65 Glenn Street
Lawrence, MA 01843 | 169 Ocean Blvd.
Unit 101, PO Box 249
Hampton, NH 03842
T:978.794.1792 T:603.601.8154
TheEngineeringCorp.com

MEMORANDUM

TO: Mr. Bartley Kelly, Chairman
Hull Redevelopment Authority
2 Samoset Avenue
Hull, Massachusetts 02045

DATE: February 1, 2016

FROM: Kevin R. Dandrade, P.E., PTOE, Principal
(TEC, Inc.)
Jason Schrieber, AICP, Project Manager
(Nelson Nygaard)

PROJECT NO.: T0597

RE: Evaluation of Two-Way Traffic Flow on Nantucket Beach - Hull, Massachusetts
Traffic Feasibility and Circulation Study

INTRODUCTION

This study is the result of a joint effort between the Massachusetts Department of Conservation and Recreation (DCR), and the Town of Hull Redevelopment Authority (HRA) to analyze the possibility of converting the current one-way flow road system in the vicinity of Nantasket Beach to a two-way flow road system. The study broadly seeks to establish whether the conversion can ***help reduce seasonal congestion***, ***improve access to the beach*** for residents and visitors, and support ***economic development***. The Partnership retained Nelson/Nygaard and their sub consultant TEC, Inc. to conduct the study.

Building on previous initiatives and through ongoing meetings, the HRA, DCR, and others have developed a vision for Nantasket Beach that moves away from auto-oriented streets and beachfront parking lots towards a mixed-use, commercially-vibrant, pedestrian, bike and American with Disabilities Act (ADA) friendly year-round community. These efforts have been codified in new zoning that supports a "Healthy by Design" future for the Beach. This initiative has already resulted in the reconstruction of Nantasket Avenue to improve vehicular, bicycle and pedestrian access.

This study specifically focuses on the potential traffic flow impacts of converting Nantasket Avenue and Hull Shore Drive to two-way streets with the addition of several new cross streets across the HRA development parcel and other points south, each connecting between Nantasket Avenue and Hull Shore Drive. By altering traffic flows and adding cross streets, the study seeks to demonstrate that these changes could relieve roadway congestion; improve access to the beach, especially for pedestrians and cyclists; and support economic development. Conversions of one-way streets to two-way have been implemented successfully in other municipalities across the Commonwealth. Examples are described in this study. Ultimately, the project team recommends the conversion of area streets to two-way traffic flow, and supporting the Town of Hull and its partners at the State in pursuing the next steps towards approvals, funding and implementation.

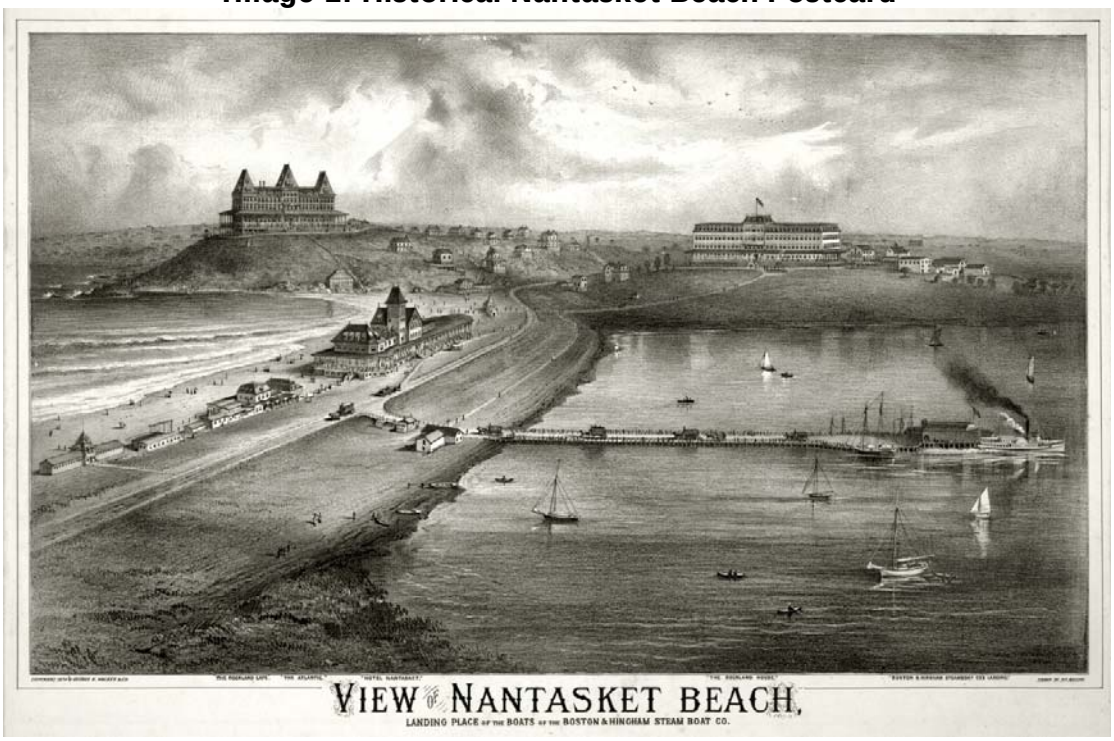
Hull Redevelopment Authority Design Principles

The HRA is currently the primary landholder north of Water Street and DCR is the primary landholder south of Bay Street along the Nantasket Beach waterfront. These two entities are currently working together to integrate a series of design principles, identified by the HRA, as part of the redevelopment of Nantasket Beach and centered around increasing the economic viability of the waterfront. Among these design principles are not only providing an enhanced waterfront with a unique ocean facing retail and restaurant district, but also providing a walkable and bike-able street system that provides both traffic operational efficiency and a safe route of travel for all users.

Nantasket Beach Background

This study to replace the existing one-way couplet traffic circulation at Nantasket Beach and restore Hull Shore Drive and Nantasket Avenue to two-way flow is an opportunity to embark on a new era for one of Massachusetts' storied assets. Nantasket Beach has long been a recreational draw for beach goers, but few remember what the Beach once was: a year-round regional entertainment and dining destination. Long before the amusement park was torn down and the hotels fell to parking lots, Nantasket Beach was the place that greater Boston went to enjoy the sea in an entertaining and high-quality setting. Visitors came by steamboat to its piers and traveled miles by train to escape from the city for days at a time.

Image 1: Historical Nantasket Beach Postcard



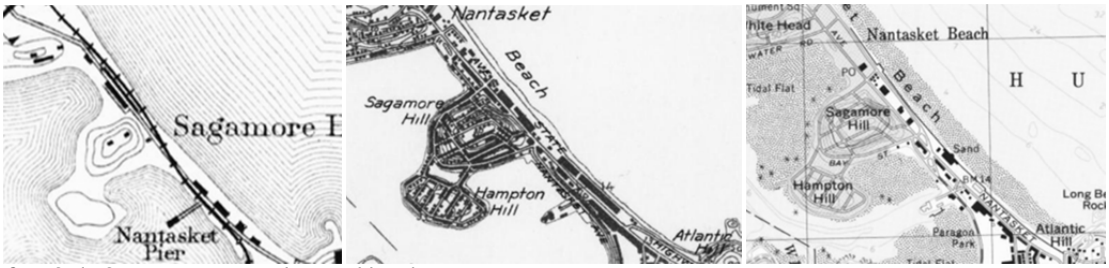
Decades of growing success may actually have contributed to the Beach's slow decline as thousands of people sought to visit the small peninsular neck of Surfside in the summers. With more people came more development. Volumes were manageable until growing

automobile ownership allowed easy access for many more people. As a result, Nantasket Beach began evolving after World War II to accommodate visitors not by boat and train, but by car.

Redevelopment took the form of adding parking and roadway capacity, eliminating direct rail and ferry service for visitors and simultaneously sacrificing the very idyllic charm that made the Beach attractive for decades. Many point to changing regional destinations, a receding beach, and competitive interests as the cause for Nantasket's decline, yet the automobile took away prime beachfront space, developable land, and any enjoyment from strolling casually through the Beach's dunes to hotels and restaurants.

Image 2: Nantasket Beach Plan View through the Years

1892[a] 1936[b] 1974[c]



[a] Surfside features a train and several hotels
[b] Surfside Heyday
[c] Soon after the one-way pair, Surfside declines.

Large parking lots began replacing many beachfront developments. The beach was (and still is) such a draw that every possible parking space could easily be filled at prime times. As a result, roadways were expanded to accommodate the in-and-out flow of traffic in high beach season, which only led to more parking demand and greater congestion. A decision to implement a wide one-way couplet in the 1950's spelled the beginning of the end of Nantasket Beach's heyday. While the new roads could theoretically whisk beachgoers and residents in and out more quickly, the emphasis on vehicles coincided with economic decline and disinvestment, made shopping or walking the area on foot unpleasant and especially inhospitable to the young and elderly.

While the Town has long recognized that improvements are needed, recent rezoning, and work with partners at the State, coupled with new development interest, represent a unique opportunity to harness forces of change and realize the latent demand for a safer, more business-friendly, walkable and bike-accessible beachfront, while maintaining access for many visitors that will continue to visit by car. Some of these recent key initiatives include:

- **Nantasket Beach Revitalization Plan (MassDevelopment, 2014**) – This plan built support for how HRA lands could be developed in a sustainable and marketable fashion. It saw that remote parking could be better-connected to the beach, and a new traffic circulation pattern could alleviate congestion hot spots while enabling a return to a more walkable and visitor-friendly development pattern – not too dissimilar from the historic pattern that originally made Surfside successful.

- **Nantasket Beach Reservation Master Plan (DCR, 2014) –**A detailed master plan focused on the "landside" of the Reservation to install beachfront amenities and a multi-use path.
- **Surfside (MassWorks 2014) –** Plan to rebuild Nantasket Ave as a Complete Street with accommodations for bicycles and pedestrians.
- **Nantasket Beach Overlay Zoning District (Town of Hull, 2013) –** A "healthy by design" community-driven process to create a mixed use redevelopment area along the beach while protecting the town's historic character.

Why Two-Way Flow?

Converting the roadway circulation to a two-way system would have a number of important transportation benefits which have been demonstrated in dozens of successful two-way conversions around the country as well as nearby in Lowell and Lawrence. Most recently, Market Street, Merrimack Street and their cross streets in historical Downtown Lowell, as shown in Image 3, were converted from one-way flow to two-way flow in 2013.

Image 3: Market Street in Lowell, Massachusetts Before and After Two-Way Conversion

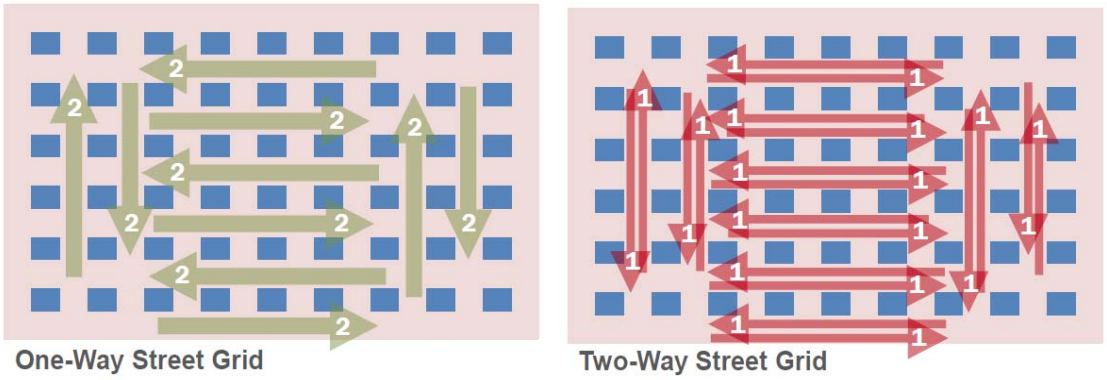


Market Street before conversion felt like a wide highway, not a downtown street.

Market Street after becoming two-way has a downtown environment.

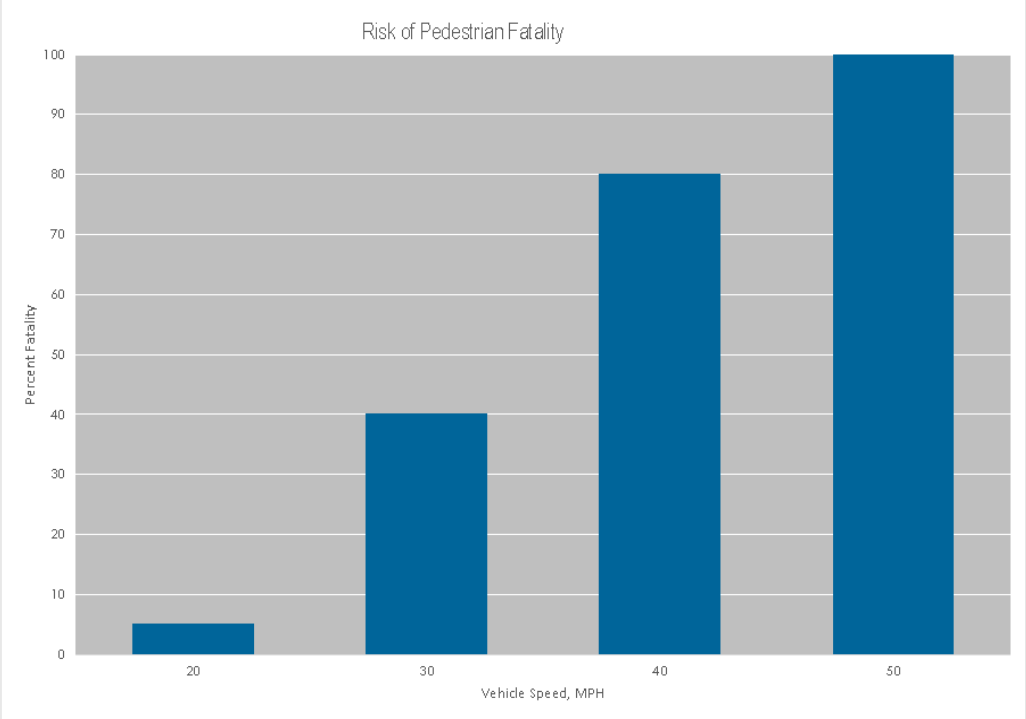
In general, the conversion of a one-way pair to two-way does not affect the volume of traffic that can flow through the area. Instead, the same amount of traffic can travel in different directions, just along multiple routes as shown in Image 4.

Image 4: Schematic Traffic Flow



This traffic may flow at slightly slower speeds, as drivers tend to slow down due to the friction that oncoming traffic can create. However, although it may take a few more seconds for a vehicle to travel the length of a converted network, the safety for pedestrians and other users increases drastically with the decreased speeds and traffic calming. Image 5 shows the relationship between vehicle speeds and fatalities (Leaf, W. and Preusser, D. Literature Review on Vehicle Travel Speeds and Pedestrian Injuries, US DOT NHTSA (DOT HS 809 021), 1999, p.4).

Image 5: Risk of Pedestrian Fatality with Travel Speed

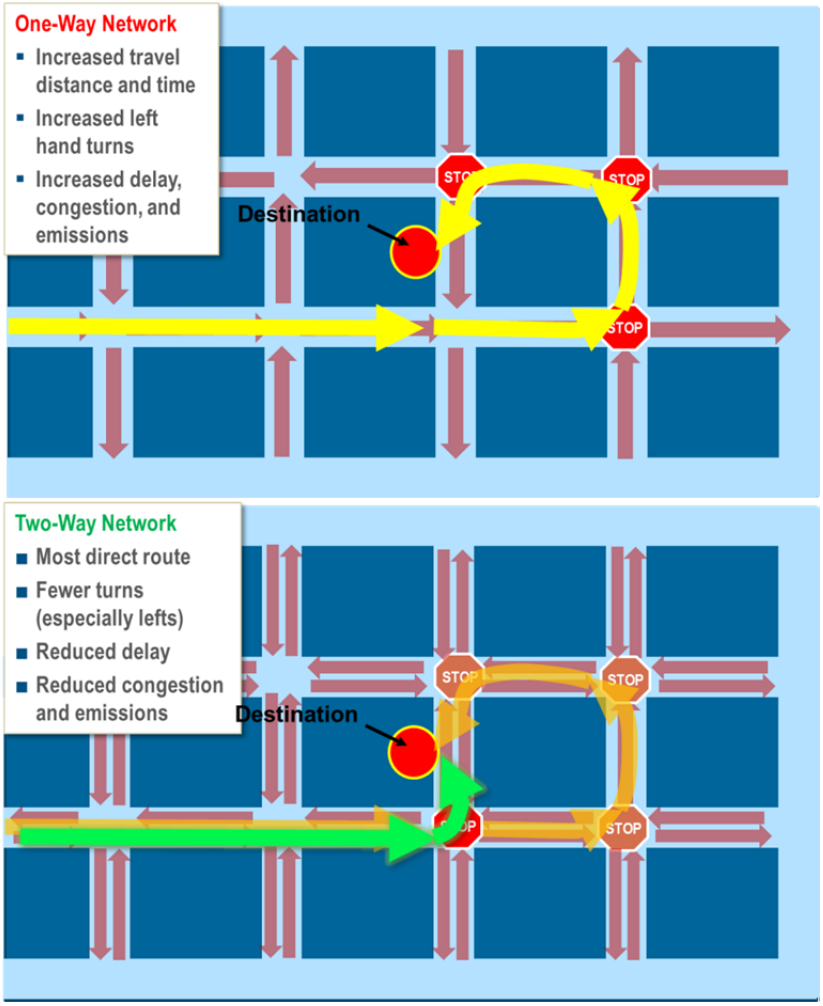


Specifically, the benefits of converting to a two-way system on Nantasket Beach include:

- While preserving the same amount of through vehicle capacity, the system would provide **alternate circulating routes for travelers;**

- **Dispersing traffic on multiple routes** avoids the single concentrated pinch points that exist today;
- Motorists would have **a more direct route to their destinations**, eliminating longer looping routes (Image 5);
- Simple two-lane roads which will operate at **slower speeds**, making Surfside much safer for pedestrians and enabling inland businesses to serve beachgoers on foot again like they once did;
- Residents commuting through the area won't have a single unavoidable pinch point of congestion but instead **multiple options to avoid beach traffic**;
- For developers, **any street can become a front door for auto and walk-up access**, rather than highway-oriented parcels of limited utility; and
- A safer and more complete two-way system can actually **accommodate more person movement** than the current network by promoting more walking and biking.

Image 6: More Direct Access in a Two-Way System



STUDY GOALS

Working with the Town, the HRA and with input at public meetings, the following goals were developed to guide the project and select the preferred alternative.

- **Improve Pedestrian Safety And Access** –by slowing traffic, rationalizing the streets network and increasing opportunities for new pedestrian crossings.
- **Eliminate Traffic Bottlenecks –** by improving traffic flows, separating local residential from beach traffic and providing more alternative routes and cross-streets between Hull Shore Drive and Nantasket Avenue.
- **Improve Emergency Access –**by providing multiple alternative routes, and more free-flowing traffic to reduce bottlenecks.
- **Realize Nantasket Beach potential** – Restore Nantasket beach to its full potential as a regional destination not just for beachgoers but for on-foot visits between the beach and local businesses, restaurants and entertainment.
- **Enhance Existing Businesses and Create Jobs –**by slowing traffic, adding curbside parking in front of businesses and creating more of a downtown-like feel, rather than today's highway-like environment.
- **Respond to Town's Changing Demographics** – by creating a more pedestrian, bicycle and ADA-friendly environment, the Town will continue to develop as a place where retirees and younger generations can live a "car-lite" existence.

STUDY AREA

The limits of the study include Nantasket Avenue, Hull Shore Drive / Franklin Drive, and George Washington Boulevard from Phipps Street to the north and DCR Lot #4 to the south. This report provides a summary of the traffic engineering, operational, and roadway design analyses that were evaluated during the traffic circulation study. The study provides an evaluation of traffic operations for the study area intersections under existing and future conditions. The future year planning horizon examines traffic operations under a 10-year design horizon (2025) for traffic-volume projections, which includes an evaluation of the no-build conditions (no change in traffic flow) and build conditions (conversion to two-way traffic flow). These conditions are compared to determine what, if any, additional improvements may be necessary to provide reasonable traffic operations in the area after the two-way flow conversion is implemented.

In addition, the two-way conversion of roadways around Nantasket Beach is anticipated to open the redevelopment potential of approximately 12.5 acres between Phipps Street and Water Street. This redevelopment potential is anticipated to consist of a mix of residential, retail, and lodging uses between Nantasket Avenue and Franklin Drive (referred to as Hull Shore Drive in future conditions). The new and converted streets would add sufficient on-street parking to replace a large portion of the current off-street beach parking supply, allowing redevelopment to proceed without impacting visitation.

Study Area Locations

The study area was selected to contain the major roadways and intersections providing local and regional access to the Nantasket Beach area. The following existing intersections were included in the study area:

- Hull Shore Drive Extension / Manomet Avenue
- Hull Shore Drive Extension / Phipps Street
- Samoset Avenue / Phipps Street
- Nantasket Avenue / Phipps Street / Mountford Road
- Nantasket Avenue NB / Samoset Avenue [Nantasket Avenue SB / Whitehead Avenue]
- Nantasket Avenue / Edgewater Avenue
- Hull Shore Drive / Franklin Drive
- Hull Shore Drive / Water Street
- Nantasket Avenue / Water Street
- Hull Shore Drive / Parrot Lot Driveway (DCR Town Lot)
- Nantasket Avenue / Parrot Lot Driveway (DCR Town Lot)
- Hull Shore Drive / DCR Parking Lot 1
- Nantasket Avenue / George Washington Boulevard / Bay Street
- Nantasket Avenue / Hull Shore Drive
- Nantasket Avenue / DCR Parking Lot 2 Exit
- Nantasket Avenue / Wharf Avenue / DCR Parking Lot 2 Entrance
- George Washington Boulevard / Wharf Avenue / Mc Duff's Landing
- Nantasket Avenue / DCR Parking Lot 3
- Nantasket Avenue / DCR Parking Lot 4

In addition to existing intersections, eight (8) new intersections are anticipated within the Nantasket Beach area between Phipps Street and Bay Street to support the two-way flow conversion and the redevelopment potential along the beachfront. These intersections include:

- Hull Shore Drive / A Street
- Nantasket Avenue / A Street
- Hull Shore Drive / Edgewater Avenue (extended)
- Hull Shore Drive / B Street
- Nantasket Avenue / B Street
- Hull Shore Drive / C Street
- Nantasket Avenue / C Street
- Hull Shore Drive / Bay Street (extended)

The study area intersections and roadway jurisdiction map is shown graphically in Figure 1.

1" = 400'

Nantasket Beach Two-Way Traffic Conversion - Hull, Massachusetts

Traffic Feasibility and Circulation Study



Existing One-Way Flow Traffic Pattern



Potential Two-Way Flow Traffic Pattern

Figure 1

Study Area Location Map

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EXISTING CONDITIONS

The existing network of streets as part of this study comprises Nantasket Avenue, Hull Shore Drive, the Hull Shore Drive Extension, and George Washington Boulevard as well as some smaller side streets. These roads form a one-way couplet north of Anastos Corner, with Hull Shore Drive providing northerly access and Nantasket Avenue access to the south. All northbound traffic from George Washington Boulevard and Nantasket Avenue is forced onto Hull Short Drive at Miller's Crossing, while all southbound traffic from the beach parking lots, Phipps Street, and other local roads is forced onto Nantasket Avenue at Phipps Street. This configuration leads to the following issues, as highlighted above:

- Congestion as merging traffic is forced onto a single one-way road in either direction;
- Limited walkability with long crossings, large blocks, and fast-moving one-way traffic when congestion is absent;
- Potential for higher-speed traffic as there are fewer conflicts drivers must consider on a two-lane one-way link; and
- Severe conflicts at Anastos Corner, Miller's Crossing, and at Phipps Street and Nantasket Avenue as merging flows converge, conflicting with local traffic trying to use the rest of Nantasket Avenue to the neighborhoods north and south of the beach.

Geometry

A comprehensive field inventory of existing traffic conditions at the study area intersections was conducted by TEC staff in July and August 2015 to obtain information related to intersection geometry and lane usage. The field investigation consisted of an inventory of existing roadway geometrics, operating characteristics, and safety characteristics. A description of the existing roadway and intersection inventory is provided below.

Roadways

Nantasket Avenue

Image 7: Nantasket Avenue Southbound, north of Anastos Corner



Nantasket Avenue is a two to four-lane northwest-southeast urban minor arterial maintained by the Massachusetts DCR south of Bay Street and the Town of Hull north of Bay Street. Between Water Street and Hull Shore Drive, Nantasket Avenue provides one-way flow southbound with Hull Shore Drive serving as its one-way pair northbound. Nantasket Avenue provides local connection between State Route 228 and Hingham to the south and the residential section of Hull to the north. The posted speed limit along the roadway is 30 miles per hour (MPH) in the

vicinity of Nantasket Beach; however higher speeds were observed on the "freeway" segment of Nantasket Avenue between Phipps Street and Water Street. On-street parking is provided within marked locations along both sides of Nantasket Avenue for large portions of its length. Between Miller's Crossing to the north and State Park Road to the south, Nantasket Avenue provides access/egress to multiple DCR surface parking lots. Land uses along Nantasket Avenue include retail, commercial, recreational, and residential uses.

A short segment of Nantasket Avenue was recently reconstructed between Water Street to the north and Bay Street to the south. The segment features parallel on-street parking spaces defined by sidewalk bump-outs, multiple enhanced pedestrian crossing locations, a southbound bicycle lane, and several streetscape features; including ornamental street lighting, pedestrian benches, and public shade trees. The Town of Hull and the HRA has expressed its desired to shape the character of any flow conversion project similar to the atmosphere of this segment of Nantasket Avenue.

Hull Shore Drive

Image 8: Hull Shore Drive, south of Water Street



Hull Shore Drive is a two-lane northwest-southeast urban minor arterial maintained by the Town of Hull. The roadway provides one-way flow northbound with Nantasket Avenue serving as its one-way pair southbound. Hull Shore Drive provides a one-way couplet connection adjacent to Nantasket Beach. The posted speed limit along the roadway is 30 MPH in the vicinity of Nantasket Beach. On-street parking is provided along the easterly side of the roadway between Water Street and Nantasket Avenue. Land uses along Hull Shore Drive include retail, commercial, and recreational uses.

During the summer time weekday and weekend peak hours, the traffic operation characteristics of Hull Shore Drive change as there is a significant increase in on-street parking maneuvers and pedestrian crossing maneuvers. Although there are three (3) marked crossing locations between Nantasket Avenue and Water Street, pedestrians tend to cross at all locations from the retail and restaurants uses along the westerly side of the roadway and the on-street parking and beachfront along the easterly side of the roadway. This forces vehicles travelling along Hull Shore Drive to break and yield several times during the 1,600 foot stretch of road causing congestion and long queues that tend to back-up into the Miller's Crossing intersection.

George Washington Boulevard

George Washington Boulevard is a four-lane north-south urban minor arterial maintained by the Massachusetts Department of Transportation (MassDOT). George Washington Boulevard provides local connection between Rockland Street and Hingham to the south and

Anastos Corner to the north. The posted speed limit along the roadway is 35 MPH in the vicinity of Nantasket Beach. Generally, speeds were observed in excess of the posted speed limits along George Washington Boulevard due to the arterial nature of the roadway. There is no on-street parking provided on either side of the roadway. Land uses along George Washington Boulevard include retail, commercial, recreational, and residential uses.

Image 9: George Washington Boulevard at Wharf Street



Currently, George Washington Boulevard provides access/egress to a large remote surface parking field of 230 parking spaces under the jurisdiction of the Town. The Town of Hull has indicated that this parking field is underutilized due to its distance to/from the Nantasket Beach shoreline and the proximity of more convenient parking facilities closer to the beachfront, retail, and restaurant destinations.

Key Locations

Anastos Corner and Miller's Crossing

The adjacent intersections of George Washington Boulevard / Nantasket Avenue / Bay Street and George Washington Avenue / Hull Shore Drive / Nantasket Avenue form what is known as Anastos Corner and Miller's Crossing, respectively. The two intersections are separated by approximately 300 linear feet.

Image 10: Nantasket Avenue Southbound through Anastos Corner



The intersection of George Washington Boulevard / Nantasket Avenue / Bay Street is a four-legged, skewed unsignalized intersection. Nantasket Avenue is one-way southbound through the intersection. The George Washington Boulevard eastbound approach has recently been restriped as one travel lane at Nantasket Avenue allowing right-turn movements only. Bay Street eastbound, consisting of a single general-purpose travel lane, enters George Washington Boulevard immediately south of Nantasket Avenue. The intersection serves as a major split for Nantasket Avenue southbound traffic exiting Hull and Nantasket Beach. Traffic volumes at this location showed approximately a 60%/40% split for the right-turn onto George Washington and continuing through on Nantasket Avenue, respectively. Due to the high right-turn volumes, in addition to significant pedestrian crossing maneuvers, queues tend to

extend north from this intersection during heavy summertime beach traffic, especially during the major beach exiting events, such as high tide or a sudden weather event.

Image 11: Hull Shore Drive at Nantasket Avenue at the Southern Edge of Miller's Crossing



The intersection of George Washington Boulevard / Hull Shore Drive / Nantasket Avenue is a four-legged, skewed signalized intersection. The Nantasket Avenue northbound approach consists of two exclusive right-turn lanes with direction flow separated by a marked centerline. The Nantasket Street southbound approach is one-way entering the intersection and consists of two through lanes with posted turn restrictions for both right and left-turns. The George Washington Boulevard eastbound approach is one-way entering the intersection and consists of a through lane and a shared through/right-turn lane. The Hull Shore Drive leg of the intersection is one-way flow exiting the intersection. This intersection serves as the start/end of one-way traffic flow along Nantasket Avenue and Hull Shore Drive, north of the intersection. Upon observation, the Miller's Crossing signalized intersection operates at an acceptable level-of-service as stand-alone intersections. However, pedestrian activity and on-street parking maneuvers during the summertime peak hours along Hull Shore Drive, immediately north of the intersection, generally force vehicles to queue back through the intersection, causing congestion along each intersection approach.

Kenberma Square

Image 12: Phipps Street Westbound entering Kenberma Square



Phipps Street and Mountford Road intersect Nantasket Avenue to form a four-way unsignalized intersection known as Kenberma Square. The intersection serves as the major egress point for vehicles exiting the northern section of the Nantasket Beach waterfront and the several DCR parking fields along Hull Shore Drive Extension (Franklin Drive). Both the Nantasket Avenue northbound and southbound approaches consist of single general-purpose travel lanes with directional flow separated by a marked centerline. The Mountford Road eastbound approach consists of a single general-purpose travel lane with directional flow unmarked. The Phipps Street westbound approach is one-way entering the intersection providing both exclusive left-turn and right turn lanes. Vehicles from Phipps Street attempting to cross Nantasket Avenue to Mountford Road typically utilize the exclusive left-turn lane to do so.

During the summertime peak periods, Phipps Street experiences periods of considerable queuing. This typically occurs at the end of high-use beach day, at the end of high-tide, or at the start of a weather event which clears the beach of beachgoers. Upon observation, the queue from the Phipps Street approach to Nantasket Street extends back through the unsignalized intersection with Samoset Avenue and then extends down the Hull Shore Drive Extension (Franklin Drive) towards the parking lot egresses. During times of heavy traffic congestion, such as a sudden weather event, the Town of Hull Police Department locates a traffic officer at the intersection to direct traffic and assists in emptying the several northerly parking lots.

Parking Facilities

On-street spaces and both paved and unpaved surface parking fields combine to provide over 1,400 surface parking spaces along the Nantasket Beach beachfront. These parking spaces are serviced by either the Town of Hull or the Massachusetts DCR. During the summer months, parking is considerably more utilized than during other times of the year. Operations at the DCR parking fields include attendants for parking fee collection. General park passes are also sold to residents for all DCR parks.

Image 12: Entrance to One of Several Parking Fields along Hull Shore Drive Extension



Based on parking inventory numbers provided by Louis Berger as part of the *Nantasket Beach Seawall Repair and Reservation - Master Plan Services – Existing Infrastructure*, dated September 2006, a total of 1,405 parking spaces are provided within the several on-street and surface parking fields along Nantasket Beach. Table 1 below (Table 3-5 from Louis Berger) provides a breakdown of the several parking facilities.

Table 1 – Marked Parking Spaces at Nantasket Beach

Lot Name	Lot Location	Spaces	Comments
Parking Lots			
Lot #4	Nantasket Ave, south of Tivoli Bathhouse	332	
Lot #3	Nantasket Ave, Tivoli Bathhouse to Bernie King Pavilion	136	
Lot #2	Nantasket Ave, Bernie King Pavilion to MJM Bath House	81	
Lot #1	Nantasket Ave, north of MJM Bath House	90	
DCR (Parrot) Lot	Between Nantasket Ave and HSD, south of Red Parrot	57	
Lot near Quincy St.	Between Nantasket Ave and HSD, south of Quincy St	109	
Parking Areas			
Blocks 101-111, 201	Nantasket Ave, from south to Bernie King Pavilion	66	
Area 1	HSD, south of Water Street	89	
Area 5	Nantasket Ave, north of Bay Street	36	
Area 4	Nantasket Ave, north of Sagamore Terrace	21	
Area 3	North of Bay Street, west of Nantasket Ave	14	On grass
Area 2	North of Water Street	48	On grass
Hull Shore Drive	HSD, between Water Street and Phipps Street	50	Estimate
Remote Lots			
Remote Lot 1	George Washington Blvd.	46	
Remote Lot 2	George Washington Blvd.	230	
Total Spaces		**1,405**	

Hull Shore Drive Angled Parking

As shown in Table 1, there are currently 89 parking spaces along the easterly side of the Hull Shore Drive, between the DCR (Parrott) Lot and Water Street, along the seawall that are angled parking spaces. These spaces require more time for drivers to exit as sight lines are typically obstructed by the adjacent parked vehicles. These parking maneuvers along this segment of Hull Shore Drive, along with many pedestrian movements, tend to cause additional delay for vehicles travelling along Hull Shore Drive. This congestion typically backs into the Miller's Crossing intersection of Nantasket Beach / George Washington Boulevard / Hull Shore Drive.

Unmarked Surface Lots

The existing parking information that was provided by Louis Berger as part of this study does not included all grass parking spaces which are utilized during the summer months between Phipps Street and Water Street on the easterly side of Nantasket Avenue. That study identified 62 parking spaces in a grass surface lot; however, based on direct observation and past satellite images, an additional 800 to 900 parking spaces are available within these separated grass areas north of Water Street.

TRAFFIC VOLUMES

Base Year Traffic Volumes

In order to establish existing summertime traffic-volume conditions, manual Turning Movement Counts (TMCs) were conducted during the weekday evening (4:00 PM – 6:00 PM) peak periods on Tuesday, August 18, 2015 and during the Saturday midday (11:00 AM – 1:00 PM) peak period on Saturday, August 15, 2015 for the following study area intersections:

- Hull Shore Drive Extension / Phipps Street
- Samoset Avenue / Phipps Street
- Nantasket Avenue / Phipps Street / Mountford Road
- Hull Shore Drive / Franklin Drive
- Hull Shore Drive / Water Street
- Nantasket Avenue / George Washington Boulevard / Bay Street
- Nantasket Avenue / Hull Shore Drive
- Nantasket Avenue / Wharf Avenue / DCR Parking Lot 2
- George Washington Boulevard / Wharf Avenue / Mc Duff's Landing
    - *Weekday TMC conducted by CTPS on Thursday June 4, 2015*

To assess existing traffic volume conditions at additional study area intersections, TEC utilized historic summertime traffic volumes counts from May 1995, June 1995, August 2006, and September 2006 for the following study area intersections:

- Phipps Street / Manomet Street
- Nantasket Avenue / Edgewater Road
- Nantasket Avenue / Water Street / Bay Street

For these additional study area intersections, the overall through movements for mainline traffic were balanced with adjacent intersections to characterize 2015 summertime peak traffic volumes.

A detailed summary of the turning movement counts, partitioned into 15-minute intervals, is provided within Attachment A.

Base Year Parking Volumes

In order to establish an estimate of traffic-volumes entering and exiting the several surface parking fields along the study area corridors, TEC utilized parking utilization counts for each parking field that were collected on Saturday August 5, 2006 as part of the Louis Berger study, *Nantasket Beach Seawall Repair and Reservation - Master Plan Services – Existing Infrastructure*, dated September 2006. The parking counts as part of this study were conducted as a utilization count and not an entering and exiting turning movement count. Therefore, an exact number of vehicles entering and exiting the several parking field was

estimated comparing both the 2006 parking utilization study and the current 2015 turning movements counts for the several study area intersection locations that included a parking lot driveway.

Seasonal Adjustment

In accordance with MassDOT standards, traffic volumes are typically adjusted to average-month conditions. Based on a review of historic traffic-volume counts collected by MassDOT at a permanent count station along Route 3 in Norwell[1], Weymouth[2], and Hingham[3], traffic volumes in May are 3.1 percent higher, traffic volumes in May are 3.1 percent higher, traffic volumes in June are 8.5 percent higher, traffic volumes in August are 11.1 percent higher, and traffic volumes in September are 1.4 percent higher than average-month conditions. Therefore, all summertime traffic counts utilized in this study were unadjusted to provide a conservative traffic condition.

The compiled seasonal adjustment data is provided in Attachment B. The resulting 2015 Base Year Summertime Condition weekday evening and Saturday midday peak-hour traffic-volume networks are illustrated in Figure 2.

Existing Traffic Patterns

The existing distribution of resident/commuter and beach-goer traffic volumes is diverse. However, the Hull Shore Drive northbound and Nantasket Avenue southbound one-way sections funnel these two traffic streams into the same roadway segments, forcing conflicting moves due to differing destinations. The presence of on-street parking maneuvers and pedestrians crossings in both marked and unmarked locations exacerbates the bottleneck of traffic.

[1] MassDOT Permanent Count Station 36 – Norwell – Route 3 – South of River Street
[2] MassDOT Permanent Count Station 6255 – Weymouth – Route 3 – North of Route 18
[3] MassDOT Permanent Count Station 7318 – Hingham – Route 3 – Between Exits 14 and 15

1"=150'

Two-Way Traffic Circulation, Hull, Massachusetts

Traffic Impact Assessment



XX(XX) = Friday PM Peak (Saturday Midday Peak)

Figure 2-A

Graphical Traffic Network
2015 Base Year Conditions

TEC

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1"=150'

Two-Way Traffic Circulation, Hull, Massachusetts

Traffic Impact Assessment



See Inset for Continuation

XX(XX) = Friday PM Peak (Saturday Midday Peak)

Figure 2-B

Graphical Traffic Network
2015 Base Year Conditions

TEC

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Future Traffic Volumes

To determine traffic-volumes under future year conditions, baseline traffic volumes in the study area were projected to a future year (2025) to provide a 10-year design horizon. Traffic volumes on the roadway network at that time would include existing traffic, new traffic due to general background traffic growth, traffic related to the redevelopment potential of the Nantasket Beach waterfront, traffic redistribution related to the conversion of flow patterns. Consideration of these factors resulted in the development of the 2025 Future Year Condition traffic volumes.

Background Traffic Growth

Traffic growth is a function of the expected land development in the immediate area and the surrounding region. Several methods can be used to estimate this growth. A procedure frequently employed estimates an ambient growth rate for the area roadways and applies that percentage to all mainline and side street traffic volumes. The drawback to such a procedure is that some turning volumes may actually grow at either a higher or a lower rate at particular intersections.

An alternative procedure identifies the location and type of planned development, estimates the traffic to be generated, and assigns it to the area roadway network. This procedure produces a more realistic estimate of growth for local traffic. However, the drawback of this procedure is that the potential growth in population and development external to the study area would not be accounted for in the traffic projections.

To provide a conservative analysis framework, both procedures were used.

General Ambient Growth

To assess traffic growth along the several roadways and corridors adjacent to Nantasket Beach, historic summertime traffic volume counts at key intersections were obtained from the Central Transportation Planning Staff (CTPS). Over the past 10 years, traffic volumes during the weekday evening and Saturday midday peak hours have significantly decreased in the vicinity of Nantasket Beach. Specifically, comparable TMCs conducted in August (peak summertime counts) at the key intersections of Nantasket Avenue / Phipps Street / Mountford Street and Nantasket Street / George Washington Boulevard / Hull Shore Drive (Miller's Crossing) have decreased between 1 and 4 percent per year since 2006. Table 2 presents an overview of the decrease in summertime traffic volumes.

The Town of Hull has indicated that the decrease in traffic volumes in the vicinity of Nantasket Beach is linked to the increase in vacant development space along the waterfront. Many of the prior retail and restaurant establishments assisted in drawing tourism and beach-goers.

Table 2 – Traffic Growth per Year at Key Intersections

Intersections	Total Traffic Entering Intersection		
	August 2006	August 2015	% Change per Year
Nantasket Avenue / Phipps Street			
Weekday Evening Peak Hour	1,477	1,444	-0.8%
Saturday Midday Peak Hour	1,699	1,500	-4.1%
Miller's Crossing			
Weekday Evening Peak Hour	1,444	1,298	-1.2%
Saturday Midday Peak Hour	1,814	1,551	-1.7%

Although the Nantasket Beach section of the Town has recently experienced a decrease in overall traffic volumes, to provide a conservative analysis scenario, TEC used a 0.5 percent growth rate compounded annually to account for general background traffic growth, private developments not yet identified, and the potential reoccupancy of vacant space along Nantasket Beach.

2025 Future Year Summertime No-Build Traffic Volumes

The 2025 Future Year Summertime No-Build weekday evening and Saturday midday peak-hour traffic-volume networks were developed by applying the 0.5 percent per year compounded annual background traffic growth rate to the 2015 Base Year Summertime Conditions peak-hour traffic volumes over the 10-year design horizon. The resulting 2025 Future Year Summertime No-Build weekday evening and Saturday midday peak-hour traffic-volume networks are illustrated in Figure 3.

Two-Way Traffic Circulation, Hull, Massachusetts

Traffic Impact Assessment

1"=150'



XX(XX) = Friday PM Peak (Saturday Midday Peak)

Figure 3-A

Graphical Traffic Network
2025 Future Year Conditions
w/ Existing One-Way Geometry

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1"=150'

Two-Way Traffic Circulation, Hull, Massachusetts

Traffic Impact Assessment



XX(XX) = Friday PM Peak (Saturday Midday Peak)

See Inset for Continuation

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Figure 3-B

Graphical Traffic Network
2025 Future Year Conditions
w/ Existing One-Way Geometry

Conversion from One-Way to Two-Way Flow

Forecasting the traffic diversions for the conversion of one-way flow to two-way flow required many factors to be considered. One of the primary goals of the flow conversion in terms of traffic operations is to provide route separation between resident/commuter traffic, beach-goer traffic, and potential redevelopment traffic. Ideally resident/commuter traffic would tend to utilize the projected westernmost corridor while beach-going traffic would utilize the projected easternmost corridor along Nantasket Beach

The general strategy in the vicinity of Nantasket Beach is to provide for two parallel north-south corridors that operate both with two-way traffic flow. The westernmost corridor would consist of the existing George Washington Boulevard to the south and Nantasket Avenue, north of Bay Street, while the easternmost corridor would consist of the existing Nantasket Avenue to the south of Miller's Crossing, Hull Shore Drive, and the Hull Shore Drive Extension (Franklin Drive). To allow for cross-corridor flow, connecting the two main corridors will be several cross-streets, similar to the existing Water Street and Wharf Street connections. Providing several cross-streets within the Nantasket Beach area between Nantasket Avenue and the Hull Shore Drive Extension will allow for those vehicles needing to cross between the two corridors, to access the Nantasket Beach waterfront, or to visit the potential redevelopment area. Multiple cross connections allow traffic to disperse over several intersections without clustering at one location. This kind of clustering current occurs under existing conditions at Anastos Corner, Miller's Crossing, and Kenberma Square. Figure 9 depicts the general flow configuration schematic before and after the conversion of one-way flow to two-way flow.

Several steps were outlined to mark predictable traffic reassignment decisions once two-way flow is provided. These strategies are further defined in this section.

Specific Link Closures

Providing a consistent two-way flow pattern along Nantasket Avenue and Hull Shore Drive requires the closure of a series of roadway links and the corresponding redistribution of traffic volumes to divert from these links. These include:

- *Samoset Avenue between Nantasket Avenue and Phipps Street* – Existing one-way northbound traffic along this link would divert to Nantasket Avenue through the intersection of Nantasket Avenue / Phipps Street / Mountford Road or have previously diverted to Hull Shore Drive Extension, accessing Samoset through the intersection of Hull Shore & Phipps,
- *Hull Shore Drive between Water Street and Nantasket Avenue* – Existing one-way northbound traffic along this link would divert to Hull Shore Drive Extension (Franklin Drive) or would have previously diverted to Nantasket Avenue directly at Miller's Crossing or via several existing or proposed cross-streets, and

1" = 400'

Nantasket Beach Two-Way Traffic Conversion - Hull, Massachusetts
Traffic Feasibility and Circulation Study



Existing One-Way Flow Traffic Pattern



Potential Two-Way Flow Traffic Pattern

Figure 4

Before and After Flow Conversion Schematic

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- *Nantasket Avenue between Hull Shore Drive and Bay Street* – Existing northbound traffic along this link would divert to Hull Shore Drive or cross-over to Nantasket Avenue via several existing or proposed cross-streets. Existing southbound traffic along this link would divert to George Washington Boulevard or would have previously diverted to Hull Shore Drive via several existing or proposed cross-streets.

Introduction of Cross-Streets

There are currently four (4) cross-streets or locations that connect Nantasket Avenue with the parallel roads of George Washington Boulevard, Hull Shore Drive, or Hull Shore Drive Extension. These include Wharf Street, Miller's Crossing, Water Street, and Phipps Street. As part of the conversion to two-way traffic, up to nine (9) cross-streets will be reconfigured or introduced into the traffic network; including (from south to north):

- Wharf Street (existing)
- George Washington Boulevard (reconfigured Miller's Crossing)
- Bay Street (new connection at Anastos Corner)
- Water Street (existing)
- C Street (new construction)
- B Street (new construction)
- Edgewater Road Extension (new connection)
- A Street (new construction)
- Phipps Street (existing)

Introducing cross-streets into the traffic network allows for traffic to better redistribute between the George Washington Boulevard / Nantasket Avenue corridor and the Nantasket Avenue / Hull Shore Drive corridor. Cross-streets also provide additional locations for on-street parking facilities, access to the potential redevelopment area, and access to off-street parking facilities. The several cross-streets, particularly those four (4) defined between Phipps Street and Water Street, will provide several alternative opportunities for beach-going traffic to access and egress the waterfront and parking facilities; decreasing the operational challenges that are common along Phipps Street in the present.

TEC estimated the potential for traffic to utilize the cross-streets, specifically those resident/commuter trips wishing to continue through the entire network, by assigning a uniform percentage of traffic for each street. Although the cross-streets are expected to be utilized as a cut-through opportunity from each corridor, a significant portion of the resident/commuter trips were assumed to cross to/from the easternmost corridor (Nantasket Beach and Hull Shore Drive) and the westernmost corridor (Nantasket Avenue and George Washington Boulevard) prior to the study area. North of Nantasket Beach, more than half a dozen cross-streets exist between the two corridors and provide southbound residents/commuters an opportunity to cross prior to reaching the Nantasket Beach area. To the south of the study area, Rockland House Road in Hull and Rockland Street in Cohasset provide an opportunity for northbound residents/commuters to cross prior to the

Nantasket Beach area. Much of the through traffic would also be expected to utilize the nine (9) cross-streets.

The forecasting of traffic volumes as a result of the redistribution are presented in Attachment C.

Nantasket Beach Redevelopment Potential

The two-way conversion of roadways around Nantasket Beach is anticipated to open the redevelopment potential of approximately 12.5 acres between Phipps Street and Water Street. This redevelopment potential is anticipated to consist of a mix of residential, retail, and lodging uses between Nantasket Avenue and the Hull Shore Drive Extension (Franklin Drive). Several new cross-street connections would greatly improve access/egress from redevelopment pads and allow for more opportunities for on-street parking. These Streets would be evenly spaced between Phipps Street and Water Street.

For the purpose of this Traffic Circulation Study, it was assumed that four (4) cross-streets would be proposed, including the extension of Edgewater Road to the Hull Shore Drive Extension. To assess the traffic impacts of any redevelopment potential, TEC assumed a conservative multi-use build program including 135 residential townhouse units, a 148-room hotel, and 65,000 square feet (SF) of specialty retail space. Potential site-generated traffic-volumes for the redevelopment were estimated based on industry standard trip rates published in the Institute of transportation Engineers (ITE) publication, *Trip Generation, 9th Edition* for Land Use Codes (LUC) 230 – Condo/Townhouse, LUC 310 – Hotel, and LUC 820 – Shopping Center. It is anticipated that the trip generation rates for LUC 820 – Shopping Center would include the potential for both specialty retail and restaurant type uses.

