane/Roosevelt Elementary S	WBL	7	1	0.93	0.95					7	1			0	0			0	0	0	0	7	1
			WBT	4	0	0.25	0.50					4	0	45		50	14	45		49	14	50	14	54	15
			WBR	4	0	0.25	0.50					4	0	55		60	17	55		60	17	67	26	71	26
			WBR	4	1	0.87	0.96					4	1			0	0			0	0	0	0	4	1
		NB (Grafton Street (Route 122))	NBL	553	753	0.87	0.96	5	1	3	12	576	792	45		8	39	45		8	39	8	40	14	48
			NBT	6	8	0.87	0.96		25			6	8			0	0			0	0	1	1	577	793
			NBR	1	3	0.38	0.44					1	3			0	0			0	0	0	0	1	3
			NBR	0	0	0.38	0.44					0	0			0	0			0	0	0	0	0	0
EB (Brandt Lane/Roosevelt Elementary S	EBL	2	4	0.38	0.44					2	4			0	0			0	0	0	0	2	4		
	EBT	0	0							0															

APPENDIX G

Capacity Analysis

2023 Existing AM Peak

Intersection						
Int Delay, s/veh	2.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	71	36	422	61	29	403
Future Vol, veh/h	71	36	422	61	29	403
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	2	-	-	-2
Peak Hour Factor	89	89	90	90	90	90
Heavy Vehicles, %	4	3	6	8	4	7
Mvmt Flow	80	40	469	68	32	448

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1015	503	0	0	537
Stage 1	503	-	-	-	-
Stage 2	512	-	-	-	-
Critical Hdwy	8.44	7.23	-	-	4.14
Critical Hdwy Stg 1	7.44	-	-	-	-
Critical Hdwy Stg 2	7.44	-	-	-	-
Follow-up Hdwy	3.536	3.327	-	-	2.236
Pot Cap-1 Maneuver	149	493	-	-	1021
Stage 1	456	-	-	-	-
Stage 2	450	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	143	493	-	-	1021
Mov Cap-2 Maneuver	267	-	-	-	-
Stage 1	456	-	-	-	-
Stage 2	431	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	23.2	0	0.6
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	316	1021
HCM Lane V/C Ratio	-	-	0.38	0.032
HCM Control Delay (s)	-	-	23.2	8.6
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	1.7	0.1

Lanes, Volumes, Timings
 2: Grafton Street (Route 122) & Dalton Street/S&S Driveway

Grafton Woods TIAPS
 2023 Existing AM

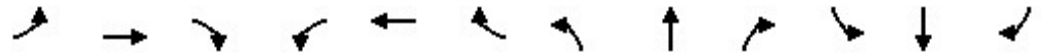


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	
Traffic Volume (vph)	47	20	131	42	16	13	34	412	23	15	447	15
Future Volume (vph)	47	20	131	42	16	13	34	412	23	15	447	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	15	12	12	12	12	11	16	12	12	12	12
Grade (%)		-6%			2%			2%				-2%
Storage Length (ft)	0		0	0		130	65		0	150		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.911				0.850		0.992			0.995	
Flt Protected		0.988			0.965		0.950			0.950		
Satd. Flow (prot)	0	1816	0	0	1815	1480	1677	2019	0	1823	1827	0
Flt Permitted		0.899			0.518		0.438			0.414		
Satd. Flow (perm)	0	1652	0	0	974	1480	773	2019	0	794	1827	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		108				116		4			3	
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		493			255			152			1165	
Travel Time (s)		13.4			7.0			3.0			22.7	
Peak Hour Factor	0.75	0.75	0.75	0.89	0.89	0.89	0.91	0.91	0.91	0.81	0.81	0.81
Heavy Vehicles (%)	15%	5%	4%	0%	0%	8%	3%	5%	0%	0%	4%	20%
Adj. Flow (vph)	63	27	175	47	18	15	37	453	25	19	552	19
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	265	0	0	65	15	37	478	0	19	571	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												Yes
Headway Factor	0.96	0.85	0.96	1.01	1.01	1.01	1.06	0.86	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	

Lanes, Volumes, Timings
 2: Grafton Street (Route 122) & Dalton Street/S&S Driveway

Grafton Woods TIAPS
 2023 Existing AM

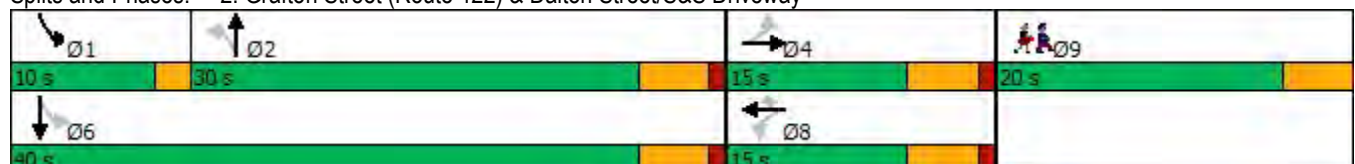


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	2	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	20.0	20.0		7.0	35.0	
Minimum Split (s)	15.0	15.0		15.0	15.0	15.0	25.0	25.0		9.0	40.0	
Total Split (s)	15.0	15.0		15.0	15.0	15.0	30.0	30.0		10.0	40.0	
Total Split (%)	20.0%	20.0%		20.0%	20.0%	20.0%	40.0%	40.0%		13.3%	53.3%	
Maximum Green (s)	10.0	10.0		10.0	10.0	10.0	25.0	25.0		8.0	35.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		2.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		0.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0	5.0	5.0	5.0		2.0	5.0	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	Max	Max		None	Max	
Act Effct Green (s)		10.0			10.0	10.0	33.2	33.2		38.0	35.0	
Actuated g/C Ratio		0.18			0.18	0.18	0.60	0.60		0.69	0.64	
v/c Ratio		0.68			0.37	0.04	0.08	0.39		0.03	0.49	
Control Delay		23.6			26.5	0.2	6.5	7.7		2.8	7.0	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		23.6			26.5	0.2	6.5	7.7		2.8	7.0	
LOS		C			C	A	A	A		A	A	
Approach Delay		23.6			21.6			7.6			6.9	
Approach LOS		C			C			A			A	

Intersection Summary

Area Type:	Other
Cycle Length:	75
Actuated Cycle Length:	55
Natural Cycle:	70
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.68
Intersection Signal Delay:	11.0
Intersection LOS:	B
Intersection Capacity Utilization:	55.9%
ICU Level of Service:	B
Analysis Period (min):	15

Splits and Phases: 2: Grafton Street (Route 122) & Dalton Street/S&S Driveway



Lane Group	Ø9
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	11.0
Total Split (s)	20.0
Total Split (%)	27%
Maximum Green (s)	16.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕			↕			↕	
Traffic Vol, veh/h	0	0	0	14	1	9	46	460	59	5	554	61
Future Vol, veh/h	0	0	0	14	1	9	46	460	59	5	554	61
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	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	-	-	2	-	-	2	-	-	-2	-
Peak Hour Factor	92	92	92	67	67	67	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	29	0	56	0	4	7	0	4	0
Mvmt Flow	0	0	0	21	1	13	52	523	67	6	630	69

Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	1338	1372	557	699	0	0	590	0	0
Stage 1	661	661	-	-	-	-	-	-	-
Stage 2	677	711	-	-	-	-	-	-	-
Critical Hdwy	7.09	6.9	6.96	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.09	5.9	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.09	5.9	-	-	-	-	-	-	-
Follow-up Hdwy	3.761	4	3.804	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	127	126	427	907	-	-	995	-	-
Stage 1	433	430	-	-	-	-	-	-	-
Stage 2	425	406	-	-	-	-	-	-	-
Platoon blocked, %									
Mov Cap-1 Maneuver	115	0	427	907	-	-	995	-	-
Mov Cap-2 Maneuver	115	0	-	-	-	-	-	-	-
Stage 1	396	0	-	-	-	-	-	-	-
Stage 2	421	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	33.6	0.8	0.1
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	907	-	-	161	995	-	-
HCM Lane V/C Ratio	0.058	-	-	0.222	0.006	-	-
HCM Control Delay (s)	9.2	0	-	33.6	8.6	0	-
HCM Lane LOS	A	A	-	D	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.8	0	-	-

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	10	555	3	5	612
Future Vol, veh/h	5	10	555	3	5	612
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	2	-	1	-	-	-1
Peak Hour Factor	63	63	87	87	93	93
Heavy Vehicles, %	0	0	5	0	0	6
Mvmt Flow	8	16	638	3	5	658

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1308	640	0	0	641	0
Stage 1	640	-	-	-	-	-
Stage 2	668	-	-	-	-	-
Critical Hdwy	6.8	6.4	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	154	462	-	-	953	-
Stage 1	493	-	-	-	-	-
Stage 2	477	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	153	462	-	-	953	-
Mov Cap-2 Maneuver	153	-	-	-	-	-
Stage 1	493	-	-	-	-	-
Stage 2	473	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.3	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	276	953
HCM Lane V/C Ratio	-	-	0.086	0.006
HCM Control Delay (s)	-	-	19.3	8.8
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.3	0

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	0	2	4	0	4	4	553	6	1	609	7
Future Vol, veh/h	1	0	2	4	0	4	4	553	6	1	609	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	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	-	-	1	-	-	1	-
Peak Hour Factor	92	92	92	92	92	92	87	87	87	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0	0	5	0	0	6	0
Mvmt Flow	1	0	2	4	0	4	5	636	7	1	655	8

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1313	1314	659	1312	1315	640	663	0	0	643	0	0
Stage 1	661	661	-	650	650	-	-	-	-	-	-	-
Stage 2	652	653	-	662	665	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
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	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	137	160	467	137	159	479	935	-	-	951	-	-
Stage 1	455	463	-	461	468	-	-	-	-	-	-	-
Stage 2	460	467	-	454	461	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	135	158	467	135	157	479	935	-	-	951	-	-
Mov Cap-2 Maneuver	135	158	-	135	157	-	-	-	-	-	-	-
Stage 1	451	462	-	457	464	-	-	-	-	-	-	-
Stage 2	452	463	-	451	460	-	-	-	-	-	-	-

Approach	EB		WB		NB			SB		
HCM Control Delay, s	19.2		22.8		0.1			0		
HCM LOS	C		C							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	935	-	-	257	211	951	-	-
HCM Lane V/C Ratio	0.005	-	-	0.013	0.041	0.001	-	-
HCM Control Delay (s)	8.9	0	-	19.2	22.8	8.8	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-

Intersection

Int Delay, s/veh 2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕			↕			↕	
Traffic Vol, veh/h	0	0	0	17	5	34	62	529	24	18	487	116
Future Vol, veh/h	0	0	0	17	5	34	62	529	24	18	487	116
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	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	-	-	2	-	-	1	-	-	1	-
Peak Hour Factor	92	92	92	67	67	67	88	88	88	96	96	96
Heavy Vehicles, %	0	0	0	0	20	0	3	5	4	6	5	10
Mvmt Flow	0	0	0	25	7	51	70	601	27	19	507	121

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1361	1421	615 628 0 0 628 0 0
Stage 1	755	755	- - - - - - - -
Stage 2	606	666	- - - - - - - -
Critical Hdwy	6.8	7.1	6.4 4.13 - - 4.16 - -
Critical Hdwy Stg 1	5.8	6.1	- - - - - - - -
Critical Hdwy Stg 2	5.8	6.1	- - - - - - - -
Follow-up Hdwy	3.5	4.18	3.3 2.227 - - 2.254 - -
Pot Cap-1 Maneuver	142	107	478 949 - - 935 - -
Stage 1	430	360	- - - - - - - -
Stage 2	513	400	- - - - - - - -
Platoon blocked, %			- - - - - - - -
Mov Cap-1 Maneuver	122	0	478 949 - - 935 - -
Mov Cap-2 Maneuver	122	0	- - - - - - - -
Stage 1	381	0	- - - - - - - -
Stage 2	497	0	- - - - - - - -

Approach	WB	NB	SB
HCM Control Delay, s	27.5	0.9	0.3
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	NBRWBLn1	SBL	SBT	SBR
Capacity (veh/h)	949	-	- 242	935	-	-
HCM Lane V/C Ratio	0.074	-	- 0.345	0.02	-	-
HCM Control Delay (s)	9.1	0	- 27.5	8.9	0	-
HCM Lane LOS	A	A	- D	A	A	-
HCM 95th %tile Q(veh)	0.2	-	- 1.5	0.1	-	-

Lanes, Volumes, Timings
7: Grafton Street (Route 122) & Sunderland Road

Grafton Woods TIAPS
2023 Existing AM

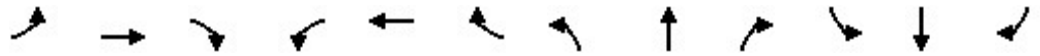


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↙	↘			↑	↗	↖	↘	↗
Traffic Volume (vph)	13	156	56	142	77	195	1	407	364	158	343	3
Future Volume (vph)	13	156	56	142	77	195	1	407	364	158	343	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	10	10	11	11	10	12
Grade (%)		-5%			3%			1%				-2%
Storage Length (ft)	0		0	250		0	0		220	175		0
Storage Lanes	0		0	1		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.966			0.893				0.850		0.999	
Flt Protected		0.997		0.950						0.950		
Satd. Flow (prot)	0	1813	0	1606	1566	0	0	1681	1508	1695	1721	0
Flt Permitted		0.960		0.323				0.999		0.242		
Satd. Flow (perm)	0	1746	0	546	1566	0	0	1679	1508	432	1721	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)		15			142							1
Link Speed (mph)		25			25			35				35
Link Distance (ft)		559			391			698				1056
Travel Time (s)		15.2			10.7			13.6				20.6
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.93	0.93	0.93	0.88	0.88	0.88
Heavy Vehicles (%)	15%	3%	2%	7%	1%	4%	0%	5%	3%	4%	4%	0%
Adj. Flow (vph)	15	175	63	160	87	219	1	438	391	180	390	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	253	0	160	306	0	0	439	391	180	393	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			11			0			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.97	0.97	0.97	1.07	1.07	1.07	1.10	1.10	1.05	1.03	1.08	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	

Lanes, Volumes, Timings
7: Grafton Street (Route 122) & Sunderland Road

Grafton Woods TIAPS
2023 Existing AM

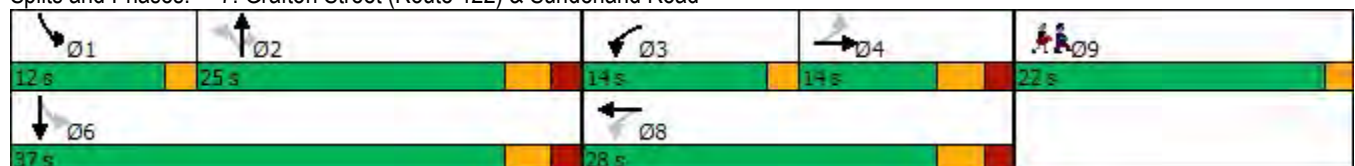


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	9.0	9.0		10.0	23.0		16.0	16.0	16.0	10.0	32.0	
Minimum Split (s)	14.0	14.0		12.0	28.0		21.0	21.0	21.0	12.0	37.0	
Total Split (s)	14.0	14.0		14.0	28.0		25.0	25.0	25.0	12.0	37.0	
Total Split (%)	16.1%	16.1%		16.1%	32.2%		28.7%	28.7%	28.7%	13.8%	42.5%	
Maximum Green (s)	9.0	9.0		12.0	23.0		20.0	20.0	20.0	10.0	32.0	
Yellow Time (s)	3.0	3.0		2.0	3.0		3.0	3.0	3.0	2.0	3.0	
All-Red Time (s)	2.0	2.0		0.0	2.0		2.0	2.0	2.0	0.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Lost Time (s)		5.0		2.0	5.0			5.0	5.0	2.0	5.0	
Lead/Lag	Lag	Lag		Lead			Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	None	Max	
Act Effct Green (s)		10.4		26.0	23.0			20.0	20.0	35.0	32.0	
Actuated g/C Ratio		0.16		0.40	0.35			0.31	0.31	0.54	0.49	
v/c Ratio		0.87		0.41	0.47			0.85	0.84	0.42	0.46	
Control Delay		58.0		16.6	11.3			39.5	40.4	11.0	13.1	
Queue Delay		0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Delay		58.0		16.6	11.3			39.5	40.4	11.0	13.1	
LOS		E		B	B			D	D	B	B	
Approach Delay		58.0			13.1			39.9			12.4	
Approach LOS		E			B			D			B	

Intersection Summary

Area Type:	Other
Cycle Length:	87
Actuated Cycle Length:	65
Natural Cycle:	80
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.87
Intersection Signal Delay:	28.8
Intersection LOS:	C
Intersection Capacity Utilization:	96.3%
ICU Level of Service:	F
Analysis Period (min):	15

Splits and Phases: 7: Grafton Street (Route 122) & Sunderland Road



Lane Group	Ø9
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	6.0
Minimum Split (s)	8.0
Total Split (s)	22.0
Total Split (%)	25%
Maximum Green (s)	20.0
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	

2023 Existing PM Peak

Intersection						
Int Delay, s/veh	3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	51	43	646	58	53	475
Future Vol, veh/h	51	43	646	58	53	475
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	2	-	-	-2
Peak Hour Factor	84	84	94	94	91	91
Heavy Vehicles, %	0	2	0	1	0	1
Mvmt Flow	61	51	687	62	58	522

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1356	718	0	0	749
Stage 1	718	-	-	-	-
Stage 2	638	-	-	-	-
Critical Hdwy	8.4	7.22	-	-	4.1
Critical Hdwy Stg 1	7.4	-	-	-	-
Critical Hdwy Stg 2	7.4	-	-	-	-
Follow-up Hdwy	3.5	3.318	-	-	2.2
Pot Cap-1 Maneuver	78	351	-	-	869
Stage 1	327	-	-	-	-
Stage 2	372	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	71	351	-	-	869
Mov Cap-2 Maneuver	184	-	-	-	-
Stage 1	327	-	-	-	-
Stage 2	337	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	33.5	0	0.9
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	235	869
HCM Lane V/C Ratio	-	-	0.476	0.067
HCM Control Delay (s)	-	-	33.5	9.4
HCM Lane LOS	-	-	D	A
HCM 95th %tile Q(veh)	-	-	2.4	0.2

Lanes, Volumes, Timings
 2: Grafton Street (Route 122) & Dalton Street/S&S Driveway

Grafton Woods TIAPS
 2023 Existing PM

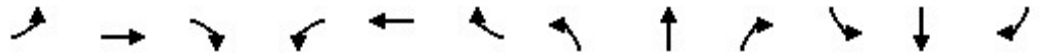


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	
Traffic Volume (vph)	23	44	47	77	39	40	57	546	43	24	437	27
Future Volume (vph)	23	44	47	77	39	40	57	546	43	24	437	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	15	12	12	12	12	11	16	12	12	12	12
Grade (%)		-6%			2%			2%				-2%
Storage Length (ft)	0		0	0		130	65		0	150		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.944				0.850		0.989			0.991	
Flt Protected		0.990			0.968		0.950			0.950		
Satd. Flow (prot)	0	2012	0	0	1809	1599	1661	2089	0	1753	1884	0
Flt Permitted		0.903			0.737		0.436			0.298		
Satd. Flow (perm)	0	1835	0	0	1377	1599	762	2089	0	550	1884	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		39				116		6			6	
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		493			255			152			1165	
Travel Time (s)		13.4			7.0			3.0			22.7	
Peak Hour Factor	0.75	0.75	0.75	0.89	0.89	0.89	0.91	0.91	0.91	0.81	0.81	0.81
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	4%	1%	0%	4%	1%	0%
Adj. Flow (vph)	31	59	63	87	44	45	63	600	47	30	540	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	153	0	0	131	45	63	647	0	30	573	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												Yes
Headway Factor	0.96	0.85	0.96	1.01	1.01	1.01	1.06	0.86	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	

Lanes, Volumes, Timings
 2: Grafton Street (Route 122) & Dalton Street/S&S Driveway