Internal Capture

It is reasonable to expect that some trips to the potential redevelopment will be shared between the multiple land uses and the general beach-going visitors. For example, someone residing in the condo/townhouses may choose to dine at the restaurant establishment on-site or a general beach-goer may choose to shop at one of the retail shops. Therefore, a reduction in the overall trips experienced at the site driveways and along the adjacent roadway network can be anticipated as a result of multi-use trips that include stops at more than one use on the site and along Nantasket Beach. TEC has identified that the site has the potential to include up to a 30 percent reduction in overall trip generation as a result of the land uses on-site and the proximity to Nantasket Beach.

Pass-by Traffic

Not all of the trips generated by the proposed retail portions of the redevelopment will be new to the roadway network. Many of the trips generated by the proposed development are already present in the existing traffic flow passing by the site. For example, some vehicles which are already travelling along Nantasket Avenue may decide to visit the site on their way to another destination. These vehicle trips are known as "pass-by" trips and are subtracted from the total trips to calculate the total primary (or "new") trips that affect the volume of traffic within the study area away from the site. It is reasonable to anticipate that

due to the commuter nature of "through" traffic along Nantasket Avenue and Hull Shore Drive that a portion of the trips would be pass-by. Based on information contained in the ITE publication *Trip Generation Handbook, 3rd Edition*, approximately 26 to 34 percent of the retail site-generated traffic is expected to be pass-by traffic.

The forecasting of traffic volumes as a result of the potential redevelopment are presented in Attachment C. The detailed trip generation calculation worksheets are provided in Attachment D.

2025 Future Year Build Traffic Volumes

The 2025 Future Year Build traffic volumes were obtained by applying the two-way conversion redistribution to the 2015 Base Year Condition traffic volumes and adding traffic to be generated by the redevelopment potential along the Nantasket Beach waterfront between Phipps Street and Water Street. The resulting 2025 Future Year Build Traffic Volume networks are presented in Figure 5.

1"=150'



XX(XX) = Friday PM Peak (Saturday Midday Peak)

Figure 5-A

Graphical Traffic Network
2025 Future Year Conditions
w/ Proposed Two-Way Geometry

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1"=150'



See Inset for Continuation

Figure 5-B

Graphical Traffic Network
2025 Future Year Conditions
w/ Proposed Two-Way Geometry

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TRAFFIC IMPACT ANALYSIS

Measuring existing and future traffic-volumes quantifies traffic flow within the study area. To assess quality of flow, roadway capacity and vehicle queue analyses were conducted under 2015 Base Year Conditions, 2025 Future Year No-Build Conditions, and 2025 Future Year Build Conditions. Capacity analyses provide an indication of how well the roadway facilities serve the traffic demands placed upon them, with vehicle queue analyses providing a secondary measure of the operational characteristics of an intersection or section of roadway under study. Synchro 8.0™ / SimTraffic simulation software was used to perform the analysis.

Methodology for Analyzing Traffic Operations

The unsignalized and signalized intersection capacity and queue analysis was conducted using methodology from SimTraffic software in order to provide characteristics intersection-to-intersection on a network-wide scale. Typically, Synchro v8 analyzes intersections on a microscopic scale based on the *Highway Capacity Manual (HCM).* As a result, the analysis does not interpolate how a specific intersection is functioning as a result of additional intersections both upstream and downstream. As the roadways and intersections in and around Nantasket Beach operate collectively during the summertime and during extreme weather events, the use of SimTraffic software was determined to be more appropriate to show traffic operations within the study area.

Levels of Service

A primary result of capacity analyses is the assignment of level-of-service to traffic facilities under various traffic-flow conditions.[4] The concept of level-of-service is defined as a qualitative measure describing operational conditions within a traffic stream and their perception by motorists and/or passengers. A level-of-service definition provides an index to quality of traffic flow in terms of such factors as speed, travel time, freedom to maneuver, traffic interruptions, comfort, convenience, and safety.

Six levels of service are defined for each type of facility. They are given letter designations from A to F, with level-of-service (LOS) A representing the best operating conditions and LOS F representing the worst. Although SimTraffic software does not fully-adhere to methodologies posed in the *HCM*, the LOS scale A-F was utilized to present a representation of traffic operations intersection by intersection within the network.

Since the level of service of a traffic facility is a function of the traffic flows placed upon it, such a facility may operate at a wide range of levels of service, depending on the time of day, day of week, or period of year.

[4] The capacity analysis methodology is based on the concepts and procedures presented in the *Highway Capacity Manual 2010*; Transportation Research Board; Washington, DC; 2010.

Queue Length Analysis

Vehicle queue analyses are a direct measurement of an intersection's ability to process vehicles under various traffic control and volume scenarios and lane use arrangements.

The vehicle queue analysis was performed using the SimTraffic simulation software which is also based upon the methodology and procedures presented in the *HCM*. SimTraffic reports both the 50th (average) and 95th percentile vehicle queues for unsignalized and signalized intersections, which are based on the number of vehicles that experience a delay of six seconds or more at an intersection and is a function of the traffic signal timing; vehicle arrival patterns during the analysis period; and the saturation flow rate. The 50th percentile or average vehicle queue is the average number of vehicles that are projected to be delayed by six seconds or more at the intersection under study during the analysis period. The 95th percentile vehicle queue is the vehicle queue length that will be exceeded only 5 percent of the time; or approximately three minutes out of sixty minutes during the peak one hour of the day. During the remaining fifty-seven minutes, the vehicle queue length will be less than the 95th percentile queue length.

Parameters for Traffic Impact Analysis

Unsignalized Intersections

Level of service is measured in terms of average control delay. Mathematically, control delay is a function of the capacity and degree of saturation of the lane group and/or approach under study and is a quantification of motorist delay associated with traffic control devices such as traffic signals and STOP signs. Control delay includes the effects of initial deceleration delay approaching a STOP sign, stopped delay, queue move-up time, and final acceleration delay from a stopped condition. Definitions for level of service at unsignalized intersections are also given in the *HCM 2000*. Although SimTraffic software does not fully-adhere to methodologies posed in the *HCM*, the LOS scale A-F was utilized to present a representation of traffic operations intersection by intersection within the network. Table 3 summarizes the relationship between level of service and average control delay.

Table 3 – Level-of-Service Criteria for Unsignalized Intersections[a]

Level of Service	Average Control Delay (seconds per vehicle)	Description
A	≤10.0	LOS A represents a condition with little or no control delay to minor street traffic.
B	10.1 to 15.0	LOS B represents a condition with short control delays to minor street traffic.
C	15.1 to 25.0	LOS C represents a condition with average control delays to minor street traffic.
D	25.1 to 35.0	LOS D represents a condition with long control delays to minor street traffic.
E	35.1 to 50.0	LOS E represents operating conditions at or near capacity level, with very long control delays to minor street traffic.
F	>50.0	LOS F represents a condition where minor street demand volume exceeds capacity of an approach lane, with excessive control delays resulting.

[a] Source: *Highway Capacity Manual 2000*; Transportation Research Board; Washington D.C.; 2000

Signalized Intersections

Although SimTraffic software does not fully-adhere to methodologies posed in the *HCM*, the LOS scale A-F was utilized to present a representation of traffic operations intersection by intersection within the network. This method assesses the effects of signal type, timing, phasing, progression; vehicle mix; and geometrics on delay. LOS designations are based on the criterion of control or signal delay per vehicle. Control or signal delay can be related to driver discomfort, frustration, and fuel consumption, and includes initial deceleration delay approaching the traffic signal, queue move-up time, stopped delay and final acceleration delay. Table 4 summarizes the relationship between LOS and control delay. The tabulated control delay criterion may be applied in assigning LOS designations to individual lane groups, to individual intersection approaches, or to entire intersections.

Table 4 – Level-of-Service Criteria for Signalized Intersections[a]

Level of Service	Average Control Delay (seconds per vehicle)	Description
A	≤10.0	LOS A describes operations with very low control delay; most vehicles do not stop at all.
B	10.1 to 20.0	LOS B describes operations with relatively low control delay. However, more vehicles stop than LOS A.
C	20.1 to 35.0	LOS C describes operations with higher control delays. Individual cycle failures may begin to appear. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.
D	35.1 to 55.0	LOS D describes operations with control delay in the range where the influence of congestion becomes more noticeable. Many vehicles stop and individual cycle failures are noticeable, whereby motorists are not able to get through the signal on one cycle.
E	55.1 to 80.0	LOS E describes operations with high control delay values. Individual cycle failures are frequent occurrences.
F	>80.0	LOS F describes operations with high control delay values that often occur with over-saturation. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

[a] Source: *Highway Capacity Manual 2000*; Transportation Research Board; Washington D.C.; 2000

Traffic Impact Analysis Results

Capacity and queue analyses were conducted for the 2015 Base Year Summertime Conditions as well as the 2025 Future Year Build Summertime Conditions. Figures 6 and 7 depict the base year and future year level-of-service for the several key intersection and individual intersection approaches within the study area. Figures 8 and 9 depict the base year and future year 95th percentile queues on each of the key intersection approaches. Figures 10 through 13 depict the base year and future year estimated travel times through the networks from various locations. The SimTraffic capacity and queue analysis worksheets are provided in Attachment E.

A key aspect and primary goal of the conversion of two-way flow is to not significantly alter or improve the travel experience of those residents/commuters who wish to traverse the entire network. However, in the narrowed neck of land that makes up Nantasket Beach, additional vehicle delay and queues are expected during the peak summertime months and

during those times of peak congestion, such as the end of high-tide and the start of a weather event. The key location of significant change in level-of-service is Kenberma Square. The introduction of multiple cross-streets and two-way flow allow for the degraded level-of-service and long vehicle queues along Phipps Street and Hull Shore Drive Extension to be dispersed in the future over the multiple cross-streets that are proposed to connect between Hull Shore Drive Extension and Nantasket Avenue. As a result of the dispersal, delay per vehicle is no longer compounded by all exiting beach vehicles sitting in a single line of traffic, waiting for a singular gap in the cross-traffic along Nantasket Avenue.

Network Travel Times

Estimated travel times provide an excellent indication of the network-wide operations as a whole. As shown in Figures 10 through 13, the travel times for through traffic on the two parallel two-way flow corridors is relatively unchanged between the 2015 Base Year and the 2025 Future Year Build and should be remain between 2 to 4 minutes pending on the specific origin and destination. What is anticipated to change along these two corridors is the experience during each vehicle trip where the dispersion of traffic will allow for a more consistent flow of traffic and travel speed, as oppose to the inconsistent delays and speeds that exist today on the "freeway" versus "downtown" sections of Nantasket Avenue and Hull Shore Drive.

The estimated travel time exiting the northern section of Nantasket Beach is anticipated to dramatically improve. Whereas it is not uncommon to experience over ten (10) minutes of travel on a typical summertime Saturday midday when exiting the DCR Lots along Hull Shore Drive Extension and passing south to George Washington Boulevard, the introduction of the several cross-streets and two-way flow is expected to significantly improve the travel time exiting the beach area to between 2 and 3 minutes, depending on the specific origin and destination. It is understood that during a weather or similar event, when beach-goers exit all at once, travel times may be more than this 2 to 3 minutes through the network; however the travel time should be proportionally lower than the travel times experienced today.

1" = 400'

Nantasket Beach Two-Way Traffic Conversion - Hull, Massachusetts

Traffic Feasibility and Circulation Study



Existing One-Way Flow Traffic Pattern



Potential Two-Way Flow Traffic Pattern

Figure 6

Levels-of-Service
Weekday Evening
Peak Hour Traffic Volumes

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Nantasket Beach Two-Way Traffic Conversion - Hull, Massachusetts

Traffic Feasibility and Circulation Study



Existing One-Way Flow Traffic Pattern



Potential Two-Way Flow Traffic Pattern

Figure 7

Levels-of-Service
Saturday Midday
Peak Hour Traffic Volumes

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Nantasket Beach Two-Way Traffic Conversion - Hull, Massachusetts

Traffic Feasibility and Circulation Study



Existing One-Way Flow Traffic Pattern



Potential Two-Way Flow Traffic Pattern

Figure 8

95th Percentile Queue
Weekday Evening
Peak Hour Traffic Volumes

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Nantasket Beach Two-Way Traffic Conversion - Hull, Massachusetts

Traffic Feasibility and Circulation Study



Existing One-Way Flow Traffic Pattern



Potential Two-Way Flow Traffic Pattern

Figure 9

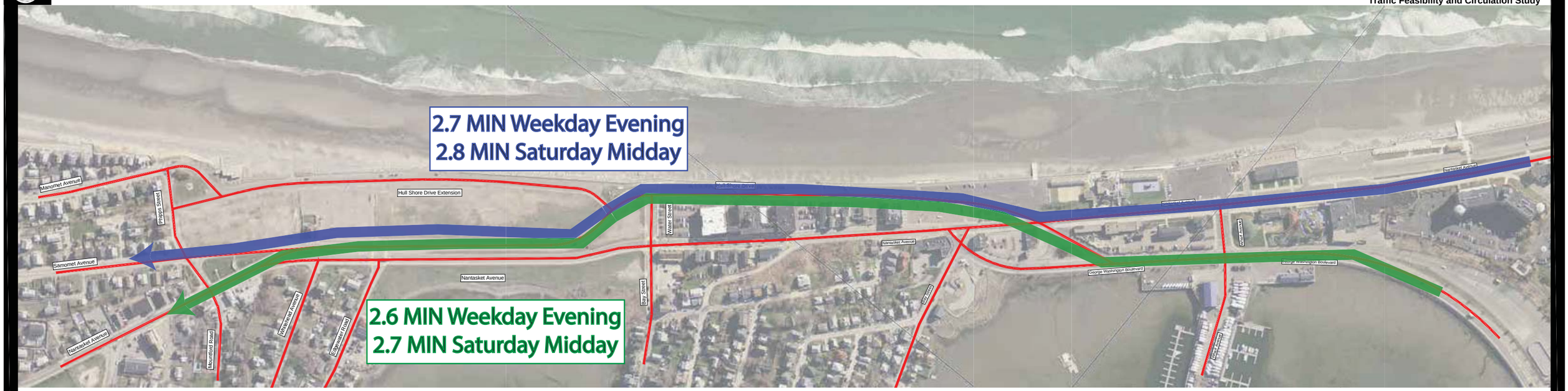
95th Percentile Queue
Saturday Midday
Peak Hour Traffic Volumes

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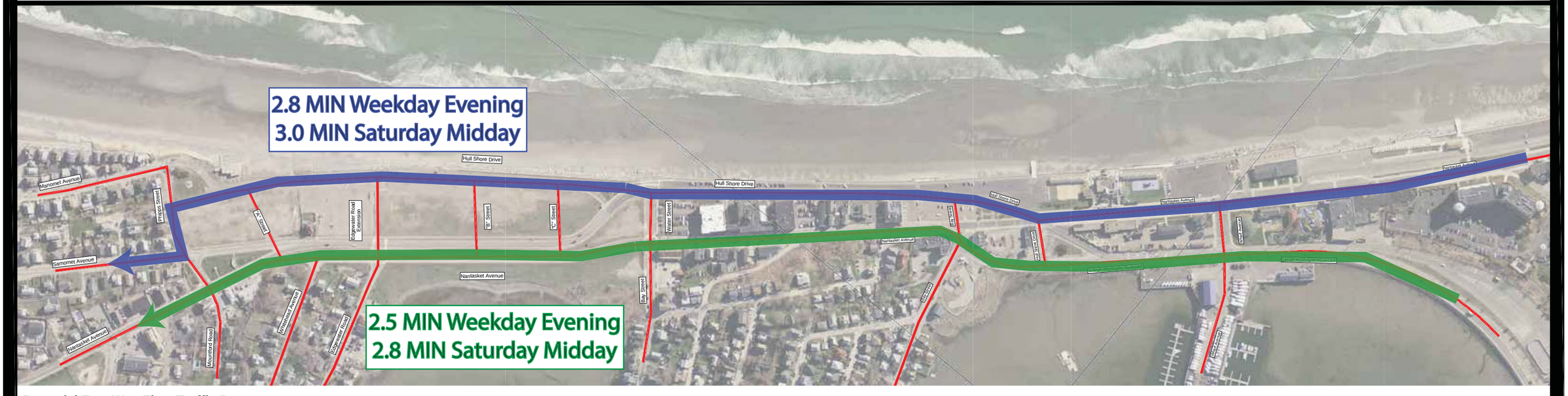
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Nantasket Beach Two-Way Traffic Conversion - Hull, Massachusetts

Traffic Feasibility and Circulation Study



Existing One-Way Flow Traffic Pattern



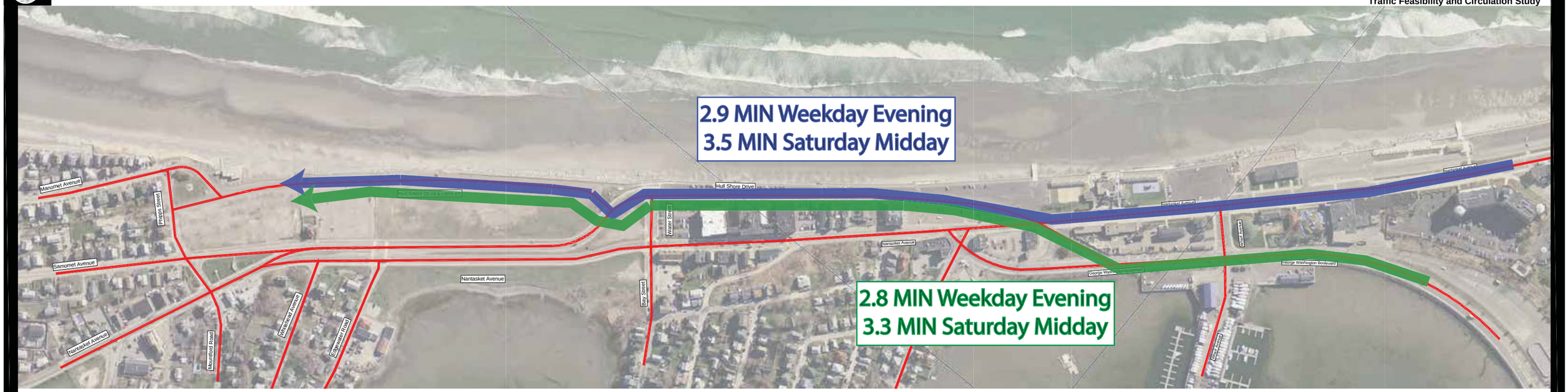
Potential Two-Way Flow Traffic Pattern

Figure 10

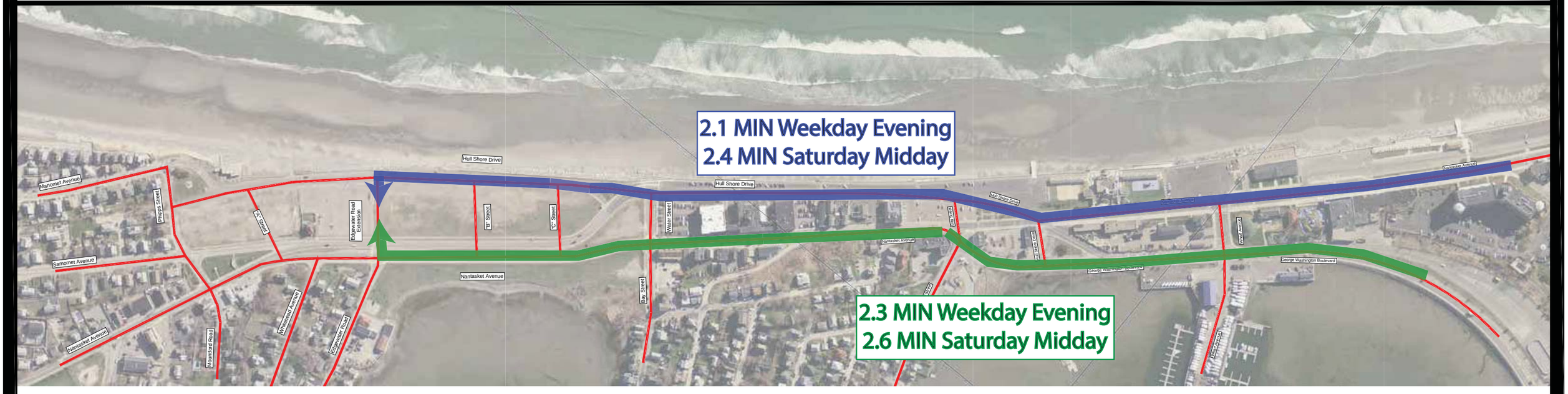
Travel Time
Resident/Commuter Traffic
Start: From South
Peak Hour Traffic Volumes

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1" = 400'



Existing One-Way Flow Traffic Pattern

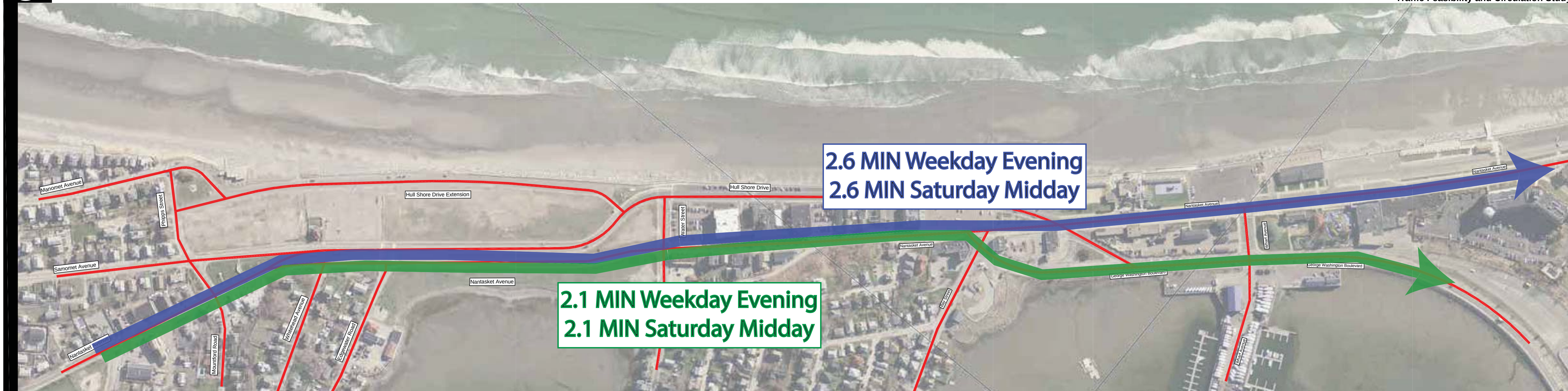


Potential Two-Way Flow Traffic Pattern

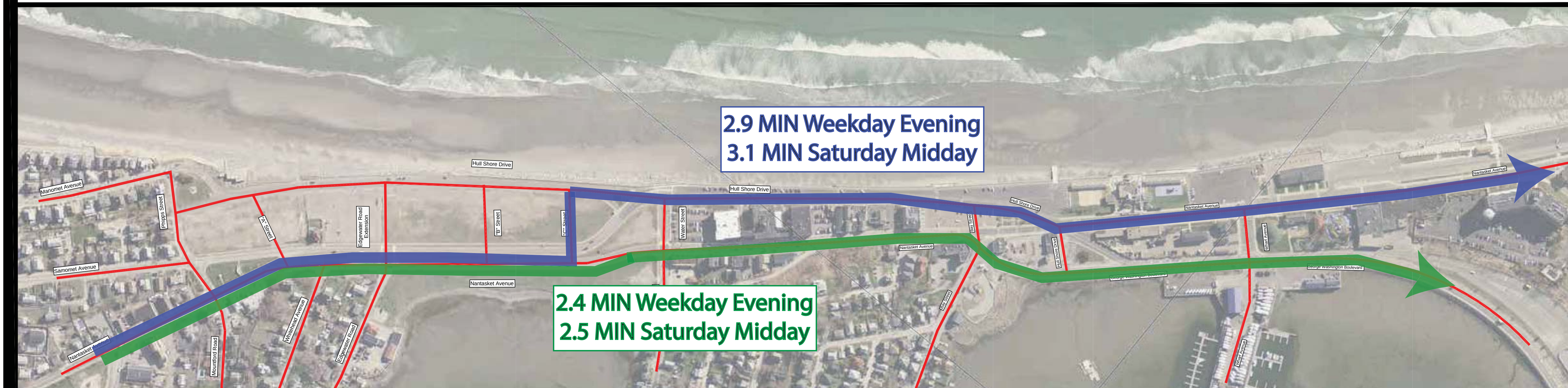
Figure 11

Travel Time
Beach Goer Traffic
Start: From South
Peak Hour Traffic Volumes

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Existing One-Way Flow Traffic Pattern



Potential Two-Way Flow Traffic Pattern

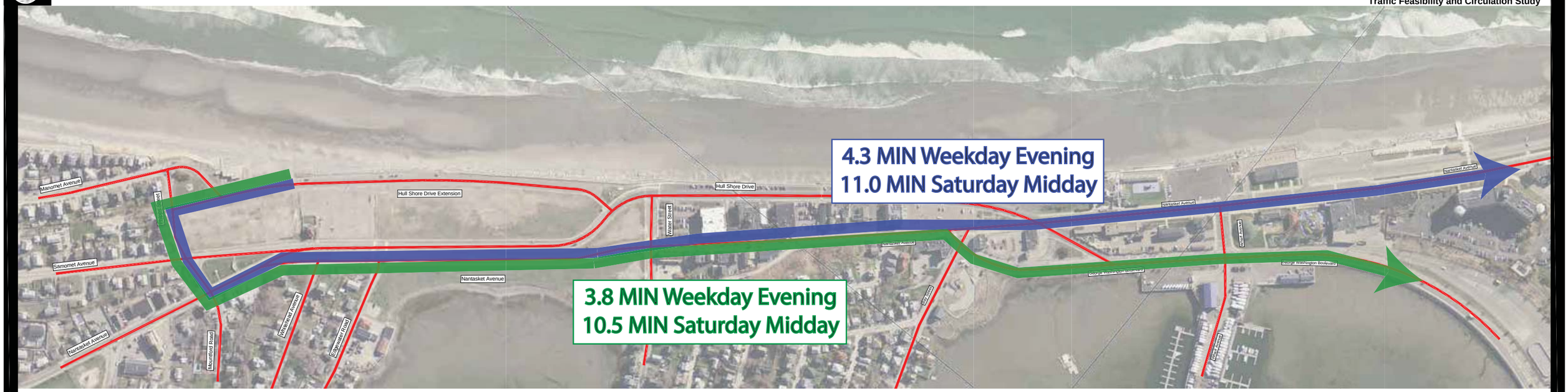
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Figure 12

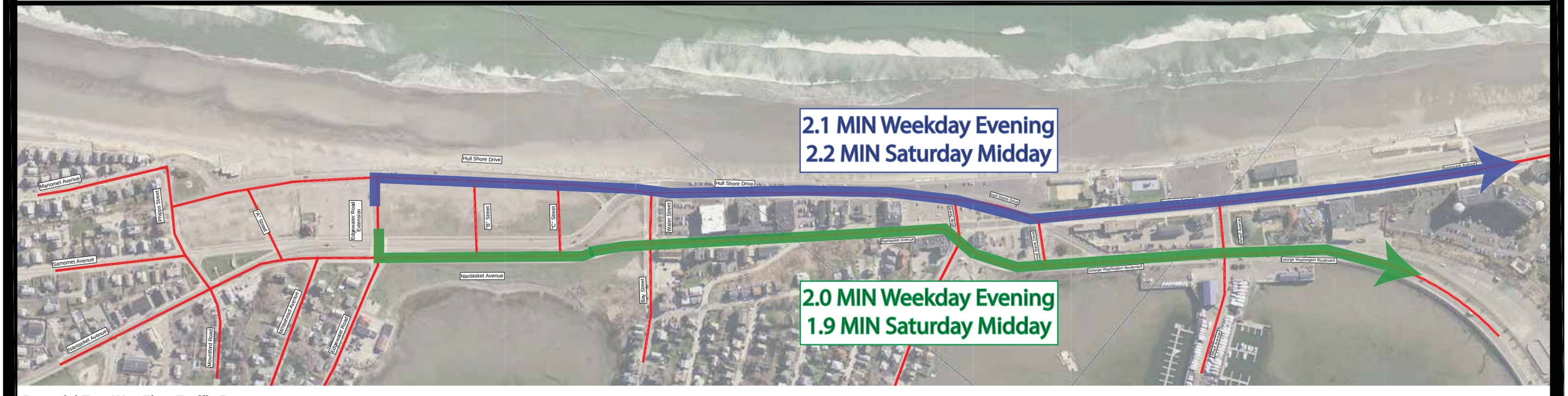
Travel Time
Resident/Commuter Traffic
Start: From North
Peak Hour Traffic Volumes

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1" = 400'



Existing One-Way Flow Traffic Pattern



Potential Two-Way Flow Traffic Pattern

Figure 13

Travel Time
Beach Goer Traffic
Start: From North
Peak Hour Traffic Volumes

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RECOMMENDATIONS

The following section describes the recommendations in order to implement two-way traffic flow, including the short-term or interim improvements that can be implemented to move towards two-way traffic flow in the vicinity of Nantasket Beach today. The recommendations include a description of proposed specific recommended intersection improvements, as well as general improvements that may enhance both motorized and non-motorized facilities throughout the study area. The section will also describe the cross-sectional elements of the roadway, streetscape, and sidewalks, as well as needed intersection improvements that can be implemented – all of which would be required to be in compliance with the current PROWAG and MUTCD requirements for the Americans with Disabilities Act (ADA) facilities.

Preferred Alternative

The preferred alternative meets the goals defined above and includes the following changes:

- Two-way traffic flow along all of Nantasket Avenue;
- Two-way traffic flow along all of Hull Shore Drive;
- Up to five new cross-streets, including the extension of Edgewater Road, between Hull Shore Drive and Nantasket Avenue in the north; and
- A redesign of the flow around Miller's Crossing, including the elimination of the "through leg" of Nantasket Avenue.

The design effectively splits the traffic currently flowing into the area onto two routes, while providing several opportunities for motorists to choose the route most appropriate for their needs. This results in the following key benefits:

- Improved traffic flow at key intersections, such as Phipps & Nantasket;
- Decreased vehicle queue lengths;
- Increased pedestrian access, as cross streets provide more direct routes; and uniform block spacing for access to existing and redeveloped properties, which also provides uniform and predictable spacing for vehicles, pedestrians, and cyclists to change direction and circulate

Implementation

Changing flow patterns on existing arterial corridors and constructing new cross-streets between Nantasket Avenue and Hull Shore Drive is a long-term process. It is recommended that the Town of Hull work with the many businesses in the vicinity of Nantasket Beach, the Town's Department of Community Development and Planning, and the Hull Redevelopment Authority to develop a strategy on implementation and timeline. This may require the Town of Hull and the HRA to work with potential tenants and developers to generate a working plan and criteria in regards to improvements and construction related to two-way flow implementation.

Interim Solutions

Construct Edgewater Extension Only

A catalyst for commencing the change to two-way flow is to provide a secondary egress point from the Nantasket Beach waterfront. A secondary egress point will allow for traffic congestion at Nantasket Ave and Phipps Street to be immediately reduced. The most logical location for a secondary egress point from the waterfront is the extension of Edgewater Road from Nantasket Ave to the Hull Shore Drive Extension. In conjunction with this extension, the Hull Shore Drive Extension could be converted to two-way flow between Phipps Street and the Edgewater Street Extension, allowing several parking fields to access both egress streets to Nantasket Avenue.

The construction of an Edgewater Street Extension alone, without other cross-street connections as visualized in the full build-out, would most likely triggered warrants for a traffic signal control. However, this is a condition that will most likely not be warranted in the full build-out condition. If warranted during an interim condition, the Town of Hull and stakeholders should only seek to install a temporary traffic signal at this location so that it can quickly be removed during a full build-out scenario when no longer warranted.

Secondary Access/Egress near Water Street

As potential redevelopment scenarios are realized, additional cross-streets between Phipps Street and Water Street could and should be implemented in order to better distribute beach-going and redevelopment traffic. The strategic decision of which cross-street could be constructed first may ultimately be decided by future tenants and the location of a particular redeveloped parcel. The Town of Hull and the HRA should consider the construction of a cross-street to the south, closest to Water Street, as a next step. This would allow the conversion of traffic flow of most, if not all, of the Hull Shore Drive Extension to two-way. In addition, it will further reduce a significant amount of traffic volumes on Nantasket Avenue to the north of Water.

With the construction of a secondary access/egress location, whether near Water Street or further north, it is anticipated that the dispersion of traffic from the existing Phipps Street westbound movement will be at a point where a traffic signal would no longer be warranted at any of the three beach egress points.

Cross-Sectional Elements and Roadway Design

Travel Lanes

One of the primary goals in making the conversions is to stay within the basic curb-to-curb cross section of each major corridor. Maintaining the existing curb lines will minimize disruptions to existing land uses along the streets. Nantasket Avenue, Hull Shore Drive, and the Hull Shore Drive Extension currently consist of one-way flow with two or more lanes in a single direction. Implementing two-way flow on these roadways, while maintaining existing Right-of-Way (or limited expansion of Right-of-Way), would require these arterial corridors to condense to one general-purpose travel lane in each direction.

As the primary travel route for resident/commuter traffic is along the westernmost Nantasket Avenue / George Washington Boulevard corridor, southbound left-turning vehicles that are heading towards the beach and the Hull Shore Drive / Hull Shore Drive Extension corridor have the potential to delay southbound through traffic when they are waiting for a gap in opposing traffic, if there is only one travel lane in each direction. As a result, it is recommended that left-turn pockets be considered along the future two-way Nantasket Avenue. This will allow for the majority of through traffic to by-pass the limited number of left-turning vehicles queued to turn left into the multiple cross-streets.

Complete Streets and Streetscape

One of the primary goals of two-way conversion concept is to create Complete Streets that enable safe, convenient, and comfortable travel and access for users of all ages and abilities regardless of their mode of transportation. The idea is to serve all the people who may be walking, bicycling, driving automobiles – especially adjacent to the Nantasket Beach shoreline. Although sidewalks are provided along each corridor and bicycles are not excluded from roadway travel, the multi-model experience of Nantasket Beach is limited today.

The Town of Hull has recently completed improvements along the one-way southbound segment of Nantasket Avenue between Water Street and Miller's Crossing. These improvements consist of enhanced sidewalks with pedestrian amenities such as benches and sidewalk extensions, or "bump-outs," at crossing locations. These bump-outs reduce the distance that pedestrians are in conflict with vehicular traffic, they keep parked cars farther from the intersections, and they improve visibility (both for drivers to see walkers and walkers to see oncoming traffic), effectively assisting with the reduction of vehicular delay. In addition, a 5-foot bicycle lane is provided along the entire segment. Tree boxes, strategic on-street parking, and modified storefronts round-out the streetscape elements. The Town of Hull has conveyed its vision that along with two-way flow conditions, the multi-model experience and streetscape elements present on this segment of Nantasket Avenue be utilized along all of the reconfigured two-way corridors and the several new cross-streets.

Parking

In a full-build condition, the conversion to two-way circulation in Surfside could increase parking supply dramatically. Assuming modifications to existing streets and installation of new cross-streets, on-street spaces could be added to each side of every new cross street north of Water Street; new parking can be added to both sides of Nantasket Avenue and Water Street, as well as one side of Phipps; and a second lane of parking could be added on the west side of Hull Shore Drive Extension. Earlier master planning work conducted for the 2014 Nantasket Beach Revitalization Plan concluded that over 350 new on-street spaces could be added north of Water with the two-way conversion and four new cross streets. Nearly another 200 on-street spaces could be added south of Water near Anastos Corner and along Nantasket Avenue along the southern DCR parking lot. With a reconfiguration of the remote lot along George Washington Avenue adding over 100 spaces, that study identified a potential increase of 650 parking spaces.

While it is anticipated that many of the overflow grass spaces on the HRA lands and – potentially the paved DCR lots – could be redeveloped, any reductions in off-street beach parking supply could be partially or entirely offset by this increase in on-street supply.

NEXT STEPS

Several steps in the project development process remain before completing the vision for two-way flow along Nantasket Avenue and Hull Shore Drive. This Traffic Feasibility and Circulation Study presents a summary of the operations and feasibility analyses that have been completed to date. The criteria for feasibility include – among other goals –d maintaining or improving the overall traffic efficiency and operations of the study area, providing opportunities for continued economic growth for Nantasket Beach, and minimizing impacts to parking and Right-of-Way. Through the feasibility analyses of the proposed two-way conversion, the following conclusions were determined:

- The traffic impact analysis confirmed that traffic operations and levels-of-service will not be negatively impacted at any of the study area intersections. Travel times through the corridor shall be comparable or improved over existing one-way flow conditions;
- The condensing of roadway cross-sections, the introduction of Complete Street design standards, and enhancing streetscape opportunities will improve opportunities for all transportation users;
- The recommended improvements and introduction of two-way flow would greatly enhance safety for pedestrians and bicyclists through increased visibility at intersections and shortened crossing distances;
- The ability to maintain on-street parking opportunities and the enhancement of additional nearby parking facilities will allow for continued beach and business access, as well as opening opportunities for future development.

Overall, the study shows that a two-way conversion is a feasible option in the vicinity of Nantasket Beach. The Town of Hull and HRA should note that implementing two-way flow will effect traffic operations and parking characteristics not only within the limits of this study, but on additional roadways and intersections both north and south of the Nantasket Beach district. The Town should be prepared to conduct monitoring and focused traffic impact assessments as necessary for the interim implementation of two-way flow, as new development is proposed, and after the full build-out is realized in coordination with MassDOT and DCR.

Attachment A

Turning Movement Counts (TMCs)

N/S: George Washington Blvd
E/W: Wharf Avenue
City, State: Hull, MA
Client: TEC/ R. Brown

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 154600 A
Site Code : T0597
Start Date : 8/15/2015
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	George Washington Boulevard From North				Wharf Avenue From East				George Washington Boulevard From South				Wharf Avenue From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
12:00 PM	7	142	7	0	9	3	19	1	28	204	5	0	4	2	3	0	434
12:15 PM	3	139	5	0	6	1	17	0	27	194	10	0	7	2	3	0	414
12:30 PM	6	143	4	0	10	2	28	2	29	196	8	0	3	2	3	0	436
12:45 PM	3	132	6	0	3	2	12	0	26	194	4	0	11	2	3	0	398
Total	19	556	22	0	28	8	76	3	110	788	27	0	25	8	12	0	1682
01:00 PM	1	140	3	0	5	3	15	2	30	191	2	0	1	2	2	0	397
01:15 PM	5	124	2	0	7	2	20	0	21	198	2	0	3	4	5	0	393
01:30 PM	3	132	4	0	7	1	29	0	28	178	3	0	4	0	8	0	397
01:45 PM	3	125	5	0	11	3	22	2	20	181	4	0	3	1	3	0	383
Total	12	521	14	0	30	9	86	4	99	748	11	0	11	7	18	0	1570
Grand Total	31	1077	36	0	58	17	162	7	209	1536	38	0	36	15	30	0	3252
Apprch %	2.7	94.1	3.1	0	23.8	7	66.4	2.9	11.7	86.1	2.1	0	44.4	18.5	37	0	
Total %	1	33.1	1.1	0	1.8	0.5	5	0.2	6.4	47.2	1.2	0	1.1	0.5	0.9	0	
Cars	30	1066	36	0	57	17	159	7	205	1524	38	0	36	15	30	0	3220
% Cars	96.8	99	100	0	98.3	100	98.1	100	98.1	99.2	100	0	100	100	100	0	99
Heavy Vehicles	1	11	0	0	1	0	3	0	4	12	0	0	0	0	0	0	32
% Heavy Vehicles	3.2	1	0	0	1.7	0	1.9	0	1.9	0.8	0	0	0	0	0	0	1

	George Washington Boulevard From North					Wharf Avenue From East					George Washington Boulevard From South					Wharf Avenue From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:00 PM																					
12:00 PM	7	142	7	0	156	9	3	19	1	32	28	204	5	0	237	4	2	3	0	9	434
12:15 PM	3	139	5	0	147	6	1	17	0	24	27	194	10	0	231	7	2	3	0	12	414
12:30 PM	6	143	4	0	153	10	2	28	2	42	29	196	8	0	233	3	2	3	0	8	436
12:45 PM	3	132	6	0	141	3	2	12	0	17	26	194	4	0	224	11	2	3	0	16	398
Total Volume	19	556	22	0	597	28	8	76	3	115	110	788	27	0	925	25	8	12	0	45	1682
% App. Total	3.2	93.1	3.7	0		24.3	7	66.1	2.6		11.9	85.2	2.9	0		55.6	17.8	26.7	0		
PHF	.679	.972	.786	.000	.957	.700	.667	.679	.375	.685	.948	.966	.675	.000	.976	.568	1.00	1.00	.000	.703	.964
Cars	18	550	22	0	590	27	8	73	3	111	109	783	27	0	919	25	8	12	0	45	1665
% Cars	94.7	98.9	100	0	98.8	96.4	100	96.1	100	96.5	99.1	99.4	100	0	99.4	100	100	100	0	100	99.0
Heavy Vehicles	1	6	0	0	7	1	0	3	0	4	1	5	0	0	6	0	0	0	0	0	17
% Heavy Vehicles	5.3	1.1	0	0	1.2	3.6	0	3.9	0	3.5	0.9	0.6	0	0	0.6	0	0	0	0	0	1.0

N/S: George Washington Blvd
E/W: Wharf Avenue
City, State: Hull, MA
Client: TEC/ R. Brown

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Cars

	George Washington Boulevard From North				Wharf Avenue From East				George Washington Boulevard From South				Wharf Avenue From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
12:00 PM	7	140	7	0	9	3	17	1	28	202	5	0	4	2	3	0	428
12:15 PM	2	138	5	0	6	1	17	0	27	194	10	0	7	2	3	0	412
12:30 PM	6	141	4	0	10	2	28	2	28	195	8	0	3	2	3	0	432
12:45 PM	3	131	6	0	2	2	11	0	26	192	4	0	11	2	3	0	393
Total	18	550	22	0	27	8	73	3	109	783	27	0	25	8	12	0	1665
01:00 PM	1	138	3	0	5	3	15	2	29	190	2	0	1	2	2	0	393
01:15 PM	5	124	2	0	7	2	20	0	21	196	2	0	3	4	5	0	391
01:30 PM	3	129	4	0	7	1	29	0	26	177	3	0	4	0	8	0	391
01:45 PM	3	125	5	0	11	3	22	2	20	178	4	0	3	1	3	0	380
Total	12	516	14	0	30	9	86	4	96	741	11	0	11	7	18	0	1555
Grand Total	30	1066	36	0	57	17	159	7	205	1524	38	0	36	15	30	0	3220
Apprch %	2.7	94.2	3.2	0	23.8	7.1	66.2	2.9	11.6	86.2	2.2	0	44.4	18.5	37	0	
Total %	0.9	33.1	1.1	0	1.8	0.5	4.9	0.2	6.4	47.3	1.2	0	1.1	0.5	0.9	0	

	George Washington Boulevard From North					Wharf Avenue From East					George Washington Boulevard From South					Wharf Avenue From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:00 PM																					
12:00 PM	7	140	7	0	154	9	3	17	1	30	28	202	5	0	235	4	2	3	0	9	428
12:15 PM	2	138	5	0	145	6	1	17	0	24	27	194	10	0	231	7	2	3	0	12	412
12:30 PM	6	141	4	0	151	10	2	28	2	42	28	195	8	0	231	3	2	3	0	8	432
12:45 PM	3	131	6	0	140	2	2	11	0	15	26	192	4	0	222	11	2	3	0	16	393
Total Volume	18	550	22	0	590	27	8	73	3	111	109	783	27	0	919	25	8	12	0	45	1665
% App. Total	3.1	93.2	3.7	0		24.3	7.2	65.8	2.7		11.9	85.2	2.9	0		55.6	17.8	26.7	0		
PHF	.643	.975	.786	.000	.958	.675	.667	.652	.375	.661	.973	.969	.675	.000	.978	.568	1.00	1.00	.000	.703	.964

N/S: George Washington Blvd
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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Heavy Vehicles

	George Washington Boulevard From North				Wharf Avenue From East				George Washington Boulevard From South				Wharf Avenue From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
12:00 PM	0	2	0	0	0	0	2	0	0	2	0	0	0	0	0	0	6
12:15 PM	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
12:30 PM	0	2	0	0	0	0	0	0	1	1	0	0	0	0	0	0	4
12:45 PM	0	1	0	0	1	0	1	0	0	2	0	0	0	0	0	0	5
Total	1	6	0	0	1	0	3	0	1	5	0	0	0	0	0	0	17
01:00 PM	0	2	0	0	0	0	0	0	1	1	0	0	0	0	0	0	4
01:15 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
01:30 PM	0	3	0	0	0	0	0	0	2	1	0	0	0	0	0	0	6
01:45 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3
Total	0	5	0	0	0	0	0	0	3	7	0	0	0	0	0	0	15
Grand Total	1	11	0	0	1	0	3	0	4	12	0	0	0	0	0	0	32
Apprch %	8.3	91.7	0	0	25	0	75	0	25	75	0	0	0	0	0	0	
Total %	3.1	34.4	0	0	3.1	0	9.4	0	12.5	37.5	0	0	0	0	0	0	

	George Washington Boulevard From North					Wharf Avenue From East					George Washington Boulevard From South					Wharf Avenue From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:00 PM																					
12:00 PM	0	2	0	0	2	0	0	2	0	2	0	2	0	0	2	0	0	0	0	0	6
12:15 PM	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
12:30 PM	0	2	0	0	2	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	4
12:45 PM	0	1	0	0	1	1	0	1	0	2	0	2	0	0	2	0	0	0	0	0	5
Total Volume	1	6	0	0	7	1	0	3	0	4	1	5	0	0	6	0	0	0	0	0	17
% App. Total	14.3	85.7	0	0		25	0	75	0		16.7	83.3	0	0		0	0	0	0		
PHF	.250	.750	.000	.000	.875	.250	.000	.375	.000	.500	.250	.625	.000	.000	.750	.000	.000	.000	.000	.000	.708

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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Peds and Bikes

	George Washington Boulevard From North					Wharf Avenue From East					George Washington Boulevard From South					Wharf Avenue From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
12:00 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	7	1	0	0	0	1	0	10
12:15 PM	0	1	0	5	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	8
12:30 PM	6	0	0	0	0	0	0	0	0	0	0	0	0	1	6	0	0	0	0	5	18
12:45 PM	0	0	0	5	11	0	0	0	2	1	0	0	0	12	5	0	0	0	6	1	43
Total	7	1	0	10	11	0	0	0	2	2	0	0	0	20	13	0	0	0	7	6	79
01:00 PM	0	0	0	3	4	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	9
01:15 PM	0	0	0	3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	8
01:30 PM	0	0	0	0	3	0	0	0	0	0	0	1	0	0	8	0	0	0	0	5	17
01:45 PM	0	0	0	8	1	0	0	0	4	0	0	0	0	5	8	0	0	0	0	2	28
Total	0	0	0	14	12	0	0	0	4	0	0	1	0	7	16	0	0	0	0	8	62
Grand Total	7	1	0	24	23	0	0	0	6	2	0	1	0	27	29	0	0	0	7	14	141
Apprch %	12.7	1.8	0	43.6	41.8	0	0	0	75	25	0	1.8	0	47.4	50.9	0	0	0	33.3	66.7	
Total %	5	0.7	0	17	16.3	0	0	0	4.3	1.4	0	0.7	0	19.1	20.6	0	0	0	5	9.9	

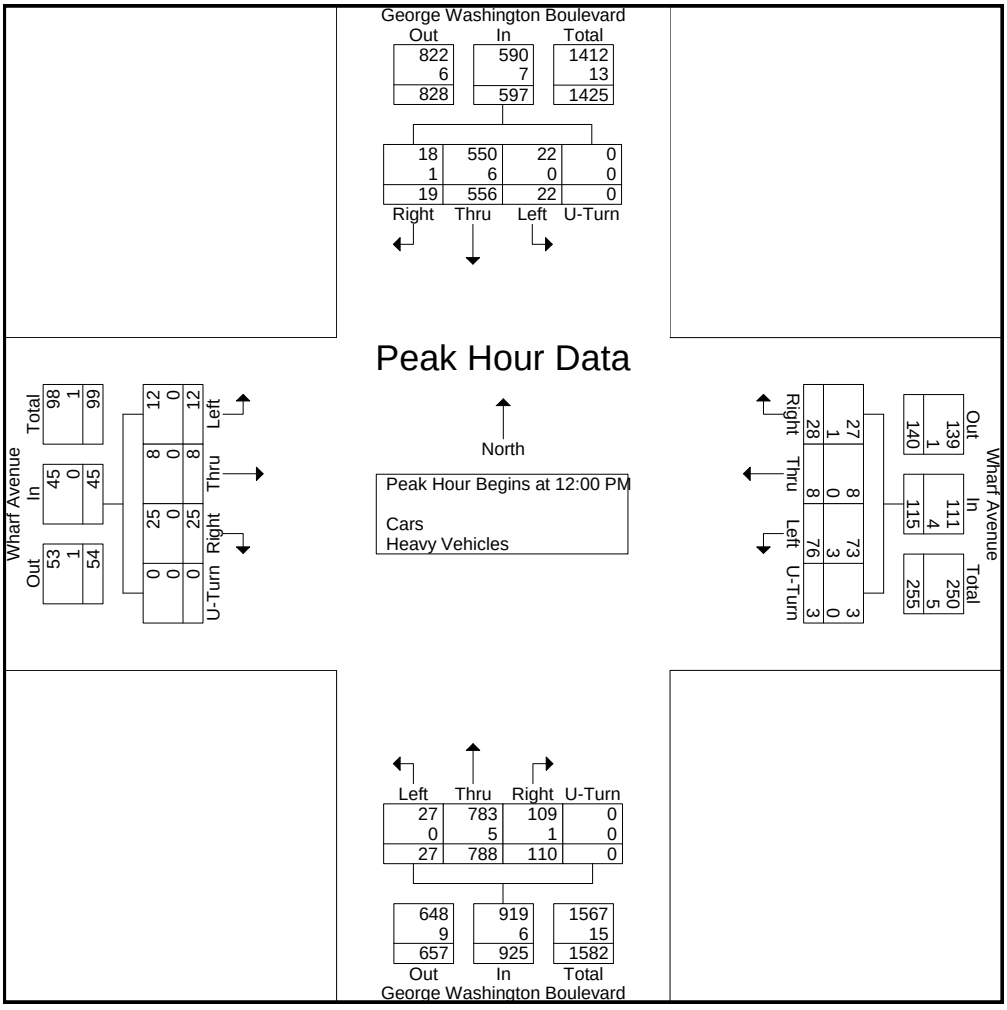
	George Washington Boulevard From North						Wharf Avenue From East						George Washington Boulevard From South						Wharf Avenue From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 12:00 PM																									
12:00 PM	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	7	1	8	0	0	0	1	0	1	10
12:15 PM	0	1	0	5	0	6	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0	0	0	0	8
12:30 PM	6	0	0	0	0	6	0	0	0	0	0	0	0	0	0	1	6	7	0	0	0	0	5	5	18
12:45 PM	0	0	0	5	11	16	0	0	0	2	1	3	0	0	0	12	5	17	0	0	0	6	1	7	43
Total Volume	7	1	0	10	11	29	0	0	0	2	2	4	0	0	0	20	13	33	0	0	0	7	6	13	79
% App. Total	24.1	3.4	0	34.5	37.9		0	0	0	50	50		0	0	0	60.6	39.4		0	0	0	53.8	46.2		
PHF	.292	.250	.000	.500	.250	.453	.000	.000	.000	.250	.500	.333	.000	.000	.000	.417	.542	.485	.000	.000	.000	.292	.300	.464	.459

N/S: George Washington Blvd
E/W: Wharf Avenue
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Office: 508.481.3999 Fax: 508.545.1234
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Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
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12:00 PM	7	142	7	0	156	9	3	19	1	32	28	204	5	0	237	4	2	3	0	9	434
12:15 PM	3	139	5	0	147	6	1	17	0	24	27	194	10	0	231	7	2	3	0	12	414
12:30 PM	6	143	4	0	153	10	2	28	2	42	29	196	8	0	233	3	2	3	0	8	436
12:45 PM	3	132	6	0	141	3	2	12	0	17	26	194	4	0	224	11	2	3	0	16	398
Total Volume	19	556	22	0	597	28	8	76	3	115	110	788	27	0	925	25	8	12	0	45	1682
% App. Total	3.2	93.1	3.7	0		24.3	7	66.1	2.6		11.9	85.2	2.9	0		55.6	17.8	26.7	0		
PHF	.679	.972	.786	.000	.957	.700	.667	.679	.375	.685	.948	.966	.675	.000	.976	.568	1.00	1.00	.000	.703	.964
Cars	18	550	22	0	590	27	8	73	3	111	109	783	27	0	919	25	8	12	0	45	1665
% Cars	94.7	98.9	100	0	98.8	96.4	100	96.1	100	96.5	99.1	99.4	100	0	99.4	100	100	100	0	100	99.0
Heavy Vehicles	1	6	0	0	7	1	0	3	0	4	1	5	0	0	6	0	0	0	0	0	17
% Heavy Vehicles	5.3	1.1	0	0	1.2	3.6	0	3.9	0	3.5	0.9	0.6	0	0	0.6	0	0	0	0	0	1.0



N/S: Hull Shore Drive
E/W: Franklin Street/ Water Street
City, State: Hull, MA
Client: TEC/ R. Brown

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 154600 B
Site Code : T0597
Start Date : 8/15/2015
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Hull Shore Drive From North				Franklin Street (Hull Shore Drive Ext) From East				Hull Shore Drive From South				Water Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
12:00 PM	0	0	0	0	0	0	0	0	54	245	31	0	0	6	16	0	352
12:15 PM	0	0	0	0	0	0	0	0	73	213	34	0	0	15	9	0	344
12:30 PM	0	0	0	0	0	0	0	0	55	251	25	0	0	5	19	0	355
12:45 PM	0	0	0	0	0	0	0	0	57	232	40	0	0	14	16	0	359
Total	0	0	0	0	0	0	0	0	239	941	130	0	0	40	60	0	1410
01:00 PM	0	0	0	0	0	0	0	0	46	214	34	0	0	11	11	0	316
01:15 PM	0	0	0	0	0	0	0	0	56	220	33	0	0	6	8	0	323
01:30 PM	0	0	0	0	0	0	0	0	39	174	57	0	0	8	7	0	285
01:45 PM	0	0	0	0	0	0	0	0	39	204	44	0	0	6	9	0	302
Total	0	0	0	0	0	0	0	0	180	812	168	0	0	31	35	0	1226
Grand Total	0	0	0	0	0	0	0	0	419	1753	298	0	0	71	95	0	2636
Apprch %	0	0	0	0	0	0	0	0	17	71	12.1	0	0	42.8	57.2	0	
Total %	0	0	0	0	0	0	0	0	15.9	66.5	11.3	0	0	2.7	3.6	0	
Cars	0	0	0	0	0	0	0	0	417	1738	296	0	0	71	95	0	2617
% Cars	0	0	0	0	0	0	0	0	99.5	99.1	99.3	0	0	100	100	0	99.3
Heavy Vehicles	0	0	0	0	0	0	0	0	2	15	2	0	0	0	0	0	19
% Heavy Vehicles	0	0	0	0	0	0	0	0	0.5	0.9	0.7	0	0	0	0	0	0.7

	Hull Shore Drive From North					Franklin Street (Hull Shore Drive Ext) From East					Hull Shore Drive From South					Water Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:00 PM																					
12:00 PM	0	0	0	0	0	0	0	0	0	0	54	245	31	0	330	0	6	16	0	22	352
12:15 PM	0	0	0	0	0	0	0	0	0	0	73	213	34	0	320	0	15	9	0	24	344
12:30 PM	0	0	0	0	0	0	0	0	0	0	55	251	25	0	331	0	5	19	0	24	355
12:45 PM	0	0	0	0	0	0	0	0	0	0	57	232	40	0	329	0	14	16	0	30	359
Total Volume	0	0	0	0	0	0	0	0	0	0	239	941	130	0	1310	0	40	60	0	100	1410
% App. Total	0	0	0	0		0	0	0	0		18.2	71.8	9.9	0		0	40	60	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.818	.937	.813	.000	.989	.000	.667	.789	.000	.833	.982
Cars	0	0	0	0	0	0	0	0	0	0	237	933	129	0	1299	0	40	60	0	100	1399
% Cars	0	0	0	0	0	0	0	0	0	0	99.2	99.1	99.2	0	99.2	0	100	100	0	100	99.2
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	2	8	1	0	11	0	0	0	0	0	11
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0.8	0.9	0.8	0	0.8	0	0	0	0	0	0.8

N/S: Hull Shore Drive
E/W: Franklin Street/ Water Street
City, State: Hull, MA
Client: TEC/ R. Brown

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 154600 B
Site Code : T0597
Start Date : 8/15/2015
Page No : 1

Groups Printed- Cars

	Hull Shore Drive From North				Franklin Street (Hull Shore Drive Ext) From East				Hull Shore Drive From South				Water Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
12:00 PM	0	0	0	0	0	0	0	0	54	242	30	0	0	6	16	0	348
12:15 PM	0	0	0	0	0	0	0	0	73	212	34	0	0	15	9	0	343
12:30 PM	0	0	0	0	0	0	0	0	55	250	25	0	0	5	19	0	354
12:45 PM	0	0	0	0	0	0	0	0	55	229	40	0	0	14	16	0	354
Total	0	0	0	0	0	0	0	0	237	933	129	0	0	40	60	0	1399
01:00 PM	0	0	0	0	0	0	0	0	46	212	34	0	0	11	11	0	314
01:15 PM	0	0	0	0	0	0	0	0	56	218	33	0	0	6	8	0	321
01:30 PM	0	0	0	0	0	0	0	0	39	173	57	0	0	8	7	0	284
01:45 PM	0	0	0	0	0	0	0	0	39	202	43	0	0	6	9	0	299
Total	0	0	0	0	0	0	0	0	180	805	167	0	0	31	35	0	1218
Grand Total	0	0	0	0	0	0	0	0	417	1738	296	0	0	71	95	0	2617
Apprch %	0	0	0	0	0	0	0	0	17	70.9	12.1	0	0	42.8	57.2	0	
Total %	0	0	0	0	0	0	0	0	15.9	66.4	11.3	0	0	2.7	3.6	0	

	Hull Shore Drive From North					Franklin Street (Hull Shore Drive Ext) From East					Hull Shore Drive From South					Water Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:00 PM																					
12:00 PM	0	0	0	0	0	0	0	0	0	0	54	242	30	0	326	0	6	16	0	22	348
12:15 PM	0	0	0	0	0	0	0	0	0	0	73	212	34	0	319	0	15	9	0	24	343
12:30 PM	0	0	0	0	0	0	0	0	0	0	55	250	25	0	330	0	5	19	0	24	354
12:45 PM	0	0	0	0	0	0	0	0	0	0	55	229	40	0	324	0	14	16	0	30	354
Total Volume	0	0	0	0	0	0	0	0	0	0	237	933	129	0	1299	0	40	60	0	100	1399
% App. Total	0	0	0	0		0	0	0	0		18.2	71.8	9.9	0		0	40	60	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.812	.933	.806	.000	.984	.000	.667	.789	.000	.833	.988

N/S: Hull Shore Drive
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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 154600 B
Site Code : T0597
Start Date : 8/15/2015
Page No : 1

Groups Printed- Heavy Vehicles

	Hull Shore Drive From North				Franklin Street (Hull Shore Drive Ext) From East				Hull Shore Drive From South				Water Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
12:00 PM	0	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	4
12:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
12:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
12:45 PM	0	0	0	0	0	0	0	0	2	3	0	0	0	0	0	0	5
Total	0	0	0	0	0	0	0	0	2	8	1	0	0	0	0	0	11
01:00 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
01:15 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
01:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
01:45 PM	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	3
Total	0	0	0	0	0	0	0	0	0	7	1	0	0	0	0	0	8
Grand Total	0	0	0	0	0	0	0	0	2	15	2	0	0	0	0	0	19
Apprch %	0	0	0	0	0	0	0	0	10.5	78.9	10.5	0	0	0	0	0	
Total %	0	0	0	0	0	0	0	0	10.5	78.9	10.5	0	0	0	0	0	

	Hull Shore Drive From North					Franklin Street (Hull Shore Drive Ext) From East					Hull Shore Drive From South					Water Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:00 PM																					
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	4
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
12:45 PM	0	0	0	0	0	0	0	0	0	0	2	3	0	0	5	0	0	0	0	0	5
Total Volume	0	0	0	0	0	0	0	0	0	0	2	8	1	0	11	0	0	0	0	0	11
% App. Total	0	0	0	0		0	0	0	0		18.2	72.7	9.1	0		0	0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.667	.250	.000	.550	.000	.000	.000	.000	.000	.550

N/S: Hull Shore Drive
E/W: Franklin Street/ Water Street
City, State: Hull, MA
Client: TEC/ R. Brown

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 154600 B
Site Code : T0597
Start Date : 8/15/2015
Page No : 1

Groups Printed- Peds and Bikes

	Hull Shore Drive From North					Franklin Street (Hull Shore Drive Ext) From East					Hull Shore Drive From South					Water Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
12:00 PM	0	0	0	3	1	0	0	0	0	0	1	1	0	1	3	0	0	0	1	0	11
12:15 PM	0	0	0	6	3	0	0	0	0	0	4	0	0	2	9	0	0	0	0	0	24
12:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	2	3	0	0	0	0	0	6
12:45 PM	0	0	0	1	1	0	0	0	4	0	1	2	0	7	2	0	0	0	1	2	21
Total	0	0	0	10	5	0	0	0	4	0	7	3	0	12	17	0	0	0	2	2	62
01:00 PM	0	0	0	1	2	0	0	0	0	0	0	0	0	3	2	0	0	0	0	0	8
01:15 PM	0	0	0	6	2	0	0	0	4	0	0	0	0	4	0	0	0	0	0	0	16
01:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	10	3	0	0	0	2	4	20
01:45 PM	0	0	0	7	0	0	0	0	1	0	0	0	0	3	6	0	0	0	2	6	25
Total	0	0	0	14	4	0	0	0	5	0	1	0	0	20	11	0	0	0	4	10	69
Grand Total	0	0	0	24	9	0	0	0	9	0	8	3	0	32	28	0	0	0	6	12	131
Apprch %	0	0	0	72.7	27.3	0	0	0	100	0	11.3	4.2	0	45.1	39.4	0	0	0	33.3	66.7	
Total %	0	0	0	18.3	6.9	0	0	0	6.9	0	6.1	2.3	0	24.4	21.4	0	0	0	4.6	9.2	

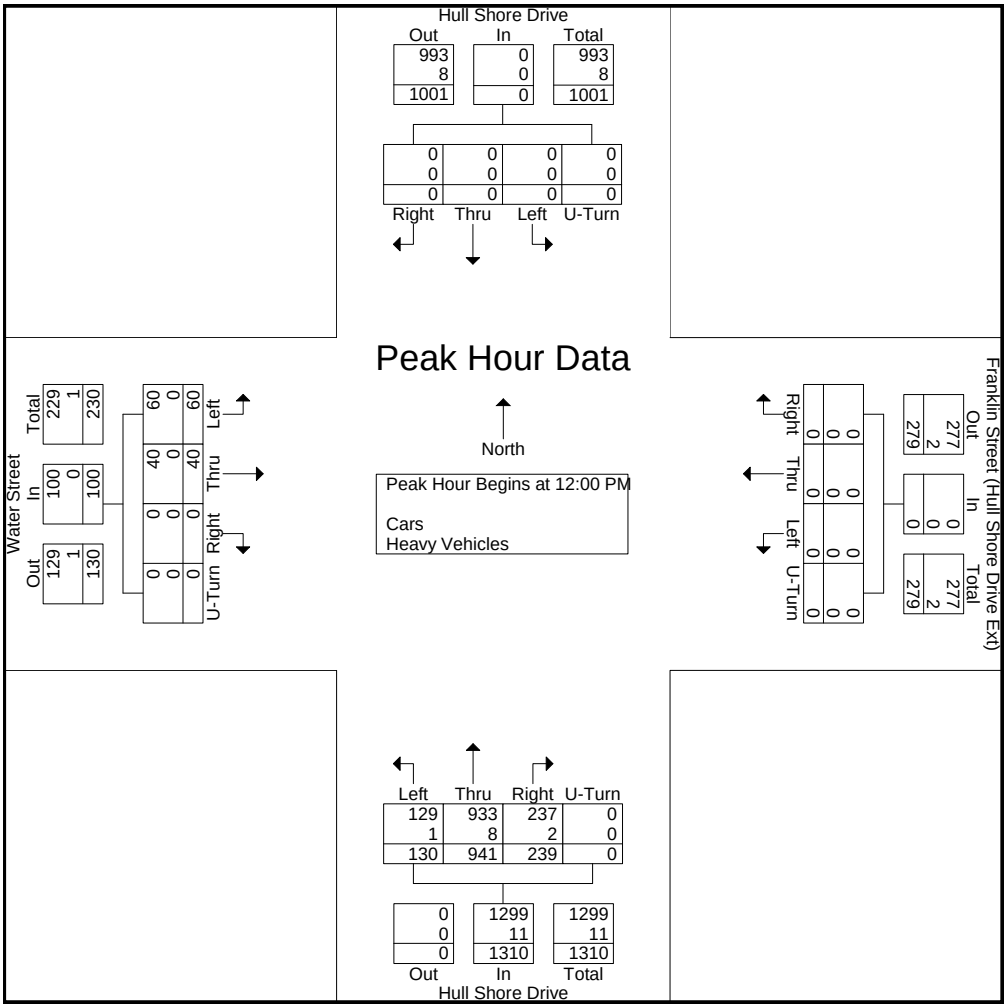
	Hull Shore Drive From North						Franklin Street (Hull Shore Drive Ext) From East						Hull Shore Drive From South						Water Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 01:00 PM																									
01:00 PM	0	0	0	1	2	3	0	0	0	0	0	0	0	0	0	3	2	5	0	0	0	0	0	0	8
01:15 PM	0	0	0	6	2	8	0	0	0	4	0	4	0	0	0	4	0	4	0	0	0	0	0	0	16
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	10	3	14	0	0	0	2	4	6	20
01:45 PM	0	0	0	7	0	7	0	0	0	1	0	1	0	0	0	3	6	9	0	0	0	2	6	8	25
Total Volume	0	0	0	14	4	18	0	0	0	5	0	5	1	0	0	20	11	32	0	0	0	4	10	14	69
% App. Total	0	0	0	77.8	22.2		0	0	0	100	0		3.1	0	0	62.5	34.4		0	0	0	28.6	71.4		
PHF	.000	.000	.000	.500	.500	.563	.000	.000	.000	.313	.000	.313	.250	.000	.000	.500	.458	.571	.000	.000	.000	.500	.417	.438	.690

N/S: Hull Shore Drive
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	Hull Shore Drive From North					Franklin Street (Hull Shore Drive Ext) From East					Hull Shore Drive From South					Water Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:00 PM																					
12:00 PM	0	0	0	0	0	0	0	0	0	0	54	245	31	0	330	0	6	16	0	22	352
12:15 PM	0	0	0	0	0	0	0	0	0	0	73	213	34	0	320	0	15	9	0	24	344
12:30 PM	0	0	0	0	0	0	0	0	0	0	55	251	25	0	331	0	5	19	0	24	355
12:45 PM	0	0	0	0	0	0	0	0	0	0	57	232	40	0	329	0	14	16	0	30	359
Total Volume	0	0	0	0	0	0	0	0	0	0	239	941	130	0	1310	0	40	60	0	100	1410
% App. Total	0	0	0	0		0	0	0	0		18.2	71.8	9.9	0		0	40	60	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.818	.937	.813	.000	.989	.000	.667	.789	.000	.833	.982
Cars	0	0	0	0	0	0	0	0	0	0	237	933	129	0	1299	0	40	60	0	100	1399
% Cars	0	0	0	0	0	0	0	0	0	0	99.2	99.1	99.2	0	99.2	0	100	100	0	100	99.2
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	2	8	1	0	11	0	0	0	0	0	11
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0.8	0.9	0.8	0	0.8	0	0	0	0	0	0.8



N/S: Hull Shore Drive
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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 154600 BB
Site Code : T0597
Start Date : 8/18/2015
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Hull Shore Drive From North				Franklin Street (Hull Shore Drive Ext) From East				Hull Shore Drive From South				Water Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	25	177	32	0	0	6	13	0	253
04:15 PM	0	0	0	0	1	0	0	0	24	198	23	0	0	4	10	0	260
04:30 PM	0	0	0	0	0	0	0	0	20	210	24	0	0	6	5	0	265
04:45 PM	0	0	0	0	0	0	0	0	19	197	25	0	0	4	4	0	249
Total	0	0	0	0	1	0	0	0	88	782	104	0	0	20	32	0	1027
05:00 PM	0	0	0	0	0	0	0	0	19	186	21	0	0	2	9	0	237
05:15 PM	0	0	0	0	0	0	0	0	9	217	16	0	0	3	11	0	256
05:30 PM	0	0	0	0	0	0	0	0	9	198	18	0	0	0	8	0	233
05:45 PM	0	0	0	0	0	0	0	0	19	229	21	0	0	2	12	0	283
Total	0	0	0	0	0	0	0	0	56	830	76	0	0	7	40	0	1009
Grand Total	0	0	0	0	1	0	0	0	144	1612	180	0	0	27	72	0	2036
Apprch %	0	0	0	0	100	0	0	0	7.4	83.3	9.3	0	0	27.3	72.7	0	
Total %	0	0	0	0	0	0	0	0	7.1	79.2	8.8	0	0	1.3	3.5	0	
Cars	0	0	0	0	1	0	0	0	143	1589	179	0	0	26	68	0	2006
% Cars	0	0	0	0	100	0	0	0	99.3	98.6	99.4	0	0	96.3	94.4	0	98.5
Heavy Vehicles	0	0	0	0	0	0	0	0	1	23	1	0	0	1	4	0	30
% Heavy Vehicles	0	0	0	0	0	0	0	0	0.7	1.4	0.6	0	0	3.7	5.6	0	1.5

	Hull Shore Drive From North					Franklin Street (Hull Shore Drive Ext) From East					Hull Shore Drive From South					Water Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	0	0	0	0	0	0	0	0	0	0	25	177	32	0	234	0	6	13	0	19	253
04:15 PM	0	0	0	0	0	1	0	0	0	1	24	198	23	0	245	0	4	10	0	14	260
04:30 PM	0	0	0	0	0	0	0	0	0	0	20	210	24	0	254	0	6	5	0	11	265
04:45 PM	0	0	0	0	0	0	0	0	0	0	19	197	25	0	241	0	4	4	0	8	249
Total Volume	0	0	0	0	0	1	0	0	0	1	88	782	104	0	974	0	20	32	0	52	1027
% App. Total	0	0	0	0		100	0	0	0		9	80.3	10.7	0		0	38.5	61.5	0		
PHF	.000	.000	.000	.000	.000	.250	.000	.000	.000	.250	.880	.931	.813	.000	.959	.000	.833	.615	.000	.684	.969
Cars	0	0	0	0	0	1	0	0	0	1	87	768	103	0	958	0	19	28	0	47	1006
% Cars	0	0	0	0	0	100	0	0	0	100	98.9	98.2	99.0	0	98.4	0	95.0	87.5	0	90.4	98.0
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	1	14	1	0	16	0	1	4	0	5	21
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	1.1	1.8	1.0	0	1.6	0	5.0	12.5	0	9.6	2.0

PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

N/S: Hull Shore Drive
E/W: Franklin Street/ Water Street
City, State: Hull, MA
Client: TEC/ R. Brown

File Name : 154600 BB
Site Code : T0597
Start Date : 8/18/2015
Page No : 1

Groups Printed- Cars

	Hull Shore Drive From North				Franklin Street (Hull Shore Drive Ext) From East				Hull Shore Drive From South				Water Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	25	174	31	0	0	6	10	0	246
04:15 PM	0	0	0	0	1	0	0	0	24	194	23	0	0	4	10	0	256
04:30 PM	0	0	0	0	0	0	0	0	20	207	24	0	0	5	5	0	261
04:45 PM	0	0	0	0	0	0	0	0	18	193	25	0	0	4	3	0	243
Total	0	0	0	0	1	0	0	0	87	768	103	0	0	19	28	0	1006
05:00 PM	0	0	0	0	0	0	0	0	19	185	21	0	0	2	9	0	236
05:15 PM	0	0	0	0	0	0	0	0	9	215	16	0	0	3	11	0	254
05:30 PM	0	0	0	0	0	0	0	0	9	195	18	0	0	0	8	0	230
05:45 PM	0	0	0	0	0	0	0	0	19	226	21	0	0	2	12	0	280
Total	0	0	0	0	0	0	0	0	56	821	76	0	0	7	40	0	1000
Grand Total	0	0	0	0	1	0	0	0	143	1589	179	0	0	26	68	0	2006
Apprch %	0	0	0	0	100	0	0	0	7.5	83.2	9.4	0	0	27.7	72.3	0	
Total %	0	0	0	0	0	0	0	0	7.1	79.2	8.9	0	0	1.3	3.4	0	

	Hull Shore Drive From North					Franklin Street (Hull Shore Drive Ext) From East					Hull Shore Drive From South					Water Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	0	0	0	0	0	0	0	0	0	0	25	174	31	0	230	0	6	10	0	16	246
04:15 PM	0	0	0	0	0	1	0	0	0	1	24	194	23	0	241	0	4	10	0	14	256
04:30 PM	0	0	0	0	0	0	0	0	0	0	20	207	24	0	251	0	5	5	0	10	261
04:45 PM	0	0	0	0	0	0	0	0	0	0	18	193	25	0	236	0	4	3	0	7	243
Total Volume	0	0	0	0	0	1	0	0	0	1	87	768	103	0	958	0	19	28	0	47	1006
% App. Total	0	0	0	0		100	0	0	0		9.1	80.2	10.8	0		0	40.4	59.6	0		
PHF	.000	.000	.000	.000	.000	.250	.000	.000	.000	.250	.870	.928	.831	.000	.954	.000	.792	.700	.000	.734	.964

N/S: Hull Shore Drive
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PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 154600 BB
Site Code : T0597
Start Date : 8/18/2015
Page No : 1

Groups Printed- Heavy Vehicles

	Hull Shore Drive From North				Franklin Street (Hull Shore Drive Ext) From East				Hull Shore Drive From South				Water Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	3	1	0	0	0	3	0	7
04:15 PM	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	4
04:30 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	1	0	0	4
04:45 PM	0	0	0	0	0	0	0	0	1	4	0	0	0	0	1	0	6
Total	0	0	0	0	0	0	0	0	1	14	1	0	0	1	4	0	21
05:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3
05:45 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3
Total	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	9
Grand Total	0	0	0	0	0	0	0	0	1	23	1	0	0	1	4	0	30
Apprch %	0	0	0	0	0	0	0	0	4	92	4	0	0	20	80	0	
Total %	0	0	0	0	0	0	0	0	3.3	76.7	3.3	0	0	3.3	13.3	0	

	Hull Shore Drive From North					Franklin Street (Hull Shore Drive Ext) From East					Hull Shore Drive From South					Water Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	3	1	0	4	0	0	3	0	3	7
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	4
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	1	0	0	1	4
04:45 PM	0	0	0	0	0	0	0	0	0	0	1	4	0	0	5	0	0	1	0	1	6
Total Volume	0	0	0	0	0	0	0	0	0	0	1	14	1	0	16	0	1	4	0	5	21
% App. Total	0	0	0	0		0	0	0	0		6.2	87.5	6.2	0		0	20	80	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.875	.250	.000	.800	.000	.250	.333	.000	.417	.750

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PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 154600 BB
Site Code : T0597
Start Date : 8/18/2015
Page No : 1

Groups Printed- Peds and Bikes

	Hull Shore Drive From North					Franklin Street (Hull Shore Drive Ext) From East					Hull Shore Drive From South					Water Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
04:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	4
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	5
04:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	3
Total	0	0	0	1	1	0	0	0	0	0	0	0	1	2	7	0	1	0	1	0	14
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0	0	3
05:30 PM	0	0	0	0	2	0	0	0	0	0	0	0	0	1	5	0	0	0	0	0	8
05:45 PM	0	0	0	1	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	0	4
Total	0	0	0	1	2	0	0	0	0	0	2	0	0	2	8	0	0	0	0	0	15
Grand Total	0	0	0	2	3	0	0	0	0	0	2	0	1	4	15	0	1	0	1	0	29
Apprch %	0	0	0	40	60	0	0	0	0	0	9.1	0	4.5	18.2	68.2	0	50	0	50	0	
Total %	0	0	0	6.9	10.3	0	0	0	0	0	6.9	0	3.4	13.8	51.7	0	3.4	0	3.4	0	

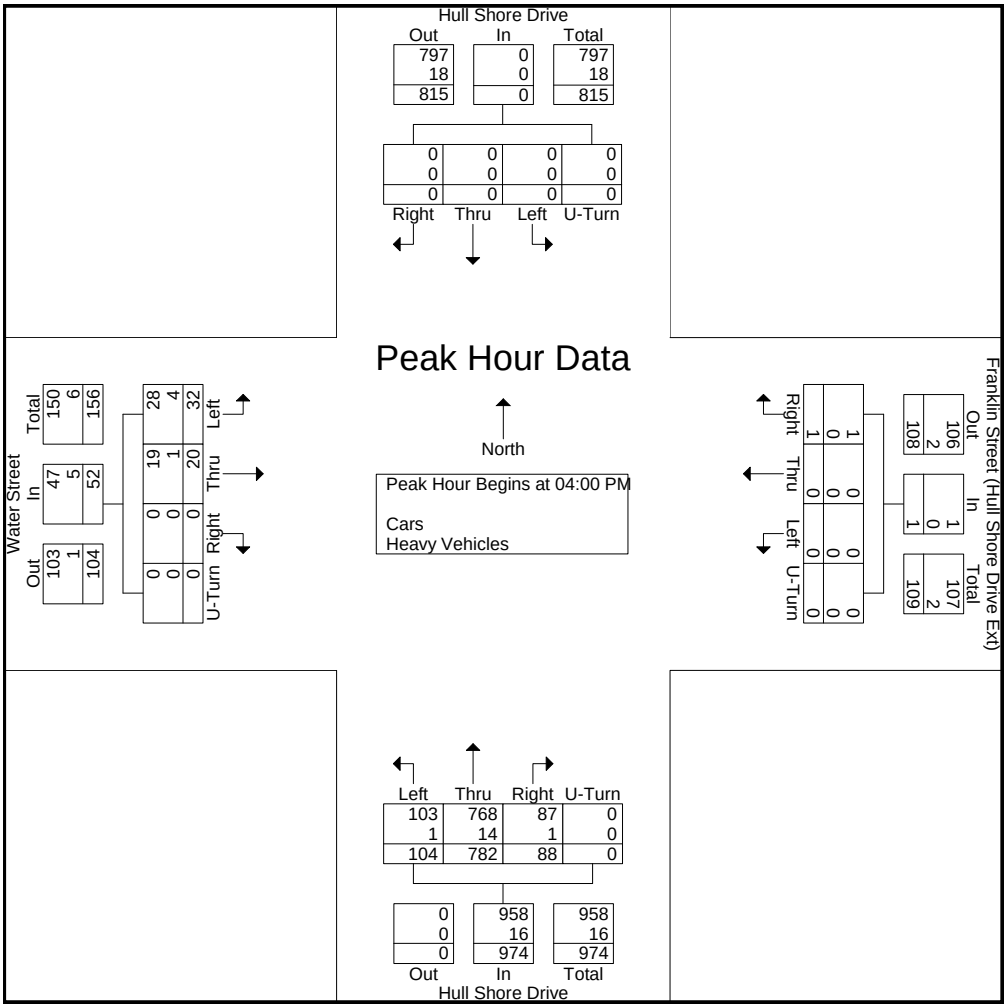
	Hull Shore Drive From North						Franklin Street (Hull Shore Drive Ext) From East						Hull Shore Drive From South						Water Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 05:00 PM																									
05:00 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
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	3	0	0	0	0	0	0	3
05:30 PM	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	1	5	6	0	0	0	0	0	0	8
05:45 PM	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	1	3	0	0	0	0	0	0	4
Total Volume	0	0	0	1	2	3	0	0	0	0	0	0	2	0	0	2	8	12	0	0	0	0	0	0	15
% App. Total	0	0	0	33.3	66.7		0	0	0	0	0		16.7	0	0	16.7	66.7		0	0	0	0	0		
PHF	.000	.000	.000	.250	.250	.375	.000	.000	.000	.000	.000	.000	.500	.000	.000	.500	.400	.500	.000	.000	.000	.000	.000	.000	.469

N/S: Hull Shore Drive
E/W: Franklin Street/ Water Street
City, State: Hull, MA
Client: TEC/ R. Brown

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 154600 BB
Site Code : T0597
Start Date : 8/18/2015
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	Hull Shore Drive From North					Franklin Street (Hull Shore Drive Ext) From East					Hull Shore Drive From South					Water Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	0	0	0	0	0	0	0	0	0	0	25	177	32	0	234	0	6	13	0	19	253
04:15 PM	0	0	0	0	0	1	0	0	0	1	24	198	23	0	245	0	4	10	0	14	260
04:30 PM	0	0	0	0	0	0	0	0	0	0	20	210	24	0	254	0	6	5	0	11	265
04:45 PM	0	0	0	0	0	0	0	0	0	0	19	197	25	0	241	0	4	4	0	8	249
Total Volume	0	0	0	0	0	1	0	0	0	1	88	782	104	0	974	0	20	32	0	52	1027
% App. Total	0	0	0	0		100	0	0	0		9	80.3	10.7	0		0	38.5	61.5	0		
PHF	.000	.000	.000	.000	.000	.250	.000	.000	.000	.250	.880	.931	.813	.000	.959	.000	.833	.615	.000	.684	.969
Cars	0	0	0	0	0	1	0	0	0	1	87	768	103	0	958	0	19	28	0	47	1006
% Cars	0	0	0	0	0	100	0	0	0	100	98.9	98.2	99.0	0	98.4	0	95.0	87.5	0	90.4	98.0
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	1	14	1	0	16	0	1	4	0	5	21
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	1.1	1.8	1.0	0	1.6	0	5.0	12.5	0	9.6	2.0



S: Franklin Street
E/W: Phipps Street
City, State: Hull, MA
Client: TEC/ R. Brown

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D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Cars - Heavy Vehicles

	Phipps Street From East			Franklin Street From South			Phipps Street From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
12:00 PM	10	0	0	0	31	0	0	10	0	51
12:15 PM	15	0	0	2	32	0	0	13	0	62
12:30 PM	13	0	0	3	32	0	0	15	0	63
12:45 PM	11	0	0	1	28	0	0	13	0	53
Total	49	0	0	6	123	0	0	51	0	229
01:00 PM	10	0	0	1	40	0	0	11	0	62
01:15 PM	5	0	0	0	37	0	0	7	0	49
01:30 PM	9	0	0	0	17	0	0	7	0	33
01:45 PM	8	0	0	1	33	0	0	4	0	46
Total	32	0	0	2	127	0	0	29	0	190
Grand Total	81	0	0	8	250	0	0	80	0	419
Apprch %	100	0	0	3.1	96.9	0	0	100	0	
Total %	19.3	0	0	1.9	59.7	0	0	19.1	0	
Cars	80	0	0	8	250	0	0	80	0	418
% Cars	98.8	0	0	100	100	0	0	100	0	99.8
Heavy Vehicles	1	0	0	0	0	0	0	0	0	1
% Heavy Vehicles	1.2	0	0	0	0	0	0	0	0	0.2

	Phipps Street From East				Franklin Street From South				Phipps Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 12:15 PM													
12:15 PM	15	0	0	15	2	32	0	34	0	13	0	13	62
12:30 PM	13	0	0	13	3	32	0	35	0	15	0	15	63
12:45 PM	11	0	0	11	1	28	0	29	0	13	0	13	53
01:00 PM	10	0	0	10	1	40	0	41	0	11	0	11	62
Total Volume	49	0	0	49	7	132	0	139	0	52	0	52	240
% App. Total	100	0	0		5	95	0		0	100	0		
PHF	.817	.000	.000	.817	.583	.825	.000	.848	.000	.867	.000	.867	.952
Cars	49	0	0	49	7	132	0	139	0	52	0	52	240
% Cars	100	0	0	100	100	100	0	100	0	100	0	100	100
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0

S: Franklin Street
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PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
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Page No : 1

Groups Printed- Cars

	Phipps Street From East			Franklin Street From South			Phipps Street From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
12:00 PM	9	0	0	0	31	0	0	10	0	50
12:15 PM	15	0	0	2	32	0	0	13	0	62
12:30 PM	13	0	0	3	32	0	0	15	0	63
12:45 PM	11	0	0	1	28	0	0	13	0	53
Total	48	0	0	6	123	0	0	51	0	228
01:00 PM	10	0	0	1	40	0	0	11	0	62
01:15 PM	5	0	0	0	37	0	0	7	0	49
01:30 PM	9	0	0	0	17	0	0	7	0	33
01:45 PM	8	0	0	1	33	0	0	4	0	46
Total	32	0	0	2	127	0	0	29	0	190
Grand Total	80	0	0	8	250	0	0	80	0	418
Apprch %	100	0	0	3.1	96.9	0	0	100	0	
Total %	19.1	0	0	1.9	59.8	0	0	19.1	0	

	Phipps Street From East				Franklin Street From South				Phipps Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 12:15 PM													
12:15 PM	15	0	0	15	2	32	0	34	0	13	0	13	62
12:30 PM	13	0	0	13	3	32	0	35	0	15	0	15	63
12:45 PM	11	0	0	11	1	28	0	29	0	13	0	13	53
01:00 PM	10	0	0	10	1	40	0	41	0	11	0	11	62
Total Volume	49	0	0	49	7	132	0	139	0	52	0	52	240
% App. Total	100	0	0		5	95	0		0	100	0		
PHF	.817	.000	.000	.817	.583	.825	.000	.848	.000	.867	.000	.867	.952

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Groups Printed- Heavy Vehicles

	Phipps Street From East			Franklin Street From South			Phipps Street From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
12:00 PM	1	0	0	0	0	0	0	0	0	1
12:15 PM	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	0	0	0	0	0	1
01:00 PM	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Grand Total	1	0	0	0	0	0	0	0	0	1
Apprch %	100	0	0	0	0	0	0	0	0	
Total %	100	0	0	0	0	0	0	0	0	

	Phipps Street From East				Franklin Street From South				Phipps Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 12:00 PM													
12:00 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	0	0	1	0	0	0	0	0	0	0	0	1
% App. Total	100	0	0		0	0	0		0	0	0		
PHF	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.250

S: Franklin Street
E/W: Phipps Street
City, State: Hull, MA
Client: TEC/ R. Brown

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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 154600 C
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Groups Printed- Peds and Bikes

	Phipps Street From East				Franklin Street From South				Phipps Street From West				
Start Time	Thru	Left	Peds SB	Peds NB	Right	Left	Peds WB	Peds EB	Right	Thru	Peds NB	Peds SB	Int. Total
12:00 PM	1	0	0	0	0	1	0	1	1	0	0	2	6
12:15 PM	0	0	0	0	0	0	0	0	1	0	0	2	3
12:30 PM	0	0	0	0	0	2	1	2	0	0	1	0	6
12:45 PM	0	0	0	0	0	0	0	0	0	3	0	0	3
Total	1	0	0	0	0	3	1	3	2	3	1	4	18
01:00 PM	0	0	5	0	0	0	5	0	0	0	0	1	11
01:15 PM	2	0	1	0	0	3	4	0	1	0	1	0	12
01:30 PM	0	1	2	0	0	2	2	0	2	0	0	0	9
01:45 PM	6	0	0	0	0	0	0	0	0	2	0	0	8
Total	8	1	8	0	0	5	11	0	3	2	1	1	40
Grand Total	9	1	8	0	0	8	12	3	5	5	2	5	58
Apprch %	50	5.6	44.4	0	0	34.8	52.2	13	29.4	29.4	11.8	29.4	
Total %	15.5	1.7	13.8	0	0	13.8	20.7	5.2	8.6	8.6	3.4	8.6	

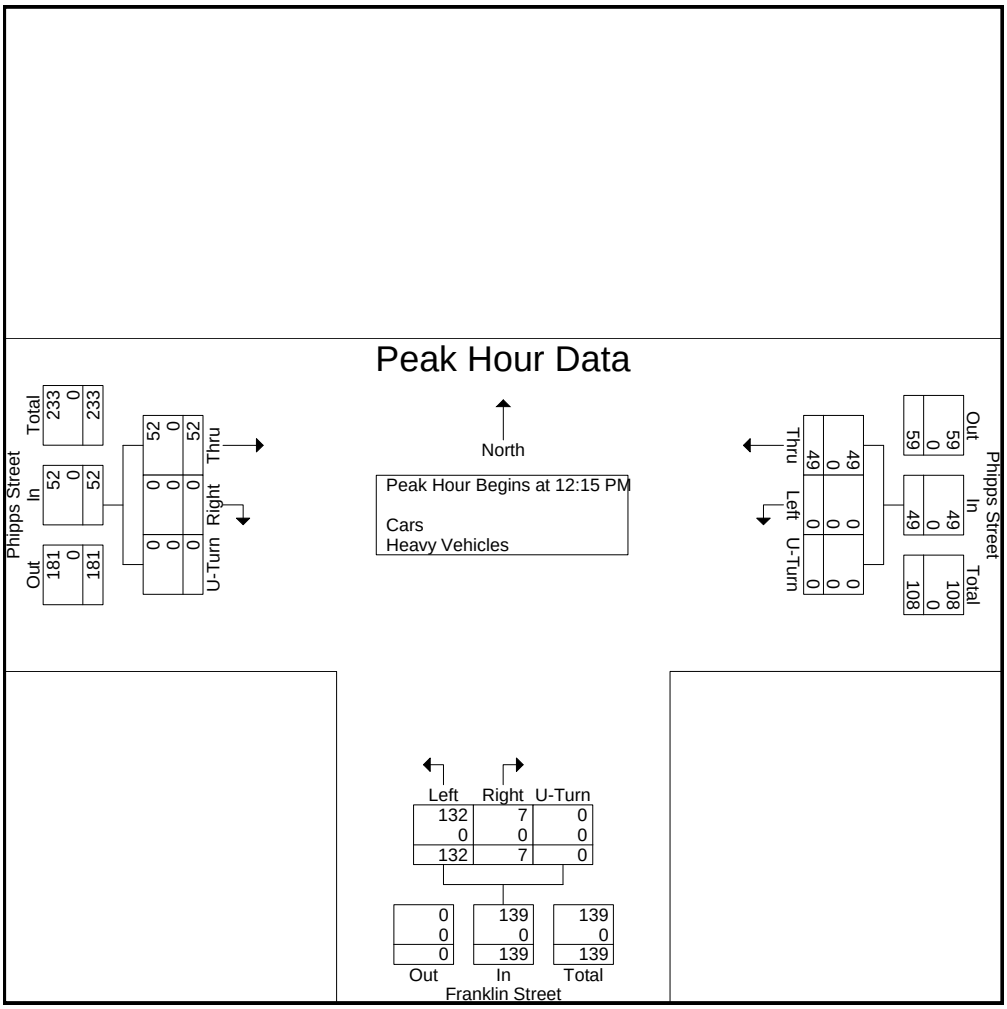
	Phipps Street From East					Franklin Street From South					Phipps Street From West					
Start Time	Thru	Left	Peds SB	Peds NB	App. Total	Right	Left	Peds WB	Peds EB	App. Total	Right	Thru	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 01:00 PM																
01:00 PM	0	0	5	0	5	0	0	5	0	5	0	0	0	1	1	11
01:15 PM	2	0	1	0	3	0	3	4	0	7	1	0	1	0	2	12
01:30 PM	0	1	2	0	3	0	2	2	0	4	2	0	0	0	2	9
01:45 PM	6	0	0	0	6	0	0	0	0	0	0	2	0	0	2	8
Total Volume	8	1	8	0	17	0	5	11	0	16	3	2	1	1	7	40
% App. Total	47.1	5.9	47.1	0		0	31.2	68.8	0		42.9	28.6	14.3	14.3		
PHF	.333	.250	.400	.000	.708	.000	.417	.550	.000	.571	.375	.250	.250	.250	.875	.833

S: Franklin Street
E/W: Phipps Street
City, State: Hull, MA
Client: TEC/ R. Brown

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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	Phipps Street From East				Franklin Street From South				Phipps Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 12:15 PM													
12:15 PM	15	0	0	15	2	32	0	34	0	13	0	13	62
12:30 PM	13	0	0	13	3	32	0	35	0	15	0	15	63
12:45 PM	11	0	0	11	1	28	0	29	0	13	0	13	53
01:00 PM	10	0	0	10	1	40	0	41	0	11	0	11	62
Total Volume	49	0	0	49	7	132	0	139	0	52	0	52	240
% App. Total	100	0	0		5	95	0		0	100	0		
PHF	.817	.000	.000	.817	.583	.825	.000	.848	.000	.867	.000	.867	.952
Cars	49	0	0	49	7	132	0	139	0	52	0	52	240
% Cars	100	0	0	100	100	100	0	100	0	100	0	100	100
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0



S: Franklin Street
E/W: Phipps Street
City, State: Hull, MA
Client: TEC/ R. Brown

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 154600 CC
Site Code : T0597
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Groups Printed- Cars - Heavy Vehicles

	Phipps Street From East			Franklin Street From South			Phipps Street From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
04:00 PM	6	0	0	4	42	0	0	2	0	54
04:15 PM	2	0	0	2	40	0	0	1	0	45
04:30 PM	6	0	1	1	23	0	0	3	0	34
04:45 PM	8	0	0	0	17	0	0	1	0	26
Total	22	0	1	7	122	0	0	7	0	159
05:00 PM	6	0	0	1	13	0	0	5	0	25
05:15 PM	4	0	0	0	13	0	0	1	0	18
05:30 PM	6	0	0	0	12	0	0	0	0	18
05:45 PM	3	0	0	0	8	0	0	1	0	12
Total	19	0	0	1	46	0	0	7	0	73
Grand Total	41	0	1	8	168	0	0	14	0	232
Apprch %	97.6	0	2.4	4.5	95.5	0	0	100	0	
Total %	17.7	0	0.4	3.4	72.4	0	0	6	0	
Cars	40	0	1	8	167	0	0	13	0	229
% Cars	97.6	0	100	100	99.4	0	0	92.9	0	98.7
Heavy Vehicles	1	0	0	0	1	0	0	1	0	3
% Heavy Vehicles	2.4	0	0	0	0.6	0	0	7.1	0	1.3

	Phipps Street From East				Franklin Street From South				Phipps Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:00 PM													
04:00 PM	6	0	0	6	4	42	0	46	0	2	0	2	54
04:15 PM	2	0	0	2	2	40	0	42	0	1	0	1	45
04:30 PM	6	0	1	7	1	23	0	24	0	3	0	3	34
04:45 PM	8	0	0	8	0	17	0	17	0	1	0	1	26
Total Volume	22	0	1	23	7	122	0	129	0	7	0	7	159
% App. Total	95.7	0	4.3		5.4	94.6	0		0	100	0		
PHF	.688	.000	.250	.719	.438	.726	.000	.701	.000	.583	.000	.583	.736
Cars	21	0	1	22	7	121	0	128	0	6	0	6	156
% Cars	95.5	0	100	95.7	100	99.2	0	99.2	0	85.7	0	85.7	98.1
Heavy Vehicles	1	0	0	1	0	1	0	1	0	1	0	1	3
% Heavy Vehicles	4.5	0	0	4.3	0	0.8	0	0.8	0	14.3	0	14.3	1.9

S: Franklin Street
E/W: Phipps Street
City, State: Hull, MA
Client: TEC/ R. Brown

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Site Code : T0597
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Groups Printed- Cars

	Phipps Street From East			Franklin Street From South			Phipps Street From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
04:00 PM	6	0	0	4	42	0	0	2	0	54
04:15 PM	2	0	0	2	39	0	0	1	0	44
04:30 PM	6	0	1	1	23	0	0	2	0	33
04:45 PM	7	0	0	0	17	0	0	1	0	25
Total	21	0	1	7	121	0	0	6	0	156
05:00 PM	6	0	0	1	13	0	0	5	0	25
05:15 PM	4	0	0	0	13	0	0	1	0	18
05:30 PM	6	0	0	0	12	0	0	0	0	18
05:45 PM	3	0	0	0	8	0	0	1	0	12
Total	19	0	0	1	46	0	0	7	0	73
Grand Total	40	0	1	8	167	0	0	13	0	229
Apprch %	97.6	0	2.4	4.6	95.4	0	0	100	0	
Total %	17.5	0	0.4	3.5	72.9	0	0	5.7	0	

	Phipps Street From East				Franklin Street From South				Phipps Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:00 PM													
04:00 PM	6	0	0	6	4	42	0	46	0	2	0	2	54
04:15 PM	2	0	0	2	2	39	0	41	0	1	0	1	44
04:30 PM	6	0	1	7	1	23	0	24	0	2	0	2	33
04:45 PM	7	0	0	7	0	17	0	17	0	1	0	1	25
Total Volume	21	0	1	22	7	121	0	128	0	6	0	6	156
% App. Total	95.5	0	4.5		5.5	94.5	0		0	100	0		
PHF	.750	.000	.250	.786	.438	.720	.000	.696	.000	.750	.000	.750	.722

S: Franklin Street
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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 154600 CC
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Groups Printed- Heavy Vehicles

	Phipps Street From East			Franklin Street From South			Phipps Street From West			
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	1	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	1	0	1
04:45 PM	1	0	0	0	0	0	0	0	0	1
Total	1	0	0	0	1	0	0	1	0	3
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Grand Total	1	0	0	0	1	0	0	1	0	3
Apprch %	100	0	0	0	100	0	0	100	0	
Total %	33.3	0	0	0	33.3	0	0	33.3	0	

	Phipps Street From East				Franklin Street From South				Phipps Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:00 PM													
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
04:45 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
Total Volume	1	0	0	1	0	1	0	1	0	1	0	1	3
% App. Total	100	0	0		0	100	0		0	100	0		
PHF	.250	.000	.000	.250	.000	.250	.000	.250	.000	.250	.000	.250	.750

S: Franklin Street
E/W: Phipps Street
City, State: Hull, MA
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Office: 508.481.3999 Fax: 508.545.1234
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File Name : 154600 CC
Site Code : T0597
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Groups Printed- Peds and Bikes