Grafton Woods TIAPS
 2023 Existing PM

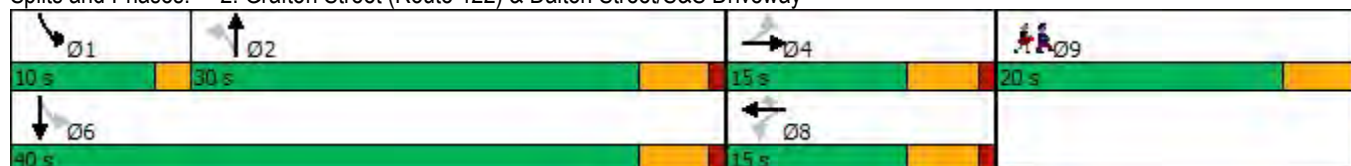


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	2	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	20.0	20.0		7.0	35.0	
Minimum Split (s)	15.0	15.0		15.0	15.0	15.0	25.0	25.0		9.0	40.0	
Total Split (s)	15.0	15.0		15.0	15.0	15.0	30.0	30.0		10.0	40.0	
Total Split (%)	20.0%	20.0%		20.0%	20.0%	20.0%	40.0%	40.0%		13.3%	53.3%	
Maximum Green (s)	10.0	10.0		10.0	10.0	10.0	25.0	25.0		8.0	35.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		2.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		0.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0	5.0	5.0	5.0		2.0	5.0	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	Max	Max		None	Max	
Act Effct Green (s)		10.0			10.0	10.0	33.2	33.2		38.0	35.0	
Actuated g/C Ratio		0.18			0.18	0.18	0.60	0.60		0.69	0.64	
v/c Ratio		0.42			0.52	0.12	0.14	0.51		0.06	0.48	
Control Delay		19.1			28.9	0.6	7.0	8.9		2.9	6.8	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		19.1			28.9	0.6	7.0	8.9		2.9	6.8	
LOS		B			C	A	A	A		A	A	
Approach Delay		19.1			21.7			8.8			6.6	
Approach LOS		B			C			A			A	

Intersection Summary

Area Type:	Other
Cycle Length:	75
Actuated Cycle Length:	55
Natural Cycle:	70
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.52
Intersection Signal Delay:	10.3
Intersection LOS:	B
Intersection Capacity Utilization:	68.8%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 2: Grafton Street (Route 122) & Dalton Street/S&S Driveway



Lane Group	Ø9
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	11.0
Total Split (s)	20.0
Total Split (%)	27%
Maximum Green (s)	16.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Act Effect Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕			↕			↕	
Traffic Vol, veh/h	0	0	0	30	0	10	9	628	83	3	553	9
Future Vol, veh/h	0	0	0	30	0	10	9	628	83	3	553	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	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	-	-	2	-	-	2	-	-	-2	-
Peak Hour Factor	92	92	92	77	77	77	95	95	95	96	96	96
Heavy Vehicles, %	0	0	0	7	0	0	0	1	7	33	1	0
Mvmt Flow	0	0	0	39	0	13	9	661	87	3	576	9

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1310	1314	705	585	0	0
Stage 1	723	723	-	-	-	-
Stage 2	587	591	-	-	-	-
Critical Hdwy	6.87	6.9	6.4	4.1	-	4.43
Critical Hdwy Stg 1	5.87	5.9	-	-	-	-
Critical Hdwy Stg 2	5.87	5.9	-	-	-	-
Follow-up Hdwy	3.563	4	3.3	2.2	-	2.497
Pot Cap-1 Maneuver	148	138	423	1000	-	736
Stage 1	435	400	-	-	-	-
Stage 2	512	466	-	-	-	-
Platoon blocked, %						
Mov Cap-1 Maneuver	145	0	423	1000	-	736
Mov Cap-2 Maneuver	145	0	-	-	-	-
Stage 1	428	0	-	-	-	-
Stage 2	509	0	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	34.3	0.1	0.1
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1000	-	-	174	736	-	-
HCM Lane V/C Ratio	0.009	-	-	0.299	0.004	-	-
HCM Control Delay (s)	8.6	0	-	34.3	9.9	0	-
HCM Lane LOS	A	A	-	D	A	A	-
HCM 95th %tile Q(veh)	0	-	-	1.2	0	-	-

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	9	745	11	4	602
Future Vol, veh/h	8	9	745	11	4	602
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	2	-	1	-	-	-1
Peak Hour Factor	61	61	96	96	95	95
Heavy Vehicles, %	13	0	1	0	0	1
Mvmt Flow	13	15	776	11	4	634

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1424	782	0	0	787
Stage 1	782	-	-	-	-
Stage 2	642	-	-	-	-
Critical Hdwy	6.93	6.4	-	-	4.1
Critical Hdwy Stg 1	5.93	-	-	-	-
Critical Hdwy Stg 2	5.93	-	-	-	-
Follow-up Hdwy	3.617	3.3	-	-	2.2
Pot Cap-1 Maneuver	121	381	-	-	841
Stage 1	396	-	-	-	-
Stage 2	469	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	120	381	-	-	841
Mov Cap-2 Maneuver	120	-	-	-	-
Stage 1	396	-	-	-	-
Stage 2	466	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	27.5	0	0.1
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	188	841
HCM Lane V/C Ratio	-	-	0.148	0.005
HCM Control Delay (s)	-	-	27.5	9.3
HCM Lane LOS	-	-	D	A
HCM 95th %tile Q(veh)	-	-	0.5	0

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	0	4	1	0	0	1	753	8	0	609	1
Future Vol, veh/h	3	0	4	1	0	0	1	753	8	0	609	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	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	-	-	1	-	-	1	-
Peak Hour Factor	92	92	92	92	92	92	96	96	96	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	1	25	0	1	0
Mvmt Flow	3	0	4	1	0	0	1	784	8	0	641	1

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1432	1436	642	1434	1432	788	642	0	0	792	0	0
Stage 1	642	642	-	790	790	-	-	-	-	-	-	-
Stage 2	790	794	-	644	642	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
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	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	113	135	478	113	136	394	952	-	-	838	-	-
Stage 1	466	472	-	386	404	-	-	-	-	-	-	-
Stage 2	386	403	-	465	472	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	113	135	478	112	136	394	952	-	-	838	-	-
Mov Cap-2 Maneuver	113	135	-	112	136	-	-	-	-	-	-	-
Stage 1	465	472	-	385	403	-	-	-	-	-	-	-
Stage 2	385	402	-	461	472	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	23.7		37.5		0		0	
HCM LOS	C		E					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	952	-	-	200	112	838	-	-
HCM Lane V/C Ratio	0.001	-	-	0.038	0.01	-	-	-
HCM Control Delay (s)	8.8	0	-	23.7	37.5	0	-	-
HCM Lane LOS	A	A	-	C	E	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕			↕			↕	
Traffic Vol, veh/h	0	0	2	13	1	17	7	743	25	14	579	11
Future Vol, veh/h	0	0	2	13	1	17	7	743	25	14	579	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	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	-	-	2	-	-	1	-	-	1	-
Peak Hour Factor	92	92	92	65	65	65	95	95	95	96	96	96
Heavy Vehicles, %	0	0	0	0	0	0	0	1	4	0	2	0
Mvmt Flow	0	0	2	20	2	26	7	782	26	15	603	11

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1448	1453	795
Stage 1	809	809	-
Stage 2	639	644	-
Critical Hdwy	6.8	6.9	6.4
Critical Hdwy Stg 1	5.8	5.9	-
Critical Hdwy Stg 2	5.8	5.9	-
Follow-up Hdwy	3.5	4	3.3
Pot Cap-1 Maneuver	124	112	374
Stage 1	403	362	-
Stage 2	493	439	-
Platoon blocked, %			
Mov Cap-1 Maneuver	119	0	374
Mov Cap-2 Maneuver	119	0	-
Stage 1	398	0	-
Stage 2	479	0	-

Approach	WB	NB	SB
HCM Control Delay, s	29.5	0.1	0.2
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	NBRWBLn1	SBL	SBT	SBR
Capacity (veh/h)	975	-	-	194	826	-
HCM Lane V/C Ratio	0.008	-	-	0.246	0.018	-
HCM Control Delay (s)	8.7	0	-	29.5	9.4	0
HCM Lane LOS	A	A	-	D	A	A
HCM 95th %tile Q(veh)	0	-	-	0.9	0.1	-

Lanes, Volumes, Timings
7: Grafton Street (Route 122) & Sunderland Road

Grafton Woods TIAPS
2023 Existing PM

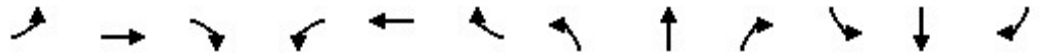


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↑	↗	↖	↗	↖
Traffic Volume (vph)	10	114	29	364	232	292	4	415	154	175	357	11
Future Volume (vph)	10	114	29	364	232	292	4	415	154	175	357	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	10	10	11	11	10	12
Grade (%)		-5%			3%			1%				-2%
Storage Length (ft)	0		0	250		0	0		220	175		0
Storage Lanes	0		0	1		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.974			0.916				0.850		0.995	
Flt Protected		0.997		0.950						0.950		
Satd. Flow (prot)	0	1880	0	1685	1641	0	0	1714	1494	1745	1765	0
Flt Permitted		0.931		0.432				0.996		0.229		
Satd. Flow (perm)	0	1756	0	766	1641	0	0	1707	1494	421	1765	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)		11			71							2
Link Speed (mph)		25			25			35				35
Link Distance (ft)		559			391			698				1056
Travel Time (s)		15.2			10.7			13.6				20.6
Peak Hour Factor	0.89	0.89	0.89	0.94	0.94	0.94	0.93	0.93	0.93	0.87	0.87	0.87
Heavy Vehicles (%)	0%	0%	3%	2%	1%	1%	0%	3%	4%	1%	1%	0%
Adj. Flow (vph)	11	128	33	387	247	311	4	446	166	201	410	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	172	0	387	558	0	0	450	166	201	423	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			11			0			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.97	0.97	0.97	1.07	1.07	1.07	1.10	1.10	1.05	1.03	1.08	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	

Lanes, Volumes, Timings
 7: Grafton Street (Route 122) & Sunderland Road

Grafton Woods TIAPS
 2023 Existing PM

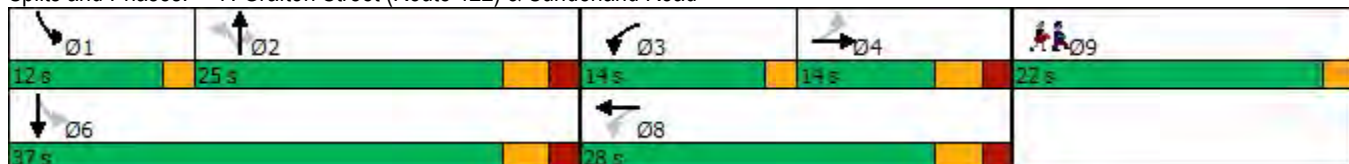


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	9.0	9.0		10.0	23.0		16.0	16.0	16.0	10.0	32.0	
Minimum Split (s)	14.0	14.0		12.0	28.0		21.0	21.0	21.0	12.0	37.0	
Total Split (s)	14.0	14.0		14.0	28.0		25.0	25.0	25.0	12.0	37.0	
Total Split (%)	16.1%	16.1%		16.1%	32.2%		28.7%	28.7%	28.7%	13.8%	42.5%	
Maximum Green (s)	9.0	9.0		12.0	23.0		20.0	20.0	20.0	10.0	32.0	
Yellow Time (s)	3.0	3.0		2.0	3.0		3.0	3.0	3.0	2.0	3.0	
All-Red Time (s)	2.0	2.0		0.0	2.0		2.0	2.0	2.0	0.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Lost Time (s)		5.0		2.0	5.0			5.0	5.0	2.0	5.0	
Lead/Lag	Lag	Lag		Lead			Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	None	Max	
Act Effct Green (s)		9.0		26.0	23.0			20.0	20.0	35.0	32.0	
Actuated g/C Ratio		0.14		0.40	0.35			0.31	0.31	0.54	0.49	
v/c Ratio		0.68		0.81	0.89			0.86	0.36	0.47	0.49	
Control Delay		41.0		32.0	37.2			39.9	20.3	11.7	13.4	
Queue Delay		0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Delay		41.0		32.0	37.2			39.9	20.3	11.7	13.4	
LOS		D		C	D			D	C	B	B	
Approach Delay		41.0			35.1			34.7			12.8	
Approach LOS		D			D			C			B	

Intersection Summary

Area Type:	Other
Cycle Length:	87
Actuated Cycle Length:	65
Natural Cycle:	90
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.89
Intersection Signal Delay:	29.5
Intersection LOS:	C
Intersection Capacity Utilization:	103.8%
ICU Level of Service:	G
Analysis Period (min):	15

Splits and Phases: 7: Grafton Street (Route 122) & Sunderland Road



Lane Group	Ø9
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	6.0
Minimum Split (s)	8.0
Total Split (s)	22.0
Total Split (%)	25%
Maximum Green (s)	20.0
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Act Effect Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	

2030 No-Build AM Peak

Intersection						
Int Delay, s/veh	2.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	73	37	440	63	30	419
Future Vol, veh/h	73	37	440	63	30	419
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	2	-	-	-2
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	3	6	8	4	7
Mvmt Flow	79	40	478	68	33	455

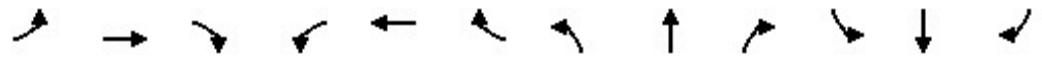
Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1033	512	0	0	546
Stage 1	512	-	-	-	-
Stage 2	521	-	-	-	-
Critical Hdwy	8.44	7.23	-	-	4.14
Critical Hdwy Stg 1	7.44	-	-	-	-
Critical Hdwy Stg 2	7.44	-	-	-	-
Follow-up Hdwy	3.536	3.327	-	-	2.236
Pot Cap-1 Maneuver	144	486	-	-	1013
Stage 1	450	-	-	-	-
Stage 2	443	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	138	486	-	-	1013
Mov Cap-2 Maneuver	262	-	-	-	-
Stage 1	450	-	-	-	-
Stage 2	424	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	23.7	0	0.6
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	310	1013
HCM Lane V/C Ratio	-	-	0.386	0.032
HCM Control Delay (s)	-	-	23.7	8.7
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	1.8	0.1

Lanes, Volumes, Timings
 2: Grafton Street (Route 122) & Dalton Street/S&S Driveway

Grafton Woods TIAPS
 2030 No-Build AM

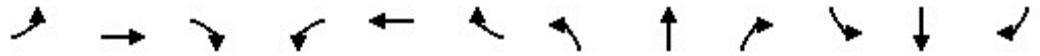


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	
Traffic Volume (vph)	48	20	135	43	16	13	35	430	23	15	464	15
Future Volume (vph)	48	20	135	43	16	13	35	430	23	15	464	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	15	12	12	12	12	11	16	12	12	12	12
Grade (%)		-6%			2%			2%				-2%
Storage Length (ft)	0		0	0		130	65		0	150		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.910				0.850		0.992			0.995	
Flt Protected		0.988			0.965		0.950			0.950		
Satd. Flow (prot)	0	1814	0	0	1815	1480	1677	2019	0	1823	1827	0
Flt Permitted		0.900			0.587		0.471			0.404		
Satd. Flow (perm)	0	1653	0	0	1104	1480	831	2019	0	775	1827	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		110				116		4			3	
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		493			255			152			1165	
Travel Time (s)		13.4			7.0			3.0			22.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	15%	5%	4%	0%	0%	8%	3%	5%	0%	0%	4%	20%
Adj. Flow (vph)	52	22	147	47	17	14	38	467	25	16	504	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	221	0	0	64	14	38	492	0	16	520	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												Yes
Headway Factor	0.96	0.85	0.96	1.01	1.01	1.01	1.06	0.86	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	

Lanes, Volumes, Timings
 2: Grafton Street (Route 122) & Dalton Street/S&S Driveway

Grafton Woods TIAPS
 2030 No-Build AM

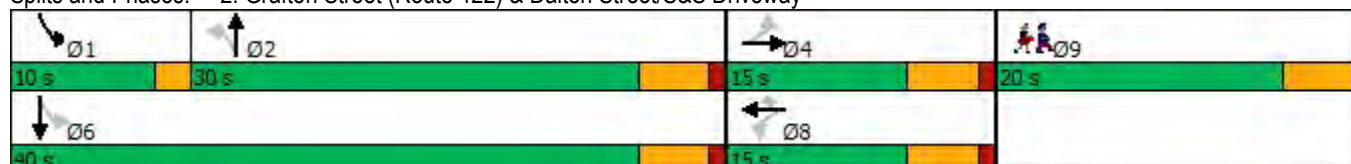


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	2	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	20.0	20.0		7.0	35.0	
Minimum Split (s)	15.0	15.0		15.0	15.0	15.0	25.0	25.0		9.0	40.0	
Total Split (s)	15.0	15.0		15.0	15.0	15.0	30.0	30.0		10.0	40.0	
Total Split (%)	20.0%	20.0%		20.0%	20.0%	20.0%	40.0%	40.0%		13.3%	53.3%	
Maximum Green (s)	10.0	10.0		10.0	10.0	10.0	25.0	25.0		8.0	35.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		2.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		0.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0	5.0	5.0	5.0		2.0	5.0	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	Max	Max		None	Max	
Act Effct Green (s)		10.0			10.0	10.0	33.2	33.2		38.0	35.0	
Actuated g/C Ratio		0.18			0.18	0.18	0.60	0.60		0.69	0.64	
v/c Ratio		0.57			0.32	0.04	0.08	0.40		0.02	0.45	
Control Delay		17.3			24.6	0.2	6.4	7.8		2.7	6.6	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		17.3			24.6	0.2	6.4	7.8		2.7	6.6	
LOS		B			C	A	A	A		A	A	
Approach Delay		17.3			20.2			7.7			6.4	
Approach LOS		B			C			A			A	

Intersection Summary

Area Type:	Other
Cycle Length:	75
Actuated Cycle Length:	55
Natural Cycle:	70
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.57
Intersection Signal Delay:	9.5
Intersection LOS:	A
Intersection Capacity Utilization:	56.9%
ICU Level of Service:	B
Analysis Period (min):	15

Splits and Phases: 2: Grafton Street (Route 122) & Dalton Street/S&S Driveway



Lane Group	Ø9
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	11.0
Total Split (s)	20.0
Total Split (%)	27%
Maximum Green (s)	16.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕			↕			↕	
Traffic Vol, veh/h	0	0	0	14	1	9	47	479	61	5	575	63
Future Vol, veh/h	0	0	0	14	1	9	47	479	61	5	575	63
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	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	-	-	2	-	-	2	-	-	-2	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	29	0	56	0	4	7	0	4	0
Mvmt Flow	0	0	0	15	1	10	51	521	66	5	625	68

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1325	1359	554	693	0	0
Stage 1	656	656	-	-	-	-
Stage 2	669	703	-	-	-	-
Critical Hdwy	7.09	6.9	6.96	4.1	-	4.1
Critical Hdwy Stg 1	6.09	5.9	-	-	-	-
Critical Hdwy Stg 2	6.09	5.9	-	-	-	-
Follow-up Hdwy	3.761	4	3.804	2.2	-	2.2
Pot Cap-1 Maneuver	130	129	428	912	-	998
Stage 1	436	433	-	-	-	-
Stage 2	429	410	-	-	-	-
Platoon blocked, %						
Mov Cap-1 Maneuver	118	0	428	912	-	998
Mov Cap-2 Maneuver	118	0	-	-	-	-
Stage 1	399	0	-	-	-	-
Stage 2	426	0	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	30.9	0.7	0.1
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	912	-	-	165	998	-	-
HCM Lane V/C Ratio	0.056	-	-	0.158	0.005	-	-
HCM Control Delay (s)	9.2	0	-	30.9	8.6	0	-
HCM Lane LOS	A	A	-	D	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.5	0	-	-

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	10	578	3	5	636
Future Vol, veh/h	5	10	578	3	5	636
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	2	-	1	-	-	-1
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	5	0	0	6
Mvmt Flow	5	11	628	3	5	691

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1331	630	0	0	631
Stage 1	630	-	-	-	-
Stage 2	701	-	-	-	-
Critical Hdwy	6.8	6.4	-	-	4.1
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	148	469	-	-	961
Stage 1	498	-	-	-	-
Stage 2	459	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	147	469	-	-	961
Mov Cap-2 Maneuver	147	-	-	-	-
Stage 1	498	-	-	-	-
Stage 2	455	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.1	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	271	961
HCM Lane V/C Ratio	-	-	0.06	0.006
HCM Control Delay (s)	-	-	19.1	8.8
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.2	0

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	0	2	4	0	4	4	576	6	1	633	7
Future Vol, veh/h	1	0	2	4	0	4	4	576	6	1	633	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	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	-	-	1	-	-	1	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	5	0	0	6	0
Mvmt Flow	1	0	2	4	0	4	4	626	7	1	688	8

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1334	1335	692	1333	1336	630	696	0	0	633	0	0
Stage 1	694	694	-	638	638	-	-	-	-	-	-	-
Stage 2	640	641	-	695	698	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
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	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	132	155	447	132	155	485	909	-	-	960	-	-
Stage 1	436	447	-	468	474	-	-	-	-	-	-	-
Stage 2	467	473	-	436	445	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	130	154	447	130	154	485	909	-	-	960	-	-
Mov Cap-2 Maneuver	130	154	-	130	154	-	-	-	-	-	-	-
Stage 1	433	446	-	465	471	-	-	-	-	-	-	-
Stage 2	460	470	-	433	444	-	-	-	-	-	-	-