	Phipps Street From East				Franklin Street From South				Phipps Street From West				
Start Time	Thru	Left	Peds SB	Peds NB	Right	Left	Peds WB	Peds EB	Right	Thru	Peds NB	Peds SB	Int. Total
04:00 PM	0	0	0	2	0	0	2	2	0	0	0	0	6
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	2	0	0	0	0	0	2
04:45 PM	0	0	0	0	0	0	1	0	0	0	0	0	1
Total	0	0	0	2	0	0	5	2	0	0	0	0	9
05:00 PM	0	1	1	0	1	0	0	0	0	0	0	2	5
05:15 PM	2	0	0	0	0	1	0	0	0	0	0	0	3
05:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	2	0	0	0	0	0	0	2
Total	2	1	2	0	1	3	0	0	0	0	0	2	11
Grand Total	2	1	2	2	1	3	5	2	0	0	0	2	20
Apprch %	28.6	14.3	28.6	28.6	9.1	27.3	45.5	18.2	0	0	0	100	
Total %	10	5	10	10	5	15	25	10	0	0	0	10	

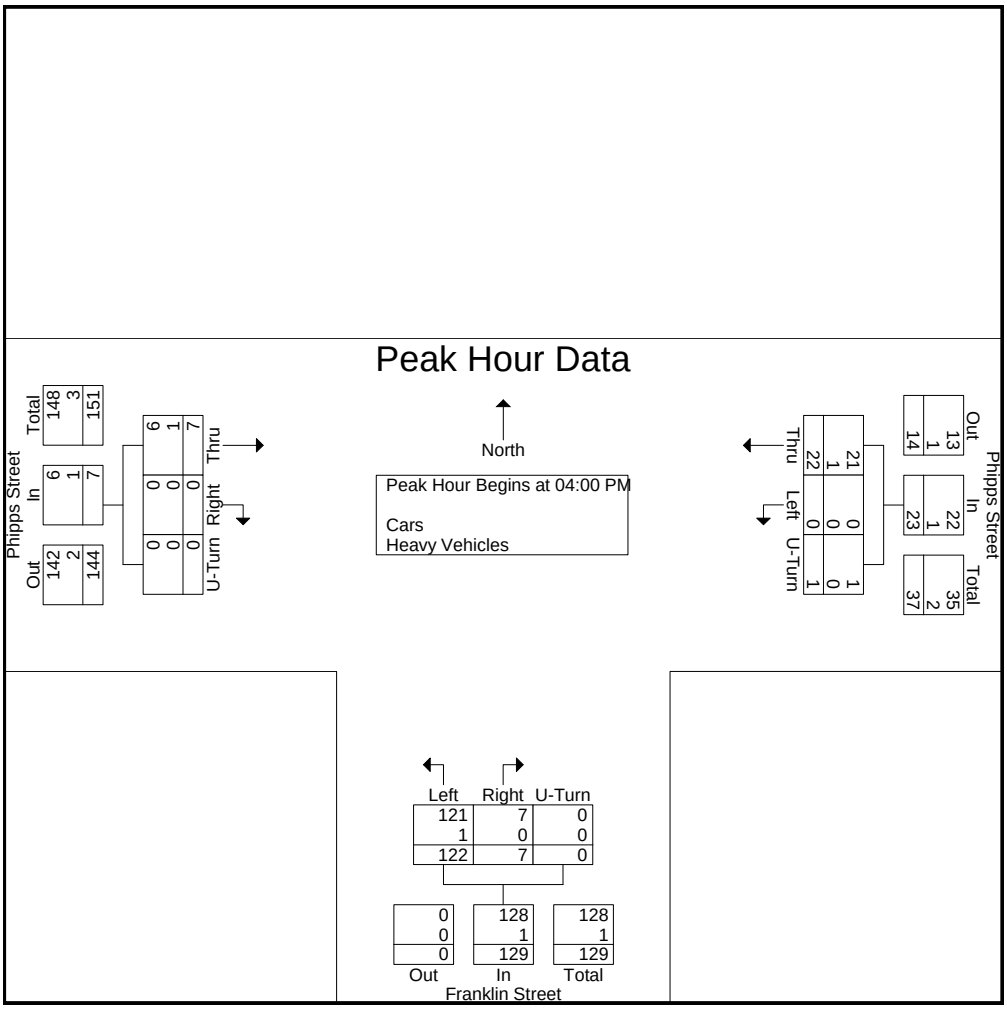
	Phipps Street From East					Franklin Street From South					Phipps Street From West					
Start Time	Thru	Left	Peds SB	Peds NB	App. Total	Right	Left	Peds WB	Peds EB	App. Total	Right	Thru	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 04:30 PM																
04:30 PM	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	2
04:45 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
05:00 PM	0	1	1	0	2	1	0	0	0	1	0	0	0	2	2	5
05:15 PM	2	0	0	0	2	0	1	0	0	1	0	0	0	0	0	3
Total Volume	2	1	1	0	4	1	1	3	0	5	0	0	0	2	2	11
% App. Total	50	25	25	0		20	20	60	0		0	0	0	100		
PHF	.250	.250	.250	.000	.500	.250	.250	.375	.000	.625	.000	.000	.000	.250	.250	.550

S: Franklin Street
E/W: Phipps Street
City, State: Hull, MA
Client: TEC/ R. Brown

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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	Phipps Street From East				Franklin Street From South				Phipps Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:00 PM													
04:00 PM	6	0	0	6	4	42	0	46	0	2	0	2	54
04:15 PM	2	0	0	2	2	40	0	42	0	1	0	1	45
04:30 PM	6	0	1	7	1	23	0	24	0	3	0	3	34
04:45 PM	8	0	0	8	0	17	0	17	0	1	0	1	26
Total Volume	22	0	1	23	7	122	0	129	0	7	0	7	159
% App. Total	95.7	0	4.3		5.4	94.6	0		0	100	0		
PHF	.688	.000	.250	.719	.438	.726	.000	.701	.000	.583	.000	.583	.736
Cars	21	0	1	22	7	121	0	128	0	6	0	6	156
% Cars	95.5	0	100	95.7	100	99.2	0	99.2	0	85.7	0	85.7	98.1
Heavy Vehicles	1	0	0	1	0	1	0	1	0	1	0	1	3
% Heavy Vehicles	4.5	0	0	4.3	0	0.8	0	0.8	0	14.3	0	14.3	1.9



N/S: Nantasket Avenue
E/W: Phipps Street/ Mountford Road
City, State: Hull, MA
Client: TEC/ R. Brown

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Groups Printed- Cars - Heavy Vehicles

	Nantasket Avenue From North				Phipps Street From East				Nantasket Avenue From South				Mountford Road From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
12:00 PM	1	152	0	0	6	0	41	0	0	164	0	0	2	0	0	0	366
12:15 PM	1	154	0	0	13	0	54	0	0	143	1	0	3	0	0	0	369
12:30 PM	1	157	0	0	13	0	42	0	0	170	0	0	1	0	0	0	384
12:45 PM	3	177	0	0	4	0	41	0	0	149	3	0	3	0	1	0	381
Total	6	640	0	0	36	0	178	0	0	626	4	0	9	0	1	0	1500
01:00 PM	0	128	0	0	4	0	51	0	0	164	0	1	1	0	0	0	349
01:15 PM	0	127	0	0	5	0	47	0	0	170	0	0	0	0	2	0	351
01:30 PM	0	149	0	0	2	0	31	0	1	113	2	0	1	0	0	0	299
01:45 PM	0	127	0	0	5	1	37	0	0	159	5	0	0	0	0	0	334
Total	0	531	0	0	16	1	166	0	1	606	7	1	2	0	2	0	1333
Grand Total	6	1171	0	0	52	1	344	0	1	1232	11	1	11	0	3	0	2833
Apprch %	0.5	99.5	0	0	13.1	0.3	86.6	0	0.1	99	0.9	0.1	78.6	0	21.4	0	
Total %	0.2	41.3	0	0	1.8	0	12.1	0	0	43.5	0.4	0	0.4	0	0.1	0	
Cars	6	1153	0	0	52	1	343	0	1	1213	11	1	11	0	3	0	2795
% Cars	100	98.5	0	0	100	100	99.7	0	100	98.5	100	100	100	0	100	0	98.7
Heavy Vehicles	0	18	0	0	0	0	1	0	0	19	0	0	0	0	0	0	38
% Heavy Vehicles	0	1.5	0	0	0	0	0.3	0	0	1.5	0	0	0	0	0	0	1.3

	Nantasket Avenue From North					Phipps Street From East					Nantasket Avenue From South					Mountford Road From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:00 PM																					
12:00 PM	1	152	0	0	153	6	0	41	0	47	0	164	0	0	164	2	0	0	0	2	366
12:15 PM	1	154	0	0	155	13	0	54	0	67	0	143	1	0	144	3	0	0	0	3	369
12:30 PM	1	157	0	0	158	13	0	42	0	55	0	170	0	0	170	1	0	0	0	1	384
12:45 PM	3	177	0	0	180	4	0	41	0	45	0	149	3	0	152	3	0	1	0	4	381
Total Volume	6	640	0	0	646	36	0	178	0	214	0	626	4	0	630	9	0	1	0	10	1500
% App. Total	0.9	99.1	0	0		16.8	0	83.2	0		0	99.4	0.6	0		90	0	10	0		
PHF	.500	.904	.000	.000	.897	.692	.000	.824	.000	.799	.000	.921	.333	.000	.926	.750	.000	.250	.000	.625	.977
Cars	6	630	0	0	636	36	0	177	0	213	0	617	4	0	621	9	0	1	0	10	1480
% Cars	100	98.4	0	0	98.5	100	0	99.4	0	99.5	0	98.6	100	0	98.6	100	0	100	0	100	98.7
Heavy Vehicles	0	10	0	0	10	0	0	1	0	1	0	9	0	0	9	0	0	0	0	0	20
% Heavy Vehicles	0	1.6	0	0	1.5	0	0	0.6	0	0.5	0	1.4	0	0	1.4	0	0	0	0	0	1.3

N/S: Nantasket Avenue
E/W: Phipps Street/ Mountford Road
City, State: Hull, MA
Client: TEC/ R. Brown

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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 154600 D
Site Code : T0597
Start Date : 8/15/2015
Page No : 1

Groups Printed- Cars

	Nantasket Avenue From North				Phipps Street From East				Nantasket Avenue From South				Mountford Road From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
12:00 PM	1	152	0	0	6	0	41	0	0	161	0	0	2	0	0	0	363
12:15 PM	1	150	0	0	13	0	53	0	0	142	1	0	3	0	0	0	363
12:30 PM	1	154	0	0	13	0	42	0	0	169	0	0	1	0	0	0	380
12:45 PM	3	174	0	0	4	0	41	0	0	145	3	0	3	0	1	0	374
Total	6	630	0	0	36	0	177	0	0	617	4	0	9	0	1	0	1480
01:00 PM	0	127	0	0	4	0	51	0	0	161	0	1	1	0	0	0	345
01:15 PM	0	127	0	0	5	0	47	0	0	167	0	0	0	0	2	0	348
01:30 PM	0	145	0	0	2	0	31	0	1	112	2	0	1	0	0	0	294
01:45 PM	0	124	0	0	5	1	37	0	0	156	5	0	0	0	0	0	328
Total	0	523	0	0	16	1	166	0	1	596	7	1	2	0	2	0	1315
Grand Total	6	1153	0	0	52	1	343	0	1	1213	11	1	11	0	3	0	2795
Apprch %	0.5	99.5	0	0	13.1	0.3	86.6	0	0.1	98.9	0.9	0.1	78.6	0	21.4	0	
Total %	0.2	41.3	0	0	1.9	0	12.3	0	0	43.4	0.4	0	0.4	0	0.1	0	

	Nantasket Avenue From North					Phipps Street From East					Nantasket Avenue From South					Mountford Road From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:00 PM																					
12:00 PM	1	152	0	0	153	6	0	41	0	47	0	161	0	0	161	2	0	0	0	2	363
12:15 PM	1	150	0	0	151	13	0	53	0	66	0	142	1	0	143	3	0	0	0	3	363
12:30 PM	1	154	0	0	155	13	0	42	0	55	0	169	0	0	169	1	0	0	0	1	380
12:45 PM	3	174	0	0	177	4	0	41	0	45	0	145	3	0	148	3	0	1	0	4	374
Total Volume	6	630	0	0	636	36	0	177	0	213	0	617	4	0	621	9	0	1	0	10	1480
% App. Total	0.9	99.1	0	0		16.9	0	83.1	0		0	99.4	0.6	0		90	0	10	0		
PHF	.500	.905	.000	.000	.898	.692	.000	.835	.000	.807	.000	.913	.333	.000	.919	.750	.000	.250	.000	.625	.974

N/S: Nantasket Avenue
E/W: Phipps Street/ Mountford Road
City, State: Hull, MA
Client: TEC/ R. Brown

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 154600 D
Site Code : T0597
Start Date : 8/15/2015
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Groups Printed- Heavy Vehicles

	Nantasket Avenue From North				Phipps Street From East				Nantasket Avenue From South				Mountford Road From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
12:00 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3
12:15 PM	0	4	0	0	0	0	1	0	0	1	0	0	0	0	0	0	6
12:30 PM	0	3	0	0	0	0	0	0	0	1	0	0	0	0	0	0	4
12:45 PM	0	3	0	0	0	0	0	0	0	4	0	0	0	0	0	0	7
Total	0	10	0	0	0	0	1	0	0	9	0	0	0	0	0	0	20
01:00 PM	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0	0	4
01:15 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3
01:30 PM	0	4	0	0	0	0	0	0	0	1	0	0	0	0	0	0	5
01:45 PM	0	3	0	0	0	0	0	0	0	3	0	0	0	0	0	0	6
Total	0	8	0	0	0	0	0	0	0	10	0	0	0	0	0	0	18
Grand Total	0	18	0	0	0	0	1	0	0	19	0	0	0	0	0	0	38
Apprch %	0	100	0	0	0	0	100	0	0	100	0	0	0	0	0	0	
Total %	0	47.4	0	0	0	0	2.6	0	0	50	0	0	0	0	0	0	

	Nantasket Avenue From North					Phipps Street From East					Nantasket Avenue From South					Mountford Road From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:15 PM																					
12:15 PM	0	4	0	0	4	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	6
12:30 PM	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	4
12:45 PM	0	3	0	0	3	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	7
01:00 PM	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	4
Total Volume	0	11	0	0	11	0	0	1	0	1	0	9	0	0	9	0	0	0	0	0	21
% App. Total	0	100	0	0		0	0	100	0		0	100	0	0		0	0	0	0		
PHF	.000	.688	.000	.000	.688	.000	.000	.250	.000	.250	.000	.563	.000	.000	.563	.000	.000	.000	.000	.000	.750

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Page No : 1

Groups Printed- Peds and Bikes

	Nantasket Avenue From North					Phipps Street From East					Nantasket Avenue From South					Mountford Road From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
12:00 PM	0	1	0	0	0	0	0	2	0	0	0	2	0	4	4	0	0	0	1	1	15
12:15 PM	0	0	0	0	0	1	0	0	2	0	0	0	0	0	4	0	0	0	1	2	10
12:30 PM	0	5	0	0	0	0	0	0	0	0	0	0	0	2	3	0	0	0	0	3	13
12:45 PM	0	1	0	0	0	0	0	0	4	0	0	0	0	2	1	0	0	0	3	2	13
Total	0	7	0	0	0	1	0	2	6	0	0	2	0	8	12	0	0	0	5	8	51
01:00 PM	0	1	0	2	0	0	0	0	1	0	0	0	0	2	5	0	0	0	1	0	12
01:15 PM	0	0	0	0	0	1	0	0	2	0	0	0	0	3	1	0	0	0	3	3	13
01:30 PM	0	3	0	0	1	0	0	0	1	0	0	0	0	3	2	0	0	0	3	1	14
01:45 PM	0	1	0	0	0	0	0	7	0	0	0	0	0	1	0	0	0	0	5	1	15
Total	0	5	0	2	1	1	0	7	4	0	0	0	0	9	8	0	0	0	12	5	54
Grand Total	0	12	0	2	1	2	0	9	10	0	0	2	0	17	20	0	0	0	17	13	105
Apprch %	0	80	0	13.3	6.7	9.5	0	42.9	47.6	0	0	5.1	0	43.6	51.3	0	0	0	56.7	43.3	
Total %	0	11.4	0	1.9	1	1.9	0	8.6	9.5	0	0	1.9	0	16.2	19	0	0	0	16.2	12.4	

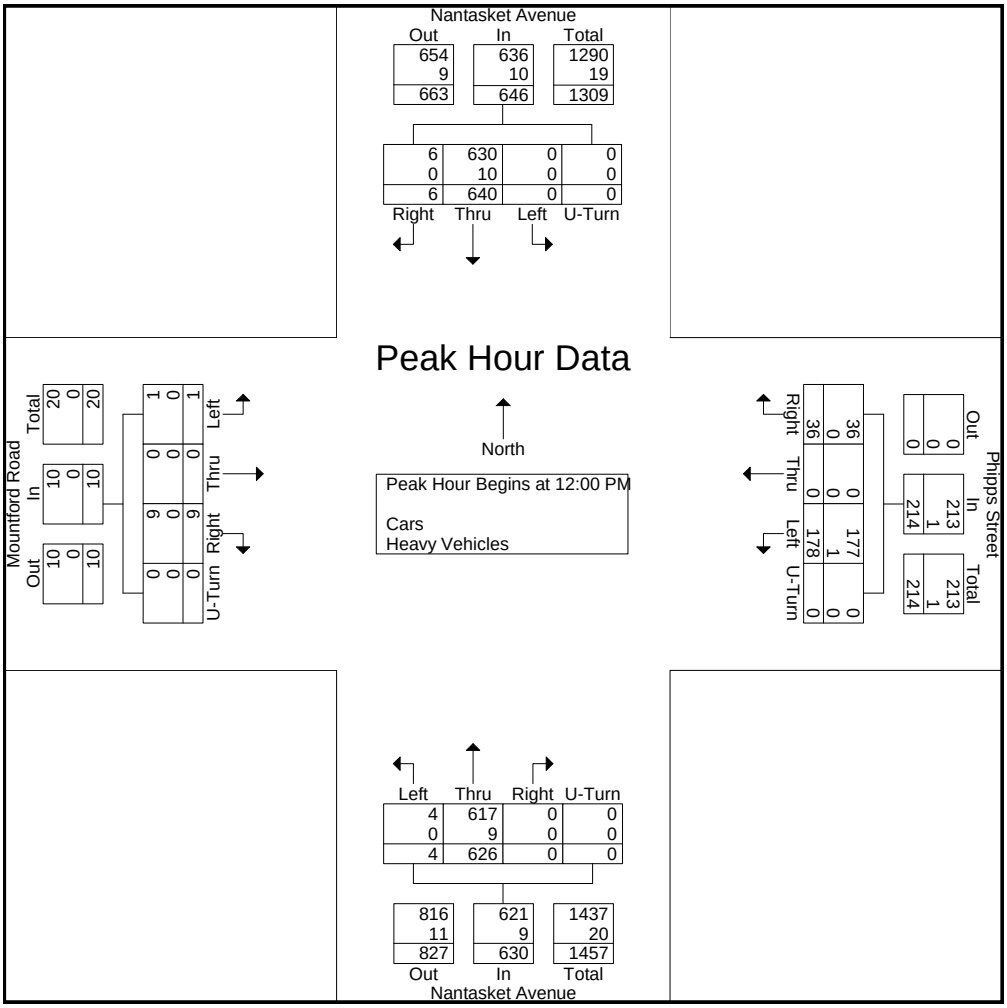
	Nantasket Avenue From North						Phipps Street From East						Nantasket Avenue From South						Mountford Road From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 01:00 PM																									
01:00 PM	0	1	0	2	0	3	0	0	0	1	0	1	0	0	0	2	5	7	0	0	0	1	0	1	12
01:15 PM	0	0	0	0	0	0	1	0	0	2	0	3	0	0	0	3	1	4	0	0	0	3	3	6	13
01:30 PM	0	3	0	0	1	4	0	0	0	1	0	1	0	0	0	3	2	5	0	0	0	3	1	4	14
01:45 PM	0	1	0	0	0	1	0	0	7	0	0	7	0	0	0	1	0	1	0	0	0	5	1	6	15
Total Volume	0	5	0	2	1	8	1	0	7	4	0	12	0	0	0	9	8	17	0	0	0	12	5	17	54
% App. Total	0	62.5	0	25	12.5		8.3	0	58.3	33.3	0		0	0	0	52.9	47.1		0	0	0	70.6	29.4		
PHF	.000	.417	.000	.250	.250	.500	.250	.000	.250	.500	.000	.429	.000	.000	.000	.750	.400	.607	.000	.000	.000	.600	.417	.708	.900

N/S: Nantasket Avenue
E/W: Phipps Street/ Mountford Road
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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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	Nantasket Avenue From North					Phipps Street From East					Nantasket Avenue From South					Mountford Road From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:00 PM																					
12:00 PM	1	152	0	0	153	6	0	41	0	47	0	164	0	0	164	2	0	0	0	2	366
12:15 PM	1	154	0	0	155	13	0	54	0	67	0	143	1	0	144	3	0	0	0	3	369
12:30 PM	1	157	0	0	158	13	0	42	0	55	0	170	0	0	170	1	0	0	0	1	384
12:45 PM	3	177	0	0	180	4	0	41	0	45	0	149	3	0	152	3	0	1	0	4	381
Total Volume	6	640	0	0	646	36	0	178	0	214	0	626	4	0	630	9	0	1	0	10	1500
% App. Total	0.9	99.1	0	0		16.8	0	83.2	0		0	99.4	0.6	0		90	0	10	0		
PHF	.500	.904	.000	.000	.897	.692	.000	.824	.000	.799	.000	.921	.333	.000	.926	.750	.000	.250	.000	.625	.977
Cars	6	630	0	0	636	36	0	177	0	213	0	617	4	0	621	9	0	1	0	10	1480
% Cars	100	98.4	0	0	98.5	100	0	99.4	0	99.5	0	98.6	100	0	98.6	100	0	100	0	100	98.7
Heavy Vehicles	0	10	0	0	10	0	0	1	0	1	0	9	0	0	9	0	0	0	0	0	20
% Heavy Vehicles	0	1.6	0	0	1.5	0	0	0.6	0	0.5	0	1.4	0	0	1.4	0	0	0	0	0	1.3



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File Name : 154600 DD
Site Code : T0597
Start Date : 8/18/2015
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Nantasket Avenue From North				Phipps Street From East				Nantasket Avenue From South				Nountford Road From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	1	159	0	0	5	0	56	0	0	147	2	0	1	0	1	0	372
04:15 PM	0	158	0	0	1	0	42	0	0	168	3	0	2	0	0	0	374
04:30 PM	1	148	0	0	3	0	33	0	0	168	2	0	3	0	0	0	358
04:45 PM	1	143	0	0	3	0	26	0	0	161	3	0	2	0	1	0	340
Total	3	608	0	0	12	0	157	0	0	644	10	0	8	0	2	0	1444
05:00 PM	2	157	0	0	3	0	17	0	0	148	1	0	1	0	1	0	330
05:15 PM	2	140	0	0	4	0	26	0	0	169	2	0	2	0	0	0	345
05:30 PM	1	133	0	0	2	1	25	0	0	168	2	0	1	0	0	0	333
05:45 PM	0	122	0	0	2	0	13	0	0	193	1	0	0	0	0	0	331
Total	5	552	0	0	11	1	81	0	0	678	6	0	4	0	1	0	1339
Grand Total	8	1160	0	0	23	1	238	0	0	1322	16	0	12	0	3	0	2783
Apprch %	0.7	99.3	0	0	8.8	0.4	90.8	0	0	98.8	1.2	0	80	0	20	0	
Total %	0.3	41.7	0	0	0.8	0	8.6	0	0	47.5	0.6	0	0.4	0	0.1	0	
Cars	8	1131	0	0	22	1	234	0	0	1297	16	0	12	0	3	0	2724
% Cars	100	97.5	0	0	95.7	100	98.3	0	0	98.1	100	0	100	0	100	0	97.9
Heavy Vehicles	0	29	0	0	1	0	4	0	0	25	0	0	0	0	0	0	59
% Heavy Vehicles	0	2.5	0	0	4.3	0	1.7	0	0	1.9	0	0	0	0	0	0	2.1

	Nantasket Avenue From North					Phipps Street From East					Nantasket Avenue From South					Nountford Road From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	1	159	0	0	160	5	0	56	0	61	0	147	2	0	149	1	0	1	0	2	372
04:15 PM	0	158	0	0	158	1	0	42	0	43	0	168	3	0	171	2	0	0	0	2	374
04:30 PM	1	148	0	0	149	3	0	33	0	36	0	168	2	0	170	3	0	0	0	3	358
04:45 PM	1	143	0	0	144	3	0	26	0	29	0	161	3	0	164	2	0	1	0	3	340
Total Volume	3	608	0	0	611	12	0	157	0	169	0	644	10	0	654	8	0	2	0	10	1444
% App. Total	0.5	99.5	0	0		7.1	0	92.9	0		0	98.5	1.5	0		80	0	20	0		
PHF	.750	.956	.000	.000	.955	.600	.000	.701	.000	.693	.000	.958	.833	.000	.956	.667	.000	.500	.000	.833	.965
Cars	3	587	0	0	590	11	0	153	0	164	0	629	10	0	639	8	0	2	0	10	1403
% Cars	100	96.5	0	0	96.6	91.7	0	97.5	0	97.0	0	97.7	100	0	97.7	100	0	100	0	100	97.2
Heavy Vehicles	0	21	0	0	21	1	0	4	0	5	0	15	0	0	15	0	0	0	0	0	41
% Heavy Vehicles	0	3.5	0	0	3.4	8.3	0	2.5	0	3.0	0	2.3	0	0	2.3	0	0	0	0	0	2.8

N/S: Nantasket Avenue
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Groups Printed- Cars

	Nantasket Avenue From North				Phipps Street From East				Nantasket Avenue From South				Nountford Road From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	1	152	0	0	5	0	56	0	0	142	2	0	1	0	1	0	360
04:15 PM	0	154	0	0	1	0	41	0	0	165	3	0	2	0	0	0	366
04:30 PM	1	144	0	0	2	0	31	0	0	167	2	0	3	0	0	0	350
04:45 PM	1	137	0	0	3	0	25	0	0	155	3	0	2	0	1	0	327
Total	3	587	0	0	11	0	153	0	0	629	10	0	8	0	2	0	1403
05:00 PM	2	154	0	0	3	0	17	0	0	146	1	0	1	0	1	0	325
05:15 PM	2	139	0	0	4	0	26	0	0	166	2	0	2	0	0	0	341
05:30 PM	1	129	0	0	2	1	25	0	0	165	2	0	1	0	0	0	326
05:45 PM	0	122	0	0	2	0	13	0	0	191	1	0	0	0	0	0	329
Total	5	544	0	0	11	1	81	0	0	668	6	0	4	0	1	0	1321
Grand Total	8	1131	0	0	22	1	234	0	0	1297	16	0	12	0	3	0	2724
Apprch %	0.7	99.3	0	0	8.6	0.4	91.1	0	0	98.8	1.2	0	80	0	20	0	
Total %	0.3	41.5	0	0	0.8	0	8.6	0	0	47.6	0.6	0	0.4	0	0.1	0	

	Nantasket Avenue From North					Phipps Street From East					Nantasket Avenue From South					Nountford Road From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	1	152	0	0	153	5	0	56	0	61	0	142	2	0	144	1	0	1	0	2	360
04:15 PM	0	154	0	0	154	1	0	41	0	42	0	165	3	0	168	2	0	0	0	2	366
04:30 PM	1	144	0	0	145	2	0	31	0	33	0	167	2	0	169	3	0	0	0	3	350
04:45 PM	1	137	0	0	138	3	0	25	0	28	0	155	3	0	158	2	0	1	0	3	327
Total Volume	3	587	0	0	590	11	0	153	0	164	0	629	10	0	639	8	0	2	0	10	1403
% App. Total	0.5	99.5	0	0		6.7	0	93.3	0		0	98.4	1.6	0		80	0	20	0		
PHF	.750	.953	.000	.000	.958	.550	.000	.683	.000	.672	.000	.942	.833	.000	.945	.667	.000	.500	.000	.833	.958

N/S: Nantasket Avenue
E/W: Phipps Street/ Mountford Road
City, State: Hull, MA
Client: TEC/ R. Brown

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 154600 DD
Site Code : T0597
Start Date : 8/18/2015
Page No : 1

Groups Printed- Heavy Vehicles

	Nantasket Avenue From North				Phipps Street From East				Nantasket Avenue From South				Nountford Road From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	0	7	0	0	0	0	0	0	0	5	0	0	0	0	0	0	12
04:15 PM	0	4	0	0	0	0	1	0	0	3	0	0	0	0	0	0	8
04:30 PM	0	4	0	0	1	0	2	0	0	1	0	0	0	0	0	0	8
04:45 PM	0	6	0	0	0	0	1	0	0	6	0	0	0	0	0	0	13
Total	0	21	0	0	1	0	4	0	0	15	0	0	0	0	0	0	41
05:00 PM	0	3	0	0	0	0	0	0	0	2	0	0	0	0	0	0	5
05:15 PM	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0	0	4
05:30 PM	0	4	0	0	0	0	0	0	0	3	0	0	0	0	0	0	7
05:45 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
Total	0	8	0	0	0	0	0	0	0	10	0	0	0	0	0	0	18
Grand Total	0	29	0	0	1	0	4	0	0	25	0	0	0	0	0	0	59
Apprch %	0	100	0	0	20	0	80	0	0	100	0	0	0	0	0	0	
Total %	0	49.2	0	0	1.7	0	6.8	0	0	42.4	0	0	0	0	0	0	

	Nantasket Avenue From North					Phipps Street From East					Nantasket Avenue From South					Nountford Road From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	0	7	0	0	7	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	12
04:15 PM	0	4	0	0	4	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	8
04:30 PM	0	4	0	0	4	1	0	2	0	3	0	1	0	0	1	0	0	0	0	0	8
04:45 PM	0	6	0	0	6	0	0	1	0	1	0	6	0	0	6	0	0	0	0	0	13
Total Volume	0	21	0	0	21	1	0	4	0	5	0	15	0	0	15	0	0	0	0	0	41
% App. Total	0	100	0	0		20	0	80	0		0	100	0	0		0	0	0	0		
PHF	.000	.750	.000	.000	.750	.250	.000	.500	.000	.417	.000	.625	.000	.000	.625	.000	.000	.000	.000	.000	.788

N/S: Nantasket Avenue
E/W: Phipps Street/ Mountford Road
City, State: Hull, MA
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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 154600 DD
Site Code : T0597
Start Date : 8/18/2015
Page No : 1

Groups Printed- Peds and Bikes

	Nantasket Avenue From North					Phipps Street From East					Nantasket Avenue From South					Nountford Road From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	6	0	1	0	0	0	0	0	0	4	1	12
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
04:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	3
04:45 PM	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	3
Total	0	2	0	0	0	0	0	0	0	6	0	2	0	0	0	0	0	0	6	3	19
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
05:15 PM	0	2	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	6
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	2	5
05:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	3
Total	0	2	0	0	0	1	0	2	0	0	0	0	0	1	0	0	0	0	5	4	15
Grand Total	0	4	0	0	0	1	0	2	0	6	0	2	0	1	0	0	0	0	11	7	34
Apprch %	0	100	0	0	0	11.1	0	22.2	0	66.7	0	66.7	0	33.3	0	0	0	0	61.1	38.9	
Total %	0	11.8	0	0	0	2.9	0	5.9	0	17.6	0	5.9	0	2.9	0	0	0	0	32.4	20.6	

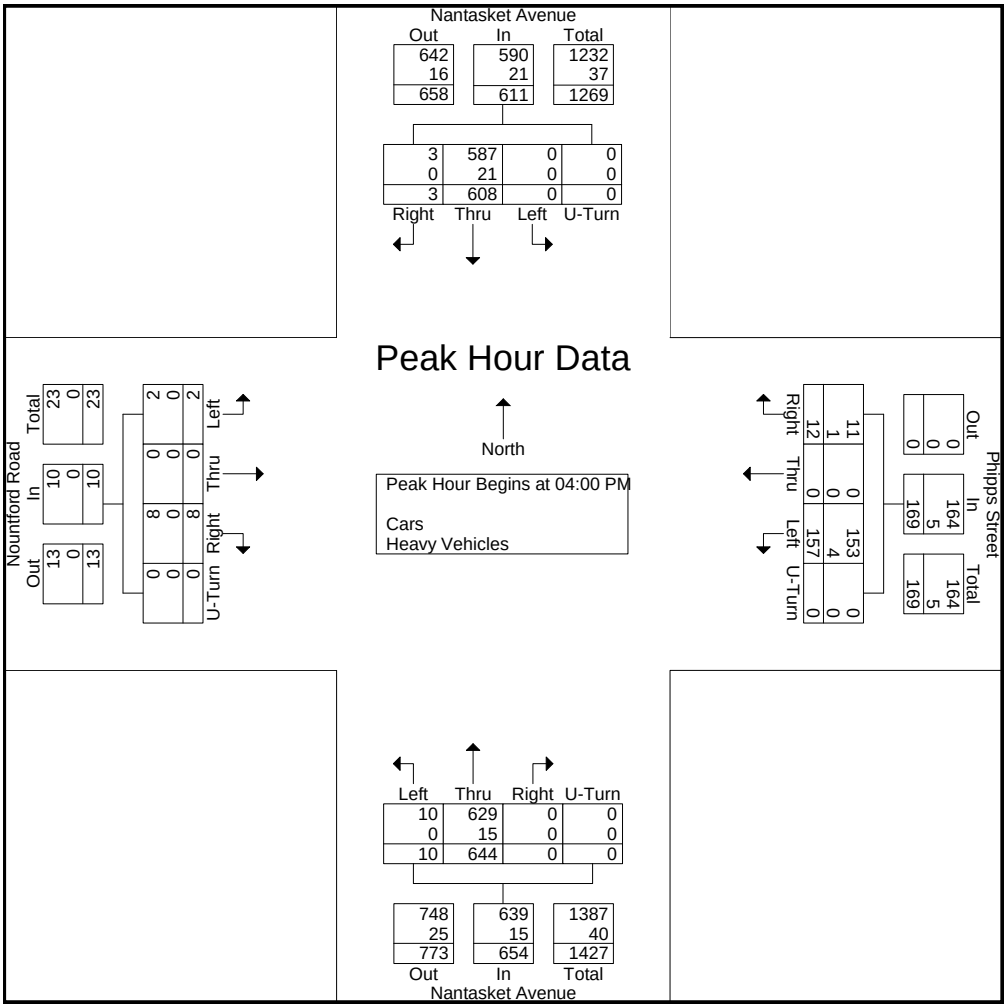
	Nantasket Avenue From North						Phipps Street From East						Nantasket Avenue From South						Nountford Road From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 04:00 PM																									
04:00 PM	0	0	0	0	0	0	0	0	0	0	6	6	0	1	0	0	0	1	0	0	0	4	1	5	12
04:15 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	1
04:30 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	3
04:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	1	3
Total Volume	0	2	0	0	0	2	0	0	0	0	6	6	0	2	0	0	0	2	0	0	0	6	3	9	19
% App. Total	0	100	0	0	0		0	0	0	0	100		0	100	0	0	0		0	0	0	66.7	33.3		
PHF	.000	.500	.000	.000	.000	.500	.000	.000	.000	.000	.250	.250	.000	.500	.000	.000	.000	.500	.000	.000	.000	.375	.750	.450	.396

N/S: Nantasket Avenue
E/W: Phipps Street/ Mountford Road
City, State: Hull, MA
Client: TEC/ R. Brown

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 154600 DD
Site Code : T0597
Start Date : 8/18/2015
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	Nantasket Avenue From North					Phipps Street From East					Nantasket Avenue From South					Nountford Road From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	1	159	0	0	160	5	0	56	0	61	0	147	2	0	149	1	0	1	0	2	372
04:15 PM	0	158	0	0	158	1	0	42	0	43	0	168	3	0	171	2	0	0	0	2	374
04:30 PM	1	148	0	0	149	3	0	33	0	36	0	168	2	0	170	3	0	0	0	3	358
04:45 PM	1	143	0	0	144	3	0	26	0	29	0	161	3	0	164	2	0	1	0	3	340
Total Volume	3	608	0	0	611	12	0	157	0	169	0	644	10	0	654	8	0	2	0	10	1444
% App. Total	0.5	99.5	0	0		7.1	0	92.9	0		0	98.5	1.5	0		80	0	20	0		
PHF	.750	.956	.000	.000	.955	.600	.000	.701	.000	.693	.000	.958	.833	.000	.956	.667	.000	.500	.000	.833	.965
Cars	3	587	0	0	590	11	0	153	0	164	0	629	10	0	639	8	0	2	0	10	1403
% Cars	100	96.5	0	0	96.6	91.7	0	97.5	0	97.0	0	97.7	100	0	97.7	100	0	100	0	100	97.2
Heavy Vehicles	0	21	0	0	21	1	0	4	0	5	0	15	0	0	15	0	0	0	0	0	41
% Heavy Vehicles	0	3.5	0	0	3.4	8.3	0	2.5	0	3.0	0	2.3	0	0	2.3	0	0	0	0	0	2.8



N/S: Samoset Avenue
E/W: Phipps Street
City, State: Hull, MA
Client: TEC/ R. Brown

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 154600 E
Site Code : T0597
Start Date : 8/15/2015
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Samoset Avenue From North				Phipps Street From East				Samoset Avenue From South				Phipps Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
12:00 PM	9	0	0	0	2	38	0	0	10	48	1	0	0	0	0	0	108
12:15 PM	13	0	0	0	3	44	0	0	14	39	7	0	0	0	0	0	120
12:30 PM	7	0	1	0	2	41	0	0	14	37	8	0	0	0	0	0	110
12:45 PM	9	0	0	0	5	35	0	0	13	40	2	0	0	0	0	0	104
Total	38	0	1	0	12	158	0	0	51	164	18	0	0	0	0	0	442
01:00 PM	5	0	0	0	5	45	0	0	11	42	4	0	0	0	0	0	112
01:15 PM	6	0	0	0	3	38	0	0	7	31	5	0	0	0	0	0	90
01:30 PM	6	0	0	0	3	22	0	0	7	25	3	0	0	0	0	0	66
01:45 PM	8	0	0	0	3	38	0	0	5	22	2	0	0	0	0	0	78
Total	25	0	0	0	14	143	0	0	30	120	14	0	0	0	0	0	346
Grand Total	63	0	1	0	26	301	0	0	81	284	32	0	0	0	0	0	788
Apprch %	98.4	0	1.6	0	8	92	0	0	20.4	71.5	8.1	0	0	0	0	0	
Total %	8	0	0.1	0	3.3	38.2	0	0	10.3	36	4.1	0	0	0	0	0	
Cars	61	0	1	0	26	300	0	0	81	284	32	0	0	0	0	0	785
% Cars	96.8	0	100	0	100	99.7	0	0	100	100	100	0	0	0	0	0	99.6
Heavy Vehicles	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3
% Heavy Vehicles	3.2	0	0	0	0	0.3	0	0	0	0	0	0	0	0	0	0	0.4

	Samoset Avenue From North					Phipps Street From East					Samoset Avenue From South					Phipps Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:15 PM																					
12:15 PM	13	0	0	0	13	3	44	0	0	47	14	39	7	0	60	0	0	0	0	0	120
12:30 PM	7	0	1	0	8	2	41	0	0	43	14	37	8	0	59	0	0	0	0	0	110
12:45 PM	9	0	0	0	9	5	35	0	0	40	13	40	2	0	55	0	0	0	0	0	104
01:00 PM	5	0	0	0	5	5	45	0	0	50	11	42	4	0	57	0	0	0	0	0	112
Total Volume	34	0	1	0	35	15	165	0	0	180	52	158	21	0	231	0	0	0	0	0	446
% App. Total	97.1	0	2.9	0		8.3	91.7	0	0		22.5	68.4	9.1	0		0	0	0	0		
PHF	.654	.000	.250	.000	.673	.750	.917	.000	.000	.900	.929	.940	.656	.000	.963	.000	.000	.000	.000	.000	.929
Cars	33	0	1	0	34	15	165	0	0	180	52	158	21	0	231	0	0	0	0	0	445
% Cars	97.1	0	100	0	97.1	100	100	0	0	100	100	100	100	0	100	0	0	0	0	0	99.8
Heavy Vehicles	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Heavy Vehicles	2.9	0	0	0	2.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2

N/S: Samoset Avenue
E/W: Phipps Street
City, State: Hull, MA
Client: TEC/ R. Brown

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 154600 E
Site Code : T0597
Start Date : 8/15/2015
Page No : 1

Groups Printed- Cars

	Samoset Avenue From North				Phipps Street From East				Samoset Avenue From South				Phipps Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
12:00 PM	9	0	0	0	2	37	0	0	10	48	1	0	0	0	0	0	107
12:15 PM	12	0	0	0	3	44	0	0	14	39	7	0	0	0	0	0	119
12:30 PM	7	0	1	0	2	41	0	0	14	37	8	0	0	0	0	0	110
12:45 PM	9	0	0	0	5	35	0	0	13	40	2	0	0	0	0	0	104
Total	37	0	1	0	12	157	0	0	51	164	18	0	0	0	0	0	440
01:00 PM	5	0	0	0	5	45	0	0	11	42	4	0	0	0	0	0	112
01:15 PM	6	0	0	0	3	38	0	0	7	31	5	0	0	0	0	0	90
01:30 PM	5	0	0	0	3	22	0	0	7	25	3	0	0	0	0	0	65
01:45 PM	8	0	0	0	3	38	0	0	5	22	2	0	0	0	0	0	78
Total	24	0	0	0	14	143	0	0	30	120	14	0	0	0	0	0	345
Grand Total	61	0	1	0	26	300	0	0	81	284	32	0	0	0	0	0	785
Apprch %	98.4	0	1.6	0	8	92	0	0	20.4	71.5	8.1	0	0	0	0	0	
Total %	7.8	0	0.1	0	3.3	38.2	0	0	10.3	36.2	4.1	0	0	0	0	0	

	Samoset Avenue From North					Phipps Street From East					Samoset Avenue From South					Phipps Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:15 PM																					
12:15 PM	12	0	0	0	12	3	44	0	0	47	14	39	7	0	60	0	0	0	0	0	119
12:30 PM	7	0	1	0	8	2	41	0	0	43	14	37	8	0	59	0	0	0	0	0	110
12:45 PM	9	0	0	0	9	5	35	0	0	40	13	40	2	0	55	0	0	0	0	0	104
01:00 PM	5	0	0	0	5	5	45	0	0	50	11	42	4	0	57	0	0	0	0	0	112
Total Volume	33	0	1	0	34	15	165	0	0	180	52	158	21	0	231	0	0	0	0	0	445
% App. Total	97.1	0	2.9	0		8.3	91.7	0	0		22.5	68.4	9.1	0		0	0	0	0		
PHF	.688	.000	.250	.000	.708	.750	.917	.000	.000	.900	.929	.940	.656	.000	.963	.000	.000	.000	.000	.000	.935

N/S: Samoset Avenue
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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 154600 E
Site Code : T0597
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Groups Printed- Heavy Vehicles

	Samoset Avenue From North				Phipps Street From East				Samoset Avenue From South				Phipps Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
12:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
12:15 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
01:45 PM	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	0	0	0	0	0	0	0	0	0	1
Grand Total	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3
Apprch %	100	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	
Total %	66.7	0	0	0	0	33.3	0	0	0	0	0	0	0	0	0	0	

	Samoset Avenue From North					Phipps Street From East					Samoset Avenue From South					Phipps Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:00 PM																					
12:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
12:15 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
% App. Total	100	0	0	0		0	100	0	0		0	0	0	0		0	0	0	0		
PHF	.250	.000	.000	.000	.250	.000	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500

N/S: Samoset Avenue
E/W: Phipps Street
City, State: Hull, MA
Client: TEC/ R. Brown

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 154600 E
Site Code : T0597
Start Date : 8/15/2015
Page No : 1

Groups Printed- Peds and Bikes

	Samoset Avenue From North					Phipps Street From East					Samoset Avenue From South					Phipps Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
12:00 PM	0	0	1	2	0	0	1	0	0	0	0	0	0	1	0	0	0	0	1	1	7
12:15 PM	0	0	0	0	0	1	0	0	0	0	1	0	1	0	0	0	0	2	0	0	5
12:30 PM	0	0	0	1	0	2	0	0	0	2	0	0	0	0	1	0	0	0	0	1	7
12:45 PM	0	0	0	1	0	0	0	0	0	0	2	0	0	1	0	0	0	0	1	0	5
Total	0	0	1	4	0	3	1	0	0	2	3	0	1	2	1	0	0	2	2	2	24
01:00 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	3
01:15 PM	0	0	0	0	1	1	4	0	3	0	0	0	0	1	1	0	0	0	0	0	11
01:30 PM	1	0	0	0	2	2	0	0	0	0	0	0	0	2	2	0	0	0	0	0	9
01:45 PM	1	0	0	2	0	0	6	0	1	0	2	0	0	0	0	0	0	0	0	0	12
Total	3	0	0	3	3	3	10	0	4	0	2	0	0	4	3	0	0	0	0	0	35
Grand Total	3	0	1	7	3	6	11	0	4	2	5	0	1	6	4	0	0	2	2	2	59
Apprch %	21.4	0	7.1	50	21.4	26.1	47.8	0	17.4	8.7	31.2	0	6.2	37.5	25	0	0	33.3	33.3	33.3	
Total %	5.1	0	1.7	11.9	5.1	10.2	18.6	0	6.8	3.4	8.5	0	1.7	10.2	6.8	0	0	3.4	3.4	3.4	

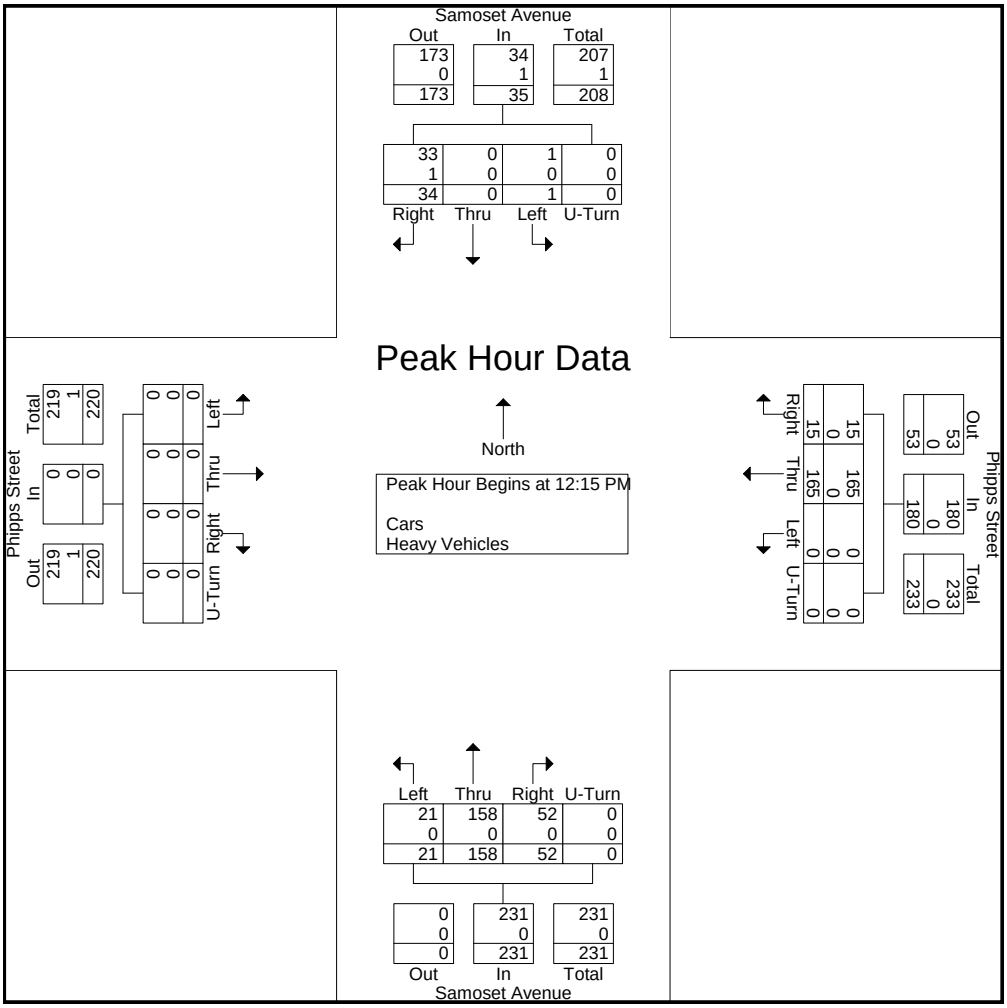
	Samoset Avenue From North						Phipps Street From East						Samoset Avenue From South						Phipps Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 01:00 PM																									
01:00 PM	1	0	0	1	0	2	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	3
01:15 PM	0	0	0	0	1	1	1	4	0	3	0	8	0	0	0	1	1	2	0	0	0	0	0	0	11
01:30 PM	1	0	0	0	2	3	2	0	0	0	0	2	0	0	0	2	2	4	0	0	0	0	0	0	9
01:45 PM	1	0	0	2	0	3	0	6	0	1	0	7	2	0	0	0	0	2	0	0	0	0	0	0	12
Total Volume	3	0	0	3	3	9	3	10	0	4	0	17	2	0	0	4	3	9	0	0	0	0	0	0	35
% App. Total	33.3	0	0	33.3	33.3		17.6	58.8	0	23.5	0		22.2	0	0	44.4	33.3		0	0	0	0	0		
PHF	.750	.000	.000	.375	.375	.750	.375	.417	.000	.333	.000	.531	.250	.000	.000	.500	.375	.563	.000	.000	.000	.000	.000	.000	.729