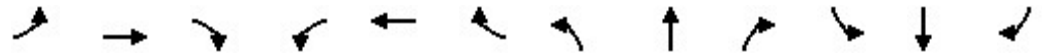
Approach	EB		WB		NB		SB	
HCM Control Delay, s	19.8		23.3		0.1		0	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	909	-	-	247	205	960	-	-
HCM Lane V/C Ratio	0.005	-	-	0.013	0.042	0.001	-	-
HCM Control Delay (s)	9	0	-	19.8	23.3	8.8	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-

Intersection												
Int Delay, s/veh	1.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↕			↕			↕		
Traffic Vol, veh/h	0	0	0	17	5	35	64	551	24	18	506	120
Future Vol, veh/h	0	0	0	17	5	35	64	551	24	18	506	120
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	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	-	-	2	-	-	1	-	-	1	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	20	0	3	5	4	6	5	10
Mvmt Flow	0	0	0	18	5	38	70	599	26	20	550	130
Major/Minor	Minor1			Major1			Major2					
Conflicting Flow All	1407			1472			612			680		
Stage 1	752			752			-			-		
Stage 2	655			720			-			-		
Critical Hdwy	6.8			7.1			6.4			4.13		
Critical Hdwy Stg 1	5.8			6.1			-			-		
Critical Hdwy Stg 2	5.8			6.1			-			-		
Follow-up Hdwy	3.5			4.18			3.3			2.227		
Pot Cap-1 Maneuver	132			99			480			908		
Stage 1	432			361			-			-		
Stage 2	484			375			-			-		
Platoon blocked, %	-			-			-			-		
Mov Cap-1 Maneuver	112			0			480			908		
Mov Cap-2 Maneuver	112			0			-			-		
Stage 1	381			0			-			-		
Stage 2	467			0			-			-		
Approach	WB			NB			SB					
HCM Control Delay, s	26.2			0.9			0.2					
HCM LOS	D											
Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	908	-	-	231	937	-	-					
HCM Lane V/C Ratio	0.077	-	-	0.268	0.021	-	-					
HCM Control Delay (s)	9.3	0	-	26.2	8.9	0	-					
HCM Lane LOS	A	A	-	D	A	A	-					
HCM 95th %tile Q(veh)	0.2	-	-	1	0.1	-	-					

Lanes, Volumes, Timings
7: Grafton Street (Route 122) & Sunderland Road

Grafton Woods TIAPS
2030 No-Build AM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↑	↗	↖	↗	↖
Traffic Volume (vph)	13	161	57	147	79	201	1	424	376	163	357	3
Future Volume (vph)	13	161	57	147	79	201	1	424	376	163	357	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	10	10	11	11	10	12
Grade (%)		-5%			3%			1%				-2%
Storage Length (ft)	0		0	250		0	0		220	175		0
Storage Lanes	0		0	1		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.967			0.892				0.850		0.999	
Flt Protected		0.997		0.950						0.950		
Satd. Flow (prot)	0	1815	0	1606	1564	0	0	1681	1508	1695	1721	0
Flt Permitted		0.963		0.323				0.999		0.214		
Satd. Flow (perm)	0	1754	0	546	1564	0	0	1679	1508	382	1721	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)		15			143							1
Link Speed (mph)		25			25			35				35
Link Distance (ft)		559			391			698				1056
Travel Time (s)		15.2			10.7			13.6				20.6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	15%	3%	2%	7%	1%	4%	0%	5%	3%	4%	4%	0%
Adj. Flow (vph)	14	175	62	160	86	218	1	461	409	177	388	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	251	0	160	304	0	0	462	409	177	391	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			11			0			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.97	0.97	0.97	1.07	1.07	1.07	1.10	1.10	1.05	1.03	1.08	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (ft)	20	100		20	100		20	100	20	20		100
Trailing Detector (ft)	0	0		0	0		0	0	0	0		0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0		0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20		6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	

Lanes, Volumes, Timings
7: Grafton Street (Route 122) & Sunderland Road

Grafton Woods TIAPS
2030 No-Build AM

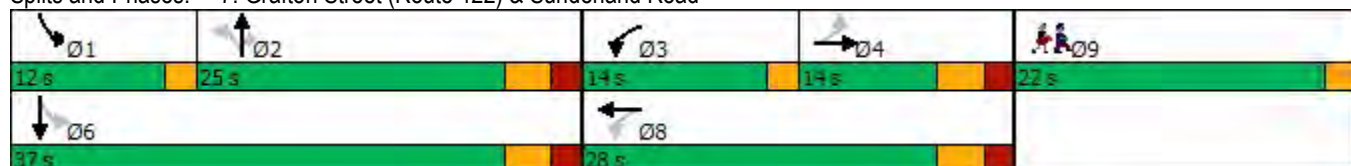


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	9.0	9.0		10.0	23.0		16.0	16.0	16.0	10.0	32.0	
Minimum Split (s)	14.0	14.0		12.0	28.0		21.0	21.0	21.0	12.0	37.0	
Total Split (s)	14.0	14.0		14.0	28.0		25.0	25.0	25.0	12.0	37.0	
Total Split (%)	16.1%	16.1%		16.1%	32.2%		28.7%	28.7%	28.7%	13.8%	42.5%	
Maximum Green (s)	9.0	9.0		12.0	23.0		20.0	20.0	20.0	10.0	32.0	
Yellow Time (s)	3.0	3.0		2.0	3.0		3.0	3.0	3.0	2.0	3.0	
All-Red Time (s)	2.0	2.0		0.0	2.0		2.0	2.0	2.0	0.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Lost Time (s)		5.0		2.0	5.0			5.0	5.0	2.0	5.0	
Lead/Lag	Lag	Lag		Lead			Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	None	Max	
Act Effct Green (s)		10.4		26.0	23.0			20.0	20.0	35.0	32.0	
Actuated g/C Ratio		0.16		0.40	0.35			0.31	0.31	0.54	0.49	
v/c Ratio		0.86		0.41	0.47			0.90	0.88	0.43	0.46	
Control Delay		56.2		16.6	11.2			45.1	45.1	11.3	13.1	
Queue Delay		0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Delay		56.2		16.6	11.2			45.1	45.1	11.3	13.1	
LOS		E		B	B			D	D	B	B	
Approach Delay		56.2			13.0			45.1			12.5	
Approach LOS		E			B			D			B	

Intersection Summary

Area Type:	Other
Cycle Length:	87
Actuated Cycle Length:	65
Natural Cycle:	80
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.90
Intersection Signal Delay:	30.9
Intersection LOS:	C
Intersection Capacity Utilization:	97.5%
ICU Level of Service:	F
Analysis Period (min):	15

Splits and Phases: 7: Grafton Street (Route 122) & Sunderland Road



Lane Group	Ø9
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	6.0
Minimum Split (s)	8.0
Total Split (s)	22.0
Total Split (%)	25%
Maximum Green (s)	20.0
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Act Effect Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	

2030 No-Build PM Peak

Intersection						
Int Delay, s/veh	2.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	52	44	680	60	54	500
Future Vol, veh/h	52	44	680	60	54	500
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	2	-	-	-2
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	2	0	1	0	1
Mvmt Flow	57	48	739	65	59	543

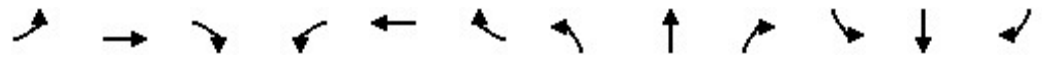
Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1433	772	0	0	804
Stage 1	772	-	-	-	-
Stage 2	661	-	-	-	-
Critical Hdwy	8.4	7.22	-	-	4.1
Critical Hdwy Stg 1	7.4	-	-	-	-
Critical Hdwy Stg 2	7.4	-	-	-	-
Follow-up Hdwy	3.5	3.318	-	-	2.2
Pot Cap-1 Maneuver	67	322	-	-	829
Stage 1	299	-	-	-	-
Stage 2	358	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	60	322	-	-	829
Mov Cap-2 Maneuver	169	-	-	-	-
Stage 1	299	-	-	-	-
Stage 2	321	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	36.3	0	0.9
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	216	829
HCM Lane V/C Ratio	-	-	0.483	0.071
HCM Control Delay (s)	-	-	36.3	9.7
HCM Lane LOS	-	-	E	A
HCM 95th %tile Q(veh)	-	-	2.4	0.2

Lanes, Volumes, Timings
 2: Grafton Street (Route 122) & Dalton Street/S&S Driveway

Grafton Woods TIAPS
 2030 No-Build PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	
Traffic Volume (vph)	23	45	48	79	40	41	59	577	44	24	461	27
Future Volume (vph)	23	45	48	79	40	41	59	577	44	24	461	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	15	12	12	12	12	11	16	12	12	12	12
Grade (%)		-6%			2%			2%				-2%
Storage Length (ft)	0		0	0		130	65		0	150		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.944				0.850		0.989			0.992	
Flt Protected		0.990			0.968		0.950			0.950		
Satd. Flow (prot)	0	2012	0	0	1809	1599	1661	2089	0	1753	1886	0
Flt Permitted		0.909			0.784		0.467			0.282		
Satd. Flow (perm)	0	1847	0	0	1465	1599	816	2089	0	520	1886	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		39				116		6				5
Link Speed (mph)		25			25			35				35
Link Distance (ft)		493			255			152				1165
Travel Time (s)		13.4			7.0			3.0				22.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	4%	1%	0%	4%	1%	0%
Adj. Flow (vph)	25	49	52	86	43	45	64	627	48	26	501	29
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	126	0	0	129	45	64	675	0	26	530	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												Yes
Headway Factor	0.96	0.85	0.96	1.01	1.01	1.01	1.06	0.86	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	

Lanes, Volumes, Timings
 2: Grafton Street (Route 122) & Dalton Street/S&S Driveway

Grafton Woods TIAPS
 2030 No-Build PM

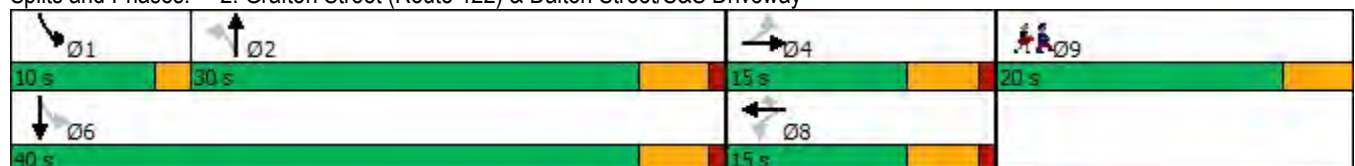


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	2	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	20.0	20.0		7.0	35.0	
Minimum Split (s)	15.0	15.0		15.0	15.0	15.0	25.0	25.0		9.0	40.0	
Total Split (s)	15.0	15.0		15.0	15.0	15.0	30.0	30.0		10.0	40.0	
Total Split (%)	20.0%	20.0%		20.0%	20.0%	20.0%	40.0%	40.0%		13.3%	53.3%	
Maximum Green (s)	10.0	10.0		10.0	10.0	10.0	25.0	25.0		8.0	35.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		2.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		0.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0	5.0	5.0	5.0		2.0	5.0	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	Max	Max		None	Max	
Act Effct Green (s)		10.0		10.0	10.0	33.9	33.9			38.7	35.7	
Actuated g/C Ratio		0.18		0.18	0.18	0.61	0.61			0.69	0.64	
v/c Ratio		0.35		0.49	0.12	0.13	0.53			0.05	0.44	
Control Delay		17.3		27.4	0.6	6.8	9.2			2.9	6.4	
Queue Delay		0.0		0.0	0.0	0.0	0.0			0.0	0.0	
Total Delay		17.3		27.4	0.6	6.8	9.2			2.9	6.4	
LOS		B		C	A	A	A			A	A	
Approach Delay		17.3		20.5			9.0				6.2	
Approach LOS		B		C			A				A	

Intersection Summary

Area Type:	Other
Cycle Length:	75
Actuated Cycle Length:	55.7
Natural Cycle:	70
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.53
Intersection Signal Delay:	9.9
Intersection LOS:	A
Intersection Capacity Utilization:	70.6%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 2: Grafton Street (Route 122) & Dalton Street/S&S Driveway



Lane Group	Ø9
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	11.0
Total Split (s)	20.0
Total Split (%)	27%
Maximum Green (s)	16.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕			↕			↕	
Traffic Vol, veh/h	0	0	0	31	0	10	9	662	85	3	581	9
Future Vol, veh/h	0	0	0	31	0	10	9	662	85	3	581	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	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	-	-	2	-	-	2	-	-	-2	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	7	0	0	0	1	7	33	1	0
Mvmt Flow	0	0	0	34	0	11	10	720	92	3	632	10

Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	1429	1434	766	642	0	0	812	0	0
Stage 1	786	786	-	-	-	-	-	-	-
Stage 2	643	648	-	-	-	-	-	-	-
Critical Hdwy	6.87	6.9	6.4	4.1	-	-	4.43	-	-
Critical Hdwy Stg 1	5.87	5.9	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.87	5.9	-	-	-	-	-	-	-
Follow-up Hdwy	3.563	4	3.3	2.2	-	-	2.497	-	-
Pot Cap-1 Maneuver	123	115	389	952	-	-	694	-	-
Stage 1	404	372	-	-	-	-	-	-	-
Stage 2	479	437	-	-	-	-	-	-	-
Platoon blocked, %									
Mov Cap-1 Maneuver	120	0	389	952	-	-	694	-	-
Mov Cap-2 Maneuver	120	0	-	-	-	-	-	-	-
Stage 1	396	0	-	-	-	-	-	-	-
Stage 2	476	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	40.8	0.1	0.1
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	952	-	-	144	694	-	-
HCM Lane V/C Ratio	0.01	-	-	0.309	0.005	-	-
HCM Control Delay (s)	8.8	0	-	40.8	10.2	0	-
HCM Lane LOS	A	A	-	E	B	A	-
HCM 95th %tile Q(veh)	0	-	-	1.2	0	-	-

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	9	783	11	4	632
Future Vol, veh/h	8	9	783	11	4	632
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	2	-	1	-	-	-1
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	13	0	1	0	0	1
Mvmt Flow	9	10	851	12	4	687

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1552	857	0	0	863
Stage 1	857	-	-	-	-
Stage 2	695	-	-	-	-
Critical Hdwy	6.93	6.4	-	-	4.1
Critical Hdwy Stg 1	5.93	-	-	-	-
Critical Hdwy Stg 2	5.93	-	-	-	-
Follow-up Hdwy	3.617	3.3	-	-	2.2
Pot Cap-1 Maneuver	99	343	-	-	788
Stage 1	362	-	-	-	-
Stage 2	440	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	98	343	-	-	788
Mov Cap-2 Maneuver	98	-	-	-	-
Stage 1	362	-	-	-	-
Stage 2	436	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	30.8	0	0.1
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	158	788
HCM Lane V/C Ratio	-	-	0.117	0.006
HCM Control Delay (s)	-	-	30.8	9.6
HCM Lane LOS	-	-	D	A
HCM 95th %tile Q(veh)	-	-	0.4	0

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	0	4	1	0	0	1	791	8	0	639	1
Future Vol, veh/h	3	0	4	1	0	0	1	791	8	0	639	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	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	-	-	1	-	-	1	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	1	25	0	1	0
Mvmt Flow	3	0	4	1	0	0	1	860	9	0	695	1

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1563	1567	696	1565	1563	865	696	0	0	869	0	0
Stage 1	696	696	-	867	867	-	-	-	-	-	-	-
Stage 2	867	871	-	698	696	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
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	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	92	112	445	91	113	356	909	-	-	784	-	-
Stage 1	435	446	-	350	373	-	-	-	-	-	-	-
Stage 2	350	371	-	434	446	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	92	112	445	90	113	356	909	-	-	784	-	-
Mov Cap-2 Maneuver	92	112	-	90	113	-	-	-	-	-	-	-
Stage 1	434	446	-	349	372	-	-	-	-	-	-	-
Stage 2	349	370	-	430	446	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	27.4		45.5		0		0	
HCM LOS	D		E					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	909	-	-	168	90	784	-	-
HCM Lane V/C Ratio	0.001	-	-	0.045	0.012	-	-	-
HCM Control Delay (s)	9	0	-	27.4	45.5	0	-	-
HCM Lane LOS	A	A	-	D	E	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-

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	0	0	2	13	1	17	7	781	25	14	608	11
Future Vol, veh/h	0	0	2	13	1	17	7	781	25	14	608	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	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	-	-	2	-	-	1	-	-	1	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	1	4	0	2	0
Mvmt Flow	0	0	2	14	1	18	8	849	27	15	661	12

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1576	1582	863
Stage 1	879	879	-
Stage 2	697	703	-
Critical Hdwy	6.8	6.9	6.4
Critical Hdwy Stg 1	5.8	5.9	-
Critical Hdwy Stg 2	5.8	5.9	-
Follow-up Hdwy	3.5	4	3.3
Pot Cap-1 Maneuver	102	92	340
Stage 1	371	334	-
Stage 2	461	410	-
Platoon blocked, %			
Mov Cap-1 Maneuver	97	0	340
Mov Cap-2 Maneuver	97	0	-
Stage 1	365	0	-
Stage 2	447	0	-

Approach	WB	NB	SB
HCM Control Delay, s	32.8	0.1	0.2
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	NBRWBLn1	SBL	SBT	SBR
Capacity (veh/h)	927	-	-	163	779	-
HCM Lane V/C Ratio	0.008	-	-	0.207	0.02	-
HCM Control Delay (s)	8.9	0	-	32.8	9.7	0
HCM Lane LOS	A	A	-	D	A	A
HCM 95th %tile Q(veh)	0	-	-	0.7	0.1	-

Lanes, Volumes, Timings
7: Grafton Street (Route 122) & Sunderland Road

Grafton Woods TIAPS
2030 No-Build PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↑	↗	↖	↗	↖
Traffic Volume (vph)	10	118	30	376	240	302	4	441	159	181	378	11
Future Volume (vph)	10	118	30	376	240	302	4	441	159	181	378	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	10	10	11	11	10	12
Grade (%)		-5%			3%			1%				-2%
Storage Length (ft)	0		0	250		0	0		220	175		0
Storage Lanes	0		0	1		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.974			0.916				0.850			0.996
Flt Protected		0.997		0.950						0.950		
Satd. Flow (prot)	0	1880	0	1685	1641	0	0	1713	1494	1745	1767	0
Flt Permitted		0.928		0.432				0.996		0.188		
Satd. Flow (perm)	0	1750	0	766	1641	0	0	1707	1494	345	1767	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)		11			71							2
Link Speed (mph)		25			25			35				35
Link Distance (ft)		559			391			698				1056
Travel Time (s)		15.2			10.7			13.6				20.6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	3%	2%	1%	1%	0%	3%	4%	1%	1%	0%
Adj. Flow (vph)	11	128	33	409	261	328	4	479	173	197	411	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	172	0	409	589	0	0	483	173	197	423	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			11			0			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.97	0.97	0.97	1.07	1.07	1.07	1.10	1.10	1.05	1.03	1.08	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (ft)	20	100		20	100		20	100	20	20		100
Trailing Detector (ft)	0	0		0	0		0	0	0	0		0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0		0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20		6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	

Lanes, Volumes, Timings
7: Grafton Street (Route 122) & Sunderland Road

Grafton Woods TIAPS
2030 No-Build PM

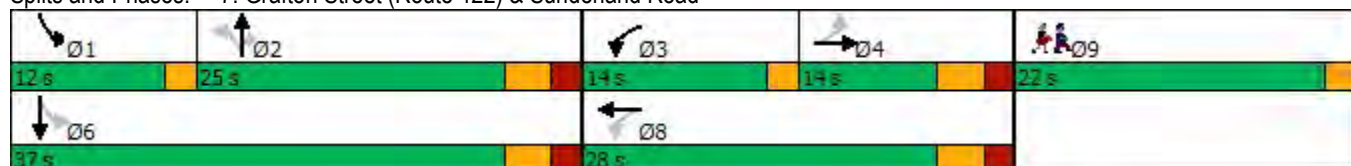


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	9.0	9.0		10.0	23.0		16.0	16.0	16.0	10.0	32.0	
Minimum Split (s)	14.0	14.0		12.0	28.0		21.0	21.0	21.0	12.0	37.0	
Total Split (s)	14.0	14.0		14.0	28.0		25.0	25.0	25.0	12.0	37.0	
Total Split (%)	16.1%	16.1%		16.1%	32.2%		28.7%	28.7%	28.7%	13.8%	42.5%	
Maximum Green (s)	9.0	9.0		12.0	23.0		20.0	20.0	20.0	10.0	32.0	
Yellow Time (s)	3.0	3.0		2.0	3.0		3.0	3.0	3.0	2.0	3.0	
All-Red Time (s)	2.0	2.0		0.0	2.0		2.0	2.0	2.0	0.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Lost Time (s)		5.0		2.0	5.0			5.0	5.0	2.0	5.0	
Lead/Lag	Lag	Lag		Lead			Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	None	Max	
Act Effct Green (s)		9.0		26.0	23.0			20.0	20.0	35.0	32.0	
Actuated g/C Ratio		0.14		0.40	0.35			0.31	0.31	0.54	0.49	
v/c Ratio		0.69		0.86	0.94			0.92	0.38	0.49	0.49	
Control Delay		41.3		36.8	44.9			48.6	20.6	12.3	13.3	
Queue Delay		0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Delay		41.3		36.8	44.9			48.6	20.6	12.3	13.3	
LOS		D		D	D			D	C	B	B	
Approach Delay		41.3			41.6			41.2			13.0	
Approach LOS		D			D			D			B	