N/S: Samoset Avenue
E/W: Phipps Street
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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 154600 E
Site Code : T0597
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Page No : 1

	Samoset Avenue From North					Phipps Street From East					Samoset Avenue From South					Phipps Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:15 PM																					
12:15 PM	13	0	0	0	13	3	44	0	0	47	14	39	7	0	60	0	0	0	0	0	120
12:30 PM	7	0	1	0	8	2	41	0	0	43	14	37	8	0	59	0	0	0	0	0	110
12:45 PM	9	0	0	0	9	5	35	0	0	40	13	40	2	0	55	0	0	0	0	0	104
01:00 PM	5	0	0	0	5	5	45	0	0	50	11	42	4	0	57	0	0	0	0	0	112
Total Volume	34	0	1	0	35	15	165	0	0	180	52	158	21	0	231	0	0	0	0	0	446
% App. Total	97.1	0	2.9	0		8.3	91.7	0	0		22.5	68.4	9.1	0		0	0	0	0		
PHF	.654	.000	.250	.000	.673	.750	.917	.000	.000	.900	.929	.940	.656	.000	.963	.000	.000	.000	.000	.000	.929
Cars	33	0	1	0	34	15	165	0	0	180	52	158	21	0	231	0	0	0	0	0	445
% Cars	97.1	0	100	0	97.1	100	100	0	0	100	100	100	100	0	100	0	0	0	0	0	99.8
Heavy Vehicles	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Heavy Vehicles	2.9	0	0	0	2.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2



N/S: Samoset Avenue
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File Name : 154600 EE
Site Code : T0597
Start Date : 8/18/2015
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Samoset Avenue From North				Phipps Street From East				Samoset Avenue From South				Phipps Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	4	0	0	0	1	54	0	0	2	15	0	0	0	0	0	0	76
04:15 PM	3	0	0	0	4	38	0	0	1	24	0	0	0	0	0	0	70
04:30 PM	11	0	1	0	4	25	0	0	2	21	1	0	0	0	0	0	65
04:45 PM	4	0	0	0	2	23	0	0	1	26	1	0	0	0	0	0	57
Total	22	0	1	0	11	140	0	0	6	86	2	0	0	0	0	0	268
05:00 PM	6	0	0	0	0	19	0	0	5	15	1	0	0	0	0	0	46
05:15 PM	8	0	0	0	1	16	0	0	1	23	1	0	0	0	0	0	50
05:30 PM	8	0	0	0	1	17	0	0	0	29	1	0	0	0	0	0	56
05:45 PM	8	0	1	0	4	7	0	0	1	23	0	0	0	0	0	0	44
Total	30	0	1	0	6	59	0	0	7	90	3	0	0	0	0	0	196
Grand Total	52	0	2	0	17	199	0	0	13	176	5	0	0	0	0	0	464
Apprch %	96.3	0	3.7	0	7.9	92.1	0	0	6.7	90.7	2.6	0	0	0	0	0	
Total %	11.2	0	0.4	0	3.7	42.9	0	0	2.8	37.9	1.1	0	0	0	0	0	
Cars	50	0	1	0	17	196	0	0	12	175	5	0	0	0	0	0	456
% Cars	96.2	0	50	0	100	98.5	0	0	92.3	99.4	100	0	0	0	0	0	98.3
Heavy Vehicles	2	0	1	0	0	3	0	0	1	1	0	0	0	0	0	0	8
% Heavy Vehicles	3.8	0	50	0	0	1.5	0	0	7.7	0.6	0	0	0	0	0	0	1.7

	Samoset Avenue From North					Phipps Street From East					Samoset Avenue From South					Phipps Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	4	0	0	0	4	1	54	0	0	55	2	15	0	0	17	0	0	0	0	0	76
04:15 PM	3	0	0	0	3	4	38	0	0	42	1	24	0	0	25	0	0	0	0	0	70
04:30 PM	11	0	1	0	12	4	25	0	0	29	2	21	1	0	24	0	0	0	0	0	65
04:45 PM	4	0	0	0	4	2	23	0	0	25	1	26	1	0	28	0	0	0	0	0	57
Total Volume	22	0	1	0	23	11	140	0	0	151	6	86	2	0	94	0	0	0	0	0	268
% App. Total	95.7	0	4.3	0		7.3	92.7	0	0		6.4	91.5	2.1	0		0	0	0	0		
PHF	.500	.000	.250	.000	.479	.688	.648	.000	.000	.686	.750	.827	.500	.000	.839	.000	.000	.000	.000	.000	.882
Cars	20	0	1	0	21	11	138	0	0	149	5	85	2	0	92	0	0	0	0	0	262
% Cars	90.9	0	100	0	91.3	100	98.6	0	0	98.7	83.3	98.8	100	0	97.9	0	0	0	0	0	97.8
Heavy Vehicles	2	0	0	0	2	0	2	0	0	2	1	1	0	0	2	0	0	0	0	0	6
% Heavy Vehicles	9.1	0	0	0	8.7	0	1.4	0	0	1.3	16.7	1.2	0	0	2.1	0	0	0	0	0	2.2

N/S: Samoset Avenue
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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 154600 EE
Site Code : T0597
Start Date : 8/18/2015
Page No : 1

Groups Printed- Cars

	Samoset Avenue From North				Phipps Street From East				Samoset Avenue From South				Phipps Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	4	0	0	0	1	54	0	0	2	15	0	0	0	0	0	0	76
04:15 PM	3	0	0	0	4	37	0	0	1	23	0	0	0	0	0	0	68
04:30 PM	9	0	1	0	4	25	0	0	1	21	1	0	0	0	0	0	62
04:45 PM	4	0	0	0	2	22	0	0	1	26	1	0	0	0	0	0	56
Total	20	0	1	0	11	138	0	0	5	85	2	0	0	0	0	0	262
05:00 PM	6	0	0	0	0	18	0	0	5	15	1	0	0	0	0	0	45
05:15 PM	8	0	0	0	1	16	0	0	1	23	1	0	0	0	0	0	50
05:30 PM	8	0	0	0	1	17	0	0	0	29	1	0	0	0	0	0	56
05:45 PM	8	0	0	0	4	7	0	0	1	23	0	0	0	0	0	0	43
Total	30	0	0	0	6	58	0	0	7	90	3	0	0	0	0	0	194
Grand Total	50	0	1	0	17	196	0	0	12	175	5	0	0	0	0	0	456
Apprch %	98	0	2	0	8	92	0	0	6.2	91.1	2.6	0	0	0	0	0	
Total %	11	0	0.2	0	3.7	43	0	0	2.6	38.4	1.1	0	0	0	0	0	

	Samoset Avenue From North					Phipps Street From East					Samoset Avenue From South					Phipps Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	4	0	0	0	4	1	54	0	0	55	2	15	0	0	17	0	0	0	0	0	76
04:15 PM	3	0	0	0	3	4	37	0	0	41	1	23	0	0	24	0	0	0	0	0	68
04:30 PM	9	0	1	0	10	4	25	0	0	29	1	21	1	0	23	0	0	0	0	0	62
04:45 PM	4	0	0	0	4	2	22	0	0	24	1	26	1	0	28	0	0	0	0	0	56
Total Volume	20	0	1	0	21	11	138	0	0	149	5	85	2	0	92	0	0	0	0	0	262
% App. Total	95.2	0	4.8	0		7.4	92.6	0	0		5.4	92.4	2.2	0		0	0	0	0		
PHF	.556	.000	.250	.000	.525	.688	.639	.000	.000	.677	.625	.817	.500	.000	.821	.000	.000	.000	.000	.000	.862

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Groups Printed- Heavy Vehicles

	Samoset Avenue From North				Phipps Street From East				Samoset Avenue From South				Phipps Street From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	2
04:30 PM	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3
04:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	2	0	0	0	0	2	0	0	1	1	0	0	0	0	0	0	6
05:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
Grand Total	2	0	1	0	0	3	0	0	1	1	0	0	0	0	0	0	8
Apprch %	66.7	0	33.3	0	0	100	0	0	50	50	0	0	0	0	0	0	
Total %	25	0	12.5	0	0	37.5	0	0	12.5	12.5	0	0	0	0	0	0	

	Samoset Avenue From North					Phipps Street From East					Samoset Avenue From South					Phipps Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	2
04:30 PM	2	0	0	0	2	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	3
04:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total Volume	2	0	0	0	2	0	3	0	0	3	1	1	0	0	2	0	0	0	0	0	7
% App. Total	100	0	0	0		0	100	0	0		50	50	0	0		0	0	0	0		
PHF	.250	.000	.000	.000	.250	.000	.750	.000	.000	.750	.250	.250	.000	.000	.500	.000	.000	.000	.000	.000	.583

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Groups Printed- Peds and Bikes

	Samoset Avenue From North					Phipps Street From East					Samoset Avenue From South					Phipps Street From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 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
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	1	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	4
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3
Total	2	0	0	0	0	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	7
Grand Total	2	0	0	0	0	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	7
Apprch %	100	0	0	0	0	20	40	40	0	0	0	0	0	0	0	0	0	0	0	0	
Total %	28.6	0	0	0	0	14.3	28.6	28.6	0	0	0	0	0	0	0	0	0	0	0	0	

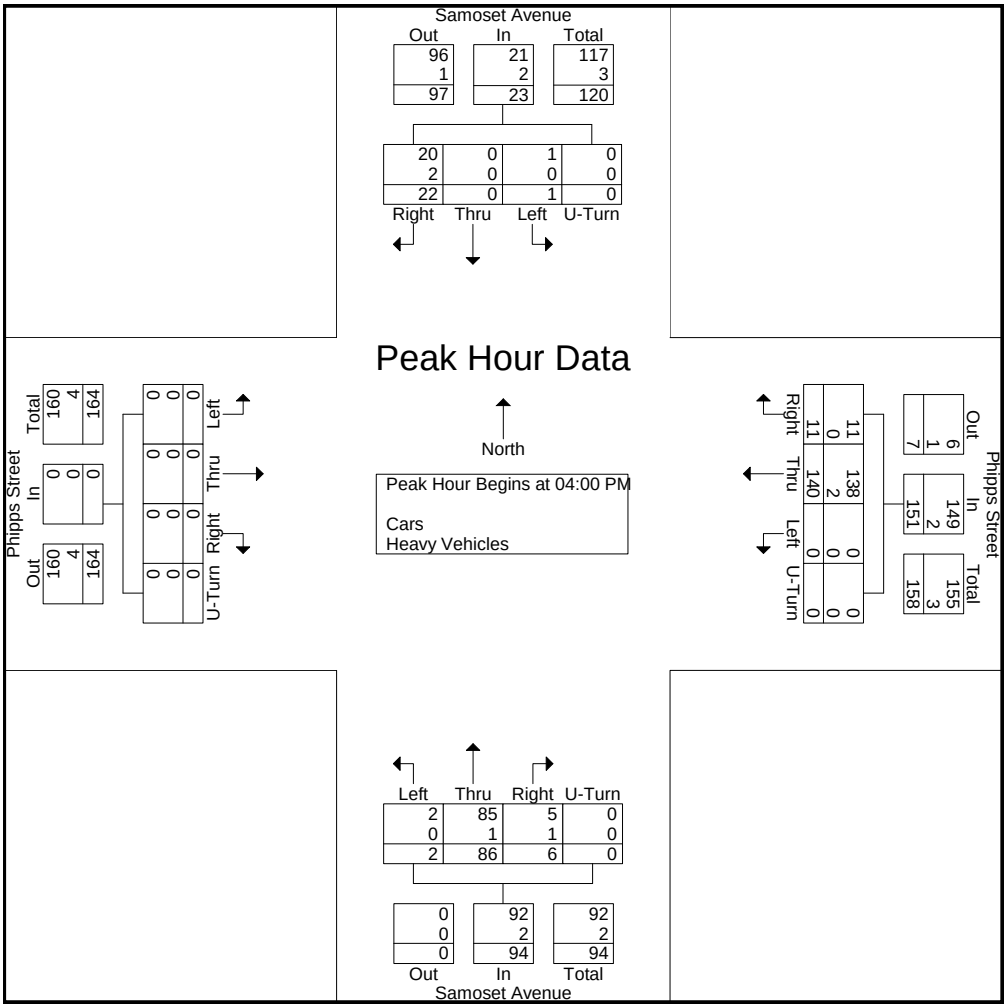
	Samoset Avenue From North						Phipps Street From East						Samoset Avenue From South						Phipps Street From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 05:00 PM																									
05:00 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
05:15 PM	1	0	0	0	0	1	0	2	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	4
05:30 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
05:45 PM	1	0	0	0	0	1	1	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3
Total Volume	2	0	0	0	0	2	1	2	2	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	7
% App. Total	100	0	0	0	0		20	40	40	0	0		0	0	0	0	0		0	0	0	0	0		
PHF	.500	.000	.000	.000	.000	.500	.250	.250	.500	.000	.000	.417	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.438

N/S: Samoset Avenue
E/W: Phipps Street
City, State: Hull, MA
Client: TEC/ R. Brown

PRECISION DATA INDUSTRIES, LLC
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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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	Samoset Avenue From North					Phipps Street From East					Samoset Avenue From South					Phipps Street From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	4	0	0	0	4	1	54	0	0	55	2	15	0	0	17	0	0	0	0	0	76
04:15 PM	3	0	0	0	3	4	38	0	0	42	1	24	0	0	25	0	0	0	0	0	70
04:30 PM	11	0	1	0	12	4	25	0	0	29	2	21	1	0	24	0	0	0	0	0	65
04:45 PM	4	0	0	0	4	2	23	0	0	25	1	26	1	0	28	0	0	0	0	0	57
Total Volume	22	0	1	0	23	11	140	0	0	151	6	86	2	0	94	0	0	0	0	0	268
% App. Total	95.7	0	4.3	0		7.3	92.7	0	0		6.4	91.5	2.1	0		0	0	0	0		
PHF	.500	.000	.250	.000	.479	.688	.648	.000	.000	.686	.750	.827	.500	.000	.839	.000	.000	.000	.000	.000	.882
Cars	20	0	1	0	21	11	138	0	0	149	5	85	2	0	92	0	0	0	0	0	262
% Cars	90.9	0	100	0	91.3	100	98.6	0	0	98.7	83.3	98.8	100	0	97.9	0	0	0	0	0	97.8
Heavy Vehicles	2	0	0	0	2	0	2	0	0	2	1	1	0	0	2	0	0	0	0	0	6
% Heavy Vehicles	9.1	0	0	0	8.7	0	1.4	0	0	1.3	16.7	1.2	0	0	2.1	0	0	0	0	0	2.2



N/S: Nantasket Avenue (Route 228)
E/W: Parking Lot/ Wharf Avenue
City, State: Hull, MA
Client: TEC/ R. Brown

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
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File Name : 154600 F
Site Code : T0597
Start Date : 8/15/2015
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Nantasket Avenue (Route 228) From North				Parking Lot From East				Nantasket Avenue (Route 228) From South				Wharf Avenue From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
12:00 PM	9	52	1	0	0	0	0	0	2	100	18	0	14	2	23	0	221
12:15 PM	12	65	1	0	0	0	0	0	2	91	12	0	10	2	20	1	216
12:30 PM	20	78	2	0	0	0	0	0	2	87	21	0	15	0	19	0	244
12:45 PM	3	86	3	0	0	0	0	0	6	102	12	0	16	2	15	0	245
Total	44	281	7	0	0	0	0	0	12	380	63	0	55	6	77	1	926
01:00 PM	15	80	0	0	0	0	0	0	4	92	11	0	11	3	25	0	241
01:15 PM	15	73	1	0	0	0	0	0	1	76	12	0	9	2	17	0	206
01:30 PM	18	65	4	0	0	0	0	0	3	98	23	0	15	5	15	0	246
01:45 PM	22	70	2	0	0	0	0	0	3	97	17	0	13	1	15	0	240
Total	70	288	7	0	0	0	0	0	11	363	63	0	48	11	72	0	933
Grand Total	114	569	14	0	0	0	0	0	23	743	126	0	103	17	149	1	1859
Apprch %	16.4	81.6	2	0	0	0	0	0	2.6	83.3	14.1	0	38.1	6.3	55.2	0.4	
Total %	6.1	30.6	0.8	0	0	0	0	0	1.2	40	6.8	0	5.5	0.9	8	0.1	
Cars	114	557	14	0	0	0	0	0	23	731	121	0	99	17	149	1	1826
% Cars	100	97.9	100	0	0	0	0	0	100	98.4	96	0	96.1	100	100	100	98.2
Heavy Vehicles	0	12	0	0	0	0	0	0	0	12	5	0	4	0	0	0	33
% Heavy Vehicles	0	2.1	0	0	0	0	0	0	0	1.6	4	0	3.9	0	0	0	1.8

	Nantasket Avenue (Route 228) From North					Parking Lot From East					Nantasket Avenue (Route 228) From South					Wharf Avenue From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:15 PM																					
12:15 PM	12	65	1	0	78	0	0	0	0	0	2	91	12	0	105	10	2	20	1	33	216
12:30 PM	20	78	2	0	100	0	0	0	0	0	2	87	21	0	110	15	0	19	0	34	244
12:45 PM	3	86	3	0	92	0	0	0	0	0	6	102	12	0	120	16	2	15	0	33	245
01:00 PM	15	80	0	0	95	0	0	0	0	0	4	92	11	0	107	11	3	25	0	39	241
Total Volume	50	309	6	0	365	0	0	0	0	0	14	372	56	0	442	52	7	79	1	139	946
% App. Total	13.7	84.7	1.6	0		0	0	0	0		3.2	84.2	12.7	0		37.4	5	56.8	0.7		
PHF	.625	.898	.500	.000	.913	.000	.000	.000	.000	.000	.583	.912	.667	.000	.921	.813	.583	.790	.250	.891	.965
Cars	50	305	6	0	361	0	0	0	0	0	14	367	54	0	435	50	7	79	1	137	933
% Cars	100	98.7	100	0	98.9	0	0	0	0	0	100	98.7	96.4	0	98.4	96.2	100	100	100	98.6	98.6
Heavy Vehicles	0	4	0	0	4	0	0	0	0	0	0	5	2	0	7	2	0	0	0	2	13
% Heavy Vehicles	0	1.3	0	0	1.1	0	0	0	0	0	0	1.3	3.6	0	1.6	3.8	0	0	0	1.4	1.4

N/S: Nantasket Avenue (Route 228)
E/W: Parking Lot/ Wharf Avenue
City, State: Hull, MA
Client: TEC/ R. Brown

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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 154600 F
Site Code : T0597
Start Date : 8/15/2015
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Groups Printed- Cars

	Nantasket Avenue (Route 228) From North				Parking Lot From East				Nantasket Avenue (Route 228) From South				Wharf Avenue From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
12:00 PM	9	51	1	0	0	0	0	0	2	98	16	0	14	2	23	0	216
12:15 PM	12	63	1	0	0	0	0	0	2	91	12	0	10	2	20	1	214
12:30 PM	20	78	2	0	0	0	0	0	2	85	21	0	14	0	19	0	241
12:45 PM	3	85	3	0	0	0	0	0	6	100	10	0	16	2	15	0	240
Total	44	277	7	0	0	0	0	0	12	374	59	0	54	6	77	1	911
01:00 PM	15	79	0	0	0	0	0	0	4	91	11	0	10	3	25	0	238
01:15 PM	15	73	1	0	0	0	0	0	1	74	12	0	9	2	17	0	204
01:30 PM	18	61	4	0	0	0	0	0	3	98	22	0	13	5	15	0	239
01:45 PM	22	67	2	0	0	0	0	0	3	94	17	0	13	1	15	0	234
Total	70	280	7	0	0	0	0	0	11	357	62	0	45	11	72	0	915
Grand Total	114	557	14	0	0	0	0	0	23	731	121	0	99	17	149	1	1826
Apprch %	16.6	81.3	2	0	0	0	0	0	2.6	83.5	13.8	0	37.2	6.4	56	0.4	
Total %	6.2	30.5	0.8	0	0	0	0	0	1.3	40	6.6	0	5.4	0.9	8.2	0.1	

	Nantasket Avenue (Route 228) From North					Parking Lot From East					Nantasket Avenue (Route 228) From South					Wharf Avenue From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:15 PM																					
12:15 PM	12	63	1	0	76	0	0	0	0	0	2	91	12	0	105	10	2	20	1	33	214
12:30 PM	20	78	2	0	100	0	0	0	0	0	2	85	21	0	108	14	0	19	0	33	241
12:45 PM	3	85	3	0	91	0	0	0	0	0	6	100	10	0	116	16	2	15	0	33	240
01:00 PM	15	79	0	0	94	0	0	0	0	0	4	91	11	0	106	10	3	25	0	38	238
Total Volume	50	305	6	0	361	0	0	0	0	0	14	367	54	0	435	50	7	79	1	137	933
% App. Total	13.9	84.5	1.7	0		0	0	0	0		3.2	84.4	12.4	0		36.5	5.1	57.7	0.7		
PHF	.625	.897	.500	.000	.903	.000	.000	.000	.000	.000	.583	.918	.643	.000	.938	.781	.583	.790	.250	.901	.968

N/S: Nantasket Avenue (Route 228)
E/W: Parking Lot/ Wharf Avenue
City, State: Hull, MA
Client: TEC/ R. Brown

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 154600 F
Site Code : T0597
Start Date : 8/15/2015
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Groups Printed- Heavy Vehicles

	Nantasket Avenue (Route 228) From North				Parking Lot From East				Nantasket Avenue (Route 228) From South				Wharf Avenue From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
12:00 PM	0	1	0	0	0	0	0	0	0	2	2	0	0	0	0	0	5
12:15 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
12:30 PM	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0	0	3
12:45 PM	0	1	0	0	0	0	0	0	0	2	2	0	0	0	0	0	5
Total	0	4	0	0	0	0	0	0	0	6	4	0	1	0	0	0	15
01:00 PM	0	1	0	0	0	0	0	0	0	1	0	0	1	0	0	0	3
01:15 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
01:30 PM	0	4	0	0	0	0	0	0	0	0	1	0	2	0	0	0	7
01:45 PM	0	3	0	0	0	0	0	0	0	3	0	0	0	0	0	0	6
Total	0	8	0	0	0	0	0	0	0	6	1	0	3	0	0	0	18
Grand Total	0	12	0	0	0	0	0	0	0	12	5	0	4	0	0	0	33
Apprch %	0	100	0	0	0	0	0	0	0	70.6	29.4	0	100	0	0	0	
Total %	0	36.4	0	0	0	0	0	0	0	36.4	15.2	0	12.1	0	0	0	

	Nantasket Avenue (Route 228) From North					Parking Lot From East					Nantasket Avenue (Route 228) From South					Wharf Avenue From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 01:00 PM																					
01:00 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	3
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
01:30 PM	0	4	0	0	4	0	0	0	0	0	0	0	1	0	1	2	0	0	0	2	7
01:45 PM	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	6
Total Volume	0	8	0	0	8	0	0	0	0	0	0	6	1	0	7	3	0	0	0	3	18
% App. Total	0	100	0	0		0	0	0	0		0	85.7	14.3	0		100	0	0	0		
PHF	.000	.500	.000	.000	.500	.000	.000	.000	.000	.000	.000	.500	.250	.000	.583	.375	.000	.000	.000	.375	.643

N/S: Nantasket Avenue (Route 228)
E/W: Parking Lot/ Wharf Avenue
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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

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Site Code : T0597
Start Date : 8/15/2015
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Groups Printed- Peds and Bikes

	Nantasket Avenue (Route 228) From North					Parking Lot From East					Nantasket Avenue (Route 228) From South					Wharf Avenue From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
12:00 PM	0	1	0	0	0	0	0	0	5	0	0	3	0	5	1	0	0	0	11	2	28
12:15 PM	0	0	0	3	0	0	0	0	9	5	0	4	0	4	0	0	0	0	6	9	40
12:30 PM	0	0	0	3	0	0	0	0	9	2	0	6	0	3	0	0	0	0	4	7	34
12:45 PM	0	1	0	6	6	0	0	0	6	6	0	0	0	10	5	0	0	0	10	15	65
Total	0	2	0	12	6	0	0	0	29	13	0	13	0	22	6	0	0	0	31	33	167
01:00 PM	0	3	0	4	1	0	0	0	10	4	0	1	0	2	0	0	0	0	8	4	37
01:15 PM	0	0	0	8	1	0	0	0	6	10	0	0	0	10	2	0	0	0	12	9	58
01:30 PM	1	3	0	0	2	0	0	0	0	0	0	1	0	2	7	0	0	0	10	10	36
01:45 PM	0	1	0	5	2	0	0	0	8	12	1	0	0	4	14	0	0	0	8	12	67
Total	1	7	0	17	6	0	0	0	24	26	1	2	0	18	23	0	0	0	38	35	198
Grand Total	1	9	0	29	12	0	0	0	53	39	1	15	0	40	29	0	0	0	69	68	365
Apprch %	2	17.6	0	56.9	23.5	0	0	0	57.6	42.4	1.2	17.6	0	47.1	34.1	0	0	0	50.4	49.6	
Total %	0.3	2.5	0	7.9	3.3	0	0	0	14.5	10.7	0.3	4.1	0	11	7.9	0	0	0	18.9	18.6	

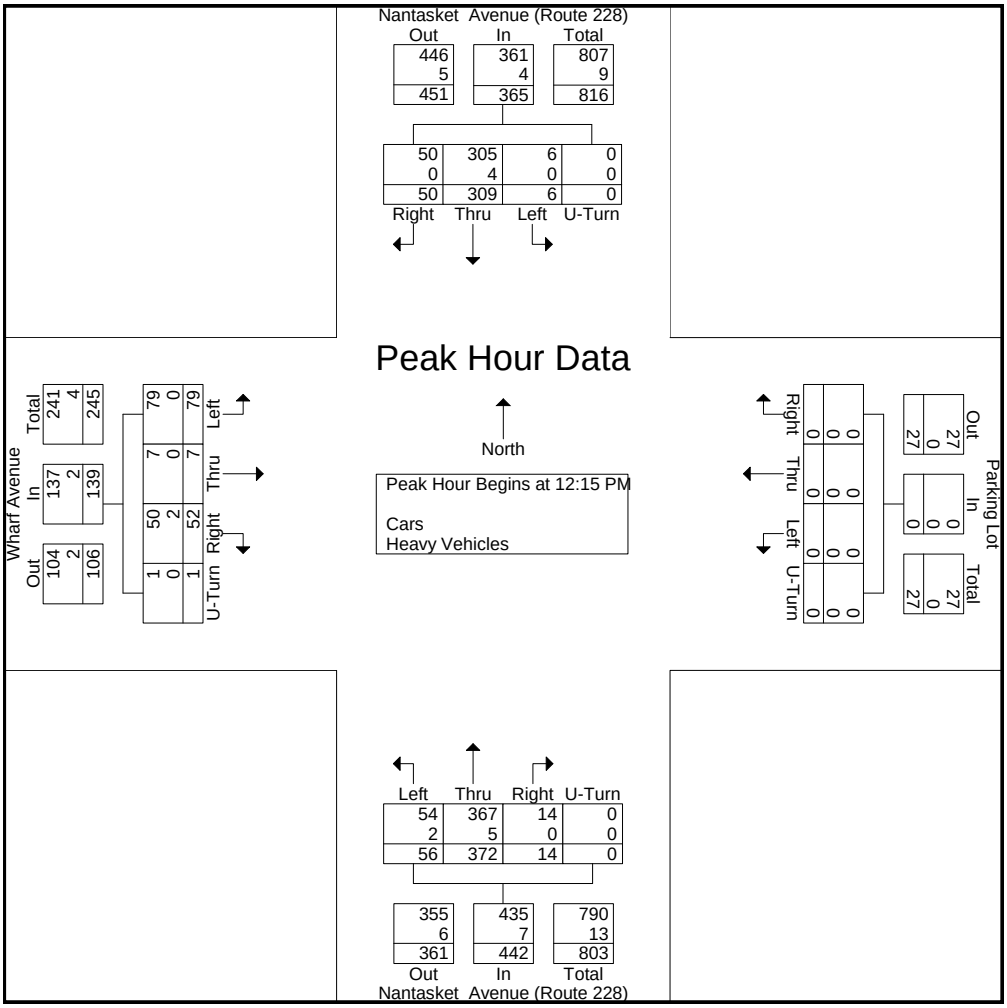
	Nantasket Avenue (Route 228) From North						Parking Lot From East						Nantasket Avenue (Route 228) From South						Wharf Avenue From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 01:00 PM																									
01:00 PM	0	3	0	4	1	8	0	0	0	10	4	14	0	1	0	2	0	3	0	0	0	8	4	12	37
01:15 PM	0	0	0	8	1	9	0	0	0	6	10	16	0	0	0	10	2	12	0	0	0	12	9	21	58
01:30 PM	1	3	0	0	2	6	0	0	0	0	0	0	0	1	0	2	7	10	0	0	0	10	10	20	36
01:45 PM	0	1	0	5	2	8	0	0	0	8	12	20	1	0	0	4	14	19	0	0	0	8	12	20	67
Total Volume	1	7	0	17	6	31	0	0	0	24	26	50	1	2	0	18	23	44	0	0	0	38	35	73	198
% App. Total	3.2	22.6	0	54.8	19.4		0	0	0	48	52		2.3	4.5	0	40.9	52.3		0	0	0	52.1	47.9		
PHF	.250	.583	.000	.531	.750	.861	.000	.000	.000	.600	.542	.625	.250	.500	.000	.450	.411	.579	.000	.000	.000	.792	.729	.869	.739

N/S: Nantasket Avenue (Route 228)
E/W: Parking Lot/ Wharf Avenue
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	Nantasket Avenue (Route 228) From North					Parking Lot From East					Nantasket Avenue (Route 228) From South					Wharf Avenue From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:15 PM																					
12:15 PM	12	65	1	0	78	0	0	0	0	0	2	91	12	0	105	10	2	20	1	33	216
12:30 PM	20	78	2	0	100	0	0	0	0	0	2	87	21	0	110	15	0	19	0	34	244
12:45 PM	3	86	3	0	92	0	0	0	0	0	6	102	12	0	120	16	2	15	0	33	245
01:00 PM	15	80	0	0	95	0	0	0	0	0	4	92	11	0	107	11	3	25	0	39	241
Total Volume	50	309	6	0	365	0	0	0	0	0	14	372	56	0	442	52	7	79	1	139	946
% App. Total	13.7	84.7	1.6	0		0	0	0	0		3.2	84.2	12.7	0		37.4	5	56.8	0.7		
PHF	.625	.898	.500	.000	.913	.000	.000	.000	.000	.000	.583	.912	.667	.000	.921	.813	.583	.790	.250	.891	.965
Cars	50	305	6	0	361	0	0	0	0	0	14	367	54	0	435	50	7	79	1	137	933
% Cars	100	98.7	100	0	98.9	0	0	0	0	0	100	98.7	96.4	0	98.4	96.2	100	100	100	98.6	98.6
Heavy Vehicles	0	4	0	0	4	0	0	0	0	0	0	5	2	0	7	2	0	0	0	2	13
% Heavy Vehicles	0	1.3	0	0	1.1	0	0	0	0	0	0	1.3	3.6	0	1.6	3.8	0	0	0	1.4	1.4



N/S: Nantasket Avenue (Route 228)
E/W: Parking Lot/ Wharf Avenue
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Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Nantasket Avenue (Route 228) From North				Parking Lot From East				Nantasket Avenue (Route 228) From South				Wharf Avenue From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	19	92	1	0	0	1	0	0	5	81	40	0	9	8	9	0	265
04:15 PM	19	79	4	0	0	0	0	0	6	91	23	0	10	3	4	0	239
04:30 PM	20	70	4	0	0	1	1	0	1	79	20	0	7	4	5	0	212
04:45 PM	11	75	0	0	0	0	1	0	6	68	17	0	4	4	5	0	191
Total	69	316	9	0	0	2	2	0	18	319	100	0	30	19	23	0	907
05:00 PM	12	63	0	0	0	0	0	0	2	77	16	0	6	7	5	0	188
05:15 PM	5	76	1	0	0	0	0	0	1	81	17	0	7	2	4	0	194
05:30 PM	9	70	2	0	0	0	0	0	5	59	17	0	2	1	1	0	166
05:45 PM	9	48	2	0	0	1	0	0	5	93	12	0	7	2	9	0	188
Total	35	257	5	0	0	1	0	0	13	310	62	0	22	12	19	0	736
Grand Total	104	573	14	0	0	3	2	0	31	629	162	0	52	31	42	0	1643
Apprch %	15.1	82.9	2	0	0	60	40	0	3.8	76.5	19.7	0	41.6	24.8	33.6	0	
Total %	6.3	34.9	0.9	0	0	0.2	0.1	0	1.9	38.3	9.9	0	3.2	1.9	2.6	0	
Cars	104	558	14	0	0	3	2	0	31	614	160	0	52	31	42	0	1611
% Cars	100	97.4	100	0	0	100	100	0	100	97.6	98.8	0	100	100	100	0	98.1
Heavy Vehicles	0	15	0	0	0	0	0	0	0	15	2	0	0	0	0	0	32
% Heavy Vehicles	0	2.6	0	0	0	0	0	0	0	2.4	1.2	0	0	0	0	0	1.9

	Nantasket Avenue (Route 228) From North					Parking Lot From East					Nantasket Avenue (Route 228) From South					Wharf Avenue From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	19	92	1	0	112	0	1	0	0	1	5	81	40	0	126	9	8	9	0	26	265
04:15 PM	19	79	4	0	102	0	0	0	0	0	6	91	23	0	120	10	3	4	0	17	239
04:30 PM	20	70	4	0	94	0	1	1	0	2	1	79	20	0	100	7	4	5	0	16	212
04:45 PM	11	75	0	0	86	0	0	1	0	1	6	68	17	0	91	4	4	5	0	13	191
Total Volume	69	316	9	0	394	0	2	2	0	4	18	319	100	0	437	30	19	23	0	72	907
% App. Total	17.5	80.2	2.3	0		0	50	50	0		4.1	73	22.9	0		41.7	26.4	31.9	0		
PHF	.863	.859	.563	.000	.879	.000	.500	.500	.000	.500	.750	.876	.625	.000	.867	.750	.594	.639	.000	.692	.856
Cars	69	306	9	0	384	0	2	2	0	4	18	310	98	0	426	30	19	23	0	72	886
% Cars	100	96.8	100	0	97.5	0	100	100	0	100	100	97.2	98.0	0	97.5	100	100	100	0	100	97.7
Heavy Vehicles	0	10	0	0	10	0	0	0	0	0	0	9	2	0	11	0	0	0	0	0	21
% Heavy Vehicles	0	3.2	0	0	2.5	0	0	0	0	0	0	2.8	2.0	0	2.5	0	0	0	0	0	2.3

N/S: Nantasket Avenue (Route 228)
E/W: Parking Lot/ Wharf Avenue
City, State: Hull, MA
Client: TEC/ R. Brown

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 154600 FF
Site Code : T0597
Start Date : 8/18/2015
Page No : 1

Groups Printed- Cars

	Nantasket Avenue (Route 228) From North				Parking Lot From East				Nantasket Avenue (Route 228) From South				Wharf Avenue From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	19	90	1	0	0	1	0	0	5	80	40	0	9	8	9	0	262
04:15 PM	19	77	4	0	0	0	0	0	6	89	22	0	10	3	4	0	234
04:30 PM	20	67	4	0	0	1	1	0	1	77	20	0	7	4	5	0	207
04:45 PM	11	72	0	0	0	0	1	0	6	64	16	0	4	4	5	0	183
Total	69	306	9	0	0	2	2	0	18	310	98	0	30	19	23	0	886
05:00 PM	12	61	0	0	0	0	0	0	2	77	16	0	6	7	5	0	186
05:15 PM	5	75	1	0	0	0	0	0	1	80	17	0	7	2	4	0	192
05:30 PM	9	68	2	0	0	0	0	0	5	57	17	0	2	1	1	0	162
05:45 PM	9	48	2	0	0	1	0	0	5	90	12	0	7	2	9	0	185
Total	35	252	5	0	0	1	0	0	13	304	62	0	22	12	19	0	725
Grand Total	104	558	14	0	0	3	2	0	31	614	160	0	52	31	42	0	1611
Apprch %	15.4	82.5	2.1	0	0	60	40	0	3.9	76.3	19.9	0	41.6	24.8	33.6	0	
Total %	6.5	34.6	0.9	0	0	0.2	0.1	0	1.9	38.1	9.9	0	3.2	1.9	2.6	0	

	Nantasket Avenue (Route 228) From North					Parking Lot From East					Nantasket Avenue (Route 228) From South					Wharf Avenue From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	19	90	1	0	110	0	1	0	0	1	5	80	40	0	125	9	8	9	0	26	262
04:15 PM	19	77	4	0	100	0	0	0	0	0	6	89	22	0	117	10	3	4	0	17	234
04:30 PM	20	67	4	0	91	0	1	1	0	2	1	77	20	0	98	7	4	5	0	16	207
04:45 PM	11	72	0	0	83	0	0	1	0	1	6	64	16	0	86	4	4	5	0	13	183
Total Volume	69	306	9	0	384	0	2	2	0	4	18	310	98	0	426	30	19	23	0	72	886
% App. Total	18	79.7	2.3	0		0	50	50	0		4.2	72.8	23	0		41.7	26.4	31.9	0		
PHF	.863	.850	.563	.000	.873	.000	.500	.500	.000	.500	.750	.871	.613	.000	.852	.750	.594	.639	.000	.692	.845

N/S: Nantasket Avenue (Route 228)
E/W: Parking Lot/ Wharf Avenue
City, State: Hull, MA
Client: TEC/ R. Brown

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 154600 FF
Site Code : T0597
Start Date : 8/18/2015
Page No : 1

Groups Printed- Heavy Vehicles

	Nantasket Avenue (Route 228) From North				Parking Lot From East				Nantasket Avenue (Route 228) From South				Wharf Avenue From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	3
04:15 PM	0	2	0	0	0	0	0	0	0	2	1	0	0	0	0	0	5
04:30 PM	0	3	0	0	0	0	0	0	0	2	0	0	0	0	0	0	5
04:45 PM	0	3	0	0	0	0	0	0	0	4	1	0	0	0	0	0	8
Total	0	10	0	0	0	0	0	0	0	9	2	0	0	0	0	0	21
05:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
05:15 PM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2
05:30 PM	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	4
05:45 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3
Total	0	5	0	0	0	0	0	0	0	6	0	0	0	0	0	0	11
Grand Total	0	15	0	0	0	0	0	0	0	15	2	0	0	0	0	0	32
Apprch %	0	100	0	0	0	0	0	0	0	88.2	11.8	0	0	0	0	0	
Total %	0	46.9	0	0	0	0	0	0	0	46.9	6.2	0	0	0	0	0	

	Nantasket Avenue (Route 228) From North					Parking Lot From East					Nantasket Avenue (Route 228) From South					Wharf Avenue From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
04:15 PM	0	2	0	0	2	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	5
04:30 PM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	5
04:45 PM	0	3	0	0	3	0	0	0	0	0	0	4	1	0	5	0	0	0	0	0	8
Total Volume	0	10	0	0	10	0	0	0	0	0	0	9	2	0	11	0	0	0	0	0	21
% App. Total	0	100	0	0		0	0	0	0		0	81.8	18.2	0		0	0	0	0		
PHF	.000	.833	.000	.000	.833	.000	.000	.000	.000	.000	.000	.563	.500	.000	.550	.000	.000	.000	.000	.000	.656

N/S: Nantasket Avenue (Route 228)
E/W: Parking Lot/ Wharf Avenue
City, State: Hull, MA
Client: TEC/ R. Brown

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P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 154600 FF
Site Code : T0597
Start Date : 8/18/2015
Page No : 1

Groups Printed- Peds and Bikes

	Nantasket Avenue (Route 228) From North					Parking Lot From East					Nantasket Avenue (Route 228) From South					Wharf Avenue From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	9	2	0	0	0	5	0	0	0	0	2	5	23
04:15 PM	0	0	0	0	0	0	0	0	1	3	0	0	0	4	0	0	0	0	8	2	18
04:30 PM	0	0	0	0	0	0	0	0	5	1	0	0	0	6	0	0	0	0	0	2	14
04:45 PM	0	0	0	0	0	0	0	0	2	9	0	1	0	0	3	0	0	0	5	0	20
Total	0	0	0	0	0	0	0	0	17	15	0	1	0	15	3	0	0	0	15	9	75
05:00 PM	0	0	0	0	0	0	0	0	11	2	0	0	0	10	3	0	0	0	0	3	29
05:15 PM	0	2	0	0	1	0	0	0	5	0	0	0	0	5	0	0	0	0	1	0	14
05:30 PM	0	0	0	0	0	0	0	0	7	3	0	0	0	5	3	0	0	0	2	0	20
05:45 PM	0	0	0	0	0	0	0	0	6	3	0	0	0	4	0	0	0	0	0	1	14
Total	0	2	0	0	1	0	0	0	29	8	0	0	0	24	6	0	0	0	3	4	77
Grand Total	0	2	0	0	1	0	0	0	46	23	0	1	0	39	9	0	0	0	18	13	152
Apprch %	0	66.7	0	0	33.3	0	0	0	66.7	33.3	0	2	0	79.6	18.4	0	0	0	58.1	41.9	
Total %	0	1.3	0	0	0.7	0	0	0	30.3	15.1	0	0.7	0	25.7	5.9	0	0	0	11.8	8.6	

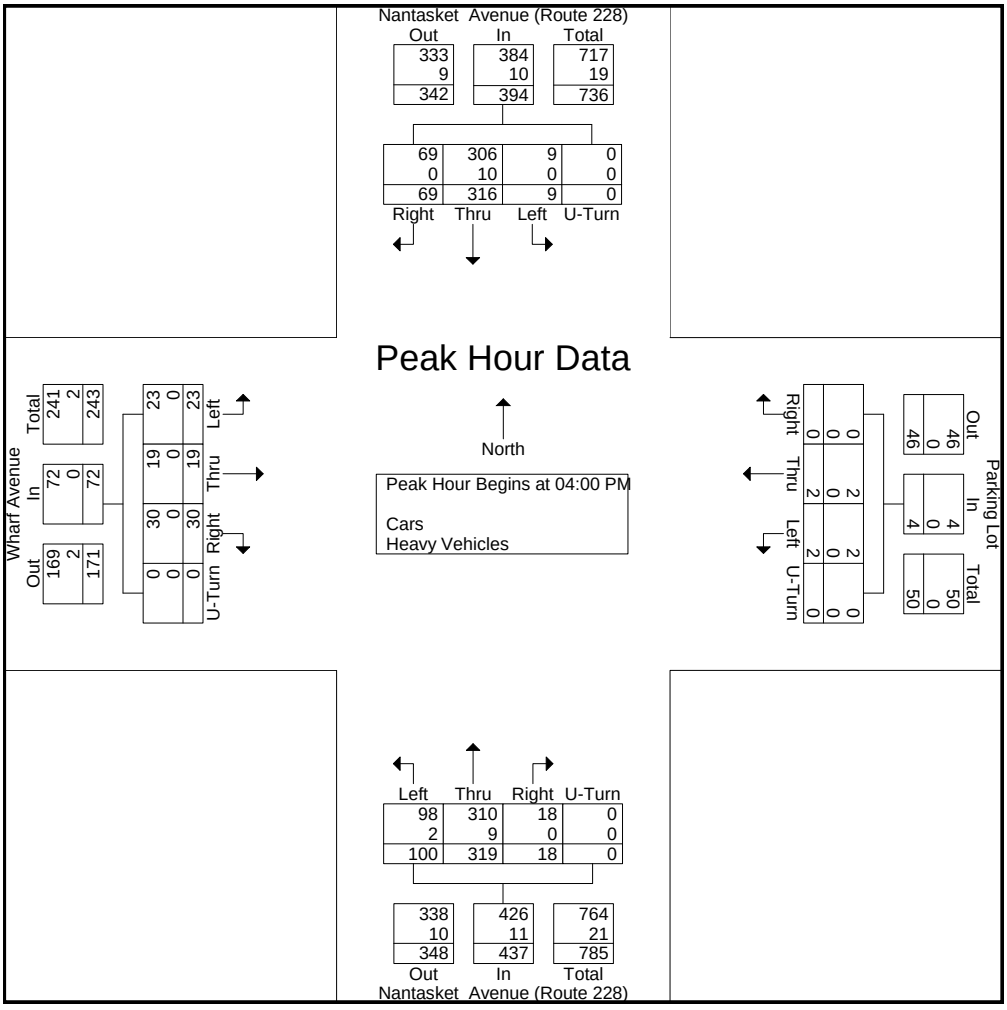
	Nantasket Avenue (Route 228) From North						Parking Lot From East						Nantasket Avenue (Route 228) From South						Wharf Avenue From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 04:45 PM																									
04:45 PM	0	0	0	0	0	0	0	0	0	2	9	11	0	1	0	0	3	4	0	0	0	5	0	5	20
05:00 PM	0	0	0	0	0	0	0	0	0	11	2	13	0	0	0	10	3	13	0	0	0	0	3	3	29
05:15 PM	0	2	0	0	1	3	0	0	0	5	0	5	0	0	0	5	0	5	0	0	0	1	0	1	14
05:30 PM	0	0	0	0	0	0	0	0	0	7	3	10	0	0	0	5	3	8	0	0	0	2	0	2	20
Total Volume	0	2	0	0	1	3	0	0	0	25	14	39	0	1	0	20	9	30	0	0	0	8	3	11	83
% App. Total	0	66.7	0	0	33.3		0	0	0	64.1	35.9		0	3.3	0	66.7	30		0	0	0	72.7	27.3		
PHF	.000	.250	.000	.000	.250	.250	.000	.000	.000	.568	.389	.750	.000	.250	.000	.500	.750	.577	.000	.000	.000	.400	.250	.550	.716

N/S: Nantasket Avenue (Route 228)
E/W: Parking Lot/ Wharf Avenue
City, State: Hull, MA
Client: TEC/ R. Brown

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 154600 FF
Site Code : T0597
Start Date : 8/18/2015
Page No : 1

	Nantasket Avenue (Route 228) From North					Parking Lot From East					Nantasket Avenue (Route 228) From South					Wharf Avenue From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	19	92	1	0	112	0	1	0	0	1	5	81	40	0	126	9	8	9	0	26	265
04:15 PM	19	79	4	0	102	0	0	0	0	0	6	91	23	0	120	10	3	4	0	17	239
04:30 PM	20	70	4	0	94	0	1	1	0	2	1	79	20	0	100	7	4	5	0	16	212
04:45 PM	11	75	0	0	86	0	0	1	0	1	6	68	17	0	91	4	4	5	0	13	191
Total Volume	69	316	9	0	394	0	2	2	0	4	18	319	100	0	437	30	19	23	0	72	907
% App. Total	17.5	80.2	2.3	0		0	50	50	0		4.1	73	22.9	0		41.7	26.4	31.9	0		
PHF	.863	.859	.563	.000	.879	.000	.500	.500	.000	.500	.750	.876	.625	.000	.867	.750	.594	.639	.000	.692	.856
Cars	69	306	9	0	384	0	2	2	0	4	18	310	98	0	426	30	19	23	0	72	886
% Cars	100	96.8	100	0	97.5	0	100	100	0	100	100	97.2	98.0	0	97.5	100	100	100	0	100	97.7
Heavy Vehicles	0	10	0	0	10	0	0	0	0	0	0	9	2	0	11	0	0	0	0	0	21
% Heavy Vehicles	0	3.2	0	0	2.5	0	0	0	0	0	0	2.8	2.0	0	2.5	0	0	0	0	0	2.3



N/S: Nantasket Avenue (Route 228)
W/SW: Bay Street/ George Washington Blvd
City, State: Hull, MA
Client: TEC/ R. Brown