Intersection Summary

Area Type:	Other
Cycle Length:	87
Actuated Cycle Length:	65
Natural Cycle:	90
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.94
Intersection Signal Delay:	34.2
Intersection LOS:	C
Intersection Capacity Utilization:	106.5%
ICU Level of Service:	G
Analysis Period (min):	15

Splits and Phases: 7: Grafton Street (Route 122) & Sunderland Road



Lane Group	Ø9
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	6.0
Minimum Split (s)	8.0
Total Split (s)	22.0
Total Split (%)	25%
Maximum Green (s)	20.0
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	

2030 Build AM Peak

Intersection						
Int Delay, s/veh	2.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	R	T	R	L	T
Traffic Vol, veh/h	75	37	492	72	30	430
Future Vol, veh/h	75	37	492	72	30	430
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	2	-	-	-2
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	3	6	8	4	7
Mvmt Flow	82	40	535	78	33	467

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1107	574	0	0	613
Stage 1	574	-	-	-	-
Stage 2	533	-	-	-	-
Critical Hdwy	8.44	7.23	-	-	4.14
Critical Hdwy Stg 1	7.44	-	-	-	-
Critical Hdwy Stg 2	7.44	-	-	-	-
Follow-up Hdwy	3.536	3.327	-	-	2.236
Pot Cap-1 Maneuver	125	440	-	-	957
Stage 1	407	-	-	-	-
Stage 2	435	-	-	-	-
Platoon blocked, %					
Mov Cap-1 Maneuver	119	440	-	-	957
Mov Cap-2 Maneuver	242	-	-	-	-
Stage 1	407	-	-	-	-
Stage 2	415	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	26.9	0	0.6
HCM LOS	D		

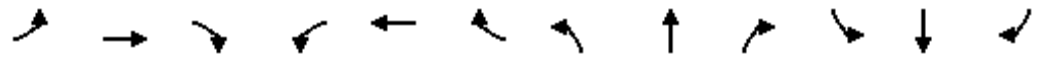
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	284	957
HCM Lane V/C Ratio	-	-	0.429	0.034
HCM Control Delay (s)	-	-	26.9	8.9
HCM Lane LOS	-	-	D	A
HCM 95th %tile Q(veh)	-	-	2	0.1

Lanes, Volumes, Timings

Grafton Woods TIAPS

2: Grafton Street (Route 122) & Dalton Street/S&S Driveway

2030 Build AM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	
Traffic Volume (vph)	48	20	136	43	16	13	41	491	23	15	477	15
Future Volume (vph)	48	20	136	43	16	13	41	491	23	15	477	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	15	12	12	12	12	11	16	12	12	12	12
Grade (%)		-6%			2%			2%				-2%
Storage Length (ft)	0		0	0		130	65		0	150		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.910				0.850		0.993			0.996	
Flt Protected		0.988			0.965		0.950			0.950		
Satd. Flow (prot)	0	1814	0	0	1815	1480	1677	2020	0	1823	1829	0
Flt Permitted		0.900			0.585		0.465			0.357		
Satd. Flow (perm)	0	1653	0	0	1100	1480	821	2020	0	685	1829	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		111				116		3			3	
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		493			255			152			1165	
Travel Time (s)		13.4			7.0			3.0			22.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	15%	5%	4%	0%	0%	8%	3%	5%	0%	0%	4%	20%
Adj. Flow (vph)	52	22	148	47	17	14	45	534	25	16	518	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	222	0	0	64	14	45	559	0	16	534	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												Yes
Headway Factor	0.96	0.85	0.96	1.01	1.01	1.01	1.06	0.86	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	

Lanes, Volumes, Timings
 2: Grafton Street (Route 122) & Dalton Street/S&S Driveway

Grafton Woods TIAPS
 2030 Build AM









Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	2	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	20.0	20.0		7.0	35.0	
Minimum Split (s)	15.0	15.0		15.0	15.0	15.0	25.0	25.0		9.0	40.0	
Total Split (s)	15.0	15.0		15.0	15.0	15.0	30.0	30.0		10.0	40.0	
Total Split (%)	20.0%	20.0%		20.0%	20.0%	20.0%	40.0%	40.0%		13.3%	53.3%	
Maximum Green (s)	10.0	10.0		10.0	10.0	10.0	25.0	25.0		8.0	35.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		2.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		0.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0	5.0	5.0	5.0		2.0	5.0	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	Max	Max		None	Max	
Act Effect Green (s)		10.0			10.0	10.0	33.2	33.2		38.0	35.0	
Actuated g/C Ratio		0.18			0.18	0.18	0.60	0.60		0.69	0.64	
v/c Ratio		0.57			0.32	0.04	0.09	0.46		0.03	0.46	
Control Delay		17.2			24.6	0.2	6.6	8.4		2.7	6.7	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		17.2			24.6	0.2	6.6	8.4		2.7	6.7	
LOS		B			C	A	A	A		A	A	
Approach Delay		17.2			20.2			8.2			6.6	
Approach LOS		B			C			A			A	
Queue Length 50th (ft)		32			18	0	5	75		1	73	
Queue Length 95th (ft)		88			48	0	23	205		5	125	
Internal Link Dist (ft)		413			175			72			1085	
Turn Bay Length (ft)						130	65			150		
Base Capacity (vph)		391			200	364	495	1220		638	1165	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.57			0.32	0.04	0.09	0.46		0.03	0.46	

Intersection Summary

Area Type:	Other
Cycle Length:	75
Actuated Cycle Length:	55
Natural Cycle:	70
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.57
Intersection Signal Delay:	9.6
Intersection LOS:	A
Intersection Capacity Utilization:	61.1%
ICU Level of Service:	B
Analysis Period (min):	15

Splits and Phases: 2: Grafton Street (Route 122) & Dalton Street/S&S Driveway

 Ø1 10 s	 Ø2 30 s	 Ø4 15 s	 Ø9 20 s
 Ø6 40 s	 Ø8 15 s		

Lane Group	Ø9
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	11.0
Total Split (s)	20.0
Total Split (%)	27%
Maximum Green (s)	16.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕			↕			↕	
Traffic Vol, veh/h	0	0	0	14	1	9	47	547	61	5	589	63
Future Vol, veh/h	0	0	0	14	1	9	47	547	61	5	589	63
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	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	-	-	2	-	-	2	-	-	-2	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	29	0	56	0	4	7	0	4	0
Mvmt Flow	0	0	0	15	1	10	51	595	66	5	640	68

Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	1414	1448	628	708	0	0	661	0	0
Stage 1	730	730	-	-	-	-	-	-	-
Stage 2	684	718	-	-	-	-	-	-	-
Critical Hdwy	7.09	6.9	6.96	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.09	5.9	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.09	5.9	-	-	-	-	-	-	-
Follow-up Hdwy	3.761	4	3.804	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	113	113	385	900	-	-	937	-	-
Stage 1	398	397	-	-	-	-	-	-	-
Stage 2	421	403	-	-	-	-	-	-	-
Platoon blocked, %									
Mov Cap-1 Maneuver	102	0	385	900	-	-	937	-	-
Mov Cap-2 Maneuver	102	0	-	-	-	-	-	-	-
Stage 1	362	0	-	-	-	-	-	-	-
Stage 2	417	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	35.7	0.7	0.1
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	900	-	-	143	937	-	-
HCM Lane V/C Ratio	0.057	-	-	0.182	0.006	-	-
HCM Control Delay (s)	9.2	0	-	35.7	8.9	0	-
HCM Lane LOS	A	A	-	E	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.6	0	-	-

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	10	645	3	5	649
Future Vol, veh/h	5	10	645	3	5	649
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	2	-	1	-	-	-1
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	5	0	0	6
Mvmt Flow	5	11	701	3	5	705

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1418	703	0	0	704
Stage 1	703	-	-	-	-
Stage 2	715	-	-	-	-
Critical Hdwy	6.8	6.4	-	-	4.1
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	130	424	-	-	903
Stage 1	457	-	-	-	-
Stage 2	451	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	129	424	-	-	903
Mov Cap-2 Maneuver	129	-	-	-	-
Stage 1	457	-	-	-	-
Stage 2	447	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	241	903
HCM Lane V/C Ratio	-	-	0.068	0.006
HCM Control Delay (s)	-	-	21	9
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.2	0

Intersection

Int Delay, s/veh 4.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	0	2	54	0	71	4	576	14	15	632	7
Future Vol, veh/h	1	0	2	54	0	71	4	576	14	15	632	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	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	-	-	1	-	-	1	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	5	0	0	6	0
Mvmt Flow	1	0	2	59	0	77	4	626	15	16	687	8

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1403	1372	691	1366	1369	634	695	0	0	641	0	0
Stage 1	723	723	-	642	642	-	-	-	-	-	-	-
Stage 2	680	649	-	724	727	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
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	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	118	147	448	126	148	483	910	-	-	953	-	-
Stage 1	421	434	-	466	472	-	-	-	-	-	-	-
Stage 2	444	469	-	420	432	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	97	142	448	122	143	483	910	-	-	953	-	-
Mov Cap-2 Maneuver	97	142	-	122	143	-	-	-	-	-	-	-
Stage 1	418	422	-	463	469	-	-	-	-	-	-	-
Stage 2	370	466	-	407	420	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	23	48.1	0.1	0.2
HCM LOS	C	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	910	-	-	203	212	953	-
HCM Lane V/C Ratio	0.005	-	-	0.016	0.641	0.017	-
HCM Control Delay (s)	9	0	-	23	48.1	8.8	0
HCM Lane LOS	A	A	-	C	E	A	A
HCM 95th %tile Q(veh)	0	-	-	0	3.8	0.1	-

Intersection												
Int Delay, s/veh	2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕			↕			↕	
Traffic Vol, veh/h	0	0	0	23	5	36	64	558	27	18	556	120
Future Vol, veh/h	0	0	0	23	5	36	64	558	27	18	556	120
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	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	-	-	2	-	-	1	-	-	1	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	20	0	3	5	4	6	5	10
Mvmt Flow	0	0	0	25	5	39	70	607	29	20	604	130

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1471	1536	622
Stage 1	762	762	-
Stage 2	709	774	-
Critical Hdwy	6.8	7.1	6.4
Critical Hdwy Stg 1	5.8	6.1	-
Critical Hdwy Stg 2	5.8	6.1	-
Follow-up Hdwy	3.5	4.18	3.3
Pot Cap-1 Maneuver	120	89	474
Stage 1	427	357	-
Stage 2	454	352	-
Platoon blocked, %			
Mov Cap-1 Maneuver	101	0	474
Mov Cap-2 Maneuver	101	0	-
Stage 1	373	0	-
Stage 2	437	0	-

Approach	WB	NB	SB
HCM Control Delay, s	33.6	0.9	0.2
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	866	-	-	194	928	-	-
HCM Lane V/C Ratio	0.08	-	-	0.359	0.021	-	-
HCM Control Delay (s)	9.5	0	-	33.6	9	0	-
HCM Lane LOS	A	A	-	D	A	A	-
HCM 95th %tile Q(veh)	0.3	-	-	1.5	0.1	-	-

Lanes, Volumes, Timings
 7: Grafton Street (Route 122) & Sunderland Road

Grafton Woods TIAPS
 2030 Build AM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	161	57	147	79	203	1	434	376	172	404	3
Future Volume (vph)	13	161	57	147	79	203	1	434	376	172	404	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	10	10	11	11	10	12
Grade (%)		-5%			3%			1%			-2%	
Storage Length (ft)	0		0	250		0	0		220	175		0
Storage Lanes	0		0	1		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.967			0.892				0.850			0.999
Flt Protected		0.997		0.950					0.950			
Satd. Flow (prot)	0	1815	0	1606	1564	0	0	1681	1508	1695	1721	0
Flt Permitted		0.963		0.323				0.999		0.200		
Satd. Flow (perm)	0	1754	0	546	1564	0	0	1679	1508	357	1721	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)		15			145							
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		559			391			698			1056	
Travel Time (s)		15.2			10.7			13.6			20.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	15%	3%	2%	7%	1%	4%	0%	5%	3%	4%	4%	0%
Adj. Flow (vph)	14	175	62	160	86	221	1	472	409	187	439	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	251	0	160	307	0	0	473	409	187	442	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			11			0			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.97	0.97	0.97	1.07	1.07	1.07	1.10	1.10	1.05	1.03	1.08	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (ft)	20	100		20	100		20	100	20	20		100
Trailing Detector (ft)	0	0		0	0		0	0	0	0		0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0		0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20		6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	

Lanes, Volumes, Timings
7: Grafton Street (Route 122) & Sunderland Road

Grafton Woods TIAPS
2030 Build AM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	9.0	9.0		10.0	23.0		16.0	16.0	16.0	10.0	32.0	
Minimum Split (s)	14.0	14.0		12.0	28.0		21.0	21.0	21.0	12.0	37.0	
Total Split (s)	14.0	14.0		14.0	28.0		25.0	25.0	25.0	12.0	37.0	
Total Split (%)	16.1%	16.1%		16.1%	32.2%		28.7%	28.7%	28.7%	13.8%	42.5%	
Maximum Green (s)	9.0	9.0		12.0	23.0		20.0	20.0	20.0	10.0	32.0	
Yellow Time (s)	3.0	3.0		2.0	3.0		3.0	3.0	3.0	2.0	3.0	
All-Red Time (s)	2.0	2.0		0.0	2.0		2.0	2.0	2.0	0.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Lost Time (s)		5.0		2.0	5.0			5.0	5.0	2.0	5.0	
Lead/Lag	Lag	Lag		Lead			Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	None	Max	
Act Effect Green (s)		10.4		26.0	23.0			20.0	20.0	35.0	32.0	
Actuated g/C Ratio		0.16		0.40	0.35			0.31	0.31	0.54	0.49	
v/c Ratio		0.86		0.41	0.47			0.92	0.88	0.47	0.52	
Control Delay		56.2		16.6	11.2			48.3	45.1	12.0	14.1	
Queue Delay		0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Delay		56.2		16.6	11.2			48.3	45.1	12.0	14.1	
LOS		E		B	B			D	D	B	B	
Approach Delay		56.2			13.0			46.8			13.4	
Approach LOS		E			B			D			B	
Queue Length 50th (ft)		91		41	45			179	152	35	112	
Queue Length 95th (ft)		#230		79	108			#345	#304	65	186	
Internal Link Dist (ft)		479			311			618			976	
Turn Bay Length (ft)				250					220	175		
Base Capacity (vph)		292		414	647			516	464	398	847	
Starvation Cap Reductn		0		0	0			0	0	0	0	
Spillback Cap Reductn		0		0	0			0	0	0	0	
Storage Cap Reductn		0		0	0			0	0	0	0	
Reduced v/c Ratio		0.86		0.39	0.47			0.92	0.88	0.47	0.52	

Intersection Summary

Area Type: Other

Cycle Length: 87

Actuated Cycle Length: 65

Natural Cycle: 80

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.92

Intersection Signal Delay: 31.4

Intersection LOS: C

Intersection Capacity Utilization 98.1%








ICU Level of Service F

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 7: Grafton Street (Route 122) & Sunderland Road

 Ø1	 Ø2	 Ø3	 Ø4	 Ø9
12 s	25 s	14 s	14 s	22 s
 Ø6		 Ø8		
37 s		28 s		

Lane Group	Ø9
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	6.0
Minimum Split (s)	8.0
Total Split (s)	22.0
Total Split (%)	25%
Maximum Green (s)	20.0
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	4	43	57	0	0	6
Future Vol, veh/h	4	43	57	0	0	6
Conflicting Peds, #/hr	0	0	0	0	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	2	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	47	62	0	0	7

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	62	0	-	0	117
Stage 1	-	-	-	-	62
Stage 2	-	-	-	-	55
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1541	-	-	-	879
Stage 1	-	-	-	-	961
Stage 2	-	-	-	-	968
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1541	-	-	-	876
Mov Cap-2 Maneuver	-	-	-	-	876
Stage 1	-	-	-	-	958
Stage 2	-	-	-	-	968

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	8.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1541	-	-	-	1003
HCM Lane V/C Ratio	0.003	-	-	-	0.007
HCM Control Delay (s)	7.3	0	-	-	8.6
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

2030 Build PM Peak

Intersection						
Int Delay, s/veh	3.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	R	T	R	L	T
Traffic Vol, veh/h	60	44	700	63	54	547
Future Vol, veh/h	60	44	700	63	54	547
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	2	-	-	-2
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	2	0	1	0	1
Mvmt Flow	65	48	761	68	59	595

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1508	795	0	0	829
Stage 1	795	-	-	-	-
Stage 2	713	-	-	-	-
Critical Hdwy	8.4	7.22	-	-	4.1
Critical Hdwy Stg 1	7.4	-	-	-	-
Critical Hdwy Stg 2	7.4	-	-	-	-
Follow-up Hdwy	3.5	3.318	-	-	2.2
Pot Cap-1 Maneuver	~ 58	311	-	-	811
Stage 1	288	-	-	-	-
Stage 2	329	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	~ 52	311	-	-	811
Mov Cap-2 Maneuver	156	-	-	-	-
Stage 1	288	-	-	-	-
Stage 2	293	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	44.9	0	0.9
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	198	811
HCM Lane V/C Ratio	-	-	0.571	0.072
HCM Control Delay (s)	-	-	44.9	9.8
HCM Lane LOS	-	-	E	A
HCM 95th %tile Q(veh)	-	-	3.1	0.2

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings

Grafton Woods TIAPS

2: Grafton Street (Route 122) & Dalton Street/S&S Driveway

2030 Build PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	
Traffic Volume (vph)	23	45	53	80	40	41	62	601	44	24	515	27
Future Volume (vph)	23	45	53	80	40	41	62	601	44	24	515	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	15	12	12	12	12	11	16	12	12	12	12
Grade (%)		-6%			2%			2%				-2%
Storage Length (ft)	0		0	0		130	65		0	150		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.941				0.850		0.990			0.993	
Flt Protected		0.991			0.968		0.950			0.950		
Satd. Flow (prot)	0	2007	0	0	1809	1599	1661	2091	0	1753	1888	0
Flt Permitted		0.913			0.775		0.425			0.264		
Satd. Flow (perm)	0	1849	0	0	1448	1599	743	2091	0	487	1888	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		43				116		5			5	
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		493			255			152			1165	
Travel Time (s)		13.4			7.0			3.0			22.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	4%	1%	0%	4%	1%	0%
Adj. Flow (vph)	25	49	58	87	43	45	67	653	48	26	560	29
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	132	0	0	130	45	67	701	0	26	589	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												Yes
Headway Factor	0.96	0.85	0.96	1.01	1.01	1.01	1.06	0.86	1.01	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	

Lanes, Volumes, Timings
 2: Grafton Street (Route 122) & Dalton Street/S&S Driveway

Grafton Woods TIAPS
 2030 Build PM









Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	2	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	20.0	20.0		7.0	35.0	
Minimum Split (s)	15.0	15.0		15.0	15.0	15.0	25.0	25.0		9.0	40.0	
Total Split (s)	15.0	15.0		15.0	15.0	15.0	30.0	30.0		10.0	40.0	
Total Split (%)	20.0%	20.0%		20.0%	20.0%	20.0%	40.0%	40.0%		13.3%	53.3%	
Maximum Green (s)	10.0	10.0		10.0	10.0	10.0	25.0	25.0		8.0	35.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		2.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		0.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0	5.0	5.0	5.0		2.0	5.0	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	Max	Max		None	Max	
Act Effect Green (s)		10.0			10.0	10.0	33.2	33.2		38.0	35.0	
Actuated g/C Ratio		0.18			0.18	0.18	0.60	0.60		0.69	0.64	
v/c Ratio		0.36			0.49	0.12	0.15	0.55		0.05	0.49	
Control Delay		17.1			27.6	0.6	7.2	9.6		2.9	6.9	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		17.1			27.6	0.6	7.2	9.6		2.9	6.9	
LOS		B			C	A	A	A		A	A	
Approach Delay		17.1			20.6			9.3			6.8	
Approach LOS		B			C			A			A	
Queue Length 50th (ft)		25			39	0	7	102		2	82	
Queue Length 95th (ft)		66			84	1	32	276		7	140	
Internal Link Dist (ft)		413			175			72			1085	
Turn Bay Length (ft)						130	65			150		
Base Capacity (vph)		371			263	385	448	1264		520	1203	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.36			0.49	0.12	0.15	0.55		0.05	0.49	