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 154600 G
Site Code : T0597
Start Date : 8/15/2015
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Nantasket Avenue (Route 228) From North				Nantasket Avenue (Route 228) From South				George Washington Boulevard From Southwest				Bay Street From West				
Start Time	Right	Bear Right	Thru	U-Turn	Thru	Left	Hard Left	U-Turn	Hard Right	Bear Left	Hard Left	U-Turn	Hard Right	Right	Left	U-Turn	Int. Total
12:00 PM	6	143	61	0	0	0	0	0	5	0	21	1	16	0	0	0	253
12:15 PM	5	131	73	0	0	0	0	0	6	0	17	0	18	1	0	0	251
12:30 PM	2	134	89	0	0	0	0	0	12	0	24	1	13	1	0	0	276
12:45 PM	10	124	90	0	0	0	0	0	4	0	17	0	19	1	0	0	265
Total	23	532	313	0	0	0	0	0	27	0	79	2	66	3	0	0	1045
01:00 PM	9	130	87	0	0	0	0	0	5	0	20	0	12	2	0	0	265
01:15 PM	5	123	87	0	0	0	0	0	5	0	30	0	18	0	0	0	268
01:30 PM	2	123	82	0	0	0	0	0	6	0	19	0	13	1	0	0	246
01:45 PM	10	115	83	0	0	0	0	0	11	0	20	1	12	2	0	0	254
Total	26	491	339	0	0	0	0	0	27	0	89	1	55	5	0	0	1033
Grand Total	49	1023	652	0	0	0	0	0	54	0	168	3	121	8	0	0	2078
Apprch %	2.8	59.3	37.8	0	0	0	0	0	24	0	74.7	1.3	93.8	6.2	0	0	
Total %	2.4	49.2	31.4	0	0	0	0	0	2.6	0	8.1	0.1	5.8	0.4	0	0	
Cars	49	1013	643	0	0	0	0	0	54	0	166	3	120	8	0	0	2056
% Cars	100	99	98.6	0	0	0	0	0	100	0	98.8	100	99.2	100	0	0	98.9
Heavy Vehicles	0	10	9	0	0	0	0	0	0	0	2	0	1	0	0	0	22
% Heavy Vehicles	0	1	1.4	0	0	0	0	0	0	0	1.2	0	0.8	0	0	0	1.1

	Nantasket Avenue (Route 228) From North					Nantasket Avenue (Route 228) From South					George Washington Boulevard From Southwest					Bay Street From West					
Start Time	Right	Bear Right	Thru	U-Turn	App. Total	Thru	Left	Hard Left	U-Turn	App. Total	Hard Right	Bear Left	Hard Left	U-Turn	App. Total	Hard Right	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:30 PM																					
12:30 PM	2	134	89	0	225	0	0	0	0	0	12	0	24	1	37	13	1	0	0	14	276
12:45 PM	10	124	90	0	224	0	0	0	0	0	4	0	17	0	21	19	1	0	0	20	265
01:00 PM	9	130	87	0	226	0	0	0	0	0	5	0	20	0	25	12	2	0	0	14	265
01:15 PM	5	123	87	0	215	0	0	0	0	0	5	0	30	0	35	18	0	0	0	18	268
Total Volume	26	511	353	0	890	0	0	0	0	0	26	0	91	1	118	62	4	0	0	66	1074
% App. Total	2.9	57.4	39.7	0		0	0	0	0		22	0	77.1	0.8		93.9	6.1	0	0		
PHF	.650	.953	.981	.000	.985	.000	.000	.000	.000	.000	.542	.000	.758	.250	.797	.816	.500	.000	.000	.825	.973
Cars	26	508	350	0	884	0	0	0	0	0	26	0	89	1	116	61	4	0	0	65	1065
% Cars	100	99.4	99.2	0	99.3	0	0	0	0	0	100	0	97.8	100	98.3	98.4	100	0	0	98.5	99.2
Heavy Vehicles	0	3	3	0	6	0	0	0	0	0	0	0	2	0	2	1	0	0	0	1	9
% Heavy Vehicles	0	0.6	0.8	0	0.7	0	0	0	0	0	0	0	2.2	0	1.7	1.6	0	0	0	1.5	0.8

N/S: Nantasket Avenue (Route 228)
W/SW: Bay Street/ George Washington Blvd
City, State: Hull, MA
Client: TEC/ R. Brown

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 154600 G
Site Code : T0597
Start Date : 8/15/2015
Page No : 1

Groups Printed- Cars

	Nantasket Avenue (Route 228) From North				Nantasket Avenue (Route 228) From South				George Washington Boulevard From Southwest				Bay Street From West				
Start Time	Right	Bear Right	Thru	U-Turn	Thru	Left	Hard Left	U-Turn	Hard Right	Bear Left	Hard Left	U-Turn	Hard Right	Right	Left	U-Turn	Int. Total
12:00 PM	6	141	61	0	0	0	0	0	5	0	21	1	16	0	0	0	251
12:15 PM	5	129	71	0	0	0	0	0	6	0	17	0	18	1	0	0	247
12:30 PM	2	133	88	0	0	0	0	0	12	0	23	1	13	1	0	0	273
12:45 PM	10	124	89	0	0	0	0	0	4	0	16	0	19	1	0	0	263
Total	23	527	309	0	0	0	0	0	27	0	77	2	66	3	0	0	1034
01:00 PM	9	128	86	0	0	0	0	0	5	0	20	0	11	2	0	0	261
01:15 PM	5	123	87	0	0	0	0	0	5	0	30	0	18	0	0	0	268
01:30 PM	2	120	80	0	0	0	0	0	6	0	19	0	13	1	0	0	241
01:45 PM	10	115	81	0	0	0	0	0	11	0	20	1	12	2	0	0	252
Total	26	486	334	0	0	0	0	0	27	0	89	1	54	5	0	0	1022
Grand Total	49	1013	643	0	0	0	0	0	54	0	166	3	120	8	0	0	2056
Apprch %	2.9	59.4	37.7	0	0	0	0	0	24.2	0	74.4	1.3	93.8	6.2	0	0	
Total %	2.4	49.3	31.3	0	0	0	0	0	2.6	0	8.1	0.1	5.8	0.4	0	0	

	Nantasket Avenue (Route 228) From North					Nantasket Avenue (Route 228) From South					George Washington Boulevard From Southwest					Bay Street From West					
Start Time	Right	Bear Right	Thru	U-Turn	App. Total	Thru	Left	Hard Left	U-Turn	App. Total	Hard Right	Bear Left	Hard Left	U-Turn	App. Total	Hard Right	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:30 PM																					
12:30 PM	2	133	88	0	223	0	0	0	0	0	12	0	23	1	36	13	1	0	0	14	273
12:45 PM	10	124	89	0	223	0	0	0	0	0	4	0	16	0	20	19	1	0	0	20	263
01:00 PM	9	128	86	0	223	0	0	0	0	0	5	0	20	0	25	11	2	0	0	13	261
01:15 PM	5	123	87	0	215	0	0	0	0	0	5	0	30	0	35	18	0	0	0	18	268
Total Volume	26	508	350	0	884	0	0	0	0	0	26	0	89	1	116	61	4	0	0	65	1065
% App. Total	2.9	57.5	39.6	0		0	0	0	0		22.4	0	76.7	0.9		93.8	6.2	0	0		
PHF	.650	.955	.983	.000	.991	.000	.000	.000	.000	.000	.542	.000	.742	.250	.806	.803	.500	.000	.000	.813	.975

N/S: Nantasket Avenue (Route 228)
W/SW: Bay Street/ George Washington Blvd
City, State: Hull, MA
Client: TEC/ R. Brown

PRECISION
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INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 154600 G
Site Code : T0597
Start Date : 8/15/2015
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Groups Printed- Heavy Vehicles

	Nantasket Avenue (Route 228) From North				Nantasket Avenue (Route 228) From South				George Washington Boulevard From Southwest				Bay Street From West				
Start Time	Right	Bear Right	Thru	U-Turn	Thru	Left	Hard Left	U-Turn	Hard Right	Bear Left	Hard Left	U-Turn	Hard Right	Right	Left	U-Turn	Int. Total
12:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
12:15 PM	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	4
12:30 PM	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	3
12:45 PM	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	2
Total	0	5	4	0	0	0	0	0	0	0	2	0	0	0	0	0	11
01:00 PM	0	2	1	0	0	0	0	0	0	0	0	0	1	0	0	0	4
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	5
01:45 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	5	5	0	0	0	0	0	0	0	0	0	1	0	0	0	11
Grand Total	0	10	9	0	0	0	0	0	0	0	2	0	1	0	0	0	22
Apprch %	0	52.6	47.4	0	0	0	0	0	0	0	100	0	100	0	0	0	
Total %	0	45.5	40.9	0	0	0	0	0	0	0	9.1	0	4.5	0	0	0	

	Nantasket Avenue (Route 228) From North					Nantasket Avenue (Route 228) From South					George Washington Boulevard From Southwest					Bay Street From West					
Start Time	Right	Bear Right	Thru	U-Turn	App. Total	Thru	Left	Hard Left	U-Turn	App. Total	Hard Right	Bear Left	Hard Left	U-Turn	App. Total	Hard Right	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:15 PM																					
12:15 PM	0	2	2	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
12:30 PM	0	1	1	0	2	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	3
12:45 PM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2
01:00 PM	0	2	1	0	3	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	4
Total Volume	0	5	5	0	10	0	0	0	0	0	0	0	2	0	2	1	0	0	0	1	13
% App. Total	0	50	50	0		0	0	0	0		0	0	100	0		100	0	0	0		
PHF	.000	.625	.625	.000	.625	.000	.000	.000	.000	.000	.000	.000	.500	.000	.500	.250	.000	.000	.000	.250	.813

N/S: Nantasket Avenue (Route 228)
W/SW: Bay Street/ George Washington Blvd
City, State: Hull, MA
Client: TEC/ R. Brown

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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 154600 G
Site Code : T0597
Start Date : 8/15/2015
Page No : 1

Groups Printed- Peds and Bikes

	Nantasket Avenue (Route 228) From North					Nantasket Avenue (Route 228) From South					George Washington Boulevard From Southwest					Bay Street From West					
Start Time	Right	Bear Right	Thru	Peds EB	Peds WB	Thru	Left	Hard Left	Peds WB	Peds EB	Hard Right	Bear Left	Hard Left	Peds NWB	Peds SEB	Hard Right	Right	Left	Peds NB	Peds SB	Int. Total
12:00 PM	0	1	1	11	0	0	0	0	4	8	0	0	0	0	0	0	0	0	1	0	26
12:15 PM	0	1	1	6	6	0	0	0	4	6	0	0	0	0	0	0	0	0	0	0	24
12:30 PM	0	6	0	8	7	0	0	0	7	3	0	0	0	0	0	0	0	0	0	2	33
12:45 PM	0	0	0	11	2	0	0	0	4	3	0	0	0	0	0	0	0	0	2	0	22
Total	0	8	2	36	15	0	0	0	19	20	0	0	0	0	0	0	0	0	3	2	105
01:00 PM	0	1	1	6	2	0	0	0	3	5	0	0	0	0	0	0	0	0	1	0	19
01:15 PM	1	0	2	6	3	0	0	0	4	3	0	0	0	0	2	0	0	0	0	0	21
01:30 PM	0	0	0	2	2	0	0	0	4	3	0	0	0	0	2	0	0	0	0	0	13
01:45 PM	0	0	0	14	3	0	0	0	2	3	0	0	0	0	0	0	0	0	0	0	22
Total	1	1	3	28	10	0	0	0	13	14	0	0	0	0	4	0	0	0	1	0	75
Grand Total	1	9	5	64	25	0	0	0	32	34	0	0	0	0	4	0	0	0	4	2	180
Apprch %	1	8.7	4.8	61.5	24	0	0	0	48.5	51.5	0	0	0	0	100	0	0	0	66.7	33.3	
Total %	0.6	5	2.8	35.6	13.9	0	0	0	17.8	18.9	0	0	0	0	2.2	0	0	0	2.2	1.1	

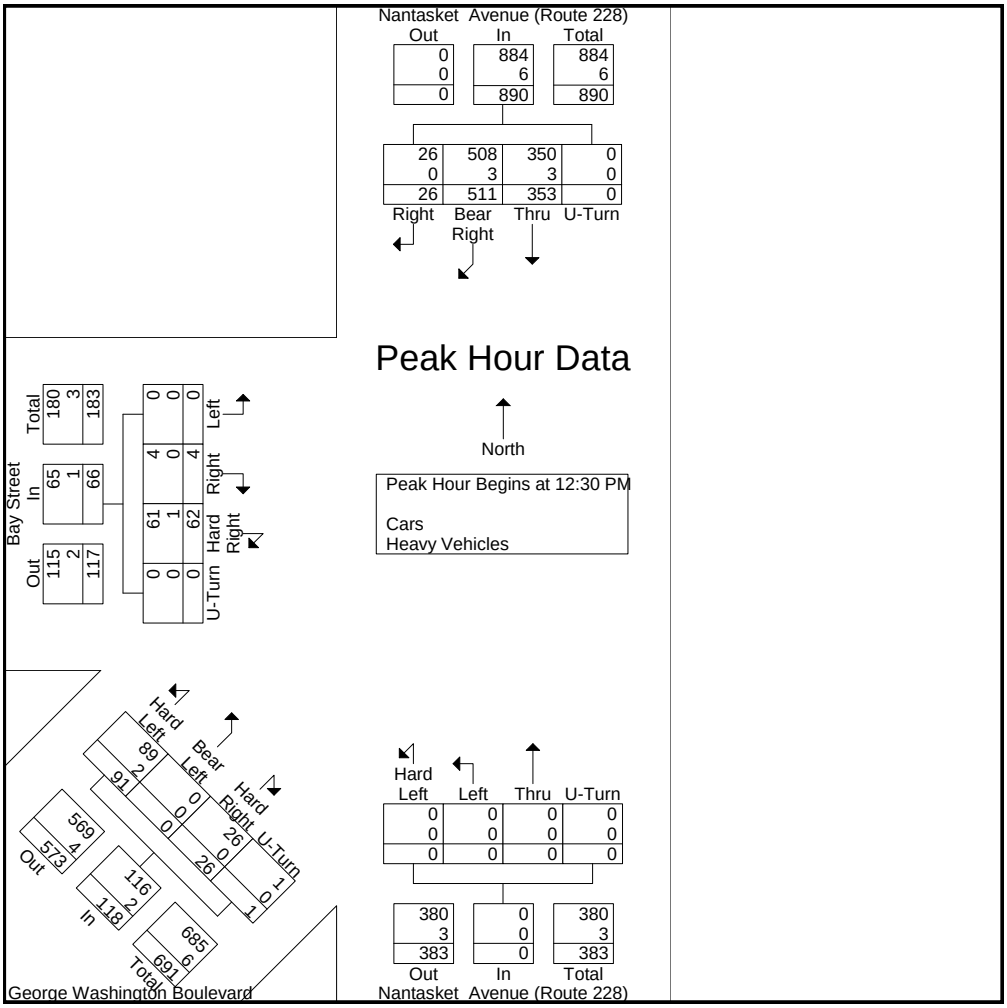
	Nantasket Avenue (Route 228) From North						Nantasket Avenue (Route 228) From South						George Washington Boulevard From Southwest						Bay Street From West						
Start Time	Right	Bear Right	Thru	Peds EB	Peds WB	App. Total	Thru	Left	Hard Left	Peds WB	Peds EB	App. Total	Hard Right	Bear Left	Hard Left	Peds NWB	Peds SEB	App. Total	Hard Right	Right	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 12:00 PM																									
12:00 PM	0	1	1	11	0	13	0	0	0	4	8	12	0	0	0	0	0	0	0	0	0	1	0	1	26
12:15 PM	0	1	1	6	6	14	0	0	0	4	6	10	0	0	0	0	0	0	0	0	0	0	0	0	24
12:30 PM	0	6	0	8	7	21	0	0	0	7	3	10	0	0	0	0	0	0	0	0	0	0	2	2	33
12:45 PM	0	0	0	11	2	13	0	0	0	4	3	7	0	0	0	0	0	0	0	0	0	2	0	2	22
Total Volume	0	8	2	36	15	61	0	0	0	19	20	39	0	0	0	0	0	0	0	0	0	3	2	5	105
% App. Total	0	13.1	3.3	59	24.6		0	0	0	48.7	51.3		0	0	0	0	0		0	0	0	60	40		
PHF	.000	.333	.500	.818	.536	.726	.000	.000	.000	.679	.625	.813	.000	.000	.000	.000	.000	.000	.000	.000	.000	.375	.250	.625	.795

N/S: Nantasket Avenue (Route 228)
W/SW: Bay Street/ George Washington Blvd
City, State: Hull, MA
Client: TEC/ R. Brown

PRECISION DATA INDUSTRIES, LLC
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File Name : 154600 G
Site Code : T0597
Start Date : 8/15/2015
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	Nantasket Avenue (Route 228) From North					Nantasket Avenue (Route 228) From South					George Washington Boulevard From Southwest					Bay Street From West					
Start Time	Right	Bear Right	Thru	U-Turn	App. Total	Thru	Left	Hard Left	U-Turn	App. Total	Hard Right	Bear Left	Hard Left	U-Turn	App. Total	Hard Right	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:30 PM																					
12:30 PM	2	134	89	0	225	0	0	0	0	0	12	0	24	1	37	13	1	0	0	14	276
12:45 PM	10	124	90	0	224	0	0	0	0	0	4	0	17	0	21	19	1	0	0	20	265
01:00 PM	9	130	87	0	226	0	0	0	0	0	5	0	20	0	25	12	2	0	0	14	265
01:15 PM	5	123	87	0	215	0	0	0	0	0	5	0	30	0	35	18	0	0	0	18	268
Total Volume	26	511	353	0	890	0	0	0	0	0	26	0	91	1	118	62	4	0	0	66	1074
% App. Total	2.9	57.4	39.7	0		0	0	0	0		22	0	77.1	0.8		93.9	6.1	0	0		
PHF	.650	.953	.981	.000	.985	.000	.000	.000	.000	.000	.542	.000	.758	.250	.797	.816	.500	.000	.000	.825	.973
Cars	26	508	350	0	884	0	0	0	0	0	26	0	89	1	116	61	4	0	0	65	1065
% Cars	100	99.4	99.2	0	99.3	0	0	0	0	0	100	0	97.8	100	98.3	98.4	100	0	0	98.5	99.2
Heavy Vehicles	0	3	3	0	6	0	0	0	0	0	0	0	2	0	2	1	0	0	0	1	9
% Heavy Vehicles	0	0.6	0.8	0	0.7	0	0	0	0	0	0	0	2.2	0	1.7	1.6	0	0	0	1.5	0.8



N/S: Nantasket Avenue (Route 228)
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File Name : 154600 GG
Site Code : T0597
Start Date : 8/18/2015
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Nantasket Avenue (Route 228) From North				Nantasket Avenue (Route 228) From South				George Washington Boulevard From Southwest				Bay Street From West				
Start Time	Right	Bear Right	Thru	U-Turn	Thru	Left	Hard Left	U-Turn	Hard Right	Bear Left	Hard Left	U-Turn	Hard Right	Right	Left	U-Turn	Int. Total
04:00 PM	5	152	103	0	0	0	0	0	3	0	21	0	8	1	0	0	293
04:15 PM	6	132	95	0	0	0	0	0	3	0	20	0	16	3	0	0	275
04:30 PM	4	137	86	0	0	0	0	0	2	0	18	0	12	1	0	0	260
04:45 PM	7	127	80	0	0	0	0	0	0	0	10	0	9	3	0	0	236
Total	22	548	364	0	0	0	0	0	8	0	69	0	45	8	0	0	1064
05:00 PM	4	118	71	0	0	0	0	0	2	0	22	0	12	1	0	0	230
05:15 PM	3	105	76	0	0	0	0	0	1	0	18	0	12	3	0	0	218
05:30 PM	1	100	75	0	0	0	0	0	0	0	18	0	10	4	0	0	208
05:45 PM	5	94	58	0	0	0	0	0	1	0	25	0	14	2	0	0	199
Total	13	417	280	0	0	0	0	0	4	0	83	0	48	10	0	0	855
Grand Total	35	965	644	0	0	0	0	0	12	0	152	0	93	18	0	0	1919
Apprch %	2.1	58.7	39.2	0	0	0	0	0	7.3	0	92.7	0	83.8	16.2	0	0	
Total %	1.8	50.3	33.6	0	0	0	0	0	0.6	0	7.9	0	4.8	0.9	0	0	
Cars	35	954	627	0	0	0	0	0	12	0	150	0	93	17	0	0	1888
% Cars	100	98.9	97.4	0	0	0	0	0	100	0	98.7	0	100	94.4	0	0	98.4
Heavy Vehicles	0	11	17	0	0	0	0	0	0	0	2	0	0	1	0	0	31
% Heavy Vehicles	0	1.1	2.6	0	0	0	0	0	0	0	1.3	0	0	5.6	0	0	1.6

	Nantasket Avenue (Route 228) From North					Nantasket Avenue (Route 228) From South					George Washington Boulevard From Southwest					Bay Street From West					
Start Time	Right	Bear Right	Thru	U-Turn	App. Total	Thru	Left	Hard Left	U-Turn	App. Total	Hard Right	Bear Left	Hard Left	U-Turn	App. Total	Hard Right	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	5	152	103	0	260	0	0	0	0	0	3	0	21	0	24	8	1	0	0	9	293
04:15 PM	6	132	95	0	233	0	0	0	0	0	3	0	20	0	23	16	3	0	0	19	275
04:30 PM	4	137	86	0	227	0	0	0	0	0	2	0	18	0	20	12	1	0	0	13	260
04:45 PM	7	127	80	0	214	0	0	0	0	0	0	0	10	0	10	9	3	0	0	12	236
Total Volume	22	548	364	0	934	0	0	0	0	0	8	0	69	0	77	45	8	0	0	53	1064
% App. Total	2.4	58.7	39	0		0	0	0	0		10.4	0	89.6	0		84.9	15.1	0	0		
PHF	.786	.901	.883	.000	.898	.000	.000	.000	.000	.000	.667	.000	.821	.000	.802	.703	.667	.000	.000	.697	.908
Cars	22	540	351	0	913	0	0	0	0	0	8	0	67	0	75	45	8	0	0	53	1041
% Cars	100	98.5	96.4	0	97.8	0	0	0	0	0	100	0	97.1	0	97.4	100	100	0	0	100	97.8
Heavy Vehicles	0	8	13	0	21	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	23
% Heavy Vehicles	0	1.5	3.6	0	2.2	0	0	0	0	0	0	0	2.9	0	2.6	0	0	0	0	0	2.2

N/S: Nantasket Avenue (Route 228)
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Groups Printed- Cars

	Nantasket Avenue (Route 228) From North				Nantasket Avenue (Route 228) From South				George Washington Boulevard From Southwest				Bay Street From West				
Start Time	Right	Bear Right	Thru	U-Turn	Thru	Left	Hard Left	U-Turn	Hard Right	Bear Left	Hard Left	U-Turn	Hard Right	Right	Left	U-Turn	Int. Total
04:00 PM	5	148	99	0	0	0	0	0	3	0	21	0	8	1	0	0	285
04:15 PM	6	132	94	0	0	0	0	0	3	0	19	0	16	3	0	0	273
04:30 PM	4	136	82	0	0	0	0	0	2	0	18	0	12	1	0	0	255
04:45 PM	7	124	76	0	0	0	0	0	0	0	9	0	9	3	0	0	228
Total	22	540	351	0	0	0	0	0	8	0	67	0	45	8	0	0	1041
05:00 PM	4	117	69	0	0	0	0	0	2	0	22	0	12	1	0	0	227
05:15 PM	3	104	76	0	0	0	0	0	1	0	18	0	12	2	0	0	216
05:30 PM	1	99	73	0	0	0	0	0	0	0	18	0	10	4	0	0	205
05:45 PM	5	94	58	0	0	0	0	0	1	0	25	0	14	2	0	0	199
Total	13	414	276	0	0	0	0	0	4	0	83	0	48	9	0	0	847
Grand Total	35	954	627	0	0	0	0	0	12	0	150	0	93	17	0	0	1888
Apprch %	2.2	59	38.8	0	0	0	0	0	7.4	0	92.6	0	84.5	15.5	0	0	
Total %	1.9	50.5	33.2	0	0	0	0	0	0.6	0	7.9	0	4.9	0.9	0	0	

	Nantasket Avenue (Route 228) From North					Nantasket Avenue (Route 228) From South					George Washington Boulevard From Southwest					Bay Street From West					
Start Time	Right	Bear Right	Thru	U-Turn	App. Total	Thru	Left	Hard Left	U-Turn	App. Total	Hard Right	Bear Left	Hard Left	U-Turn	App. Total	Hard Right	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	5	148	99	0	252	0	0	0	0	0	3	0	21	0	24	8	1	0	0	9	285
04:15 PM	6	132	94	0	232	0	0	0	0	0	3	0	19	0	22	16	3	0	0	19	273
04:30 PM	4	136	82	0	222	0	0	0	0	0	2	0	18	0	20	12	1	0	0	13	255
04:45 PM	7	124	76	0	207	0	0	0	0	0	0	0	9	0	9	9	3	0	0	12	228
Total Volume	22	540	351	0	913	0	0	0	0	0	8	0	67	0	75	45	8	0	0	53	1041
% App. Total	2.4	59.1	38.4	0		0	0	0	0		10.7	0	89.3	0		84.9	15.1	0	0		
PHF	.786	.912	.886	.000	.906	.000	.000	.000	.000	.000	.667	.000	.798	.000	.781	.703	.667	.000	.000	.697	.913

N/S: Nantasket Avenue (Route 228)
W/SW: Bay Street/ George Washington Blvd
City, State: Hull, MA
Client: TEC/ R. Brown

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 154600 GG
Site Code : T0597
Start Date : 8/18/2015
Page No : 1

Groups Printed- Heavy Vehicles

	Nantasket Avenue (Route 228) From North				Nantasket Avenue (Route 228) From South				George Washington Boulevard From Southwest				Bay Street From West				
Start Time	Right	Bear Right	Thru	U-Turn	Thru	Left	Hard Left	U-Turn	Hard Right	Bear Left	Hard Left	U-Turn	Hard Right	Right	Left	U-Turn	Int. Total
04:00 PM	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	8
04:15 PM	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	2
04:30 PM	0	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	5
04:45 PM	0	3	4	0	0	0	0	0	0	0	1	0	0	0	0	0	8
Total	0	8	13	0	0	0	0	0	0	0	2	0	0	0	0	0	23
05:00 PM	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	3
05:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2
05:30 PM	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	3
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	3	4	0	0	0	0	0	0	0	0	0	0	1	0	0	8
Grand Total	0	11	17	0	0	0	0	0	0	0	2	0	0	1	0	0	31
Apprch %	0	39.3	60.7	0	0	0	0	0	0	0	100	0	0	100	0	0	
Total %	0	35.5	54.8	0	0	0	0	0	0	0	6.5	0	0	3.2	0	0	

	Nantasket Avenue (Route 228) From North					Nantasket Avenue (Route 228) From South					George Washington Boulevard From Southwest					Bay Street From West					
Start Time	Right	Bear Right	Thru	U-Turn	App. Total	Thru	Left	Hard Left	U-Turn	App. Total	Hard Right	Bear Left	Hard Left	U-Turn	App. Total	Hard Right	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	0	4	4	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
04:15 PM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2
04:30 PM	0	1	4	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
04:45 PM	0	3	4	0	7	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	8
Total Volume	0	8	13	0	21	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	23
% App. Total	0	38.1	61.9	0		0	0	0	0		0	0	100	0		0	0	0	0		
PHF	.000	.500	.813	.000	.656	.000	.000	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.000	.719

N/S: Nantasket Avenue (Route 228)
W/SW: Bay Street/ George Washington Blvd
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Office: 508.481.3999 Fax: 508.545.1234
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File Name : 154600 GG
Site Code : T0597
Start Date : 8/18/2015
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Groups Printed- Peds and Bikes

	Nantasket Avenue (Route 228) From North					Nantasket Avenue (Route 228) From South					George Washington Boulevard From Southwest					Bay Street From West					
Start Time	Right	Bear Right	Thru	Peds EB	Peds WB	Thru	Left	Hard Left	Peds WB	Peds EB	Hard Right	Bear Left	Hard Left	Peds NWB	Peds SEB	Hard Right	Right	Left	Peds NB	Peds SB	Int. Total
04:00 PM	0	0	1	8	9	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	28
04:15 PM	0	0	0	2	3	0	0	0	5	2	0	0	0	0	0	0	0	0	0	0	12
04:30 PM	0	1	0	1	0	0	0	0	5	6	0	0	0	0	0	0	0	0	0	0	13
04:45 PM	0	1	0	0	2	0	0	0	1	4	0	0	0	0	0	0	0	0	0	0	8
Total	0	2	1	11	14	0	0	0	16	17	0	0	0	0	0	0	0	0	0	0	61
05:00 PM	0	0	0	3	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	1	7
05:15 PM	0	0	2	0	3	0	0	0	4	2	0	0	0	0	0	0	0	0	0	0	11
05:30 PM	0	0	1	5	1	0	0	0	1	5	0	0	0	0	0	0	0	0	0	0	13
05:45 PM	0	0	0	3	1	0	0	0	2	5	0	0	0	0	0	0	0	0	1	0	12
Total	0	0	3	11	5	0	0	0	8	14	0	0	0	0	0	0	0	0	1	1	43
Grand Total	0	2	4	22	19	0	0	0	24	31	0	0	0	0	0	0	0	0	1	1	104
Apprch %	0	4.3	8.5	46.8	40.4	0	0	0	43.6	56.4	0	0	0	0	0	0	0	0	50	50	
Total %	0	1.9	3.8	21.2	18.3	0	0	0	23.1	29.8	0	0	0	0	0	0	0	0	1	1	

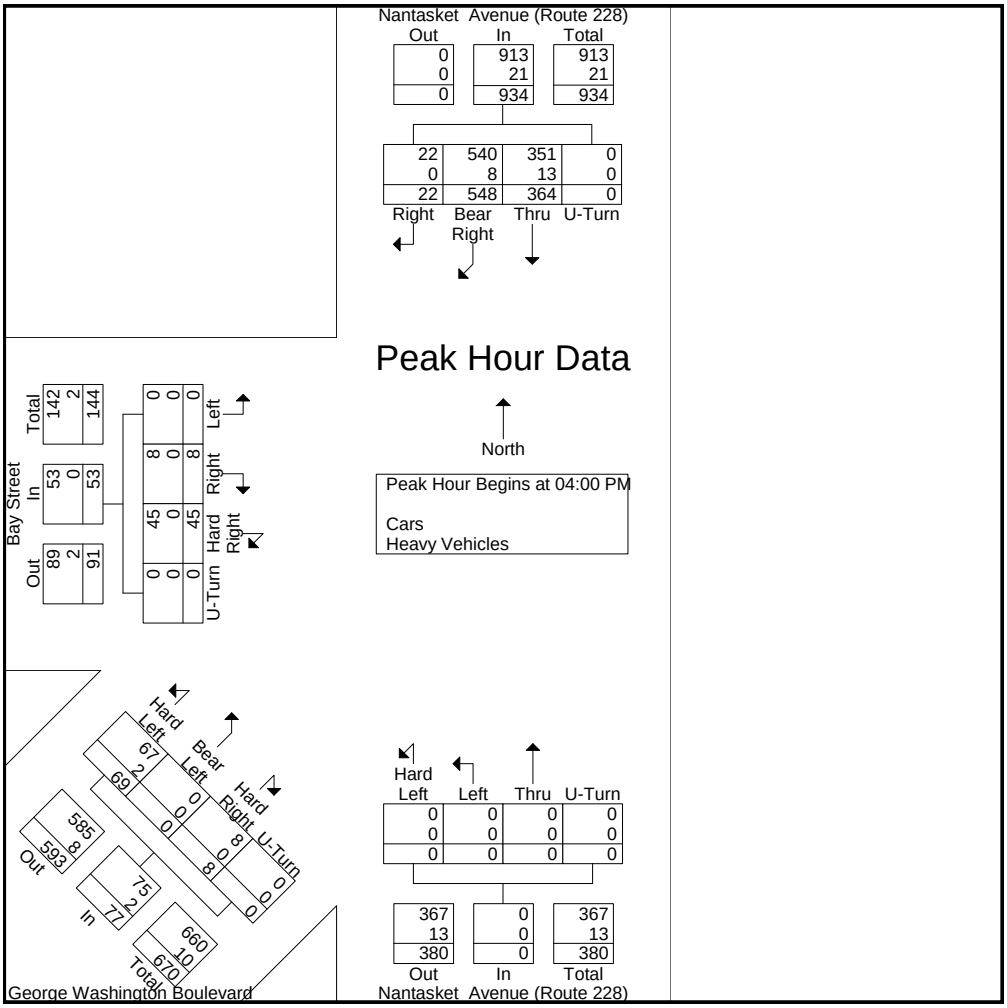
	Nantasket Avenue (Route 228) From North						Nantasket Avenue (Route 228) From South						George Washington Boulevard From Southwest						Bay Street From West						
Start Time	Right	Bear Right	Thru	Peds EB	Peds WB	App. Total	Thru	Left	Hard Left	Peds WB	Peds EB	App. Total	Hard Right	Bear Left	Hard Left	Peds NWB	Peds SEB	App. Total	Hard Right	Right	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 04:00 PM																									
04:00 PM	0	0	1	8	9	18	0	0	0	5	5	10	0	0	0	0	0	0	0	0	0	0	0	0	28
04:15 PM	0	0	0	2	3	5	0	0	0	5	2	7	0	0	0	0	0	0	0	0	0	0	0	0	12
04:30 PM	0	1	0	1	0	2	0	0	0	5	6	11	0	0	0	0	0	0	0	0	0	0	0	0	13
04:45 PM	0	1	0	0	2	3	0	0	0	1	4	5	0	0	0	0	0	0	0	0	0	0	0	0	8
Total Volume	0	2	1	11	14	28	0	0	0	16	17	33	0	0	0	0	0	0	0	0	0	0	0	0	61
% App. Total	0	7.1	3.6	39.3	50		0	0	0	48.5	51.5		0	0	0	0	0		0	0	0	0	0		
PHF	.000	.500	.250	.344	.389	.389	.000	.000	.000	.800	.708	.750	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.545

N/S: Nantasket Avenue (Route 228)
W/SW: Bay Street/ George Washington Blvd
City, State: Hull, MA
Client: TEC/ R. Brown

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Office: 508.481.3999 Fax: 508.545.1234
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Site Code : T0597
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	Nantasket Avenue (Route 228) From North					Nantasket Avenue (Route 228) From South					George Washington Boulevard From Southwest					Bay Street From West					
Start Time	Right	Bear Right	Thru	U-Turn	App. Total	Thru	Left	Hard Left	U-Turn	App. Total	Hard Right	Bear Left	Hard Left	U-Turn	App. Total	Hard Right	Right	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	5	152	103	0	260	0	0	0	0	0	3	0	21	0	24	8	1	0	0	9	293
04:15 PM	6	132	95	0	233	0	0	0	0	0	3	0	20	0	23	16	3	0	0	19	275
04:30 PM	4	137	86	0	227	0	0	0	0	0	2	0	18	0	20	12	1	0	0	13	260
04:45 PM	7	127	80	0	214	0	0	0	0	0	0	0	10	0	10	9	3	0	0	12	236
Total Volume	22	548	364	0	934	0	0	0	0	0	8	0	69	0	77	45	8	0	0	53	1064
% App. Total	2.4	58.7	39	0		0	0	0	0		10.4	0	89.6	0		84.9	15.1	0	0		
PHF	.786	.901	.883	.000	.898	.000	.000	.000	.000	.000	.667	.000	.821	.000	.802	.703	.667	.000	.000	.697	.908
Cars	22	540	351	0	913	0	0	0	0	0	8	0	67	0	75	45	8	0	0	53	1041
% Cars	100	98.5	96.4	0	97.8	0	0	0	0	0	100	0	97.1	0	97.4	100	100	0	0	100	97.8
Heavy Vehicles	0	8	13	0	21	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	23
% Heavy Vehicles	0	1.5	3.6	0	2.2	0	0	0	0	0	0	0	2.9	0	2.6	0	0	0	0	0	2.2



N/S:Hull Shore Dr/ George Washington Blv
E/W: Nantasket Avenue (Route 228)
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File Name : 154600 H
Site Code : T0597
Start Date : 8/15/2015
Page No : 1

Groups Printed- Cars

	Hull Shore Drive From North				Nantasket Avenue (Route 228) From East				George Washington Boulevard From South				Nantasket Avenue (Route 228) From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
12:00 PM	0	0	0	0	119	0	0	0	0	191	0	0	0	62	0	0	372
12:15 PM	0	0	0	0	114	0	0	0	0	185	0	0	0	78	0	0	377
12:30 PM	0	0	0	0	116	0	0	0	0	172	0	0	0	105	0	0	393
12:45 PM	0	0	0	0	127	0	0	0	0	167	0	0	0	96	0	0	390
Total	0	0	0	0	476	0	0	0	0	715	0	0	0	341	0	0	1532
01:00 PM	0	0	0	0	118	0	0	0	0	169	0	0	0	91	2	0	380
01:15 PM	0	0	0	0	102	0	0	0	0	195	0	0	2	88	1	0	388
01:30 PM	0	0	0	0	116	0	0	0	0	166	0	0	0	85	0	0	367
01:45 PM	0	0	0	0	121	0	0	0	1	156	0	0	0	92	1	0	371
Total	0	0	0	0	457	0	0	0	1	686	0	0	2	356	4	0	1506
Grand Total	0	0	0	0	933	0	0	0	1	1401	0	0	2	697	4	0	3038
Apprch %	0	0	0	0	100	0	0	0	0.1	99.9	0	0	0.3	99.1	0.6	0	
Total %	0	0	0	0	30.7	0	0	0	0	46.1	0	0	0.1	22.9	0.1	0	

	Hull Shore Drive From North					Nantasket Avenue (Route 228) From East					George Washington Boulevard From South					Nantasket Avenue (Route 228) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:30 PM																					
12:30 PM	0	0	0	0	0	116	0	0	0	116	0	172	0	0	172	0	105	0	0	105	393
12:45 PM	0	0	0	0	0	127	0	0	0	127	0	167	0	0	167	0	96	0	0	96	390
01:00 PM	0	0	0	0	0	118	0	0	0	118	0	169	0	0	169	0	91	2	0	93	380
01:15 PM	0	0	0	0	0	102	0	0	0	102	0	195	0	0	195	2	88	1	0	91	388
Total Volume	0	0	0	0	0	463	0	0	0	463	0	703	0	0	703	2	380	3	0	385	1551
% App. Total	0	0	0	0		100	0	0	0		0	100	0	0		0.5	98.7	0.8	0		
PHF	.000	.000	.000	.000	.000	.911	.000	.000	.000	.911	.000	.901	.000	.000	.901	.250	.905	.375	.000	.917	.987

N/S:Hull Shore Dr/ George Washington Blv
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File Name : 154600 H
Site Code : T0597
Start Date : 8/15/2015
Page No : 1

Groups Printed- Heavy Vehicles

	Hull Shore Drive From North				Nantasket Avenue (Route 228) From East				George Washington Boulevard From South				Nantasket Avenue (Route 228) From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
12:00 PM	0	0	0	0	2	0	0	0	0	3	0	0	0	0	0	0	5
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
12:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	2
12:45 PM	0	0	0	0	3	0	0	0	0	2	0	0	0	1	0	0	6
Total	0	0	0	0	6	0	0	0	0	5	0	0	0	4	0	0	15
01:00 PM	0	0	0	0	1	0	0	0	0	1	0	0	0	1	0	0	3
01:15 PM	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	0	3
01:30 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	4
01:45 PM	0	0	0	0	3	0	0	0	0	3	0	0	0	3	0	0	9
Total	0	0	0	0	6	0	0	0	0	7	0	0	0	6	0	0	19
Grand Total	0	0	0	0	12	0	0	0	0	12	0	0	0	10	0	0	34
Apprch %	0	0	0	0	100	0	0	0	0	100	0	0	0	100	0	0	
Total %	0	0	0	0	35.3	0	0	0	0	35.3	0	0	0	29.4	0	0	

	Hull Shore Drive From North					Nantasket Avenue (Route 228) From East					George Washington Boulevard From South					Nantasket Avenue (Route 228) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 01:00 PM																					
01:00 PM	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0	1	0	0	1	3
01:15 PM	0	0	0	0	0	2	0	0	0	2	0	1	0	0	1	0	0	0	0	0	3
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	2	0	0	2	4
01:45 PM	0	0	0	0	0	3	0	0	0	3	0	3	0	0	3	0	3	0	0	3	9
Total Volume	0	0	0	0	0	6	0	0	0	6	0	7	0	0	7	0	6	0	0	6	19
% App. Total	0	0	0	0		100	0	0	0		0	100	0	0		0	100	0	0		
PHF	.000	.000	.000	.000	.000	.500	.000	.000	.000	.500	.000	.583	.000	.000	.583	.000	.500	.000	.000	.500	.528

N/S:Hull Shore Dr/ George Washington Blv
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PRECISION
D A T A
INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
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Groups Printed- Peds and Bikes

	Hull Shore Drive From North					Nantasket Avenue (Route 228) From East					George Washington Boulevard From South					Nantasket Avenue (Route 228) From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
12:00 PM	0	0	0	4	0	2	0	0	0	0	0	0	0	11	1	0	1	0	4	0	23
12:15 PM	0	0	0	0	4	3	0	0	0	0	0	0	0	9	10	1	0	0	0	4	31
12:30 PM	0	0	0	4	1	5	0	0	0	0	0	0	0	3	8	0	0	0	3	6	30
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	8	5	0	1	0	11	2	27
Total	0	0	0	8	5	10	0	0	0	0	0	0	0	31	24	1	2	0	18	12	111
01:00 PM	0	0	0	2	5	1	0	0	1	2	0	0	0	6	6	0	3	0	1	5	32
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	5	0	1	0	1	0	9
01:30 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	11	6	0	3	0	2	2	26
01:45 PM	0	0	0	0	2	1	0	0	0	0	0	0	0	8	6	0	0	0	0	2	19
Total	0	0	0	3	7	3	0	0	1	2	0	0	0	27	23	0	7	0	4	9	86
Grand Total	0	0	0	11	12	13	0	0	1	2	0	0	0	58	47	1	9	0	22	21	197
Apprch %	0	0	0	47.8	52.2	81.2	0	0	6.2	12.5	0	0	0	55.2	44.8	1.9	17	0	41.5	39.6	
Total %	0	0	0	5.6	6.1	6.6	0	0	0.5	1	0	0	0	29.4	23.9	0.5	4.6	0	11.2	10.7	

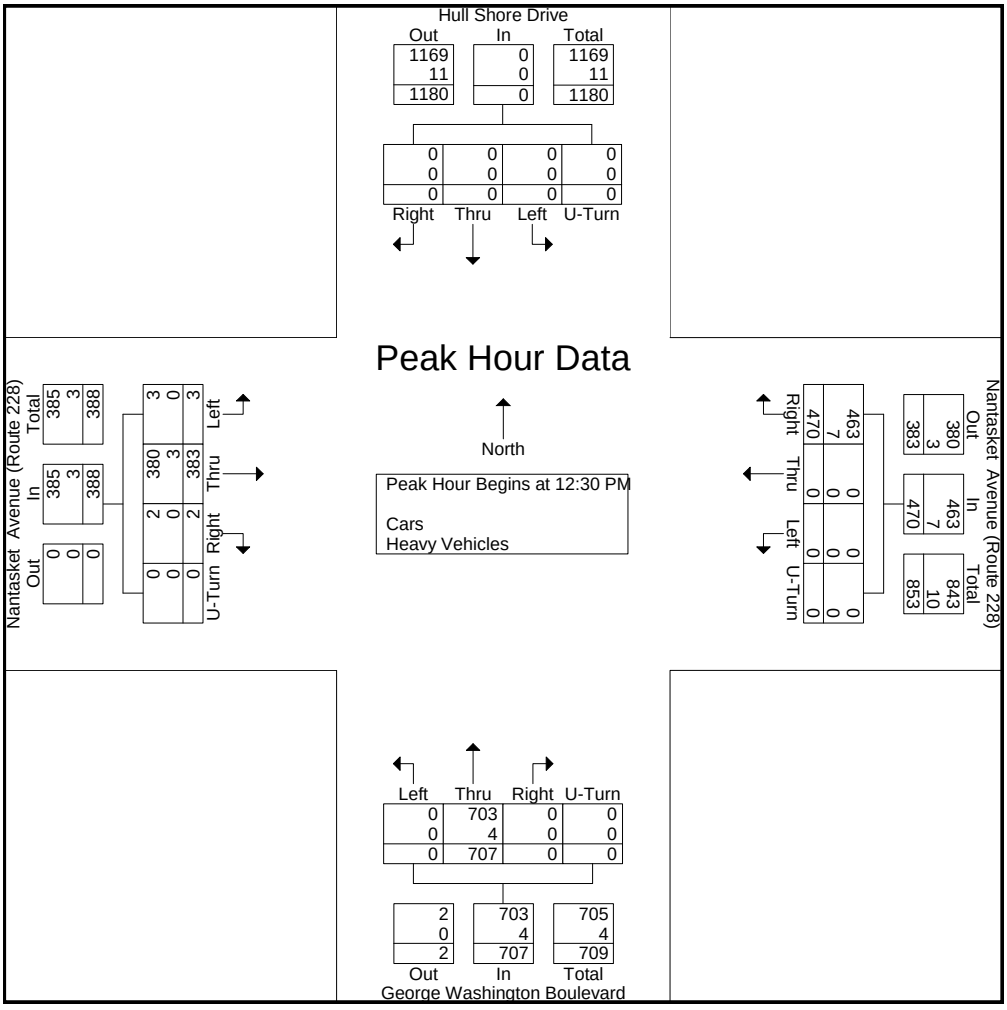
	Hull Shore Drive From North						Nantasket Avenue (Route 228) From East						George Washington Boulevard From South						Nantasket Avenue (Route 228) From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 12:15 PM																									
12:15 PM	0	0	0	0	4	4	3	0	0	0	0	3	0	0	0	9	10	19	1	0	0	0	4	5	31
12:30 PM	0	0	0	4	1	5	5	0	0	0	0	5	0	0	0	3	8	11	0	0	0	3	6	9	30
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	5	13	0	1	0	11	2	14	27
01:00 PM	0	0	0	2	5	7	1	0	0	1	2	4	0	0	0	6	6	12	0	3	0	1	5	9	32
Total Volume	0	0	0	6	10	16	9	0	0	1	2	12	0	0	0	26	29	55	1	4	0	15	17	37	120
% App. Total	0	0	0	37.5	62.5		75	0	0	8.3	16.7		0	0	0	47.3	52.7		2.7	10.8	0	40.5	45.9		
PHF	.000	.000	.000	.375	.500	.571	.450	.000	.000	.250	.250	.600	.000	.000	.000	.722	.725	.724	.250	.333	.000	.341	.708	.661	.938

N/S:Hull Shore Dr/ George Washington Blv
E/W: Nantasket Avenue (Route 228)
City, State: Hull, MA
Client: TEC/ R. Brown

PRECISION DATA INDUSTRIES, LLC
P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 154600 H
Site Code : T0597
Start Date : 8/15/2015
Page No : 1

	Hull Shore Drive From North					Nantasket Avenue (Route 228) From East					George Washington Boulevard From South					Nantasket Avenue (Route 228) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:30 PM																					
12:30 PM	0	0	0	0	0	117	0	0	0	117	0	172	0	0	172	0	106	0	0	106	395
12:45 PM	0	0	0	0	0	130	0	0	0	130	0	169	0	0	169	0	97	0	0	97	396
01:00 PM	0	0	0	0	0	119	0	0	0	119	0	170	0	0	170	0	92	2	0	94	383
01:15 PM	0	0	0	0	0	104	0	0	0	104	0	196	0	0	196	2	88	1	0	91	391
Total Volume	0	0	0	0	0	470	0	0	0	470	0	707	0	0	707	2	383	3	0	388	1565
% App. Total	0	0	0	0		100	0	0	0		0	100	0	0		0.5	98.7	0.8	0		
PHF	.000	.000	.000	.000	.000	.904	.000	.000	.000	.904	.000	.902	.000	.000	.902	.250	.903	.375	.000	.915	.988
Cars	0	0	0	0	0	463	0	0	0	463	0	703	0	0	703	2	380	3	0	385	1551
% Cars	0	0	0	0	0	98.5	0	0	0	98.5	0	99.4	0	0	99.4	100	99.2	100	0	99.2	99.1
Heavy Vehicles	0	0	0	0	0	7	0	0	0	7	0	4	0	0	4	0	3	0	0	3	14
% Heavy Vehicles	0	0	0	0	0	1.5	0	0	0	1.5	0	0.6	0	0	0.6	0	0.8	0	0	0.8	0.9



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File Name : 154600 HH
Site Code : T0597
Start Date : 8/18/2015
Page No : 1

Groups Printed- Cars - Heavy Vehicles

	Hull Shore Drive From North				Nantasket Avenue (Route 228) From East				George Washington Boulevard From South				Nantasket Avenue (Route 228) From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	0	0	0	0	101	0	0	0	0	132	0	0	0	103	0	0	336
04:15 PM	0	0	0	0	104	0	0	0	0	120	0	0	0	105	0	0	329
04:30 PM	0	0	0	0	98	0	0	0	0	145	0	0	0	89	0	0	332
04:45 PM	0	0	0	0	80	0	0	0	0	139	0	0	0	82	0	0	301
Total	0	0	0	0	383	0	0	0	0	536	0	0	0	379	0	0	1298
05:00 PM	0	0	0	0	89	0	0	0	0	126	0	0	0	76	0	0	291
05:15 PM	0	0	0	0	87	0	0	0	0	140	0	0	0	80	0	0	307
05:30 PM	0	0	0	0	65	0	0	0	1	152	0	0	0	80	0	0	298
05:45 PM	0	0	0	0	109	0	0	0	0	148	0	0	0	62	0	0	319
Total	0	0	0	0	350	0	0	0	1	566	0	0	0	298	0	0	1215
Grand Total	0	0	0	0	733	0	0	0	1	1102	0	0	0	677	0	0	2513
Apprch %	0	0	0	0	100	0	0	0	0.1	99.9	0	0	0	100	0	0	
Total %	0	0	0	0	29.2	0	0	0	0	43.9	0	0	0	26.9	0	0	
Cars	0	0	0	0	719	0	0	0	1	1095	0	0	0	659	0	0	2474
% Cars	0	0	0	0	98.1	0	0	0	100	99.4	0	0	0	97.3	0	0	98.4
Heavy Vehicles	0	0	0	0	14	0	0	0	0	7	0	0	0	18	0	0	39
% Heavy Vehicles	0	0	0	0	1.9	0	0	0	0	0.6	0	0	0	2.7	0	0	1.6