Intersection Summary

Area Type:	Other
Cycle Length:	75
Actuated Cycle Length:	55
Natural Cycle:	70
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.55
Intersection Signal Delay:	10.2
Intersection LOS:	B
Intersection Capacity Utilization:	71.9%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 2: Grafton Street (Route 122) & Dalton Street/S&S Driveway

 Ø1 10 s	 Ø2 30 s	 Ø4 15 s	 Ø9 20 s
 Ø6 40 s	 Ø8 15 s		

Lane Group	Ø9
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	11.0
Total Split (s)	20.0
Total Split (%)	27%
Maximum Green (s)	16.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕			↕			↕	
Traffic Vol, veh/h	0	0	0	31	0	10	9	688	85	3	642	9
Future Vol, veh/h	0	0	0	31	0	10	9	688	85	3	642	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	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	-	-	2	-	-	2	-	-	-2	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	7	0	0	0	1	7	33	1	0
Mvmt Flow	0	0	0	34	0	11	10	748	92	3	698	10

Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	1523	1528	794	708	0	0	840	0	0
Stage 1	814	814	-	-	-	-	-	-	-
Stage 2	709	714	-	-	-	-	-	-	-
Critical Hdwy	6.87	6.9	6.4	4.1	-	-	4.43	-	-
Critical Hdwy Stg 1	5.87	5.9	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.87	5.9	-	-	-	-	-	-	-
Follow-up Hdwy	3.563	4	3.3	2.2	-	-	2.497	-	-
Pot Cap-1 Maneuver	107	100	374	900	-	-	677	-	-
Stage 1	390	360	-	-	-	-	-	-	-
Stage 2	443	405	-	-	-	-	-	-	-
Platoon blocked, %									
Mov Cap-1 Maneuver	104	0	374	900	-	-	677	-	-
Mov Cap-2 Maneuver	104	0	-	-	-	-	-	-	-
Stage 1	382	0	-	-	-	-	-	-	-
Stage 2	440	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	48.4	0.1	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	900	-	-	126	677	-	-
HCM Lane V/C Ratio	0.011	-	-	0.354	0.005	-	-
HCM Control Delay (s)	9	0	-	48.4	10.3	0	-
HCM Lane LOS	A	A	-	E	B	A	-
HCM 95th %tile Q(veh)	0	-	-	1.4	0	-	-

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T		T
Traffic Vol, veh/h	8	9	809	11	4	693
Future Vol, veh/h	8	9	809	11	4	693
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	2	-	1	-	-	-1
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	13	0	1	0	0	1
Mvmt Flow	9	10	879	12	4	753

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1646	885	0	0	891
Stage 1	885	-	-	-	-
Stage 2	761	-	-	-	-
Critical Hdwy	6.93	6.4	-	-	4.1
Critical Hdwy Stg 1	5.93	-	-	-	-
Critical Hdwy Stg 2	5.93	-	-	-	-
Follow-up Hdwy	3.617	3.3	-	-	2.2
Pot Cap-1 Maneuver	86	330	-	-	769
Stage 1	350	-	-	-	-
Stage 2	406	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	85	330	-	-	769
Mov Cap-2 Maneuver	85	-	-	-	-
Stage 1	350	-	-	-	-
Stage 2	402	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	34.6	0	0.1
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	140	769
HCM Lane V/C Ratio	-	-	0.132	0.006
HCM Control Delay (s)	-	-	34.6	9.7
HCM Lane LOS	-	-	D	A
HCM 95th %tile Q(veh)	-	-	0.4	0

Intersection												
Int Delay, s/veh	1.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	0	4	15	0	26	1	792	48	60	640	1
Future Vol, veh/h	3	0	4	15	0	26	1	792	48	60	640	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	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	-	-	1	-	-	1	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	1	25	0	1	0
Mvmt Flow	3	0	4	16	0	28	1	861	52	65	696	1

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1730	1742	697	1718	1716	887	697	0	0	913	0	0
Stage 1	827	827	-	889	889	-	-	-	-	-	-	-
Stage 2	903	915	-	829	827	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
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	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	70	88	444	71	91	346	909	-	-	755	-	-
Stage 1	369	389	-	341	364	-	-	-	-	-	-	-
Stage 2	335	354	-	368	389	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	57	76	444	63	78	346	909	-	-	755	-	-
Mov Cap-2 Maneuver	57	76	-	63	78	-	-	-	-	-	-	-
Stage 1	368	335	-	340	363	-	-	-	-	-	-	-
Stage 2	307	353	-	313	335	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	38.8		46		0		0.9	
HCM LOS	E		E					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	909	-	-	114	131	755	-
HCM Lane V/C Ratio	0.001	-	-	0.067	0.34	0.086	-
HCM Control Delay (s)	9	0	-	38.8	46	10.2	0
HCM Lane LOS	A	A	-	E	E	B	A
HCM 95th %tile Q(veh)	0	-	-	0.2	1.4	0.3	-

Intersection

Int Delay, s/veh 1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕			↕			↕	
Traffic Vol, veh/h	0	0	2	20	1	18	7	821	34	15	622	11
Future Vol, veh/h	0	0	2	20	1	18	7	821	34	15	622	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	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	-	-	2	-	-	1	-	-	1	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	1	4	0	2	0
Mvmt Flow	0	0	2	22	1	20	8	892	37	16	676	12

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1641	1647	911
Stage 1	927	927	-
Stage 2	714	720	-
Critical Hdwy	6.8	6.9	6.4
Critical Hdwy Stg 1	5.8	5.9	-
Critical Hdwy Stg 2	5.8	5.9	-
Follow-up Hdwy	3.5	4	3.3
Pot Cap-1 Maneuver	93	83	319
Stage 1	351	316	-
Stage 2	452	402	-
Platoon blocked, %			
Mov Cap-1 Maneuver	88	0	319
Mov Cap-2 Maneuver	88	0	-
Stage 1	345	0	-
Stage 2	436	0	-

Approach	WB	NB	SB
HCM Control Delay, s	43.8	0.1	0.2
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	916	-	-	134	744	-	-
HCM Lane V/C Ratio	0.008	-	-	0.316	0.022	-	-
HCM Control Delay (s)	9	0	-	43.8	9.9	0	-
HCM Lane LOS	A	A	-	E	A	A	-
HCM 95th %tile Q(veh)	0	-	-	1.3	0.1	-	-

Lanes, Volumes, Timings
7: Grafton Street (Route 122) & Sunderland Road

Grafton Woods TIAPS
2030 Build PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↑	↗	↖	↗	↖
Traffic Volume (vph)	10	118	30	376	240	310	4	483	159	184	396	11
Future Volume (vph)	10	118	30	376	240	310	4	483	159	184	396	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	10	10	11	11	10	12
Grade (%)		-5%			3%			1%				-2%
Storage Length (ft)	0		0	250		0	0		220	175		0
Storage Lanes	0		0	1		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.974			0.915				0.850		0.996	
Flt Protected		0.997		0.950						0.950		
Satd. Flow (prot)	0	1880	0	1685	1639	0	0	1713	1494	1745	1767	0
Flt Permitted		0.896		0.432				0.996		0.182		
Satd. Flow (perm)	0	1690	0	766	1639	0	0	1707	1494	334	1767	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)		11			73							2
Link Speed (mph)		25			25			35				35
Link Distance (ft)		559			391			698				1056
Travel Time (s)		15.2			10.7			13.6				20.6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	3%	2%	1%	1%	0%	3%	4%	1%	1%	0%
Adj. Flow (vph)	11	128	33	409	261	337	4	525	173	200	430	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	172	0	409	598	0	0	529	173	200	442	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			11			0			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.97	0.97	0.97	1.07	1.07	1.07	1.10	1.10	1.05	1.03	1.08	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	

Lanes, Volumes, Timings
7: Grafton Street (Route 122) & Sunderland Road

Grafton Woods TIAPS
2030 Build PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	9.0	9.0		10.0	23.0		16.0	16.0	16.0	10.0	32.0	
Minimum Split (s)	14.0	14.0		12.0	28.0		21.0	21.0	21.0	12.0	37.0	
Total Split (s)	14.0	14.0		14.0	28.0		25.0	25.0	25.0	12.0	37.0	
Total Split (%)	16.1%	16.1%		16.1%	32.2%		28.7%	28.7%	28.7%	13.8%	42.5%	
Maximum Green (s)	9.0	9.0		12.0	23.0		20.0	20.0	20.0	10.0	32.0	
Yellow Time (s)	3.0	3.0		2.0	3.0		3.0	3.0	3.0	2.0	3.0	
All-Red Time (s)	2.0	2.0		0.0	2.0		2.0	2.0	2.0	0.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Lost Time (s)		5.0		2.0	5.0			5.0	5.0	2.0	5.0	
Lead/Lag	Lag	Lag		Lead			Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	None	Max	
Act Effect Green (s)		9.0		26.0	23.0			20.0	20.0	35.0	32.0	
Actuated g/C Ratio		0.14		0.40	0.35			0.31	0.31	0.54	0.49	
v/c Ratio		0.71		0.86	0.95			1.01	0.38	0.51	0.51	
Control Delay		43.4		36.8	47.3			67.3	20.6	12.6	13.7	
Queue Delay		0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Delay		43.4		36.8	47.3			67.3	20.6	12.6	13.7	
LOS		D		D	D			E	C	B	B	
Approach Delay		43.4			43.0			55.8			13.4	
Approach LOS		D			D			E			B	
Queue Length 50th (ft)		62		124	202			~210	53	38	110	
Queue Length 95th (ft)		#148		#225	#402			#396	102	70	182	
Internal Link Dist (ft)		479			311			618			976	
Turn Bay Length (ft)				250					220	175		
Base Capacity (vph)		243		476	627			525	459	396	870	
Starvation Cap Reductn		0		0	0			0	0	0	0	
Spillback Cap Reductn		0		0	0			0	0	0	0	
Storage Cap Reductn		0		0	0			0	0	0	0	
Reduced v/c Ratio		0.71		0.86	0.95			1.01	0.38	0.51	0.51	








Intersection Summary

Area Type: Other
 Cycle Length: 87
 Actuated Cycle Length: 65
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.01
 Intersection Signal Delay: 39.1
 Intersection LOS: D
 Intersection Capacity Utilization 109.2%
 ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.

Lane Group	Ø9
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	6.0
Minimum Split (s)	8.0
Total Split (s)	22.0
Total Split (%)	25%
Maximum Green (s)	20.0
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

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

Splits and Phases: 7: Grafton Street (Route 122) & Sunderland Road

 Ø1 12 s	 Ø2 25 s	 Ø3 14 s	 Ø4 14 s	 Ø9 22 s
 Ø6 37 s	 Ø8 28 s			

Intersection

Int Delay, s/veh 1.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	10	40	32	0	0	8
Future Vol, veh/h	10	40	32	0	0	8
Conflicting Peds, #/hr	0	0	0	0	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	2	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	43	35	0	0	9

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	35	0	0
Stage 1	-	-	35
Stage 2	-	-	65
Critical Hdwy	4.12	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	3.518
Pot Cap-1 Maneuver	1576	-	899
Stage 1	-	-	987
Stage 2	-	-	958
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1576	-	893
Mov Cap-2 Maneuver	-	-	893
Stage 1	-	-	980
Stage 2	-	-	958

Approach	EB	WB	SB
HCM Control Delay, s	1.5	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1576	-	-	-	1038
HCM Lane V/C Ratio	0.007	-	-	-	0.008
HCM Control Delay (s)	7.3	0	-	-	8.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

APPENDIX H

Proposed Parking Supply Waiver



October 22, 2024

Mr. Russell Karlstad, Chair
Worcester Zoning Board of Appeals
c/o Division of Planning & Regulatory Services
City Hall, Room 404
455 Main Street
Worcester, MA 01608

Re: Grafton Woods Project, Worcester
Proposed Parking Supply Waiver

Dear Chairman Karlstad:

Kimley-Horn and Associates, Inc. (Kimley-Horn) has completed an analysis of the proposed parking to be provided as part of the Grafton Woods development for the purpose of determining its adequacy to meet the needs of the use and if so, in support of the requested waiver from the zoning requirements pertaining to the parking supply. The following paragraphs summarize the anticipated parking supply and the analysis.

Proposed Development Project

The proposed development is currently for 491 apartment units in five (5) buildings as well as approximately 4,500 square feet of commercial space to be in Building 5 adjacent to Grafton Street. The proposed development will be providing on-site parking either in a combination of open parking lots adjacent to the buildings or in the proposed two level parking deck located between Buildings 2 and 3. Building 5 will have some below grade parking as well. In total, there are 793 parking spaces proposed. Table 1 summarizes the amount of parking spaces per building.

**TABLE 1
PROPOSED PARKING BY BUILDING**

Building #	# of Spaces
1	150
2	232*
3	170
4	160
5	81
Total	793

* includes parking deck between Buildings 2 and 3

Per the City of Worcester Zoning Ordinance, Section 7 – Off-Street Parking and Loading, for a multi-family dwelling residential, two (2) parking spaces per dwelling unit and commercial spaces (either retail sales or services), one (1) parking space per 300 square feet of gross floor area is required. Based on these requirements, a total of 997 parking spaces would be required per the zoning code.

Considering the current environment of encouraging less vehicle activity and the experience in the City and Commonwealth of lower parking demands typically generated for these proposed uses than zoning would suggest, it is proposed to provide fewer parking spaces than required by zoning. Factors that support justifying lower parking supplies include the project being located on a corridor that is walkable to commercial uses and having the Worcester Regional Transit Authority (WRTA) that serves the corridor with two bus routes that connect with major activity zones and the train station. In addition, with services such as Uber and Lyft, the auto ownership levels for residents could be lower than typically in

the past. Finally, there has been a significant increase in the Work From Home (WFH) practice, especially since the Covid-19 pandemic.

A parking analysis was completed in support of providing less parking supply for the project than would be required by the existing zoning bylaw. The analysis was completed for the total project but also for Building 5 separately since it is more disconnected from Buildings 1-4. The analysis was also done for Buildings 1-4 as a group as they are relatively close to each other and each parking field including the parking deck is highly walkable from each of these 4 buildings. As described below, the analysis has shown that the proposed amount of parking provided is expected to be more than adequate for meeting the needs of the project in total, as well as for Building 5 and Buildings 1-4 as a group.

The peak parking demand for the uses was determined based on the ITE models and rates, as applicable, to calculate parking demand. The parking demand models are based on actual observation of similar uses and characterized by type of area (i.e. urban/suburban, near rail transit or not) and guidance for estimating time of day patterns. Residential peak demands occur late in the night and early morning whereas the commercial demands will tend to peak in late morning or early afternoon. Table 2 depicts the estimated individual peak parking demands for the proposed development program in total while Table 3 separates out Building 5 from the Buildings 1-4 grouping. As shown, the estimated weekday peak parking demand on average is 521 parked vehicles including the commercial use demands. Compared to the 793 parking spaces provided in total, the proposed supply exceeds the estimated average peak demand by 272 spaces.

**TABLE 2
SUMMARY OF TOTAL PARKING
SUPPLY VS. ESTIMATED PEAK DEMAND**

Proposed Supply (spaces)	Estimated Peak Demands	Surplus/(Deficit)
793	521	+272

The development is predominantly residential with most of the spaces for Buildings 1 to 4 and served by the spaces close by. Not including Building 5, there are 712 parking spaces serving Buildings 1-4. The analysis has shown that the peak demands for these four buildings in total is estimated to be 478 parked vehicles resulting in 233 available spaces. Building 5 includes both the ground floor commercial space and residential units in the upper floors. In relation to Building 5, there would include some level of shared parking as residential parking tends to peak overnight when there is no demand for the commercial land use.

**TABLE 3
SUMMARY OF PARKING SUPPLY
VS. ESTIMATED PEAK DEMAND BY MAJOR AREAS**

Building Group	Proposed Supply (spaces)	Estimated Peak Demands	Surplus/(Deficit)
Bldgs. 1-4	712	478	+233
Bldg. 5	81	36	+45

For specifically Building 5, the estimated peak parking needs based on a shared parking approach was 81 parked vehicles. The parking demand for Building 5 also peaks overnight with an estimated demand

of 36 parked vehicles although the commercial use demands will occur during the daytime when the residential demands are lower. The proposed design in this area indicates that 53 surface parking spaces would be provided that could be used by both residents and demands associated with the commercial use. The below grade parking in the building would be restricted to residents.

Based on this analysis, the estimated peak demands for the project on average, in total, as well as broken out by the two main building areas remains well below the proposed parking supply and is further below what would be required by zoning by approximately another 200 spaces. Consequently, one can easily conclude that more than sufficient parking supply is being provided by the project and there is full justification for providing less parking supply than zoning would require.

In support of the reduced parking supply, the proposed project will provide sidewalk connections to the Grafton Street sidewalk, proposed enhancements of pedestrian crossings and the transit stop on Grafton Street, transit information in each building, bike accommodation within the project, and improvements to a major section of sidewalk along Grafton Street in the vicinity of the project. Less parking also results in less impervious area that benefits the environmental conditions and provides for a healthier amount of green space for project residents.

In summary, the demand analysis as shown that the proposed supply of 793 parking spaces for the development in total, which is lower than what would be required by current zoning, will also be well beyond the supply needed to meet the expected peak parking demands for the project. Based on this analysis, providing less parking than the current zoning requirement as proposed, will be more than adequate for this project.

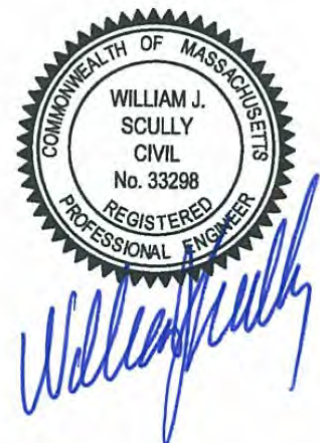
If you have any questions, do not hesitate to contact me at my email address (bill.scully@kimley-horn.com) or my cell phone (508-395-3334).

Very truly yours,
KIMLEY-HORN AND ASSOCIATES, INC.

Signed: *William J Scully*

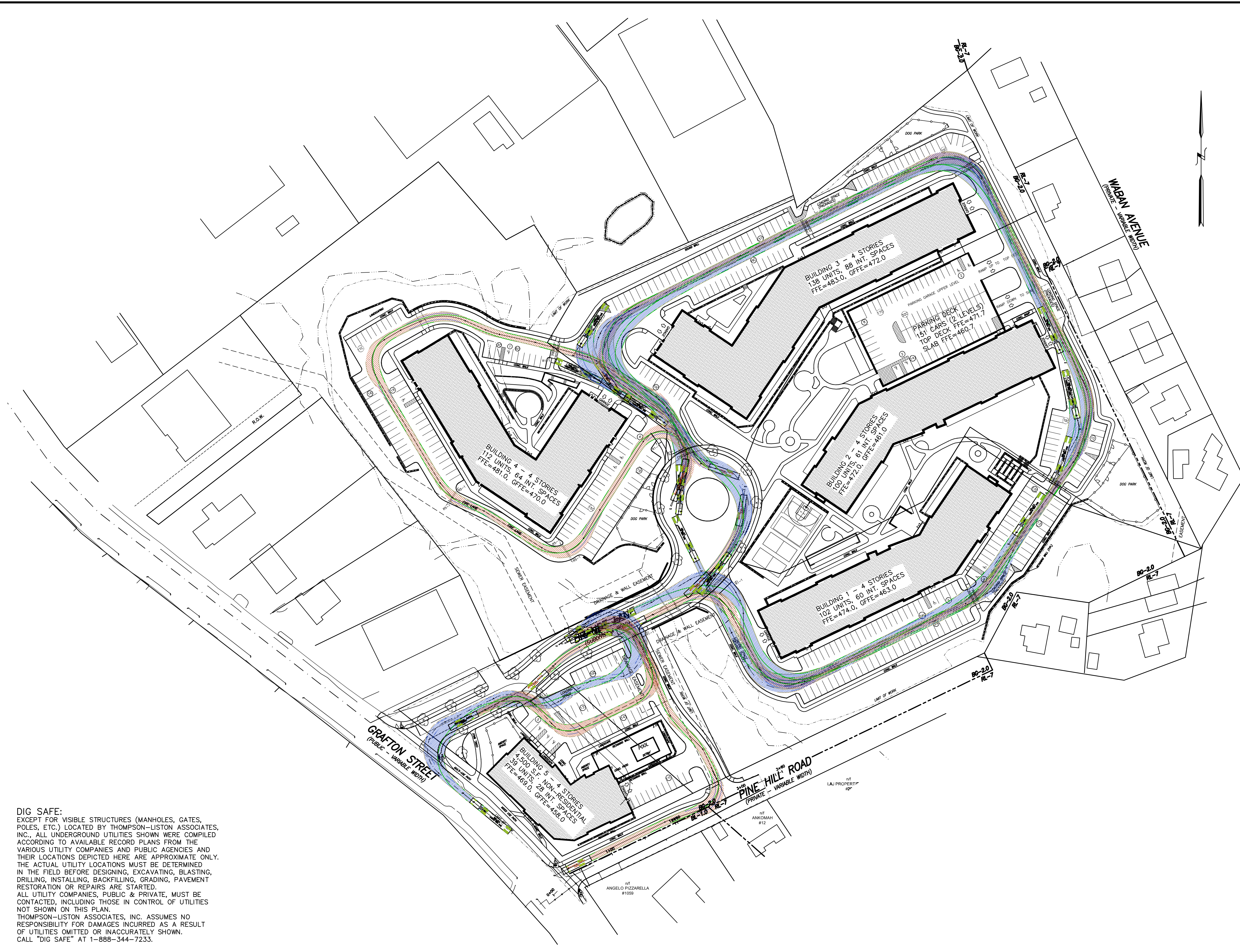
Printed Name: William J. Scully, P.E., RSP₁
Title: Associate/Sr. Project Manager

Cc S. Madaus
P. Healy



APPENDIX I

Truck Turning Exhibit

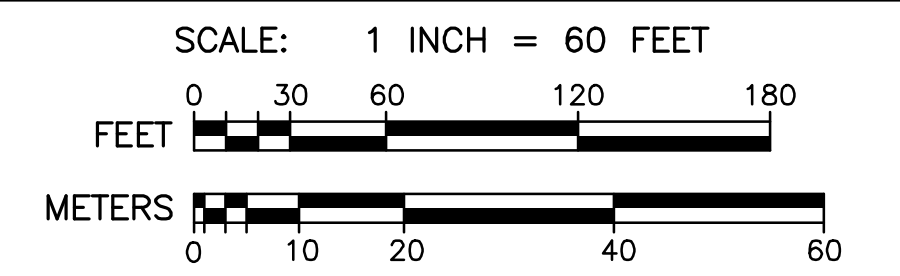


- NOTES:
1. OWNED BY BRANDT LANE DEVELOPMENT LLC SEE DEED BOOK 68959 PAGE 58.
 2. ASSESSORS MBL 0038-0026-0003A & 00044
 3. ZONING DISTRICTS: BL-1.0, RL-7, AND BG-2.0
 4. EXISTING CONDITIONS INCLUDING PROPERTY LINES, MONUMENTS, EASEMENTS, TOPOGRAPHY WETLAND RESOURCES, AND SETBACKS SHOWN HEREON ARE BASED UPON A SURVEY COMPLETED BY TAUPER LAND SURVEY, INC. DATED MAY 31, 2023.
 5. ELEVATIONS SHOWN HEREON REFER TO MEAN SEA LEVEL N.A.V.D. 88 DATUM.
 6. WETLAND RESOURCE AREA BOUNDARIES HAVE BEEN CONFIRMED BY THE WORCESTER CONSERVATION COMMISSION. SEE ORDER OF RESOURCE AREA DELINEATION FOR DEP FILE NO. 349-1365 RECORDED IN DEED BOOK 69362 PAGE 385.
 7. THE PROPERTY IS SUBJECT TO REGULATION UNDER THE MASSACHUSETTS CONTINGENCY PLAN (CH.21E). SITE REFERENCE RTN 2-21432.



THOMPSON-LISTON ASSOCIATES, INC.
Professional Engineers Professional Land Surveyors
Erosion Control Specialists
P O Box 570, Boylston MA 01505
info@tlainc.net (508) 869-6151

DATE:	OCTOBER 21, 2024	DWG NO.:	
REVISIONS			
DATE:		DESCRIPTION	

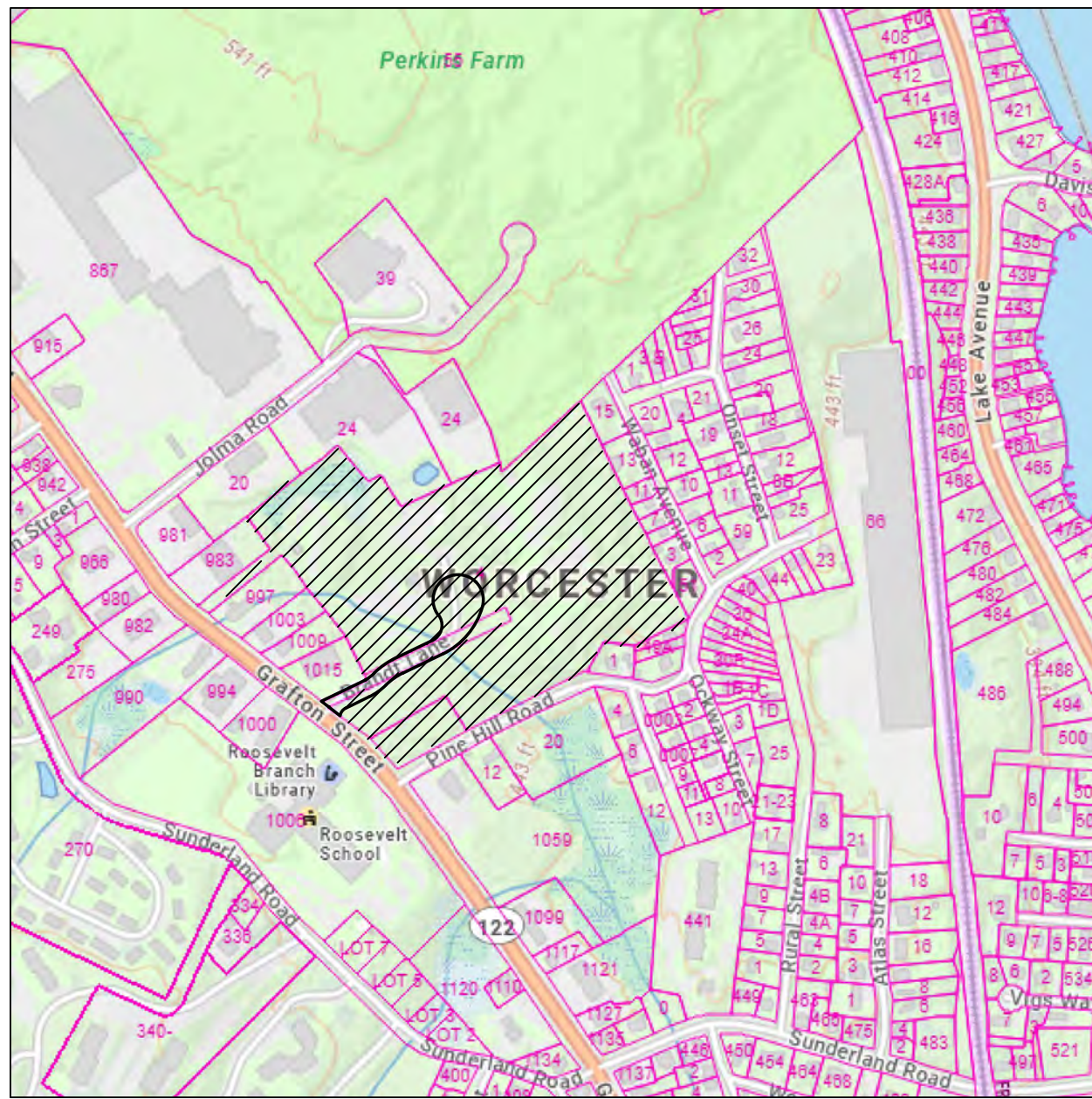


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Grafton Woods
LUXURY LIVING
4 BRANDT LANE
WORCESTER, MASSACHUSETTS
OWNED BY:
BRANDT LANE DEVELOPMENT, LLC
38 BRENTWOOD DRIVE
HOLDEN, MASSACHUSETTS 01520

APPENDIX J

Site Plan



LOCUS MAP
SCALE: 1"=500'

"GRAFTON WOODS" PARKING PLAN FOR ZBA SUBMITTAL

4 BRANDT LANE
ASSESSORS MBL 0038-0026-0003A & 00044
IN

WORCESTER, MASSACHUSETTS

OWNED BY:

BRANDT LANE DEVELOPMENT, LLC.

APPLICANT:

BRANDT LANE DEVELOPMENT, LLC.

38 BRENTWOOD LANE
HOLDEN MA 01520

DEED BOOK 68959 PAGE 58

DRAWING : GRAFTON WOODS DEFINITIVE SITE PLAN.DWG

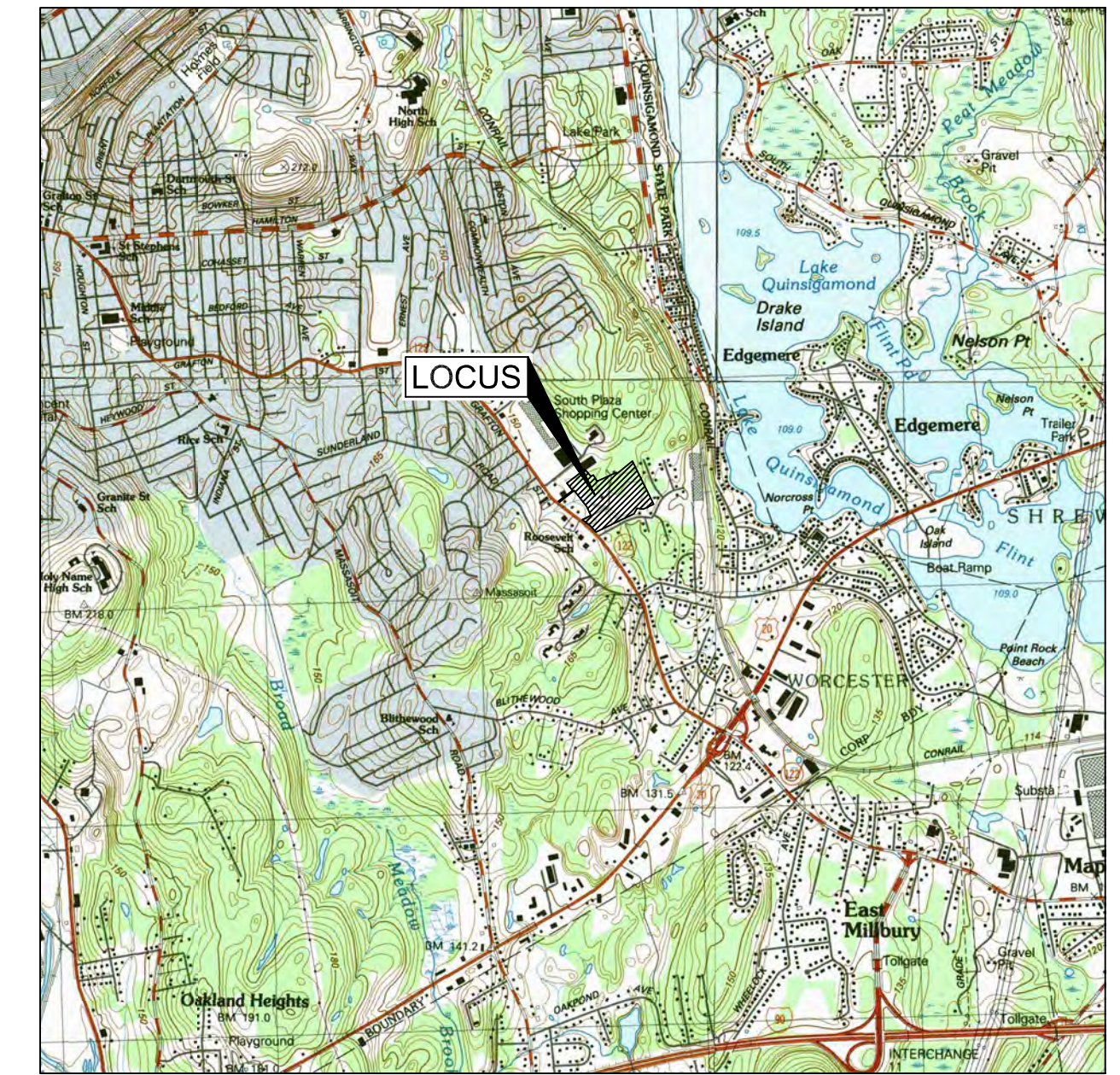
PREPARED BY:

T&L THOMPSON-LISTON
ASSOCIATES, INC.
Professional Engineers Professional Land Surveyors
Erosion Control Specialists
P O Box 370, Boylston MA 01505
info@tlainc.net (508) 869-6151

PATRICK J. HEALY, P.E. # 39804

DATE:

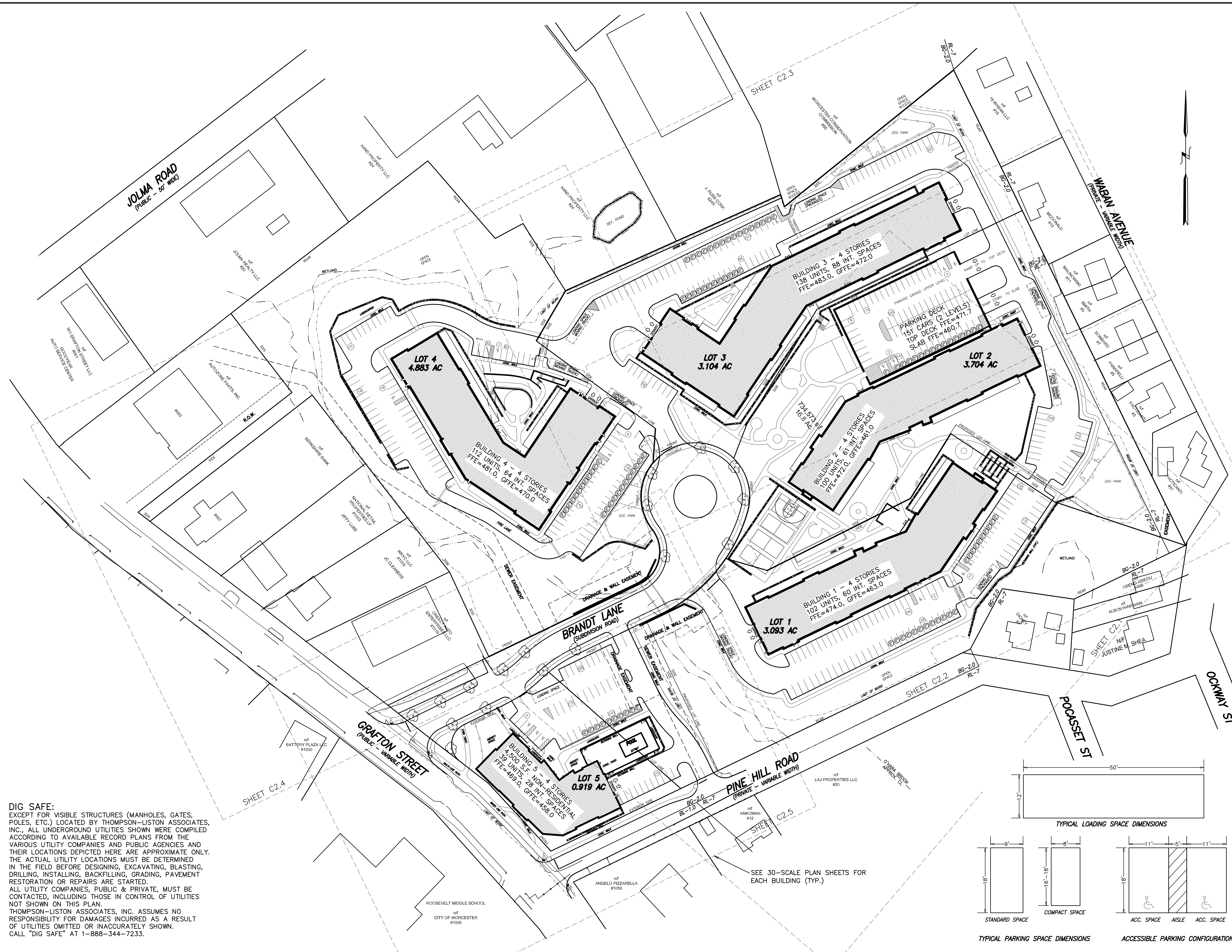
OCTOBER 21, 2024



LOCUS MAP
SCALE: 1:25,000

PLAN SHEET DIRECTORY

	SHEET NUMBER
COVER SHEET	C0
PROPOSED PARKING & LAYOUT PLAN OVERVIEW	C2.0
PROPOSED PARKING LAYOUT (BY BUILDING)	C2.1-C2.5



OVERALL SITE PARKING SUMMARY:

	REQUIRED	PROVIDED
TOTAL PARKING SPACES	997	793
PARKING RATIO PER DU	2	1.60
MAXIMUM %COMPACT	25%	33.9%
ACCESSIBLE SPACES	28	29
LOADING SPACES	13	9
EV READY SPACES	-	159 (20% OF 793)

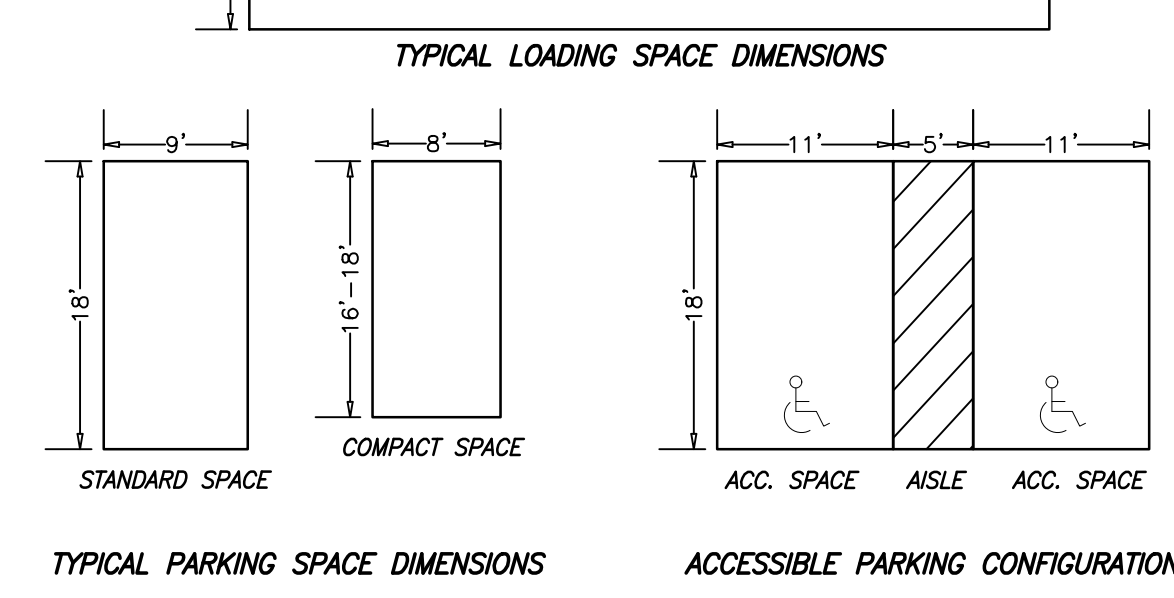
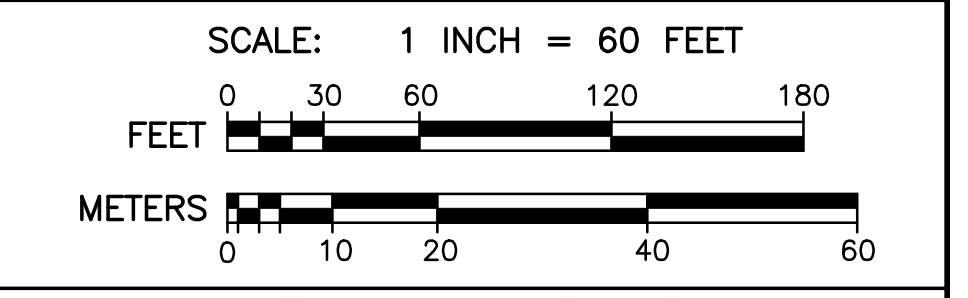
SEE DETAILED BREAKDOWNS FOR INDIVIDUAL BUILDINGS ON SHEETS C2.1-C2.5, INCLUDING THE PROPOSED INTERIOR LOWER LEVEL PARKING AND SURFACE PARKING AT EACH BUILDING.