	Hull Shore Drive From North					Nantasket Avenue (Route 228) From East					George Washington Boulevard From South					Nantasket Avenue (Route 228) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	0	0	0	0	0	101	0	0	0	101	0	132	0	0	132	0	103	0	0	103	336
04:15 PM	0	0	0	0	0	104	0	0	0	104	0	120	0	0	120	0	105	0	0	105	329
04:30 PM	0	0	0	0	0	98	0	0	0	98	0	145	0	0	145	0	89	0	0	89	332
04:45 PM	0	0	0	0	0	80	0	0	0	80	0	139	0	0	139	0	82	0	0	82	301
Total Volume	0	0	0	0	0	383	0	0	0	383	0	536	0	0	536	0	379	0	0	379	1298
% App. Total	0	0	0	0		100	0	0	0		0	100	0	0		0	100	0	0		
PHF	.000	.000	.000	.000	.000	.921	.000	.000	.000	.921	.000	.924	.000	.000	.924	.000	.902	.000	.000	.902	.966
Cars	0	0	0	0	0	374	0	0	0	374	0	530	0	0	530	0	367	0	0	367	1271
% Cars	0	0	0	0	0	97.7	0	0	0	97.7	0	98.9	0	0	98.9	0	96.8	0	0	96.8	97.9
Heavy Vehicles	0	0	0	0	0	9	0	0	0	9	0	6	0	0	6	0	12	0	0	12	27
% Heavy Vehicles	0	0	0	0	0	2.3	0	0	0	2.3	0	1.1	0	0	1.1	0	3.2	0	0	3.2	2.1

N/S:Hull Shore Dr/ George Washington Blv
E/W: Nantasket Avenue (Route 228)
City, State: Hull, MA
Client: TEC/ R. Brown

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File Name : 154600 HH
Site Code : T0597
Start Date : 8/18/2015
Page No : 1

Groups Printed- Cars

	Hull Shore Drive From North				Nantasket Avenue (Route 228) From East				George Washington Boulevard From South				Nantasket Avenue (Route 228) From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	0	0	0	0	100	0	0	0	0	131	0	0	0	101	0	0	332
04:15 PM	0	0	0	0	102	0	0	0	0	119	0	0	0	102	0	0	323
04:30 PM	0	0	0	0	96	0	0	0	0	144	0	0	0	86	0	0	326
04:45 PM	0	0	0	0	76	0	0	0	0	136	0	0	0	78	0	0	290
Total	0	0	0	0	374	0	0	0	0	530	0	0	0	367	0	0	1271
05:00 PM	0	0	0	0	89	0	0	0	0	126	0	0	0	74	0	0	289
05:15 PM	0	0	0	0	86	0	0	0	0	140	0	0	0	78	0	0	304
05:30 PM	0	0	0	0	63	0	0	0	1	151	0	0	0	78	0	0	293
05:45 PM	0	0	0	0	107	0	0	0	0	148	0	0	0	62	0	0	317
Total	0	0	0	0	345	0	0	0	1	565	0	0	0	292	0	0	1203
Grand Total	0	0	0	0	719	0	0	0	1	1095	0	0	0	659	0	0	2474
Apprch %	0	0	0	0	100	0	0	0	0.1	99.9	0	0	0	100	0	0	
Total %	0	0	0	0	29.1	0	0	0	0	44.3	0	0	0	26.6	0	0	

	Hull Shore Drive From North					Nantasket Avenue (Route 228) From East					George Washington Boulevard From South					Nantasket Avenue (Route 228) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	0	0	0	0	0	100	0	0	0	100	0	131	0	0	131	0	101	0	0	101	332
04:15 PM	0	0	0	0	0	102	0	0	0	102	0	119	0	0	119	0	102	0	0	102	323
04:30 PM	0	0	0	0	0	96	0	0	0	96	0	144	0	0	144	0	86	0	0	86	326
04:45 PM	0	0	0	0	0	76	0	0	0	76	0	136	0	0	136	0	78	0	0	78	290
Total Volume	0	0	0	0	0	374	0	0	0	374	0	530	0	0	530	0	367	0	0	367	1271
% App. Total	0	0	0	0		100	0	0	0		0	100	0	0		0	100	0	0		
PHF	.000	.000	.000	.000	.000	.917	.000	.000	.000	.917	.000	.920	.000	.000	.920	.000	.900	.000	.000	.900	.957

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File Name : 154600 HH
Site Code : T0597
Start Date : 8/18/2015
Page No : 1

Groups Printed- Heavy Vehicles

	Hull Shore Drive From North				Nantasket Avenue (Route 228) From East				George Washington Boulevard From South				Nantasket Avenue (Route 228) From West				
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Int. Total
04:00 PM	0	0	0	0	1	0	0	0	0	1	0	0	0	2	0	0	4
04:15 PM	0	0	0	0	2	0	0	0	0	1	0	0	0	3	0	0	6
04:30 PM	0	0	0	0	2	0	0	0	0	1	0	0	0	3	0	0	6
04:45 PM	0	0	0	0	4	0	0	0	0	3	0	0	0	4	0	0	11
Total	0	0	0	0	9	0	0	0	0	6	0	0	0	12	0	0	27
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
05:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	3
05:30 PM	0	0	0	0	2	0	0	0	0	1	0	0	0	2	0	0	5
05:45 PM	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	0	0	5	0	0	0	0	1	0	0	0	6	0	0	12
Grand Total	0	0	0	0	14	0	0	0	0	7	0	0	0	18	0	0	39
Apprch %	0	0	0	0	100	0	0	0	0	100	0	0	0	100	0	0	
Total %	0	0	0	0	35.9	0	0	0	0	17.9	0	0	0	46.2	0	0	

	Hull Shore Drive From North					Nantasket Avenue (Route 228) From East					George Washington Boulevard From South					Nantasket Avenue (Route 228) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0	2	0	0	2	4
04:15 PM	0	0	0	0	0	2	0	0	0	2	0	1	0	0	1	0	3	0	0	3	6
04:30 PM	0	0	0	0	0	2	0	0	0	2	0	1	0	0	1	0	3	0	0	3	6
04:45 PM	0	0	0	0	0	4	0	0	0	4	0	3	0	0	3	0	4	0	0	4	11
Total Volume	0	0	0	0	0	9	0	0	0	9	0	6	0	0	6	0	12	0	0	12	27
% App. Total	0	0	0	0		100	0	0	0		0	100	0	0		0	100	0	0		
PHF	.000	.000	.000	.000	.000	.563	.000	.000	.000	.563	.000	.500	.000	.000	.500	.000	.750	.000	.000	.750	.614

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P.O. Box 301 Berlin, MA 01503
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Site Code : T0597
Start Date : 8/18/2015
Page No : 1

Groups Printed- Peds and Bikes

	Hull Shore Drive From North					Nantasket Avenue (Route 228) From East					George Washington Boulevard From South					Nantasket Avenue (Route 228) From West					
Start Time	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	Int. Total
04:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	1	2	0	1	0	1	1	7
04:15 PM	0	0	0	0	3	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	5
04:30 PM	0	0	0	0	3	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	6
04:45 PM	0	0	0	1	0	2	0	0	0	0	0	0	0	7	3	0	0	0	0	1	14
Total	0	0	0	1	7	2	0	0	0	0	0	0	0	8	9	0	1	0	1	3	32
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	4	6
05:30 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	5
05:45 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	1	0	0	0	0	0	0	0	0	0	4	2	0	2	0	0	4	13
Grand Total	0	0	0	2	7	2	0	0	0	0	0	0	0	12	11	0	3	0	1	7	45
Apprch %	0	0	0	22.2	77.8	100	0	0	0	0	0	0	0	52.2	47.8	0	27.3	0	9.1	63.6	
Total %	0	0	0	4.4	15.6	4.4	0	0	0	0	0	0	0	26.7	24.4	0	6.7	0	2.2	15.6	

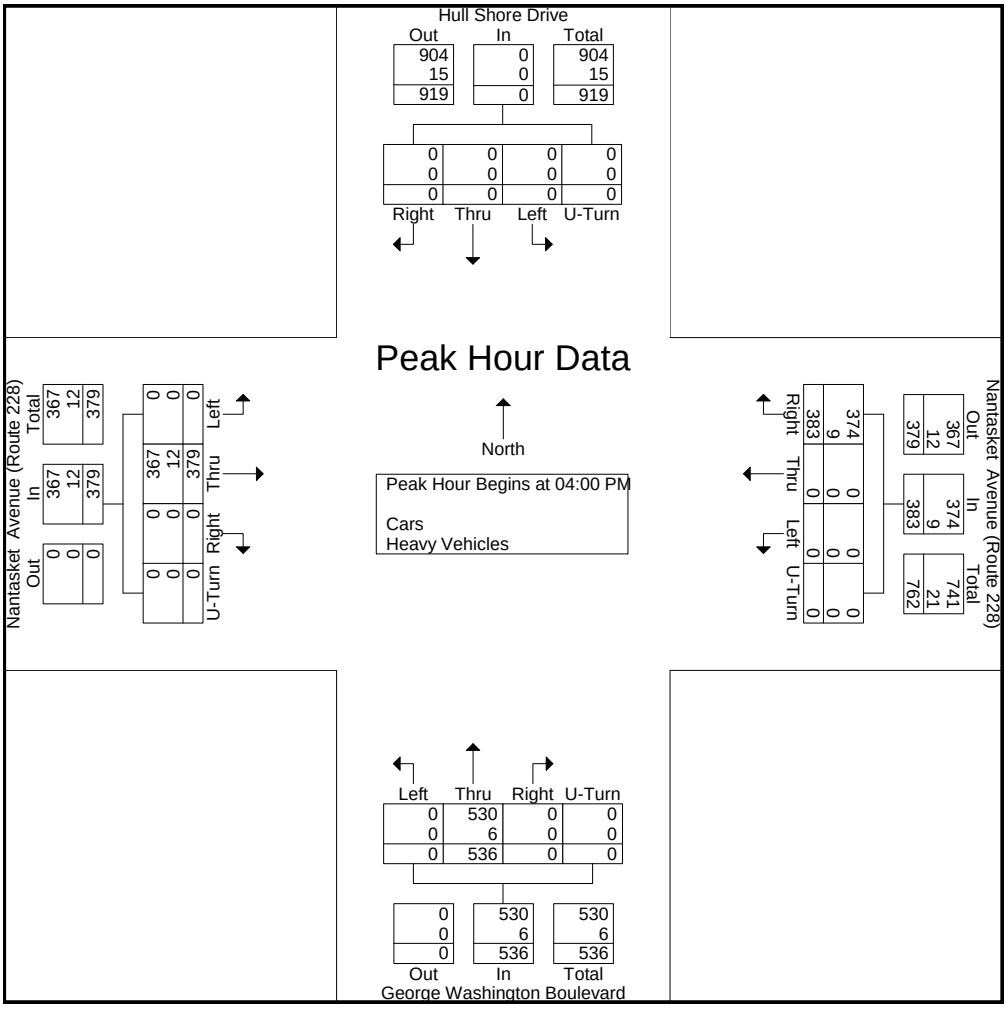
	Hull Shore Drive From North						Nantasket Avenue (Route 228) From East						George Washington Boulevard From South						Nantasket Avenue (Route 228) From West						
Start Time	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 04:00 PM																									
04:00 PM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	2	3	0	1	0	1	1	3	7
04:15 PM	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	5
04:30 PM	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	1	1	6
04:45 PM	0	0	0	1	0	1	2	0	0	0	0	2	0	0	0	7	3	10	0	0	0	0	1	1	14
Total Volume	0	0	0	1	7	8	2	0	0	0	0	2	0	0	0	8	9	17	0	1	0	1	3	5	32
% App. Total	0	0	0	12.5	87.5		100	0	0	0	0		0	0	0	47.1	52.9		0	20	0	20	60		
PHF	.000	.000	.000	.250	.583	.667	.250	.000	.000	.000	.000	.250	.000	.000	.000	.286	.750	.425	.000	.250	.000	.250	.750	.417	.571

N/S:Hull Shore Dr/ George Washington Blv
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	Hull Shore Drive From North					Nantasket Avenue (Route 228) From East					George Washington Boulevard From South					Nantasket Avenue (Route 228) From West					
Start Time	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	0	0	0	0	0	101	0	0	0	101	0	132	0	0	132	0	103	0	0	103	336
04:15 PM	0	0	0	0	0	104	0	0	0	104	0	120	0	0	120	0	105	0	0	105	329
04:30 PM	0	0	0	0	0	98	0	0	0	98	0	145	0	0	145	0	89	0	0	89	332
04:45 PM	0	0	0	0	0	80	0	0	0	80	0	139	0	0	139	0	82	0	0	82	301
Total Volume	0	0	0	0	0	383	0	0	0	383	0	536	0	0	536	0	379	0	0	379	1298
% App. Total	0	0	0	0		100	0	0	0		0	100	0	0		0	100	0	0		
PHF	.000	.000	.000	.000	.000	.921	.000	.000	.000	.921	.000	.924	.000	.000	.924	.000	.902	.000	.000	.902	.966
Cars	0	0	0	0	0	374	0	0	0	374	0	530	0	0	530	0	367	0	0	367	1271
% Cars	0	0	0	0	0	97.7	0	0	0	97.7	0	98.9	0	0	98.9	0	96.8	0	0	96.8	97.9
Heavy Vehicles	0	0	0	0	0	9	0	0	0	9	0	6	0	0	6	0	12	0	0	12	27
% Heavy Vehicles	0	0	0	0	0	2.3	0	0	0	2.3	0	1.1	0	0	1.1	0	3.2	0	0	3.2	2.1



MassDOT Highway Division
WEEKLY SUMMARY FOR LANE
Starting: 6/1/2015

STA. 11 NB

TOTAL

Site Reference: 150150000599
Site ID: 110000001101
Location: GEORGE WASHINGTON BLVD N OF ROCKLAND CIR
Direction: ROAD TOTAL

File: dir.prn
City: HULL
County: SPEED LN-1&2 NB

TIME	MON 1	TUE 2	WED 3	THU 4	FRI	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		56	56	59		57			57	171
02:00		46	33	32		37			37	111
03:00		15	17	20		17			17	52
04:00		14	19	14		15			15	47
05:00		12	15	20		15			15	47
06:00		56	32	60		49			49	148
07:00		123	129	117		123			123	369
08:00		239	271	265		258			258	775
09:00		270	279	303		284			284	852
10:00		260	318	317		298			298	895
11:00		312	334	341		329			329	987
12:00		321	362			341			341	683
13:00		360	370			365			365	730
14:00		363	356			359			359	719
15:00	412	359	433			401			401	1204
16:00	481	525	535			513			513	1541
17:00	620	589	605			604			604	1814
18:00	572	609	622			601			601	1803
19:00	562	575	578			571			571	1715
20:00	388	406	536			443			443	1330
21:00	304	326	395			341			341	1025
22:00	250	303	284			279			279	837
23:00	154	171	202			175			175	527
24:00	92	106	123			107			107	321
TOTALS	3835	6416	6904	1548	0	6582	0	0	6582	18703
% AVG WKDY	58.2	97.4	104.8	23.5						
% AVG WEEK	58.2	97.4	104.8	23.5						
AM Times		12:00	12:00	11:00		12:00			12:00	
AM Peaks		321	362	341		341			341	
PM Times	17:00	18:00	18:00			17:00			17:00	
PM Peaks	620	609	622			604			604	
D%	65	70	65	60						
K%	16	9	9	22						

US

NB 6582
SB 7228
COMB AWD 13810
FAC .97(87)
COMB ADT 11,700

MassDOT Highway Division
WEEKLY SUMMARY FOR LANE
Starting: 6/1/2015

STA. 11 SB
TOTAL

Site Reference: 150150000656
Site ID: 110000001102
Location: GEORGE WASHINGTON BLVD N OF ROCKLAND CIR
Direction: ROAD TOTAL

File: dir.prn
City: HULL
County: SPEED LN-1&2 SB

TIME	MON 1	TUE 2	WED 3	THU 4	FRI	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		31	18	34		27			27	83
02:00		23	19	26		22			22	68
03:00		8	13	14		11			11	35
04:00		32	30	23		28			28	85
05:00		103	91	102		98			98	296
06:00		305	312	312		309			309	929
07:00		528	554	540		540			540	1622
08:00		623	637	634		631			631	1894
09:00		570	611	623		601			601	1804
10:00		463	544	525		510			510	1532
11:00		478	498	434		470			470	1410
12:00		421	476			448			448	897
13:00		444	387			415			415	831
14:00		394	456			425			425	850
15:00	448	452	411			437			437	1311
16:00	424	383	443			416			416	1250
17:00	395	434	484			437			437	1313
18:00	338	332	423			364			364	1093
19:00	287	305	330			307			307	922
20:00	222	225	272			239			239	719
21:00	170	185	235			196			196	590
22:00	124	150	194			156			156	468
23:00	93	86	101			93			93	280
24:00	41	32	71			48			48	144
TOTALS	2542	7007	7610	3267	0	7228	0	0	7228	20426
% AVG WKDY	35.1	96.9	105.2	45.1						
% AVG WEEK	35.1	96.9	105.2	45.1						
AM Times		08:00	08:00	08:00		08:00			08:00	
AM Peaks		623	637	634		631			631	
PM Times	15:00	15:00	17:00			15:00			15:00	
PM Peaks	448	452	484			437			437	
D%	55	60	55	60						
K%	18	9	8	19						

MassDOT Highway Division
WEEKLY SUMMARY FOR LANE 1
Starting: 6/1/2015

STA. 11 NB

LN. 1

Site Reference: 150150000599
Site ID: 110000001101
Location: GEORGE WASHINGTON BLVD N OF ROCKLAND CIR
Direction: NORTH

File: dir.prn
City: HULL
County: SPEED LN-1&2 NB

TIME	MON 1	TUE 2	WED 3	THU 4	FRI	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		14	12	17		14			14	43
02:00		14	9	9		10			10	32
03:00		4	4	5		4			4	13
04:00		6	4	1		3			3	11
05:00		3	6	5		4			4	14
06:00		24	17	27		22			22	68
07:00		39	48	42		43			43	129
08:00		85	105	111		100			100	301
09:00		91	109	106		102			102	306
10:00		104	128	140		124			124	372
11:00		111	135	136		127			127	382
12:00		124	122			123			123	246
13:00		150	124			137			137	274
14:00		133	122			127			127	255
15:00	152	121	146			139			139	419
16:00	165	177	192			178			178	534
17:00	209	199	236			214			214	644
18:00	186	194	207			195			195	587
19:00	181	194	210			195			195	585
20:00	122	147	178			149			149	447
21:00	88	106	135			109			109	329
22:00	67	87	94			82			82	248
23:00	38	52	69			53			53	159
24:00	18	25	41			28			28	84
TOTALS	1226	2204	2453	599	0	2282	0	0	2282	6482
% AVG WKDY	53.7	96.5	107.4	26.2						
% AVG WEEK	53.7	96.5	107.4	26.2						
AM Times		12:00	11:00	10:00		11:00			11:00	
AM Peaks		124	135	140		127			127	
PM Times	17:00	17:00	17:00			17:00			17:00	
PM Peaks	209	199	236			214			214	

MassDOT Highway Division
WEEKLY SUMMARY FOR LANE 2
Starting: 6/1/2015

STA. 11 NB
LN. 2

Site Reference: 150150000599
Site ID: 110000001101
Location: GEORGE WASHINGTON BLVD N OF ROCKLAND CIR
Direction: NORTH

File: dir.prn
City: HULL
County: SPEED LN-1&2 NB

TIME	MON 1	TUE 2	WED 3	THU 4	FRI	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		42	44	42		42			42	128
02:00		32	24	23		26			26	79
03:00		11	13	15		13			13	39
04:00		8	15	13		12			12	36
05:00		9	9	15		11			11	33
06:00		32	15	33		26			26	80
07:00		84	81	75		80			80	240
08:00		154	166	154		158			158	474
09:00		179	170	197		182			182	546
10:00		156	190	177		174			174	523
11:00		201	199	205		201			201	605
12:00		197	240			218			218	437
13:00		210	246			228			228	456
14:00		230	234			232			232	464
15:00	260	238	287			261			261	785
16:00	316	348	343			335			335	1007
17:00	411	390	369			390			390	1170
18:00	386	415	415			405			405	1216
19:00	381	381	368			376			376	1130
20:00	266	259	358			294			294	883
21:00	216	220	260			232			232	696
22:00	183	216	190			196			196	589
23:00	116	119	133			122			122	368
24:00	74	81	82			79			79	237
TOTALS	2609	4212	4451	949	0	4293	0	0	4293	12221
% AVG WKDY	60.7	98.1	103.6	22.1						
% AVG WEEK	60.7	98.1	103.6	22.1						
AM Times		11:00	12:00	11:00		12:00			12:00	
AM Peaks		201	240	205		218			218	
PM Times	17:00	18:00	18:00			18:00			18:00	
PM Peaks	411	415	415			405			405	

MassDOT Highway Division
WEEKLY SUMMARY FOR LANE 1
Starting: 6/1/2015

STA. 115B

LN. 1

Site Reference: 150150000656
Site ID: 110000001102
Location: GEORGE WASHINGTON BLVD N OF ROCKLAND CIR
Direction: SOUTH

File: dir.prn
City: HULL
County: SPEED LN-1&2 SB

TIME	MON 1	TUE 2	WED 3	THU 4	FRI	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		9	6	14		9			9	29
02:00		12	2	8		7			7	22
03:00		2	3	4		3			3	9
04:00		14	8	9		10			10	31
05:00		42	37	39		39			39	118
06:00		125	129	141		131			131	395
07:00		205	232	212		216			216	649
08:00		259	273	266		266			266	798
09:00		241	285	288		271			271	814
10:00		198	268	266		244			244	732
11:00		225	246	220		230			230	691
12:00		199	222			210			210	421
13:00		192	173			182			182	365
14:00		164	210			187			187	374
15:00	194	207	193			198			198	594
16:00	196	174	220			196			196	590
17:00	177	195	220			197			197	592
18:00	147	136	188			157			157	471
19:00	108	125	159			130			130	392
20:00	88	93	113			98			98	294
21:00	64	70	112			82			82	246
22:00	50	60	71			60			60	181
23:00	38	36	36			36			36	110
24:00	20	7	28			18			18	55
TOTALS	1082	2990	3434	1467	0	3177	0	0	3177	8973
% AVG WKDY	34	94.1	108	46.1						
% AVG WEEK	34	94.1	108	46.1						
AM Times		08:00	09:00	09:00		09:00			09:00	
AM Peaks		259	285	288		271			271	
PM Times	16:00	15:00	16:00			15:00			15:00	
PM Peaks	196	207	220			198			198	

STA. 11 SB
LN 2

Site Reference: 150150000656
Site ID: 110000001102
Location: GEORGE WASHINGTON BLVD N OF ROCKLAND CIR
Direction: SOUTH

File: dir.prn
City: HULL
County: SPEED LN-1&2 SB

TIME	MON 1	TUE 2	WED 3	THU 4	FRI	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		22	12	20		18			18	54
02:00		11	17	18		15			15	46
03:00		6	10	10		8			8	26
04:00		18	22	14		18			18	54
05:00		61	54	63		59			59	178
06:00		180	183	171		178			178	534
07:00		323	322	328		324			324	973
08:00		364	364	368		365			365	1096
09:00		329	326	335		330			330	990
10:00		265	276	259		266			266	800
11:00		253	252	214		239			239	719
12:00		222	254			238			238	476
13:00		252	214			233			233	466
14:00		230	246			238			238	476
15:00	254	245	218			239			239	717
16:00	228	209	223			220			220	660
17:00	218	239	264			240			240	721
18:00	191	196	235			207			207	622
19:00	179	180	171			176			176	530
20:00	134	132	159			141			141	425
21:00	106	115	123			114			114	344
22:00	74	90	123			95			95	287
23:00	55	50	65			56			56	170
24:00	21	25	43			29			29	89
TOTALS	1460	4017	4176	1800	0	4046	0	0	4046	11453
% AVG WKDY	36	99.2	103.2	44.4						
% AVG WEEK	36	99.2	103.2	44.4						
AM Times		08:00	08:00	08:00		08:00			08:00	
AM Peaks		364	364	368		365			365	
PM Times	15:00	13:00	17:00			17:00			17:00	
PM Peaks	254	252	264			240			240	

MassDOT Highway Division
WEEKLY SUMMARY FOR LANE
Starting: 6/1/2015

STA. 12

TOTAL

Site Reference: 150150000631
Site ID: 000000001202
Location: George Washington Blvd.,N. OF WHARF AVE.
Direction: ROAD TOTAL

File: dir.prn
City: HULL
County: VOL S&N

TIME	MON 1	TUE 2	WED 3	THU 4	FRI	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		68	69	78		71			71	215
02:00		46	44	49		46			46	139
03:00		18	26	27		23			23	71
04:00		34	45	37		38			38	116
05:00		79	92	105		92			92	276
06:00		343	330	356		343			343	1029
07:00		645	678	653		658			658	1976
08:00		857	907	901		888			888	2665
09:00		843	903	939		895			895	2685
10:00		706	834	818		786			786	2358
11:00		767	817	779		787			787	2363
12:00		739	818			778			778	1557
13:00		770	740			755			755	1510
14:00		722	766			744			744	1488
15:00	826	760	808			798			798	2394
16:00	872	908	963			914			914	2743
17:00	1005	1020	1057			1027			1027	3082
18:00	886	932	1000			939			939	2818
19:00	799	872	856			842			842	2527
20:00	551	597	730			626			626	1878
21:00	423	466	571			486			486	1460
22:00	323	429	429			393			393	1181
23:00	212	229	278			239			239	719
24:00	114	131	171			138			138	416
TOTALS	6011	12981	13932	4742	0	13306	0	0	13306	37666
% AVG WKDY	45.1	97.5	104.7	35.6						
% AVG WEEK	45.1	97.5	104.7	35.6						
AM Times		08:00	08:00	09:00		09:00			09:00	
AM Peaks		857	907	939		895			895	
PM Times	17:00	17:00	17:00			17:00			17:00	
PM Peaks	1005	1020	1057			1027			1027	
D%	65	60	60	70						
K%	17	8	8	20						

US

COMB AWD 13306

FAC .87 (.97)

COMB ADT 11,200

STA. 12 NB

Site Reference: 150150000631
Site ID: 000000001202
Location: George Washington Blvd.,N. OF WHARF AVE.
Direction: NORTH

File: dir.prn
City: HULL
County: VOL S&N

TIME	MON 1	TUE 2	WED 3	THU 4	FRI	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		44	52	52		49			49	148
02:00		35	28	28		30			30	91
03:00		12	15	17		14			14	44
04:00		12	18	16		15			15	46
05:00		10	13	15		12			12	38
06:00		44	28	48		40			40	120
07:00		119	124	118		120			120	361
08:00		235	271	255		253			253	761
09:00		274	278	282		278			278	834
10:00		257	298	297		284			284	852
11:00		316	333	337		328			328	986
12:00		309	363			336			336	672
13:00		355	363			359			359	718
14:00		356	348			352			352	704
15:00	420	358	413			397			397	1191
16:00	481	526	549			518			518	1556
17:00	636	602	613			617			617	1851
18:00	570	607	618			598			598	1795
19:00	549	588	561			566			566	1698
20:00	371	408	516			431			431	1295
21:00	302	313	392			335			335	1007
22:00	239	309	285			277			277	833
23:00	147	160	192			166			166	499
24:00	84	104	117			101			101	305
TOTALS	3799	6353	6788	1465	0	6476	0	0	6476	18405
% AVG WKDY	58.6	98.1	104.8	22.6						
% AVG WEEK	58.6	98.1	104.8	22.6						
AM Times		11:00	12:00	11:00		12:00			12:00	
AM Peaks		316	363	337		336			336	
PM Times	17:00	18:00	18:00			17:00			17:00	
PM Peaks	636	607	618			617			617	

MassDOT Highway Division
WEEKLY SUMMARY FOR LANE 1 Page: 1
Starting: 6/1/2015

STA. 12 SB

Site Reference: 150150000631
Site ID: 000000001202
Location: George Washington Blvd.,N. OF WHARF AVE.
Direction: SOUTH

File: dir.prn
City: HULL
County: VOL S&N

TIME	MON 1	TUE 2	WED 3	THU 4	FRI	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00		24	17	26		22			22	67
02:00		11	16	21		16			16	48
03:00		6	11	10		9			9	27
04:00		22	27	21		23			23	70
05:00		69	79	90		79			79	238
06:00		299	302	308		303			303	909
07:00		526	554	535		538			538	1615
08:00		622	636	646		634			634	1904
09:00		569	625	657		617			617	1851
10:00		449	536	521		502			502	1506
11:00		451	484	442		459			459	1377
12:00		430	455			442			442	885
13:00		415	377			396			396	792
14:00		366	418			392			392	784
15:00	406	402	395			401			401	1203
16:00	391	382	414			395			395	1187
17:00	369	418	444			410			410	1231
18:00	316	325	382			341			341	1023
19:00	250	284	295			276			276	829
20:00	180	189	214			194			194	583
21:00	121	153	179			151			151	453
22:00	84	120	144			116			116	348
23:00	65	69	86			73			73	220
24:00	30	27	54			37			37	111
TOTALS	2212	6628	7144	3277	0	6826	0	0	6826	19261
% AVG WKDY	32.4	97	104.6	48						
% AVG WEEK	32.4	97	104.6	48						
AM Times		08:00	08:00	09:00		08:00			08:00	
AM Peaks		622	636	657		634			634	
PM Times	15:00	17:00	17:00			17:00			17:00	
PM Peaks	406	418	444			410			410	

STA. 13

TOTAL

Site Reference: 150000000528
Site ID: 000000001301
Location: NANTASKET AVE., North of Wharf Ave.
Direction: ROAD TOTAL

File: 130102.prn
City: HULL
County: VOL N&S

TIME	MON	TUE 2	WED 3	THU 4	FRI	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00			32	37		34			34	69
02:00			22	21		21			21	43
03:00			4	17		10			10	21
04:00			7	5		6			6	12
05:00			20	29		24			24	49
06:00			90	94		92			92	184
07:00			248	237		242			242	485
08:00			450	414		432			432	864
09:00			477	479		478			478	956
10:00			459	423		441			441	882
11:00			547	495		521			521	1042
12:00			539			539			539	539
13:00			604			604			604	604
14:00		479	545			512			512	1024
15:00		468	540			504			504	1008
16:00		486	614			550			550	1100
17:00		559	608			583			583	1167
18:00		527	606			566			566	1133
19:00		436	532			484			484	968
20:00		400	421			410			410	821
21:00		312	391			351			351	703
22:00		229	268			248			248	497
23:00		115	152			133			133	267
24:00		89	86			87			87	175
TOTALS	0	4100	8262	2251	0	7872	0	0	7872	14613
% AVG WKDY		52	104.9	28.5						
% AVG WEEK		52	104.9	28.5						
AM Times			11:00	11:00		12:00			12:00	
AM Peaks			547	495		539			539	
PM Times		17:00	16:00			13:00			13:00	
PM Peaks		559	614			604			604	
D%		55	50	50						
K%		14	7	22						

US

COMB AWD 7872

FAC .87(.97)

COMB ADT 6,600

MassDOT Highway Division
WEEKLY SUMMARY FOR LANE 1 Page: 1
Starting: 6/2/2015

STA. 13 NB

Site Reference: 150000000528
Site ID: 000000001301
Location: NANTASKET AVE., North of Wharf Ave.
Direction: NORTH

File: 130102.prn
City: HULL
County: VOL N&S

TIME	MON	TUE 2	WED 3	THU 4	FRI	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00			23	23		23			23	46
02:00			9	8		8			8	17
03:00			4	11		7			7	15
04:00			2	1		1			1	3
05:00			12	10		11			11	22
06:00			27	37		32			32	64
07:00			112	102		107			107	214
08:00			210	198		204			204	408
09:00			238	233		235			235	471
10:00			239	211		225			225	450
11:00			277	247		262			262	524
12:00			286			286			286	286
13:00			295			295			295	295
14:00		243	274			258			258	517
15:00		249	278			263			263	527
16:00		259	320			289			289	579
17:00		302	351			326			326	653
18:00		305	352			328			328	657
19:00		233	294			263			263	527
20:00		214	236			225			225	450
21:00		176	205			190			190	381
22:00		129	151			140			140	280
23:00		76	73			74			74	149
24:00		51	40			45			45	91
TOTALS	0	2237	4308	1081	0	4097	0	0	4097	7626
% AVG WKDY		54.6	105.1	26.3						
% AVG WEEK		54.6	105.1	26.3						
AM Times			12:00	11:00		12:00			12:00	
AM Peaks			286	247		286			286	
PM Times		18:00	18:00			18:00			18:00	
PM Peaks		305	352			328			328	

STA. 13 SB

Site Reference: 150000000528
Site ID: 000000001301
Location: NANTASKET AVE., North of Wharf Ave.
Direction: SOUTH

File: 130102.prn
City: HULL
County: VOL N&S

TIME	MON	TUE 2	WED 3	THU 4	FRI	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00			9	14		11			11	23
02:00			13	13		13			13	26
03:00			0	6		3			3	6
04:00			5	4		4			4	9
05:00			8	19		13			13	27
06:00			63	57		60			60	120
07:00			136	135		135			135	271
08:00			240	216		228			228	456
09:00			239	246		242			242	485
10:00			220	212		216			216	432
11:00			270	248		259			259	518
12:00			253			253			253	253
13:00			309			309			309	309
14:00		236	271			253			253	507
15:00		219	262			240			240	481
16:00		227	294			260			260	521
17:00		257	257			257			257	514
18:00		222	254			238			238	476
19:00		203	238			220			220	441
20:00		186	185			185			185	371
21:00		136	186			161			161	322
22:00		100	117			108			108	217
23:00		39	79			59			59	118
24:00		38	46			42			42	84
TOTALS	0	1863	3954	1170	0	3769	0	0	3769	6987
% AVG WKDY		49.4	104.9	31						
% AVG WEEK		49.4	104.9	31						
AM Times			11:00	11:00		11:00			11:00	
AM Peaks			270	248		259			259	
PM Times		17:00	13:00			13:00			13:00	
PM Peaks		257	309			309			309	

Study Name Hull - George Washington Boulevard at Wharf Avenue and McDuff's Landing TM8 TMC
Start Date Thursday, June 04, 2015 7:00 AM
End Date Thursday, June 04, 2015 6:00 PM
Site Code

Report Summary

		Southbound						Westbound						Northbound						Eastbound							Crosswalk	
Time Period	**Class.**	**R**	**T**	**L**	**U**	**I**	**O**	**R**	**T**	**L**	**U**	**I**	**O**	**R**	**T**	**L**	**U**	**I**	**O**	**R**	**T**	**L**	**U**	**I**	**O**	**Total**		**Pedestrians**	**Total**
Peak 1	Motorcycles	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	N	1	1
Specified Period	%	0%	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%	
7:00 AM - 9:00 AM	Cars	4	570	21	0	595	230	14	3	11	0	28	32	11	215	1	1	228	585	3	0	1	0	4	8	855	E	0	0
One Hour Peak	%	80%	90%	95%	0%	90%	78%	88%	75%	73%	0%	80%	94%	92%	78%	100%	100%	79%	89%	60%	0%	50%	0%	57%	80%	86%		0%	
7:30 AM - 8:30 AM	Light Goods Vehicles	0	50	1	0	51	43	1	1	2	0	4	2	1	41	0	0	42	53	1	0	1	0	2	1	99	S	1	1
	%	0%	8%	5%	0%	8%	15%	6%	25%	13%	0%	11%	6%	8%	15%	0%	0%	14%	8%	20%	0%	50%	0%	29%	10%	10%		100%	
	Buses	0	1	0	0	1	3	0	0	0	0	0	0	0	3	0	0	3	1	0	0	0	0	0	0	4	W	4	4
	%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%		100%	
	Single-Unit Trucks	0	8	0	0	8	14	1	0	2	0	3	0	0	13	0	0	13	11	1	0	0	0	1	0	25		**6**	**6**
	%	0%	1%	0%	0%	1%	5%	6%	0%	13%	0%	9%	0%	0%	5%	0%	0%	4%	2%	20%	0%	0%	0%	14%	0%	3%			
	Articulated Trucks	0	4	0	0	4	4	0	0	0	0	0	0	0	4	0	0	4	4	0	0	0	0	0	0	8			
	%	0%	1%	0%	0%	1%	1%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	1%	0%	0%	0%	0%	0%	0%	1%			
	Bicycles on Road	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1			
	%	20%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	0%			
	Total	**5**	**634**	**22**	**0**	**661**	**294**	**16**	**4**	**15**	**0**	**35**	**34**	**12**	**276**	**1**	**1**	**290**	**655**	**5**	**0**	**2**	**0**	**7**	**10**	**993**			
	PHF	0.42	0.93	0.55	0	0.93	0.88	0.67	0.33	0.62	0	0.8	0.65	0.5	0.88	0.25	0.25	0.88	0.92	0.62	0	0.5	0	0.88	0.42	0.93			
	Approach %					67%	30%					4%	3%					29%	66%					1%	1%				
Peak 2	Motorcycles	0	2	2	0	4	3	0	0	0	0	0	2	0	3	0	0	3	2	0	0	0	0	0	0	7	N	1	1
Specified Period	%	0%	0%	12%	0%	1%	0%	0%	0%	0%	0%	0%	6%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%		100%	
4:00 PM - 6:00 PM	Cars	9	342	14	0	365	533	13	2	30	0	45	29	12	509	4	0	525	377	5	3	11	0	19	15	954	E	0	0
One Hour Peak	%	90%	85%	82%	0%	85%	86%	87%	100%	86%	0%	87%	81%	92%	86%	80%	0%	86%	85%	71%	50%	85%	0%	73%	88%	85%		0%	
4:30 PM - 5:30 PM	Light Goods Vehicles	1	50	1	0	52	74	2	0	5	0	7	5	1	70	1	0	72	57	2	3	2	0	7	2	138	S	0	0
	%	10%	12%	6%	0%	12%	12%	13%	0%	14%	0%	13%	14%	8%	12%	20%	0%	12%	13%	29%	50%	15%	0%	27%	12%	12%		0%	
	Buses	0	2	0	0	2	2	0	0	0	0	0	0	0	2	0	0	2	2	0	0	0	0	0	0	4	W	2	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%		100%	
	Single-Unit Trucks	0	6	0	0	6	9	0	0	0	0	0	0	0	9	0	0	9	6	0	0	0	0	0	0	15		**3**	**3**
	%	0%	1%	0%	0%	1%	1%	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	1%	0%	0%	0%	0%	0%	0%	1%			
	Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%			
	Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	%	0%	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	**10**	**402**	**17**	**0**	**429**	**621**	**15**	**2**	**35**	**0**	**52**	**36**	**13**	**593**	**5**	**0**	**611**	**444**	**7**	**6**	**13**	**0**	**26**	**17**	**1118**			
	PHF	0.62	0.95	0.53	0	0.98	0.91	0.75	0.5	0.73	0	0.72	0.9	0.81	0.91	0.42	0	0.92	0.97	0.58	0.38	0.65	0	0.65	0.71	0.95			
	Approach %					38%	56%					5%	3%					55%	40%					2%	2%				

Accurate Counts
978-664-2565

N/S Street : Manomet Ave/Hull Shore Dr
E/W Street: Phipps Street
City/State : Hull, MA
Weather : Clear

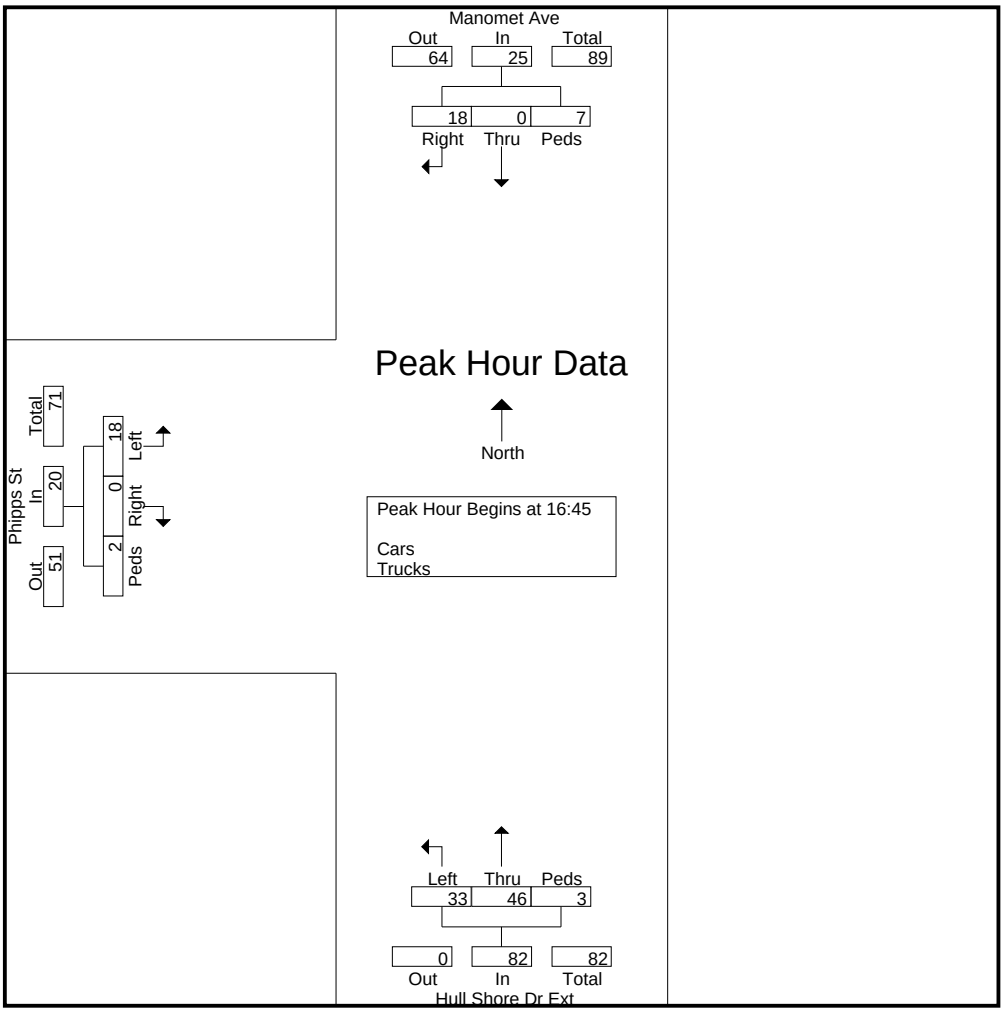
File Name : 14640003
Site Code : 14640003
Start Date : 8/3/2006

Groups Printed- Cars - Trucks

	Manomet Ave From North			Hull Shore Dr Ext From South			Phipps St From West			
Start Time	Thru	Right	Peds	Left	Thru	Peds	Left	Right	Peds	Int. Total
16:00	0	5	3	8	7	0	2	0	1	26
16:15	0	7	0	9	4	0	5	0	1	26
16:30	0	3	1	9	6	0	6	0	0	25
16:45	0	2	4	7	12	1	4	0	0	30
Total	0	17	8	33	29	1	17	0	2	107
17:00	0	5	1	7	14	0	7	0	0	34
17:15	0	5	1	11	10	0	4	0	0	31
17:30	0	6	1	8	10	2	3	0	2	32
17:45	0	3	0	3	7	0	5	0	0	18
Total	0	19	3	29	41	2	19	0	2	115
Grand Total	0	36	11	62	70	3	36	0	4	222
Apprch %	0	76.6	23.4	45.9	51.9	2.2	90	0	10	
Total %	0	16.2	5	27.9	31.5	1.4	16.2	0	1.8	
Cars	0	36	11	62	70	3	36	0	4	222
% Cars	0	100	100	100	100	100	100	0	100	100
Trucks	0	0	0	0	0	0	0	0	0	0
% Trucks	0	0	0	0	0	0	0	0	0	0

	Manomet Ave From North				Hull Shore Dr Ext From South				Phipps St From West				
Start Time	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 17:45 - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 16:45													
16:45	0	2	4	6	7	12	1	20	4	0	0	4	30
17:00	0	5	1	6	7	14	0	21	7	0	0	7	34
17:15	0	5	1	6	11	10	0	21	4	0	0	4	31
17:30	0	6	1	7	8	10	2	20	3	0	2	5	32
Total Volume	0	18	7	25	33	46	3	82	18	0	2	20	127
% App. Total	0	72	28		40.2	56.1	3.7		90	0	10		
PHF	.000	.750	.438	.893	.750	.821	.375	.976	.643	.000	.250	.714	.934

File Name : 14640003
Site Code : 14640003
Start Date : 8/3/2006
Page No : 2



Accurate Counts
978-664-2565

N/S Street : Manomet Ave/Hull Shore Dr
E/W Street: Phipps Street
City/State : Hull, MA
Weather : Clear

File Name : 146400A3
Site Code : 14640003
Start Date : 8/5/2006
Page No : 1

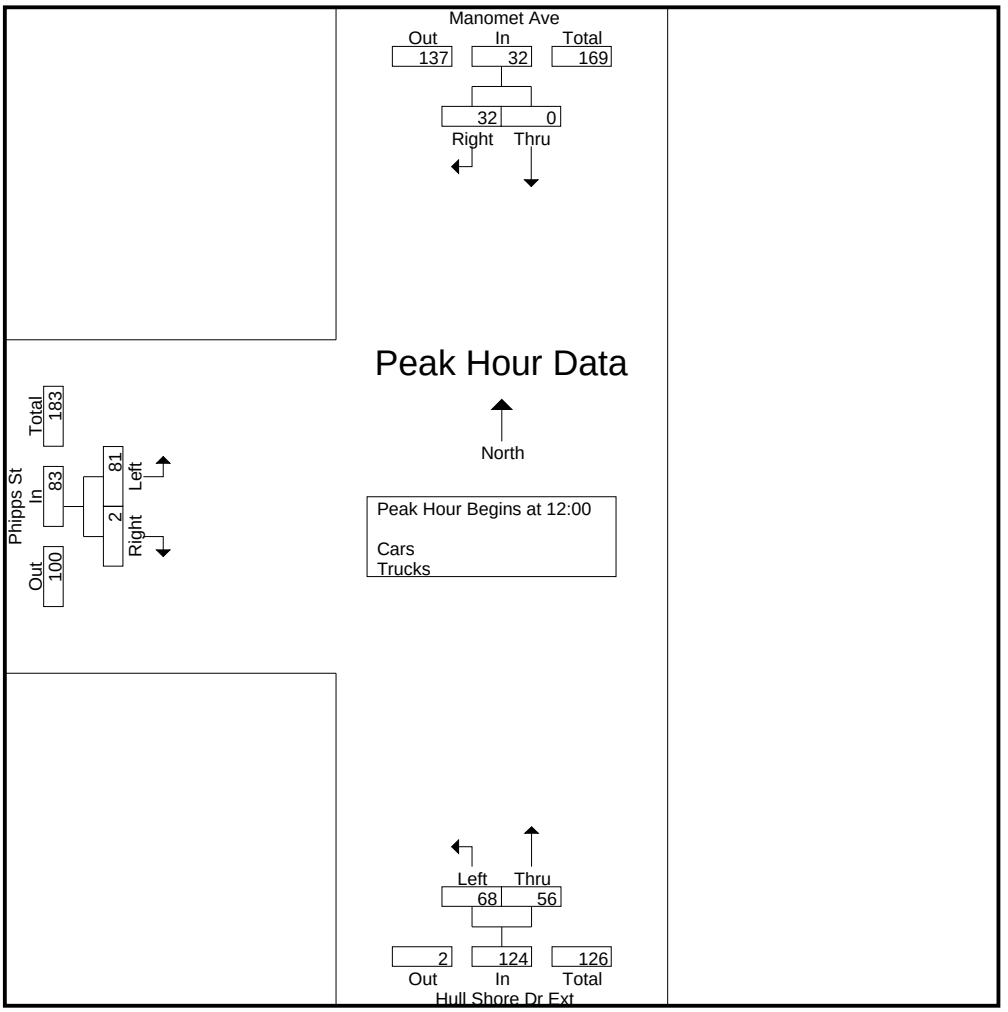
Groups Printed- Cars - Trucks

	Manomet Ave From North			Hull Shore Dr Ext From South			Phipps St From West					
Start Time	Thru	Right	Peds	Left	Thru	Peds	Left	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
11:00	0	4	0	3	21	0	5	0	0	0	33	33
11:15	0	10	0	4	18	0	7	0	0	0	39	39
11:30	0	8	0	7	21	0	13	0	0	0	49	49
11:45	0	2	0	10	11	0	16	0	0	0	39	39
Total	0	24	0	24	71	0	41	0	0	0	160	160
12:00	0	8	0	15	13	0	23	0	0	0	59	59
12:15	0	10	0	22	12	0	23	1	0	0	68	68
12:30	0	5	0	14	13	0	16	1	0	0	49	49
12:45	0	9	0	17	18	0	19	0	0	0	63	63
Total	0	32	0	68	56	0	81	2	0	0	239	239
13:00	0	6	0	14	14	0	13	0	0	0	47	47
13:15	0	7	0	16	24	0	16	0	0	0	63	63
13:30	0	10	0	19	21	0	8	0	0	0	58	58
13:45	0	12	0	14	12	0	12	0	0	0	50	50
Total	0	35	0	63	71	0	49	0	0	0	218	218
Grand Total	0	91	0	155	198	0	171	2	0	0	617	617
Apprch %	0	100		43.9	56.1		98.8	1.2				
Total %	0	14.7		25.1	32.1		27.7	0.3		0	100	
Cars	0	88		155	198		169	2		0	0	612
% Cars	0	96.7	0	100	100	0	98.8	100	0	0	0	99.2
Trucks	0	3		0	0		2	0		0	0	5
% Trucks	0	3.3	0	0	0	0	1.2	0	0	0	0	0.8