- NOTES:
- OWNED BY BRANDT LANE DEVELOPMENT LLC SEE DEED BOOK 68959 PAGE 58.
 - ASSESSORS MBL 0038-0026-0003A & 00044
 - ZONING DISTRICTS: BL-1.0, RL-7, AND BG-2.0
 - EXISTING CONDITIONS INCLUDING PROPERTY LINES, MONUMENTS, EASEMENTS, TOPOGRAPHY WETLAND RESOURCES, AND SETBACKS SHOWN HEREON ARE BASED UPON A SURVEY COMPLETED BY TAUPER LAND SURVEY, INC. DATED MAY 31, 2023.
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PROGRESS PRINT
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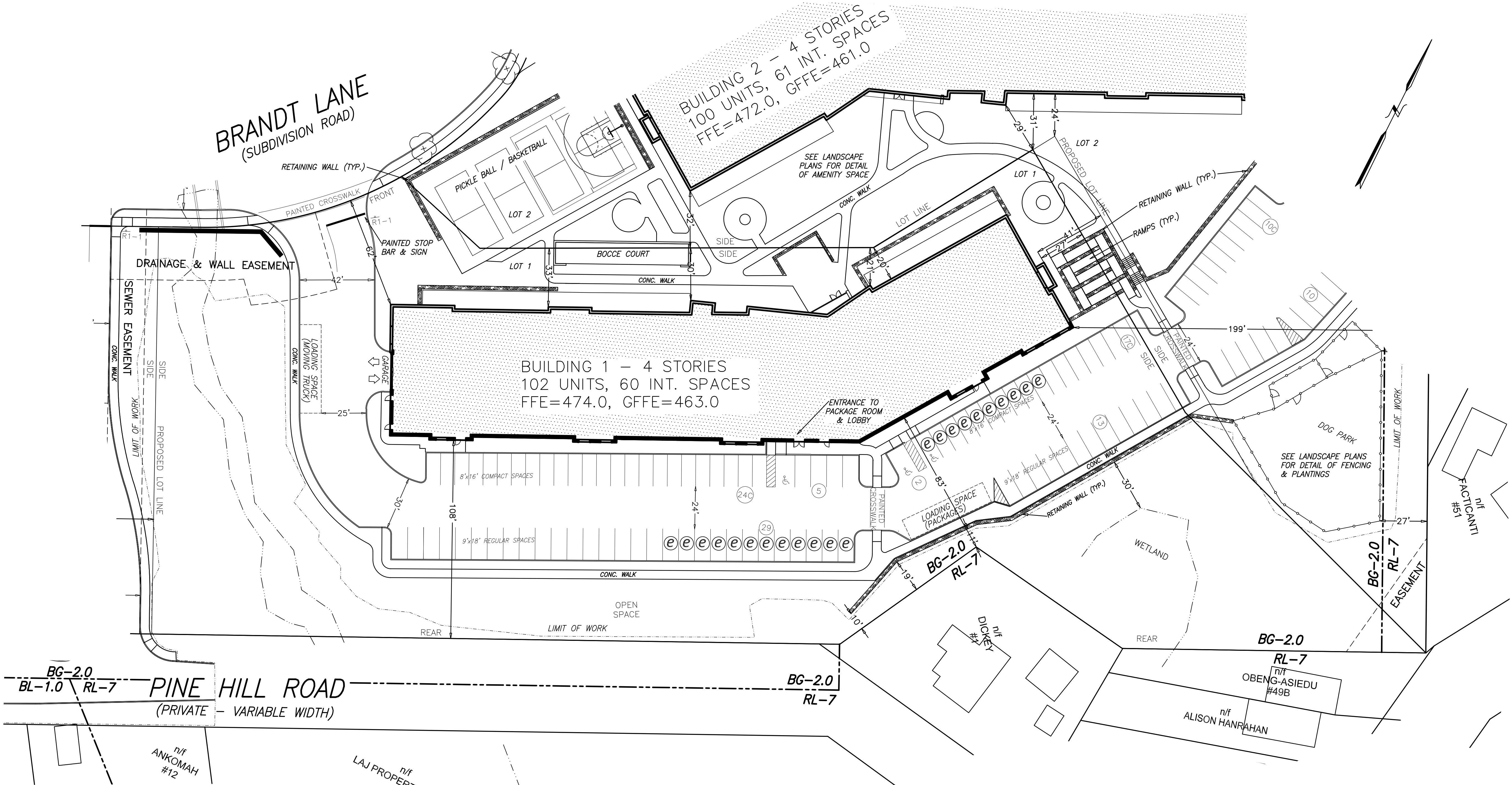
THOMPSON-LISTON ASSOCIATES, INC.
 Professional Engineers Professional Land Surveyors
 Erosion Control Specialists
 P O Box 570, Boylston MA 01505
 info@tlainc.net (508) 869-6151

DATE:	OCTOBER 21, 2024	DWG NO.	
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DATE:		DESCRIPTION	



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 CALL "DIG SAFE" AT 1-888-344-7233.

Grafton Woods
 LUXURY LIVING
4 BRANDT LANE
 WORCESTER, MASSACHUSETTS
 OWNED BY:
BRANDT LANE DEVELOPMENT, LLC
 38 BRENTWOOD DRIVE
 HOLDEN, MASSACHUSETTS 01520
 PARKING & LAYOUT PLAN OVERVIEW **C2.0**



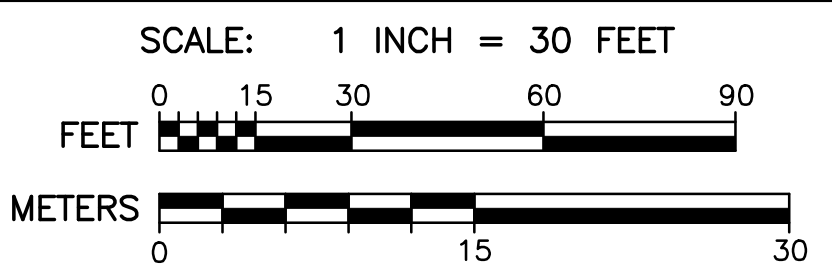
LEGEND

- 1 FOOT CONTOURS
- 5 FOOT CONTOURS
- [470] PROPOSED CONTOUR
- [459.0] PROPOSED SPOT GRADE
- WETLAND FLAG
- EDGE OF WETLAND
- WETLAND BUFFER
- STREAM BANK
- TREE-LINE
- CB CATCH BASIN
- DMH DRAIN MANHOLE
- SMH SEWER MANHOLE
- HYD HYDRANT
- WG WATER GATE
- WS WATER SHUTOFF
- MW MONITORING WELL
- UP UTILITY POLE
- EXISTING DRAIN LINE
- EXISTING SEWER LINE
- PROPOSED DRAIN LINE
- PROPOSED SEWER LINE
- WOU WATER QUALITY UNIT
- OWS OIL WATER SEPARATOR
- WATER LINE
- GAS LINE
- OHW OVERHEAD WIRES
- ECT ELECTRICAL & TELECOM. WIRES
- E ELECTRICAL WIRES
- EMH ELECTRIC MANHOLE
- EDGE OF PAVEMENT
- GUARD RAIL
- PROPOSED CURB
- ACCESSIBLE FEATURE
- SEDIMENTATION CONTROL BARRIER
- PROPOSED FENCE
- PROPOSED WALL
- PROPOSED LIGHT
- SOIL BORING
- SOIL TEST PIT
- PROPOSED EV READY SPACE

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DATE: OCTOBER 21, 2024	DWG NO.:
REVISIONS	
DATE:	DESCRIPTION



Grafton Woods
 LUXURY LIVING

4 BRANDT LANE
 WORCESTER, MASSACHUSETTS

OWNED BY:
BRANDT LANE DEVELOPMENT, LLC
 38 BRENTWOOD DRIVE
 HOLDEN, MASSACHUSETTS 01520

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PARKING REQUIREMENTS:

	REQUIRED	PROVIDED
PARKING SPACES	204	150
PARKING RATIO PER DU	2:1	1.47:1
MAXIMUM % COMPACT	25	27.3
ACCESSIBLE SPACES	6	7
LOADING SPACES	3	2

UNIT BREAKDOWN FOR BUILDING 1:

GROSS FLOOR AREA (SF)	= 134,890
TOTAL UNITS	= 102
STUDIO UNITS	= 16
1 BEDROOM UNITS	= 51
2 BEDROOM UNITS	= 35
3 BEDROOM UNITS	= 0

PARKING BREAKDOWN FOR BUILDING 1:

TOTAL INTERIOR GARAGE SPACES	= 60
INTERIOR COMPACT SPACES	= 0
INTERIOR ACCESSIBLE SPACES	= 3
INTERIOR EV READY SPACES	= 9
INTERIOR BICYCLE SLOTS	= 21
TOTAL EXTERIOR SPACES	= 90
EXTERIOR COMPACT SPACES	= 41
EXTERIOR ADA SPACES	= 3
EXTERIOR EV READY SPACES	= 22

LOT 1: ZONING DISTRICT BG-2.0 & RL-7

BUILDING DIMENSIONAL REQUIREMENTS:

	REQUIRED	PROVIDED
MINIMUM LOT AREA (SF)	5,000	141,171
MINIMUM FRONTAGE (FT)	125	141
MINIMUM YARD FRONT (FT)	NA	62
MINIMUM YARD SIDE (FT)	NA	20
MINIMUM YARD REAR (FT)	15	83
MAXIMUM HEIGHT (STO)	NA	4
MAXIMUM HEIGHT (FT)	50	50
MAX FLOOR AREA RATIO	2:1	0.83:1

CONSTRUCTION NOTES:

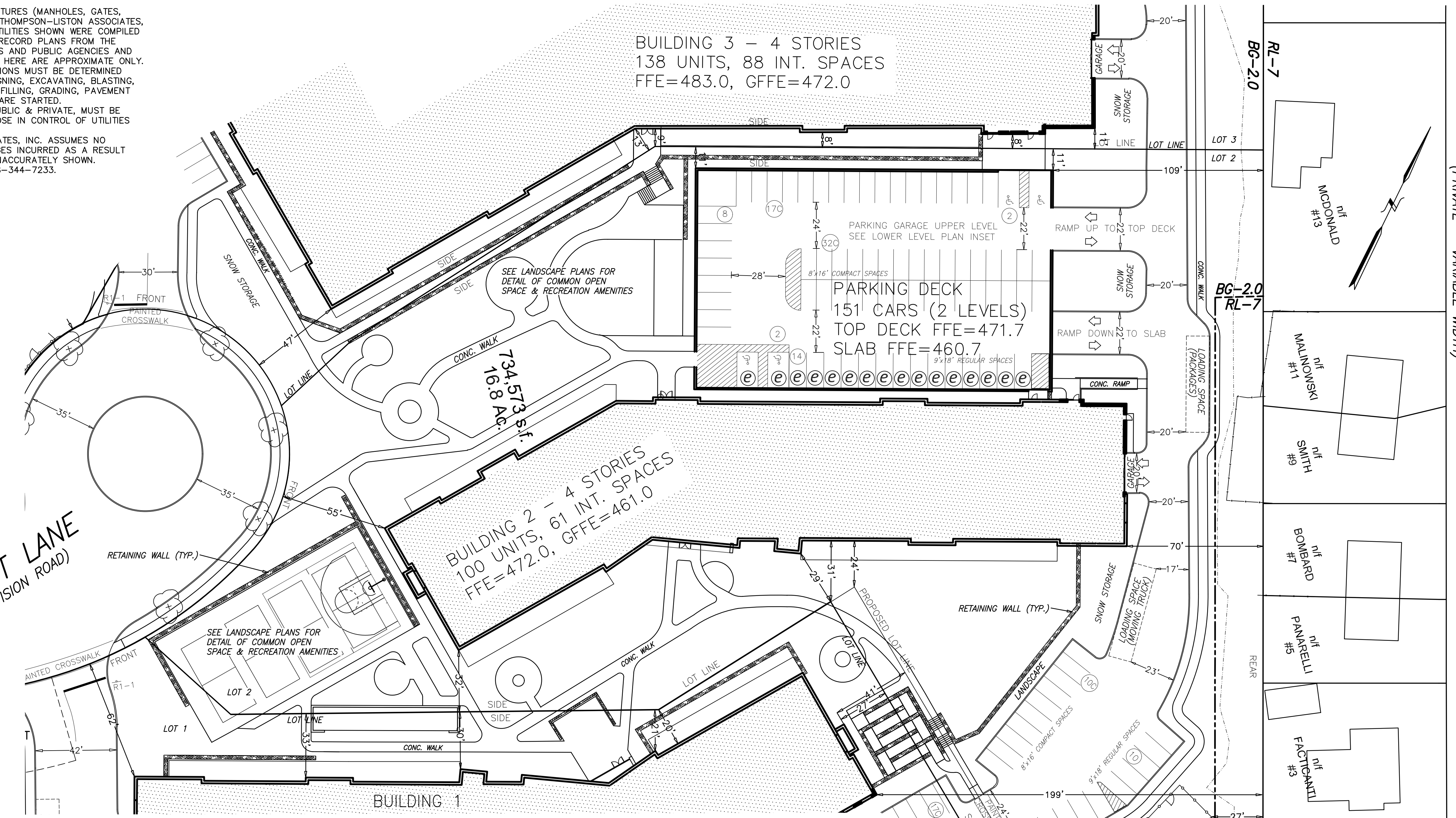
- RETAINING WALLS SHALL BE DESIGNED BY A P.E. DIMENSIONED DRAWINGS AND CALCULATIONS SHALL BE SUBMITTED WITH THE BUILDING PERMIT APPLICATION. CALCULATIONS SHALL INCLUDE A GLOBAL STABILITY ANALYSIS AND MUST SHOW SURCHARGES FOR TRAFFIC & SNOW STORAGE.
- SEE LANDSCAPE PLANS FOR DETAILED PLANTING SCHEDULES, FENCING, FLATWORK, AND AMENITIES.

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BUILDING 3 - 4 STORIES
138 UNITS, 88 INT. SPACES
FFE=483.0, GFFE=472.0

PARKING DECK
151 CARS (2 LEVELS)
TOP DECK FFE=471.7
SLAB FFE=460.7

BUILDING 2 - 4 STORIES
100 UNITS, 61 INT. SPACES
FFE=472.0, GFFE=461.0



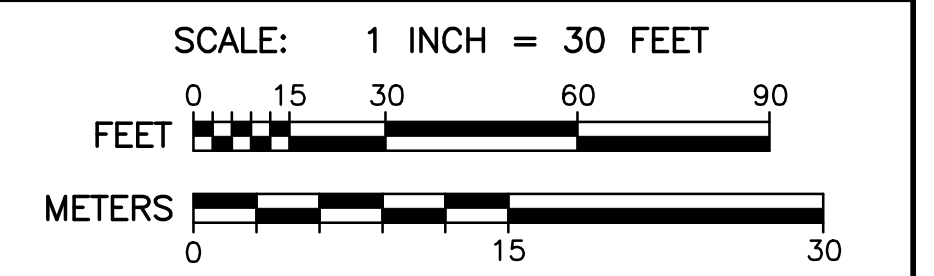
LEGEND

- 1 FOOT CONTOURS
- 5 FOOT CONTOURS
- PROPOSED CONTOUR
- PROPOSED SPOT GRADE
- WETLAND FLAG
- EDGE OF WETLAND
- WETLAND BUFFER
- STREAM BANK
- TREE-LINE
- CATCH BASIN
- DRAIN MANHOLE
- SEWER MANHOLE
- HYDRANT
- WATER GATE
- WATER SHUTOFF
- MONITORING WELL
- UTILITY POLE
- EXISTING DRAIN LINE
- EXISTING SEWER LINE
- PROPOSED DRAIN LINE
- PROPOSED SEWER LINE
- WATER QUALITY UNIT
- OIL WATER SEPARATOR
- WATER LINE
- GAS LINE
- OVERHEAD WIRES
- ELECTRICAL & TELECOM. WIRES
- ELECTRICAL WIRES
- ELECTRIC MANHOLE
- EDGE OF PAVEMENT
- GUARD RAIL
- PROPOSED CURB
- ACCESSIBLE FEATURE
- SEDIMENTATION CONTROL BARRIER
- PROPOSED FENCE
- PROPOSED WALL
- PROPOSED LIGHT
- SOIL BORING
- SOIL TEST PIT
- PROPOSED EV READY SPACE

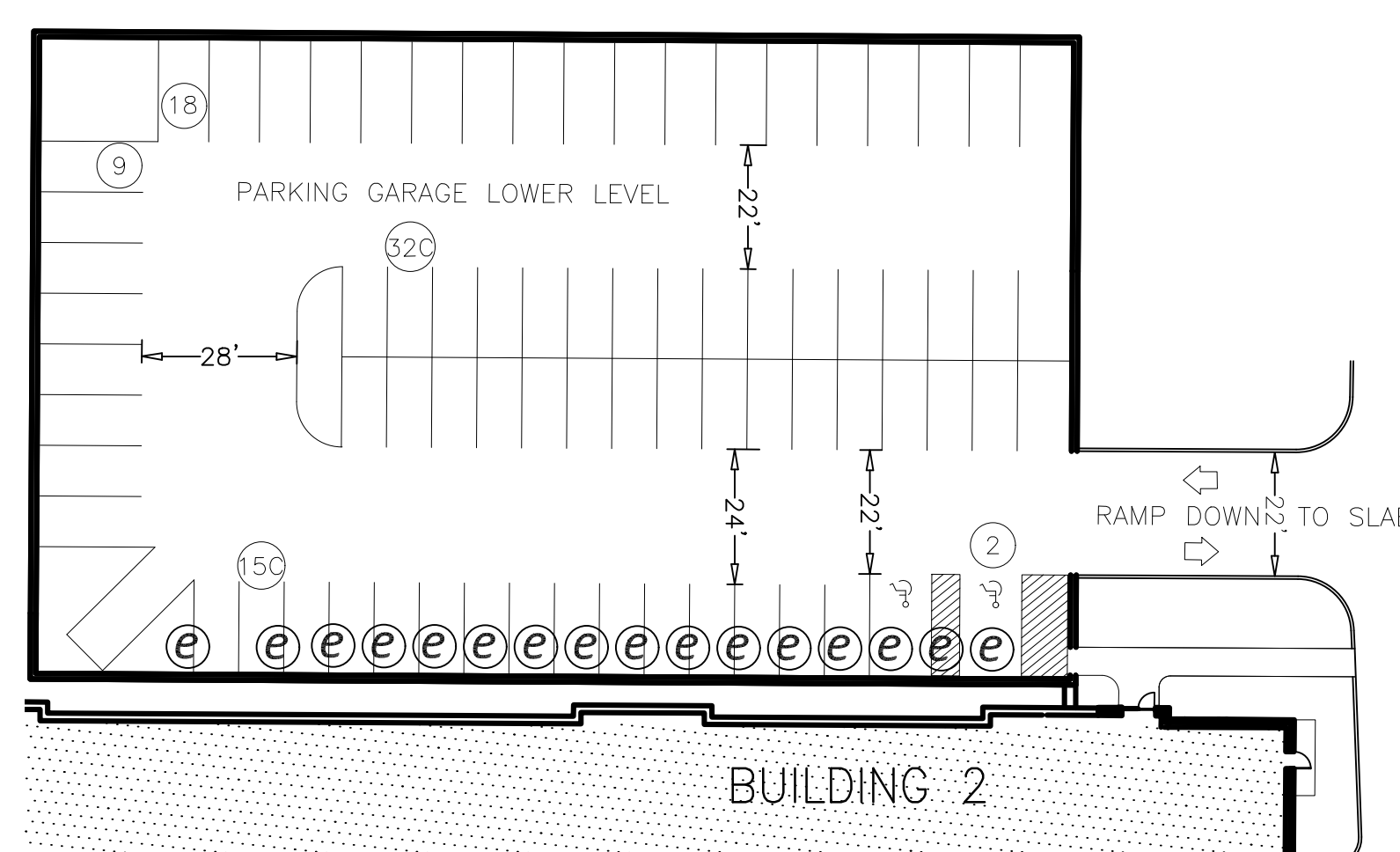
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P O Box 570, Boylston MA 01505
info@tlainc.net (508) 869-6151

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Grafton Woods
LUXURY LIVING
4 BRANDT LANE
WORCESTER, MASSACHUSETTS
OWNED BY:
BRANDT LANE DEVELOPMENT, LLC
38 BRENTWOOD DRIVE
HOLDEN, MASSACHUSETTS 01520



PLAN OF PARKING GARAGE LOWER LEVEL
SCALE 1"=30'

PARKING REQUIREMENTS:

	REQUIRED	PROVIDED
PARKING SPACES	202	232
PARKING RATIO PER DU	2:1	2.30:1
MAXIMUM % COMPACT	25	50.0
ACCESSIBLE SPACES	7	9
LOADING SPACES	3	2

UNIT BREAKDOWN FOR BUILDING 2:

GROSS FLOOR AREA (SF)	= 134,737
TOTAL UNITS	= 100
STUDIO UNITS	= 12
1 BEDROOM UNITS	= 50
2 BEDROOM UNITS	= 38
3 BEDROOM UNITS	= 0

PARKING BREAKDOWN FOR BUILDING 2:

TOTAL INTERIOR GARAGE SPACES	= 61
INTERIOR COMPACT SPACES	= 0
INTERIOR ACCESSIBLE SPACES	= 3
INTERIOR EV READY SPACES	= 9
INTERIOR BICYCLE SLOTS	= 27

TOTAL EXTERIOR SPACES	= 171*
EXTERIOR COMPACT SPACES	= 106*
EXTERIOR ADA SPACES	= 6*
EXTERIOR EV READY SPACES	= 34*

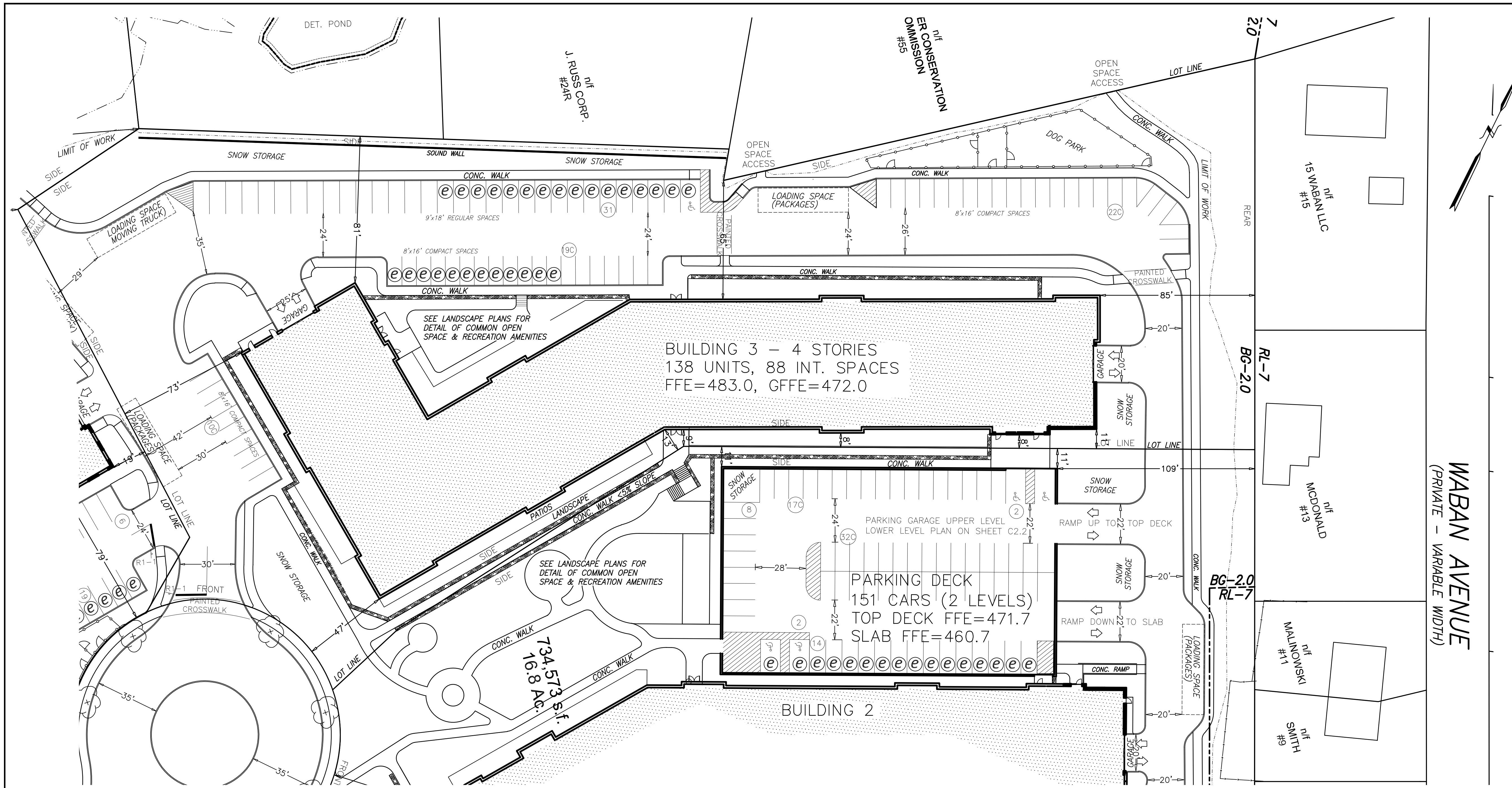
*INCLUDING PARKING STRUCTURE

LOT 2: ZONING DISTRICT BG-2.0 & RL-7

BUILDING DIMENSIONAL REQUIREMENTS:

	REQUIRED	PROVIDED
MINIMUM LOT AREA (SF)	5,000	158,496
MINIMUM FRONTAGE (FT)	125	152
MINIMUM YARD FRONT (FT)	NA	55
MINIMUM YARD SIDE (FT)	NA	24
MINIMUM YARD REAR (FT)	15	70
MAXIMUM HEIGHT (STY)	NA	4
MAXIMUM HEIGHT (FT)	50	50
MAX FLOOR AREA RATIO	2:1	0.85:1

- CONSTRUCTION NOTES:**
- RETAINING WALLS SHALL BE DESIGNED BY A P.E. DIMENSIONED DRAWINGS AND CALCULATIONS SHALL BE SUBMITTED WITH THE BUILDING PERMIT APPLICATION. CALCULATIONS SHALL INCLUDE A GLOBAL STABILITY ANALYSIS AND MUST SHOW SURCHARGES FOR TRAFFIC & SNOW STORAGE.
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LEGEND

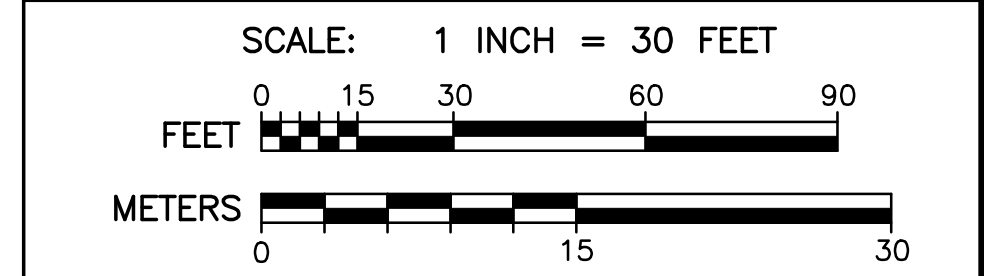
- 1 FOOT CONTOURS
- 5 FOOT CONTOURS
- 470 PROPOSED CONTOUR
- 459+0 PROPOSED SPOT GRADE
- WETLAND FLAG
- EDGE OF WETLAND
- WETLAND BUFFER
- STREAM BANK
- TREE-LINE
- CATCH BASIN
- DRAIN MANHOLE
- SEWER MANHOLE
- HYDRANT
- WATER GATE
- WATER SHUTOFF
- MONITORING WELL
- UTILITY POLE
- EXISTING DRAIN LINE
- EXISTING SEWER LINE
- PROPOSED DRAIN LINE
- PROPOSED SEWER LINE
- WQU WATER QUALITY UNIT
- OWS OIL WATER SEPARATOR
- W WATER LINE
- G GAS LINE
- OHW OVERHEAD WIRES
- ECT ELECTRICAL & TELECOM. WIRES
- E ELECTRICAL WIRES
- EMH ELECTRIC MANHOLE
- --- EDGE OF PAVEMENT
- --- GUARD RAIL
- --- PROPOSED CURB
- --- ACCESSIBLE FEATURE
- --- SEDIMENTATION CONTROL BARRIER
- --- PROPOSED FENCE
- --- PROPOSED WALL
- --- PROPOSED LIGHT
- --- SOIL BORING
- --- SOIL TEST PIT
- --- PROPOSED EV READY SPACE

PROGRESS PRINT

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Grafton Woods
LUXURY LIVING

4 BRANDT LANE
WORCESTER, MASSACHUSETTS

OWNED BY:
BRANDT LANE DEVELOPMENT, LLC
38 BRENTWOOD DRIVE
HOLDEN, MASSACHUSETTS 01520

LOT 3: ZONING DISTRICT BG-2.0

BUILDING DIMENSIONAL REQUIREMENTS:

	REQUIRED	PROVIDED
MINIMUM LOT AREA (SF)	5,000	135,209
MINIMUM FRONTAGE (FT)	125	126
MINIMUM YARD FRONT (FT)	NA	47
MINIMUM YARD SIDE (FT)	NA	8
MINIMUM YARD REAR (FT)	15	65
MAXIMUM HEIGHT (STO)	NA	4
MAXIMUM HEIGHT (FT)	50	50
MAX FLOOR AREA RATIO	2:1	1.37:1

PARKING REQUIREMENTS:

	REQUIRED	PROVIDED
PARKING SPACES	280	170
PARKING RATIO PER DU	2:1	1.21:1
MAXIMUM % COMPACT	25	30.0
ACCESSIBLE SPACES	6	4 (+2 FROM LOT2 DECK)
LOADING SPACES	3	2

UNIT BREAKDOWN FOR BUILDING 3:

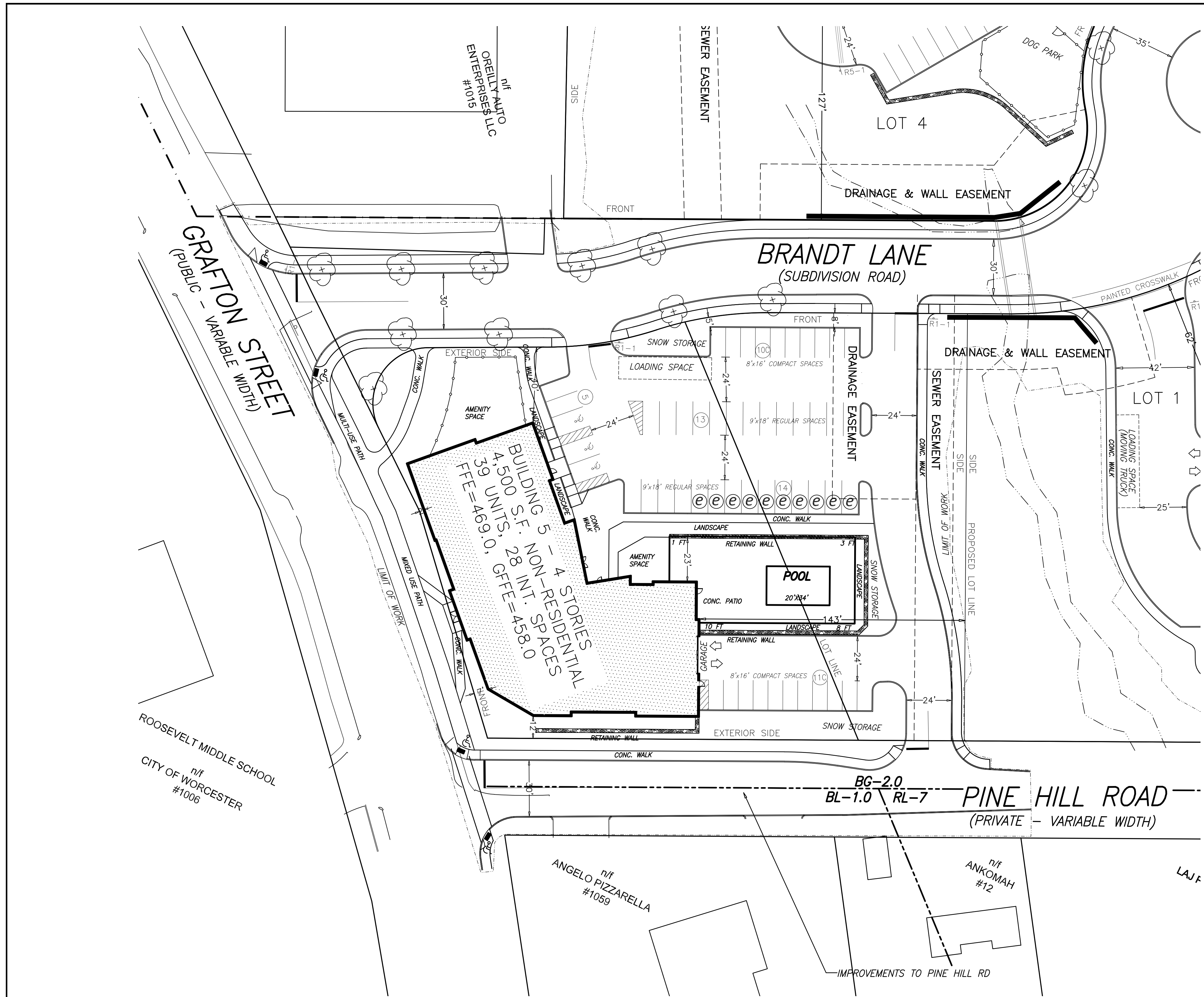
- GROSS FLOOR AREA (SF) = 184,830
- TOTAL UNITS = 138
- STUDIO UNITS = 28
- 1 BEDROOM UNITS = 56
- 2 BEDROOM UNITS = 50
- 3 BEDROOM UNITS = 4

PARKING BREAKDOWN FOR BUILDING 3:

- TOTAL INTERIOR GARAGE SPACES = 88
- INTERIOR COMPACT SPACES = 0
- INTERIOR ACCESSIBLE SPACES = 3
- INTERIOR EV READY SPACES = 9
- INTERIOR BICYCLE SLOTS = 27
- TOTAL EXTERIOR SPACES = 82
- EXTERIOR COMPACT SPACES = 51
- EXTERIOR ADA SPACES = 3
- EXTERIOR EV SPACES = 28

- CONSTRUCTION NOTES:**
- RETAINING WALLS SHALL BE DESIGNED BY A P.E. DIMENSIONED DRAWINGS AND CALCULATIONS SHALL BE SUBMITTED WITH THE BUILDING PERMIT APPLICATION. CALCULATIONS SHALL INCLUDE A GLOBAL STABILITY ANALYSIS AND MUST SHOW SURCHARGES FOR TRAFFIC & SNOW STORAGE.
 - SEE LANDSCAPE PLANS FOR DETAILED PLANTING SCHEDULES, FENCING, FLATWORK, AND AMENITIES.

DIG SAFE:
EXCEPT FOR VISIBLE STRUCTURES (MANHOLES, GATES, POLES, ETC.) LOCATED BY THOMPSON-LISTON ASSOCIATES, INC., ALL UNDERGROUND UTILITIES SHOWN WERE COMPILED ACCORDING TO AVAILABLE RECORD PLANS FROM THE VARIOUS UTILITY COMPANIES AND PUBLIC AGENCIES AND THEIR LOCATIONS DEPICTED HERE ARE APPROXIMATE ONLY. THE ACTUAL UTILITY LOCATIONS MUST BE DETERMINED IN THE FIELD BEFORE DESIGNING, EXCAVATING, BLASTING, DRILLING, INSTALLING, BACKFILLING, GRADING, PAVEMENT RESTORATION OR REPAIRS ARE STARTED. ALL UTILITY COMPANIES, PUBLIC & PRIVATE, MUST BE CONTACTED, INCLUDING THOSE IN CONTROL OF UTILITIES NOT SHOWN ON THIS PLAN. THOMPSON-LISTON ASSOCIATES, INC. ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN. CALL "DIG SAFE" AT 1-888-344-7233.



LOT 5: ZONING DISTRICT BG-2.0

BUILDING DIMENSIONAL REQUIREMENTS:

	REQUIRED	PROVIDED
MINIMUM LOT AREA (SF)	5,000	64,280
MINIMUM FRONTAGE (FT)	125	786
MINIMUM YARD FRONT (FT)	NA	2
MINIMUM EXT. SIDE YD. (FT)	NA	6
MINIMUM YARD SIDE (FT)	NA	14.3
MINIMUM YARD REAR (FT)	15	NA
MAXIMUM HEIGHT (STO)	NA	4
MAXIMUM HEIGHT (FT)	50	50
MAX FLOOR AREA RATIO	2:1	1.04:1

PARKING REQUIREMENTS:

	REQUIRED	PROVIDED
RES. PARKING SPACES	78	68
NON-RES. 4,500 x 1/300	15	13
TOTAL REQUIRED	93	81
PARKING RATIO PER DU	2:1	1.60:1
MAXIMUM % COMPACT	25	25.9
ACCESSIBLE SPACES	3	4
LOADING SPACES	1	1

UNIT BREAKDOWN FOR BUILDING 5:

GROSS FLOOR AREA (SF)	= 67,142 (4,500 COMMERCIAL)
TOTAL DWELLING UNITS	= 39
STUDIO UNITS	= 9
1 BEDROOM UNITS	= 14
2 BEDROOM UNITS	= 16
3 BEDROOM UNITS	= 0

PARKING BREAKDOWN FOR BUILDING 5:

TOTAL INTERIOR GARAGE SPACES	= 28
INTERIOR COMPACT SPACES	= 1
INTERIOR ACCESSIBLE SPACES	= 1
INTERIOR EV READY SPACES	= 7
INTERIOR BICYCLE SLOTS	= 28
TOTAL EXTERIOR SPACES	= 53
EXTERIOR COMPACT SPACES	= 21
EXTERIOR ADA SPACES	= 3
EXTERIOR EV SPACES	= 10

- CONSTRUCTION NOTES:**
- RETAINING WALLS SHALL BE DESIGNED BY A P.E. DIMENSIONED DRAWINGS AND CALCULATIONS SHALL BE SUBMITTED WITH THE BUILDING PERMIT APPLICATION. CALCULATIONS SHALL INCLUDE A GLOBAL STABILITY ANALYSIS AND MUST SHOW SURCHARGES FOR TRAFFIC & SNOW STORAGE.
 - SEE LANDSCAPE PLANS FOR DETAILED PLANTING SCHEDULES, FENCING, FLATWORK, AND AMENITIES.

LEGEND

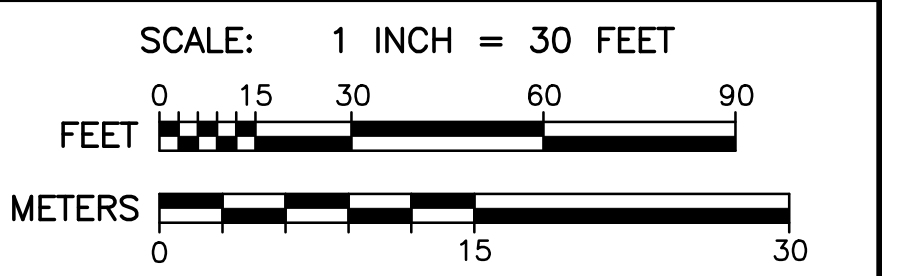
- 1 FOOT CONTOURS
- 5 FOOT CONTOURS
- [470] PROPOSED CONTOUR
- [459+0] PROPOSED SPOT GRADE
- WETLAND FLAG
- WETLAND BUFFER
- WETLAND BUFFER
- STREAM BANK
- TREE-LINE
- CATCH BASIN
- DRAIN MANHOLE
- SEWER MANHOLE
- HYDRANT
- WATER GATE
- WATER SHUTOFF
- MONITORING WELL
- UTILITY POLE
- EXISTING DRAIN LINE
- EXISTING SEWER LINE
- PROPOSED DRAIN LINE
- PROPOSED SEWER LINE
- WQU WATER QUALITY UNIT
- OWS OIL WATER SEPARATOR
- W WATER LINE
- G GAS LINE
- OHW OVERHEAD WIRES
- ECT ELECTRICAL & TELECOM. WIRES
- E ELECTRICAL WIRES
- EMH ELECTRIC MANHOLE
- --- EDGE OF PAVEMENT
- --- GUARD RAIL
- --- PROPOSED CURB
- --- ACCESSIBLE FEATURE
- --- SEDIMENTATION CONTROL BARRIER
- --- PROPOSED FENCE
- --- PROPOSED WALL
- --- PROPOSED LIGHT
- --- SOIL BORING
- --- SOIL TEST PIT
- --- PROPOSED EV READY SPACE

PROGRESS PRINT

INFORMATION SHOWN ON THIS PLAN IS NOT NECESSARILY COMPLETE OR CORRECT.
DATE: 10-18-2024

THOMPSON-LISTON ASSOCIATES, INC.
Professional Engineers Professional Land Surveyors
Erosion Control Specialists
P O Box 570, Boylston MA 01505
info@tlainc.net (508) 869-6151

DATE:	OCTOBER 21, 2024	DWG NO.	
REVISIONS			
DATE:		DESCRIPTION	



Grafton Woods
LUXURY LIVING

4 BRANDT LANE
WORCESTER, MASSACHUSETTS

OWNED BY:
BRANDT LANE DEVELOPMENT, LLC
38 BRENTWOOD DRIVE
HOLDEN, MASSACHUSETTS 01520

PARKING LAYOUT PLAN BUILDING 5 C2.5

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