	Manomet Ave From North			Hull Shore Dr Ext From South			Phipps St From West			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 11:00 to 13:45 - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 12:00										
12:00	0	8	8	15	13	28	23	0	23	59
12:15	0	10	10	22	12	34	23	1	24	68
12:30	0	5	5	14	13	27	16	1	17	49
12:45	0	9	9	17	18	35	19	0	19	63
Total Volume	0	32	32	68	56	124	81	2	83	239
% App. Total	0	100		54.8	45.2		97.6	2.4		
PHF	.000	.800	.800	.773	.778	.886	.880	.500	.865	.879

Accurate Counts
978-664-2565

File Name : 146400A3
Site Code : 14640003
Start Date : 8/5/2006
Page No : 2



Accurate Counts
978-664-2565

N/S Street : Nantasket Avenue
E/W Street: Water St / Bay St
City/State : Hull, MA
Weather : Clear

File Name : 14640004
Site Code : 14640004
Start Date : 8/3/2006
Page No : 1

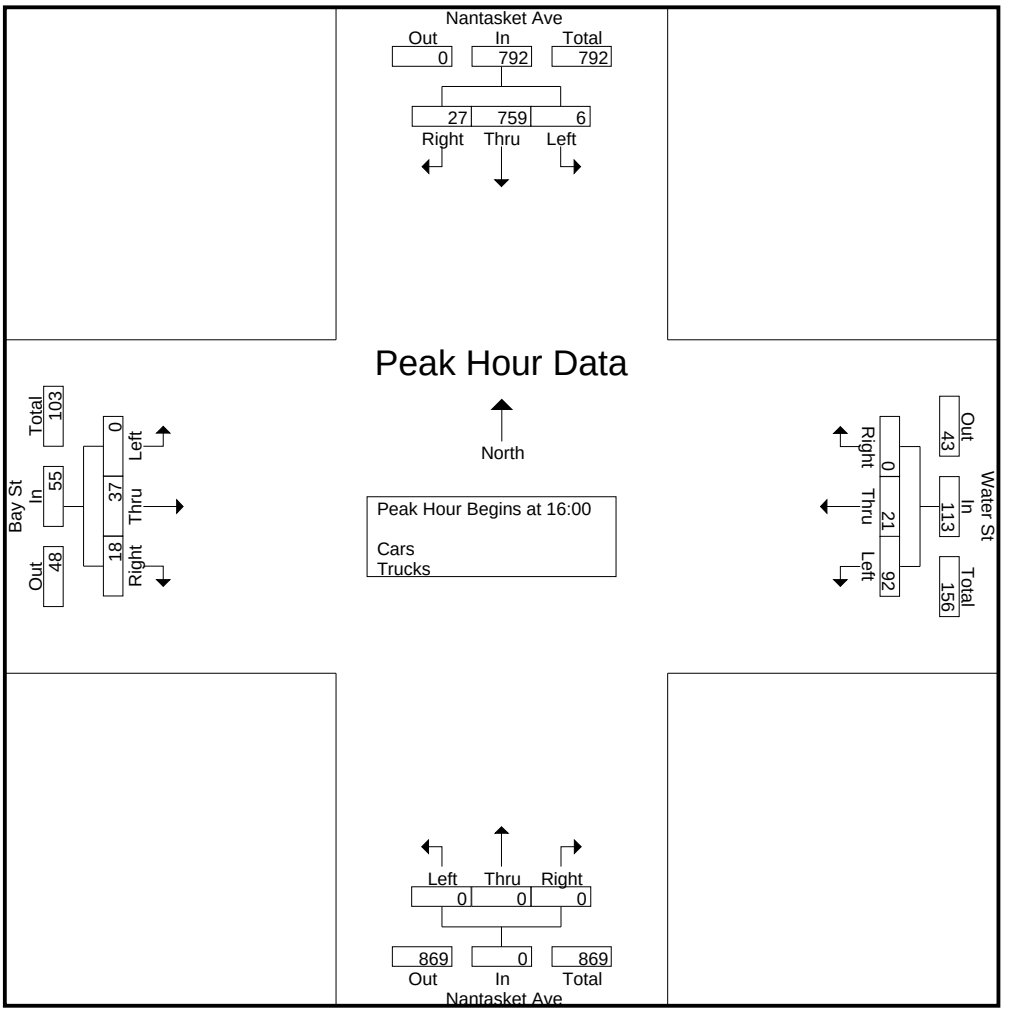
Groups Printed- Cars - Trucks

	Nantasket Ave From North			Water St From East			Nantasket Ave From South			Bay St From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
16:00	2	204	8	24	1	0	0	0	0	0	11	6	256
16:15	0	184	8	21	8	0	0	0	0	0	9	3	233
16:30	2	182	8	24	7	0	0	0	0	0	9	7	239
16:45	2	189	3	23	5	0	0	0	0	0	8	2	232
Total	6	759	27	92	21	0	0	0	0	0	37	18	960
17:00	1	157	15	19	8	0	0	0	0	0	14	3	217
17:15	0	165	10	23	6	0	0	0	0	0	3	1	208
17:30	0	171	8	16	8	0	0	0	0	0	10	1	214
17:45	2	166	14	21	7	0	0	0	0	0	11	8	229
Total	3	659	47	79	29	0	0	0	0	0	38	13	868
Grand Total	9	1418	74	171	50	0	0	0	0	0	75	31	1828
Apprch %	0.6	94.5	4.9	77.4	22.6	0	0	0	0	0	70.8	29.2	
Total %	0.5	77.6	4	9.4	2.7	0	0	0	0	0	4.1	1.7	
Cars	9	1391	73	166	50	0	0	0	0	0	73	31	1793
% Cars	100	98.1	98.6	97.1	100	0	0	0	0	0	97.3	100	98.1
Trucks	0	27	1	5	0	0	0	0	0	0	2	0	35
% Trucks	0	1.9	1.4	2.9	0	0	0	0	0	0	2.7	0	1.9

	Nantasket Ave From North				Water St From East				Nantasket Ave From South				Bay St From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:00																	
16:00	2	204	8	214	24	1	0	25	0	0	0	0	0	11	6	17	256
16:15	0	184	8	192	21	8	0	29	0	0	0	0	0	9	3	12	233
16:30	2	182	8	192	24	7	0	31	0	0	0	0	0	9	7	16	239
16:45	2	189	3	194	23	5	0	28	0	0	0	0	0	8	2	10	232
Total Volume	6	759	27	792	92	21	0	113	0	0	0	0	0	37	18	55	960
% App. Total	0.8	95.8	3.4		81.4	18.6	0		0	0	0		0	67.3	32.7		
PHF	.750	.930	.844	.925	.958	.656	.000	.911	.000	.000	.000	.000	.000	.841	.643	.809	.938

Accurate Counts
978-664-2565

File Name : 14640004
Site Code : 14640004
Start Date : 8/3/2006
Page No : 2



Accurate Counts
978-664-2565

N/S Street : Nantasket Avenue
E/W Street: Water St / Bay St
City/State : Hull, MA
Weather : Clear

File Name : 146400A4
Site Code : 14640004
Start Date : 8/5/2006
Page No : 1

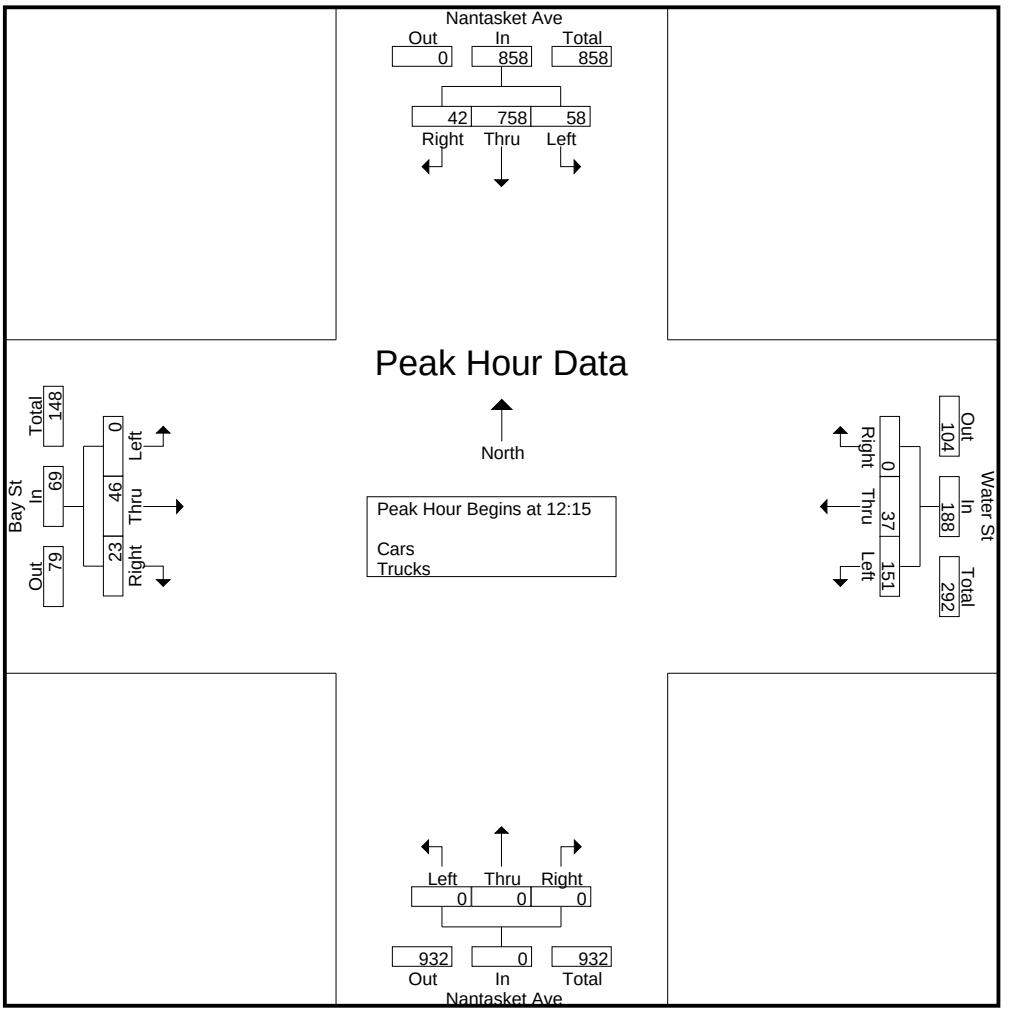
Groups Printed- Cars - Trucks

	Nantasket Ave From North			Water St From East			Nantasket Ave From South			Bay St From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
11:00	1	178	10	25	4	0	0	0	0	0	10	3	231
11:15	2	182	13	31	9	0	0	0	0	0	9	2	248
11:30	2	181	14	29	11	0	0	0	0	0	13	3	253
11:45	11	209	17	36	4	0	0	0	0	0	13	11	301
Total	16	750	54	121	28	0	0	0	0	0	45	19	1033
12:00	13	159	10	22	3	0	0	0	0	0	14	5	226
12:15	18	176	12	41	9	0	0	0	0	0	14	4	274
12:30	11	201	9	43	6	0	0	0	0	0	9	7	286
12:45	15	201	14	24	10	0	0	0	0	0	14	7	285
Total	57	737	45	130	28	0	0	0	0	0	51	23	1071
13:00	14	180	7	43	12	0	0	0	0	0	9	5	270
13:15	6	153	12	31	8	0	0	0	0	0	11	3	224
13:30	19	157	7	37	8	0	0	0	0	0	11	1	240
13:45	4	196	16	32	9	0	0	0	0	0	13	2	272
Total	43	686	42	143	37	0	0	0	0	0	44	11	1006
Grand Total	116	2173	141	394	93	0	0	0	0	0	140	53	3110
Apprch %	4.8	89.4	5.8	80.9	19.1	0	0	0	0	0	72.5	27.5	
Total %	3.7	69.9	4.5	12.7	3	0	0	0	0	0	4.5	1.7	
Cars	116	2143	134	392	92	0	0	0	0	0	138	53	3068
% Cars	100	98.6	95	99.5	98.9	0	0	0	0	0	98.6	100	98.6
Trucks	0	30	7	2	1	0	0	0	0	0	2	0	42
% Trucks	0	1.4	5	0.5	1.1	0	0	0	0	0	1.4	0	1.4

	Nantasket Ave From North				Water St From East				Nantasket Ave From South				Bay St From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 11:00 to 13:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:15																	
12:15	18	176	12	206	41	9	0	50	0	0	0	0	0	14	4	18	274
12:30	11	201	9	221	43	6	0	49	0	0	0	0	0	9	7	16	286
12:45	15	201	14	230	24	10	0	34	0	0	0	0	0	14	7	21	285
13:00	14	180	7	201	43	12	0	55	0	0	0	0	0	9	5	14	270
Total Volume	58	758	42	858	151	37	0	188	0	0	0	0	0	46	23	69	1115
% App. Total	6.8	88.3	4.9		80.3	19.7	0		0	0	0		0	66.7	33.3		
PHF	.806	.943	.750	.933	.878	.771	.000	.855	.000	.000	.000	.000	.000	.821	.821	.821	.975

Accurate Counts
978-664-2565

File Name : 146400A4
Site Code : 14640004
Start Date : 8/5/2006
Page No : 2



Attachment B

Seasonal Adjustment Data

Seasonal Adjustment

Project: T0597 - Two-Way Traffic Cirulation - Hull, Massachusetts
Date: 7/13/2015
Analyst: TEC, Inc. / Douglas S. Halpert, E.I.T.
Source: MassDOT Permanent Count Station 36, 6255, 7318

STATION 36 - NORWELL - RTE.3 - SOUTH OF RIVER STREET

YR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	July Seasonal Adjustment	August Seasonal Adjustment
05	65,000	65,804	68,156	72,458	79,243	84,307	85,050	85,840	75,661	70,428	71,404	69,200	74,379	-14.3%	-15.4%
07	66,928	66,220	67,703	69,129	75,732	81,145	84,541	85,742	75,944	72,555	69,342	65,052	73,336	-15.3%	-16.9%
08	62,963	63,021	65,834	69,023	73,528	77,280	81,470	82,266	71,400	70,783	66,548	63,791	70,659	-15.3%	-16.4%
09	59,795	63,425	64,038	70,631	74,392	78,537	83,873	84,181	73,970	69,596	67,079	66,153	71,306	-17.6%	-18.1%

STATION 6255 - WEYMOUTH - RTE.3 - NORTH OF RTE.18

YR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR		
05	118,000	121,374	124,011	136,739	138,980	149,033	144,695	147,221	137,210	133,034	134,233	131,016	134,629	-7.5%	-9.4%
06	127,860	130,038	134,769	134,790	137,305	142,198	141,532	145,144	137,785	135,232	131,943	133,004	135,967	-4.1%	-6.7%
08	108,948	123,432	127,432	131,442	134,698	137,617	138,002	139,131	130,855	132,275	125,709	119,851	129,116	-6.9%	-7.8%
09	120,200	123,983	124,807	134,354	135,239	143,114	143,685	144,937	140,079	137,288	138,708	136,428	135,235	-6.2%	-7.2%

STATION 7318 - HINGHAM - RTE.3 - BETWEEN EXITS 14 AND 15

YR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR		
05	87,000	88,804	91,725	96,534	98,981	106,927	106,895	108,782	98,248	94,298	95,093	92,026	97,109	-10.1%	-12.0%
06	83,878	88,500	93,541	94,036	97,168	101,493	104,458	103,714	96,982	94,006	91,503	92,813	95,174	-9.8%	-9.0%
07	88,880	89,923	91,597	91,818	98,247	99,653	99,656	101,792	95,339	95,500	94,030	88,576	94,584	-5.4%	-7.6%
08	89,419	93,856	92,600	92,464	94,682	94,660	99,019	98,704	88,097	91,202	87,772	88,382	92,571	-7.0%	-6.6%

Seasonal Average =	**-10.0%**	**-11.1%**

Attachment C

Traffic Volume Forecasting

ADJUSTMENT RATES:

Seasonal Adjustment July	**0.00%**
Seasonal Adjustment August	**0.00%**
Annual Growth Rate	**0.50%**
Design Year 2025	**10**

WEEKDAY EVENING PEAK HOUR TRAFFIC VOLUMES: 4:00 PM - 5:00 PM

Land Use Code 230	
Entering	**Exiting**
36	17

Land Use Code 310	
Entering	**Exiting**
34	33

LUC 820			
Entering	**Exiting**	**Pass-By**	
36	52	22	22

										Northern Beach Parking Redistribution					Site-Generated Trips				Site-Generated Trips							
	Intersection/Movement	1995 Raw	2006 Raw	2015 Raw	**2015 Base Year**	**2025 No-Build**	Closures minus Park N	2025 w/ Closures Only	Redist from South	Redist from North	Redist from Parking	Removal Of North Parking	Parking From GW	Parking From Nan S	Parking from Nan N	**2025 w/ Redist**	Entering %	Exiting %	Entering	Exiting	Entering %	Exiting %	Entering	Exiting	Entering %	Exiting %	Entering	Exiting	Entering	Exiting	Total Site Gen	**2025 Build**
1	**Hull Shore Drive Extension (Franklin Street) @ Manomet Avenue**																														
	Phipps Street EBL		18		**10**	**10**	20	30	59							**89**														0	**90**
	Hull Shore Drive Ext NBL		33		**10**	**10**	-10	0								**0**															
	Hull Shore Drive Ext NBT		46		**20**	**20**	-20	0								**0**															
	Manoment Avenue SBR		18		**10**	**10**		10		37						**47**														0	**45**
2	**Hull Shore Drive Extension (Franklin Street) @ Phipps Street**																														
	Phipps Street EBT			7	**5**	**5**		5								**5**														0	**5**
	Phipps Street EBR							0	2	87			3	10	2	**104**									15%		5			5	**110**
	Phipps Street WBL							0		37						**37**														0	**35**
	Phipps Street WBT			21	**20**	**20**	-10	10								**10**														0	**10**
	Hull Shore Drive Ext NBL			122	**135**	**145**	10	155	174			-150	20	3	6	**208**										15%		10		10	**220**
	Hull Shore Drive Ext NBR			7	**5**	**5**	20	25	59							**84**														0	**85**
	Hull Shore Drive @ New Street A																														
	A Street EBL						0	0	2				6		2	**10**										4%		3			3	**15**
	A Street EBR							0		12			3	12		**27**		7%		2						7%		4			6	**35**
	Hull Shore Drive NBL							0	14				8	7		**29**	7%		3						7%		3			6	**35**
	Hull Shore Drive NBT				**170**	**180**		180	229			-150	14	1	4	**278**										11%		7			7	**285**
	Hull Shore Drive SBT							0		124				10	1	**135**									11%		4			4	**140**
	Hull Shore Drive SBR							0					3		0	**3**									4%		1			1	**5**
	Hull Shore Drive Extension (Franklin Street) @ DCR Northern Lot Driveway																														
	Northern Lot Driveway WBL				**140**	**150**		150				-150				**150**															
	Hull Shore Drive Ext NBL				**80**	**80**		80				-80				**80**															
	Hull Shore Drive Ext NBT				**30**	**30**		30								**30**															
	Hull Shore Drive @ Edgewater Ext																														
	Edgewater Road Ext EBL							0	2				6		0	**8**										4%		3			3	**10**
	Edgewater Road Ext EBR							0		12			3	13		**28**		6%		1						6%		4			5	**35**
	Hull Shore Drive NBL							0	14				14	7		**35**	6%		2						6%		2			4	**40**
	Hull Shore Drive NBT			**0**	**110**	**110**		110	241		5	-80	8	6	4	**294**	7%		3						7%	7%	3	4			10	**305**
	Hull Shore Drive SBT							0		136				22	1	**159**		7%		2					7%	7%	3	4			9	**170**
	Hull Shore Drive SBR							0					3		1	**4**									4%		1			1	**5**
	Hull Shore Drive @ New Street B																														
	B Street EBL							0	2				6		2	**10**										4%		2			2	**10**
	B Street EBR							0		12			6	12		**30**		6%		1		12%		3		6%		3			7	**35**
	Hull Shore Drive NBL							0	14				16	10		**40**	6%		3		12%		3		6%		3			9	**50**
	Hull Shore Drive NBT				**110**	**110**		110	253		5	-80	12	11	2	**313**	13%		5						13%	3%	5	2			12	**325**
	Hull Shore Drive SBT							0		148				35	1	**184**		13%		3					3%	13%	1	8			12	**195**
	Hull Shore Drive SBR							0					3		0	**3**									4%		2			2	**5**
	Hull Shore Drive @ New Street C																														
	C Street EBL																														
	C Street EBR																														
	Hull Shore Drive NBL																														
	Hull Shore Drive NBT																														
	Hull Shore Drive SBT																														
	Hull Shore Drive SBR																														
	Hull Shore Drive @ New Street D																														
	D Street EBL							0	2						2	**4**										3%		2			2	**5**
	D Street EBR							0		12			9	4		**25**		6%		1		23%		7		6%		4			12	**35**
	Hull Shore Drive NBL							0	14				8	8		**30**	6%		2		23%		7		6%		2			11	**40**
	Hull Shore Drive NBT				**110**	**110**		110	265		5	-80	20	18	0	**338**	19%		8		12%		3		19%		8			19	**355**
	Hull Shore Drive SBT							0		160			3	47	0	**210**		19%		4		12%		3		19%		11			18	**230**
	Hull Shore Drive SBR							0					3		1	**4**									3%		1			1	**5**
	Hull Shore Drive @ Hull Shore Drive Extension																														
	Hull Shore Drive NBT			814	810	860	-531	329	-345																						
	Hull Shore Drive NBR			108	**110**	**110**		110	244		5	-80																				
	Hull Shore Drive @ Water Street																														
	Water Street EBL			52	**50**	**55**		55	2			-5			0	**52**														0	**50**
	Water Street EBR									12						**12**														0	**10**
	Hull Shore Drive NBL			104	**105**	**110**		110	39		-35			2		**116**														0	**115**
	Hull Shore Drive NBT			870	**870**	**915**	-531	384	-103		5	-75	24	24		**259**	25%		10		35%		10		25%		10			30	**290**
	Hull Shore Drive SBT									172				51		**223**		25%		5		35%		10		25%		15			30	**255**
	Hull Shore Drive SBR												12		1	**13**														0	**15**
	Hull Shore Drive @ Parrott Lot																														
	Parrott Lot EBL				**20**	**20**		20								**20**														0	**20**
	Parrott Lot EBR							0								**0**														0	**0**
	Hull Shore Drive NBL				**20**	**20**		20								**20**														0	**20**
	Hull Shore Drive NBT				**935**	**990**	-531	459	-64		5	-75	24	26		**375**	25%		10		35%		10		25%		10			30	**405**
	Hull Shore Drive SBT							0		184	80			51		**315**		25%		5		35%		10		25%		15			30	**345**
	Hull Shore Drive SBR							0								**0**														0	**0**
	Hull Shore Drive @ DCR Lot 1 (Bathhouse)																														
	DCR Lot 1 WBR				**10**	**10**		10																							
	Hull Shore Drive NBT				**945**	**1000**	-531	469	-66		15	-75		26																		
	Hull Shore Drive NBR				**15**	**15**		15			-15																					
	Hull Shore Drive @ Bay Street																														
	Bay Street EBL							0	2				8			**10**														0	**10**
	Bay Street EBR						344	344		-208	-55					**81**														0	**80**
	Hull Shore Drive NBL							0	14							**14**														0	**15**

	Hull Shore Drive NBT				**955**	**1010**	-531	479	-66			-75	16	26		**380**	25%		10		35%		10		25%		10			30	**410**
	Hull Shore Drive SBT							0		184	65			51		**300**		25%		5		35%		10		25%		15		30	**330**
	Hull Shore Drive SBR							0			15					**15**														0	**15**
3	**Samoset Avenue @ Phipps Street**																														
	Phipps Street EBL						95	95	-35							**60**														0	**60**
	Phipps Street EBT						5	5	2	12			3	10		**32**									0%		0			0	**30**
	Phipps Street WBT		140	**145**	**155**		0	155	49			-150	20	3	3	**80**									0%		0			0	**80**
	Phipps Street WBR		11	**10**	**10**			10	125						3	**138**									15%		10			10	**150**
	Samoset Avenue NBL		2	**0**	**0**		0	0								**0**														
	Samoset Avenue NBT		86	**90**	**95**		-95	0								**0**														
	Samoset Avenue NBR		6	**5**	**5**		-5	0								**0**														
	Samoset Avenue SBL		1	**0**	**0**			0		75					2	**77**									15%		5			5	**80**
	Samoset Avenue SBR		22	**20**	**20**			20								**20**														0	**20**
4	**Nantasket Avenue @ Phipps Street @ Mountford Road**																														
	Mountford Road EBL		2	**0**	**0**			0								**0**														0	**0**
	Mountford Road EBT							0								**0**														0	**0**
	Mountford Road EBR		8	**10**	**10**			10								**10**														0	**10**
	Phipps Street WBL		157	**155**	**165**			165				-141	20	3		**47**														0	**45**
	Phipps Street WBT		0	**0**	**0**			0								**0**														0	**0**
	Phipps Street WBR		12	**10**	**10**			10	49			-9			3	**53**														0	**55**
	Nantasket Avenue NBL		10	**10**	**10**			10								**10**														0	**10**
	Nantasket Avenue NBT		644	**670**	**715**			715	-198						3	**520**		10%		0					25%			15		15	**535**
	Nantasket Avenue NBR						90	90	-33				3	10		**70**														0	**70**
	Nantasket Avenue SBL						10	10		12						**22**														0	**20**
	Nantasket Avenue SBT		587	**585**	**615**		-10	605		-124		-5			3	**479**	10%		5						25%		10			15	**495**
	Nantasket Avenue SBR		3	**5**	**5**			5								**5**														0	**5**
5	**Nantasket Avenue @ Samoset Avenue**																														
	Nantasket Avenue NBL				**680**	**725**		725	-196																						
	Nantasket Avenue NBR				**95**	**100**	-100	0																							
	Nantasket Avenue @ New Street A																														
	A Street WBL							0					11			**11**		17%		3					7.5%			5		8	**20**
	A Street WBR							0	14					8	0	**22**		2.5%		0					6%			4		4	**25**
	Nantasket Avenue NBT				**775**	**825**	0	825	-245				3		3	**586**		7.5%		0					19%			11		11	**595**
	Nantasket Avenue NBR						0	0	2				6	9		**17**	17%		7						7.5%		2			9	**25**
	Nantasket Avenue SBL							0		12				3	1	**16**	2.5%		1						6%		2			3	**20**
	Nantasket Avenue SBT				**750**	**790**	-10	780		-136		-146	20		3	**521**	7.5%		4						19%		8			12	**535**
7	**Nantasket Avenue @ Whitehead Avenue**																														
	Whitehead Avenue EBL							0	3							**3**														0	**5**
	Whitehead Avenue EBR	17			**15**	**15**		15								**15**														0	**15**
	Nantasket Avenue NBL							0	23							**23**														0	**25**
	Nantasket Avenue NBT				**775**	**825**		825	-246				6	9	3	**597**	17%	7.5%	7	0					7.5%	19%	2	11		20	**615**
	Nantasket Avenue SBT				**735**	**775**	-10	765		-136		-146	31		2	**516**	7.5%	17%	4	3					19%	7.5%	8	5		20	**535**
	Nantasket Avenue SBR	13			**15**	**15**		15								**15**														0	**15**
8	**Nantasket Avenue @ Edgewater Road**																														
	Edgewater Road EBL	7	7		**5**	**5**		5	-3							**2**														0	**0**
	Edgewater Road EBT							0								**0**									5%		0			0	**0**
	Edgewater Road EBR	17	17		**15**	**15**		15								**15**														0	**15**
	Edgewater Road Ext WBL							0					9			**9**		16%		2					7.5%			5		7	**15**
	Edgewater Road Ext WBT							0								**0**									5%			5		5	**5**
	Edgewater Road Ext WBR							0	14					8	1	**23**		2.5%		0					6%			3		3	**25**
	Nantasket Avenue NB U-Turn	5	5		**5**	**5**		5								**5**														0	
	Nantasket Avenue NBL	43	44		**45**	**45**		45	-23							**22**														0	**20**
	Nantasket Avenue NBT	847	868		**760**	**810**		810	-234				8		2	**586**	17%	5.0%	7	0					7.5%	13%	2	8		17	**605**
	Nantasket Avenue NBR							0	2				6	13		**21**	16%		6						7.5%		3			9	**30**
	Nantasket Avenue SB U-Turn	8	8		**10**	**10**	-10	0								**0**														0	
	Nantasket Avenue SBL	0	0		**0**	**0**		0		12					1	**13**	2.5%		1						6%		3			4	**15**
	Nantasket Avenue SBT	630	646		**725**	**765**		765		-148		-146	31		1	**503**	5.0%	17%	3	3					13%	7.5%	5	5		16	**520**
	Nantasket Avenue SBR	13	13		**15**	**15**		15								**15**														0	**15**
	Nantasket Avenue @ New Street B																														
	B Street WBL							0					11			**11**		16%		3		21%		6		7.5%		5		14	**25**
	B Street WBR							0	14					11	0	**25**		2.5%		0					6%		4		4	**30**
	Nantasket Avenue NBT				**810**	**860**		860	-269				13		2	**606**	33%	2.5%	13	0					15.0%	7%	5	4		22	**630**
	Nantasket Avenue NBR							0	2				9	12		**23**	16%		6		21%		6		7.5%		2			14	**35**
	Nantasket Avenue SBL							0		12					1	**13**	2.5%		2						6%		2			4	**15**
	Nantasket Avenue SBT				**745**	**785**		785		-160		-146	48		1	**528**	2.5%	33%	1	5					7%	15.0%	3	10		19	**545**
	Nantasket Avenue @ New Street C																														
	C Street WBL																														
	C Street WBR																														
	Nantasket Avenue NBT																														
	Nantasket Avenue NBR																														
	Nantasket Avenue SBL																														
	Nantasket Avenue SBT																														
	Nantasket Avenue @ New Street D																														
	D Street WBL							0					11			**11**		16%		2		44%		14		7.5%		5		21	**30**
	D Street WBR							0	14					9	1	**24**		2.5%		0					7%		4		4	**30**
	Nantasket Avenue NBT				**810**	**860**		860	-281				20		1	**600**	49%		19		21%		6		22.5%		7			32	**630**
	Nantasket Avenue NBR							0	2				6	4		**12**	16%		6		44%		14		7.5%		3			23	**35**
	Nantasket Avenue SBL							0		12					1	**13**	2.5%		1						7%		3			4	**15**
	Nantasket Avenue SBT				**745**	**785**		785		-172		-146	67		0	**534**		49%		8		21%		6		22.5%		15		29	**565**
11	**Nantasket Avenue @ Water Street @ Bay Street**																														
	Bay Street EBL							0								**0**									5%		0			0	**0**
	Bay Street EBT		37		**45**	**50**		50								**50**														0	**50**
	Bay Street EBR		18		**20**	**20**		20								**20**														0	**20**
	Water Street WBL		92		**85**	**90**		90			-35		12			**67**														0	**65**
	Water Street WBT		21		**20**	**20**		20	-10							**10**														0	**10**
	Water Street WBR							0	49					2	1	**52**														0	**50**
	Nantasket Avenue NBL							0	10							**10**														0	**10**
	Nantasket Avenue NBT						531	531	52				25			**608**	65%		25		65%		20		25%		10			55	**665**
	Nantasket Avenue NBR							0	2							**2**														0	**0**

	Nantasket Avenue SBL		6		**5**	**5**		5		12		-5			0	**12**										0	**10**
	Nantasket Avenue SBT		759		**715**	**755**		755		-184		-141	78			**508**		65%		10		65%		20		25%		15		45	**555**
	Nantasket Avenue SBR		27		**25**	**25**		25								**25**										5%		5		5	**30**
12	**Nantasket Avenue @ Parrot Lot Driveway**																													
	Parrot Lot Driveway WBL				**20**	**20**		20								**20**													0	**20**
	Parrot Lot Driveway WBR							0								**0**													0	**0**
	Nantasket Avenue NBT						531	531	64				25			**620**	65%		25		65%		20		25%		10		55	**675**
	Nantasket Avenue NBR							0								**0**													0	**0**
	Nantasket Avenue SBL				**20**	**20**		20								**20**													0	**20**
	Nantasket Avenue SBT				**915**	**965**		965		-184	-80	-141	90			**650**		65%		10		65%		20		25%		15		45	**695**
13	**Nantasket Avenue @ George Washington Bouelward @ Bay Street**																													
	Bay Street EBL							0								**0**													0	**0**
	Bay Street EBT						10	10								**10**													0	**10**
	Bay Street EBR							0								**0**													0	**0**
	Bay Street EBBR		8		**10**	**10**	-10	0								**0**													0	**0**
	Bay Street EBHR		45		**45**	**45**		45								**45**													0	**45**
	Bay Street WBL							0			15					**15**													0	**15**
	Bay Street WBT							0								**0**													0	**0**
	Bay Street WBR							0	14							**14**													0	**15**
	George Washington Blvd NB U Turn		0					0								**0**													0	**0**
	George Washington Blvd NBL		69		**75**	**75**		75								**75**													0	**75**
	George Washington Blvd NBHL							0								**0**													0	**0**
	George Washington Blvd NBT						531	531	50				25			**606**	65%		25		65%		20		25%		10		55	**660**
	George Washington Blvd NBR		8		**10**	**10**	-10	0	2				8			**10**													0	**10**
	Nantasket Avenue SBL						334	334		-208	-55					**71**													0	**70**
	Nantasket Avenue SBT		364		**365**	**385**	-334	51				-51				**0**													0	**0**
	Nantasket Avenue SBR							0								**0**													0	**0**
	Nantasket Avenue SBBR		548		**550**	**580**		580		24	-25	-90	90			**579**		65%		10		65%		20		25%		15		45	**625**
	Nantasket Avenue SBHR		22		**20**	**20**		20								**20**													0	**20**
15	**Nantasket Avenue @ Hull Shore Drive (a.k.a. New Cut Through)**																													
	Hull Shore Drive EBT		536		**575**	**610**	-531	79	-27			-49	8			**11**													0	**10**
	Hull Shore Drive EBR		0		**0**	**0**	10	10		12						**22**													0	**20**
	Hull Shore Drive WBL						344	344		-24				51		**371**		25%		5		35%		10		25%		15		30	**400**
	Hull Shore Drive WBT							0			10					**10**													0	**10**
	Nantasket Avenue NBL							0	14							**14**													0	**15**
	Nantasket Avenue NBR		383		**385**	**405**		405	-25			-26	8	26		**388**	25%		10		35%		10		25%		10		30	**420**
	Nantasket Avenue SBL		0		**0**	**0**		0																						
	Nantasket Avenue SBT		379		**385**	**405**	-354	51				-51																		
	Nantasket Avenue @ DCR Lot 2 (MJM Bathhouse) Driveway																													
	MJM Bathhouse Driveway WBL				**25**	**25**		25								**25**													0	**25**
	MJM Bathhouse Driveway WBR				**10**	**10**		10								**10**													0	**10**
	Nantasket Avenue NBT				**345**	**360**		360	-11			-26	8	26		**357**	25%		10		35%		10		25%		10		30	**385**
	Nantasket Avenue SBT				**370**	**390**		390		-12		-51		51		**378**		25%		5		35%		10		25%		15		30	**410**
17	**Nantasket Avenue @ DCR Lot 2 (Wharf Avenue) Driveway**																													
	Wharf Avenue EBL		23		**25**	**25**		25	3				8			**36**													0	**35**
	Wharf Avenue EBT		19		**20**	**20**		20								**20**													0	**20**
	Wharf Avenue EBR		30		**30**	**30**		30		12						**42**													0	**40**
	DCR Driveway 2 WBL		2		**0**	**0**		0								**0**													0	**0**
	DCR Driveway 2 WBT		2		**0**	**0**		0								**0**													0	**0**
	DCR Driveway 2 WBR		0		**0**	**0**		0								**0**													0	**0**
	Nantasket Avenue NBL		100		**100**	**105**		105	14							**119**													0	**120**
	Nantasket Avenue NBT		319		**320**	**335**		335	-14			-26		26		**321**	25%		10		35%		10		25%		10		30	**350**
	Nantasket Avenue NBR		18		**20**	**20**		20								**20**													0	**20**
	Nantasket Avenue SBL		9		**10**	**10**		10								**10**													0	**10**
	Nantasket Avenue SBT		316		**315**	**330**		330		-12		-51		51		**318**		25%		5		35%		10		25%		15		30	**350**
	Nantasket Avenue SBR		69		**70**	**75**		75								**75**													0	**75**
18	**Nantasket Avenue @ DCR Lot 3 (Pavilion) Driveway**																													
	DCR Driveway 3 WBL				**10**	**10**		10								**10**													0	**10**
	DCR Driveway 3 WBR				**10**	**10**		10								**10**													0	**10**
	Nantasket Avenue NBT				**430**	**450**		450				-26		26		**450**	25%		10		35%		10		25%		10		30	**480**
	Nantasket Avenue SBT				**345**	**360**		360				-51		51		**360**		25%		5		35%		10		25%		15		30	**390**
19	**Nantasket Avenue @ DCR Lot 4 (South Lot) Driveway**																													
	DCR Driveway 4 WBL				**25**	**25**		25								**25**													0	**25**
	DCR Driveway 4 WBR				**25**	**25**		25								**25**													0	**25**
	Nantasket Avenue NBT				**405**	**425**		425				-26		26		**425**	25%		10		35%		10		25%		10		30	**455**
	Nantasket Avenue NBR				**25**	**25**		25								**25**													0	**25**
	Nantasket Avenue SBL				**25**	**25**		25								**25**													0	**25**
	Nantasket Avenue SBT				**330**	**345**		345				-51		51		**345**		25%		5		35%		10		25%		15		30	**375**
	George Washington Bouelvard @ Hull Shore Drive (a.k.a. New Cut Through)																													
	Hull Shore Drive WBL							0			10					**10**													0	**10**
	Hull Shore Drive WBR							0	14							**14**													0	**15**
	George Washington Blvd NBT		77		**85**	**85**	521	606	38				33			**677**	65%		25		65%		20		25%		10		55	**730**
	George Washington Blvd NBR		536		**575**	**610**	-521	89	-27			-49	8			**21**													0	**20**
	George Washington Blvd SBL							0		12						**12**													0	**10**
	George Washington Blvd SBT				**595**	**625**		625		12	-10	-90	90			**627**		65%		10		65%		20		25%		15		45	**670**
	George Washington Boulevard @ Wharf Avenue																													
	Wharf Avenue EBL		13		**15**	**15**		15								**15**													0	**15**
	Wharf Avenue EBT		6		**15**	**15**		15								**15**													0	**15**
	Wharf Avenue EBR		7		**5**	**5**		5								**5**													0	**5**
	Wharf Avenue WB U-Turn		0		**0**	**0**		0								**0**													0	**0**
	Wharf Avenue WBL		35		**115**	**120**		120								**120**													0	**120**
	Wharf Avenue WBT		2		**5**	**5**		5								**5**													0	**5**
	Wharf Avenue WBR		15		**50**	**55**		55	14							**69**													0	**70**
	George Washington Blvd NBL		5		**5**	**5**		5								**5**													0	**5**
	George Washington Blvd NBT		593		**595**	**625**		625	-3			-49	41			**614**	65%		25		65%		20		25%		10		55	**670**
	George Washington Blvd NBR		13		**25**	**25**		25	3				8			**36**													0	**35**
	George Washington Blvd SBL		17		**35**	**35**		35		12						**47**													0	**45**
	George Washington Blvd SBT		402		**550**	**580**		580				-90	90			**580**		65%		10		65%		20		25%		15		45	**625**
	George Washington Blvd SBR		10		**10**	**10**		10								**10**													0	**10**

40 15 30 30 35 65

Closure of Samoset Avenue NBL	0					
Closure of Samoset Avenue NBT	85					
Closure of Samoset Avenue NBR	5				Park	
Clourse of Nantasket Avenue SBT	405	334	10	10	51	
Closure of Hull Shore Drive Extension Entrance	110	Through	Bay	Parking		
From GW to Nantasket via HSD	590	531	10	49		
Closure of Manomet NBL	10					
Closure of Manomet NBT	20					
Edgewater U-Turn to Samoset	10					
From Nantasket S to Nantasket			310			
From Nantasket to Nantasket via Wharf			14			
From Nantasket to Nantasket via New Cut			14			
From Nantasket to Nantasket via Bay			14			
From Nantasket to Nantasket via Water			14			
From Nantasket to Nantasket via D			14			
From Nantasket to Nantasket via C						
From Nantasket to Nantasket via B			14			
From Nantasket to Nantasket via Edgewater			14			
From Nantasket to Nantasket via A			14			
From Nantasket to Nantasket via Phippes			14			
From Nantasket to Nantasket via Samoset			184	125	59	
From GW to Hull Shore Drive			20			
From GW to Hull Shore Drive via Wharf			3			
From GW to Hull Shore Drive via New Cut			3			
From GW to Hull Shore Drive via Bay			2			
From GW to Hull Shore Drive via Water			2			
From GW to Hull Shore Drive via D			2			
From GW to Hull Shore Drive via C						
From GW to Hull Shore Drive via B			2			
From GW to Hull Shore Drive via Edgewater			2			
From GW to Hull Shore Drive via A			2			
From GW to Hull Shore Drive via Phipps			2	20		
From GW to Nantasket			35			
From GW to Bay			10			
EXISTING: From Nantasket N to Nantasket				220		
From Nantasket to Nantasket Pre Network				112	75	37
From Nantasket N to Nantasket via Phippes				12		
From Nantasket N to Nantasket via A				12		
From Nantasket N to Nantasket via Edgewater				12		
From Nantasket N to Nantasket via B				12		
From Nantasket N to Nantasket via C						
From Nantasket N to Nantasket via D				12		
From Nantasket N to Nantasket via Water				12		
From Nantasket N to Nantasket via Bay				12		
From Nantasket N to Nantasket via Cut-Through				12		
From Nantasket N to Nantasket via Water				12		
From Nantasket to Samoset			35			

			From GW	From Nan S	From Nan N			
Northern Lot In	80		49	26	5	49	26	5
	5	A	4	1	0			
	5	B	2	2	0			
	5	C	3	2	0			
	5	D	4	2	1			
	5	E	2	1	0			
	5	F						
	5	G	4	1	0			
	5	H	2	2	1			
	5	I	3	2	0			
	5	J	4	1	0			
	5	K	2	2	0			
	5	L	3	2	1			
	5	M	4	1	0			
	5	N	2	2	1			
	5	O	3	2	0			
	5	P	4	1	1			
	5	Q	3	2	0	80		
Northern Lot Out	150		90	51	9	90	51	9
	9	A	8	3	1			
	9	B	3	4	0			
	9	C	6	3	1			
	9	D	8	3	0			
	9	E	3	3	1			
	9	F						
	9	G	8	3	1			
	9	H	3	3	0			
	9	I	6	3	1			
	9	J	8	3	0			
	9	K	3	4	1			
	9	L	6	3	0			
	9	M	8	3	1			
	9	N	3	3	0			
	9	O	6	3	1			
	9	P	8	3	0			
	9	Q	3	4	1	150		
Lot 1 In	15							
Lot 1 Out	10							
Existing Rotary to South	45	30	15					
Existing Rotary to North	35	25	10					

ADJUSTMENT RATES:

Seasonal Adjustment July	**0.00%**
Seasonal Adjustment August	**0.00%**
Annual Growth Rate	**0.50%**
Design Year 2025	**10**

SATURDAY MIDDAY PEAK HOUR TRAFFIC VOLUMES: 12:00 PM - 1:00 PM

Land Use Code 230		Land Use Code 310		LUC 820			
Entering	Exiting	Entering	Exiting	Entering	Exiting	Pass-By	
31	27	44	35	77	69	26	26

	Intersection/Movement	1995 Raw	2006 Raw	2015 Raw	2015 Base Year		2025 No-Build	Closures minus Park N	2025 w/ Closures Only	Redist from South	Redist from North	Redist from Parking	Removal Of North Parking	Parking From GW	Parking From Nan S	Parking from Nan N	2025 w/ Redist	Site-Generated Trips Entering %	Site-Generated Trips Exiting %	Entering	Exiting	Site-Generated Trips Entering %	Exiting %	Entering	Exiting	Entering %	Exiting %	Entering	Exiting	Entering	Exiting	Total Site Gen	2025 Build
										Northern Beach Parking Redistribution								Site-Generated Trips				Site-Generated Trips											
1	**Hull Shore Drive Extension (Franklin Street) @ Manomet Avenue**																															
	Phipps Street EBL		78		**70**		**75**	65	140	70							**210**														0	**210**
	Hull Shore Drive Ext NBL		61		**35**		**35**	-35	0								**0**															
	Hull Shore Drive Ext NBT		49		**60**		**65**	-65	0								**0**															
	Manoment Avenue SBR		25		**15**		**15**		15		32						**47**														0	**45**
2	**Hull Shore Drive Extension (Franklin Street) @ Phipps Street**																															
	Phipps Street EBT			51	**60**		**65**		65								**65**														0	**65**
	Phipps Street EBR								0	2	82			6	12	22	**124**									15%		10				10	**135**
	Phipps Street WBL								0		32						**32**														0	**30**
	Phipps Street WBT			49	**50**		**55**	-35	20								**20**														0	**20**
	Hull Shore Drive Ext NBL			123	**175**		**185**	55	240	225			-225	24	3	29	**296**										15%		10		10	**305**
	Hull Shore Drive Ext NBR			6	**10**		**10**	65	75	70							**145**														0	**145**
	Hull Shore Drive @ New Street A																															
	A Street EBL							20	20	2				7		6	**35**										4%		3			3	**40**
	A Street EBR								0		12			6	13		**31**		7%		2						7%		4			6	**35**
	Hull Shore Drive NBL								0	15				10	11		**36**	7%		3						7%		5			8	**45**
	Hull Shore Drive NBT				**280**		**295**		295	291			-225	17	3	23	**404**										11%		7			7	**410**
	Hull Shore Drive SBT								0		114				12	18	**144**									11%		7			7	**150**
	Hull Shore Drive SBR								0					6		2	**8**									4%		3			3	**10**
	Hull Shore Drive Extension (Franklin Street) @ DCR Northern Lot Driveway																															
	Northern Lot Driveway WBL				**210**		**225**		225				-225				**225**															
	Hull Shore Drive Ext NBL				**210**		**210**		210				-210				**210**															
	Hull Shore Drive Ext NBT				**70**		**70**		70								**70**															
	Hull Shore Drive @ Edgewater Ext																															
	Edgewater Road Ext EBL								0	2				7		6	**15**										4%		3			3	**20**
	Edgewater Road Ext EBR								0		12			5	15		**32**		6%		1						6%		4			5	**35**
	Hull Shore Drive NBL								0	15				17	9		**41**	6%		2						6%		5			7	**50**
	Hull Shore Drive NBT				**280**		**280**		280	304		5	-210	18	13	17	**427**	7%		3						7%	7%	5	4		12	**440**
	Hull Shore Drive SBT								0		126				25	15	**166**		7%		2						7%	4	4		10	**175**
	Hull Shore Drive SBR								0					6		2	**8**										4%		3			3	**10**
	Hull Shore Drive @ New Street B																															
	B Street EBL								0	2				7		6	**15**										4%		2			2	**15**
	B Street EBR								0		12			10	16		**38**		6%		1		12%		3		6%		3			7	**45**
	Hull Shore Drive NBL								0	15				20	13		**48**	6%		3		12%		5		6%		5			13	**60**
	Hull Shore Drive NBT				**280**		**280**		280	317		5	-210	27	22	11	**452**	13%		5						13%	3%	10	2		17	**470**
	Hull Shore Drive SBT								0		138				40	11	**189**		13%		3					3%	13%	2	8		13	**200**
	Hull Shore Drive SBR								0					5		3	**8**									4%		2			2	**10**
	Hull Shore Drive @ New Street C																															
	C Street EBL																														0	**0**
	C Street EBR																														0	**0**
	Hull Shore Drive NBL																														0	**0**
	Hull Shore Drive NBT																														0	**0**
	Hull Shore Drive SBT																														0	**0**
	Hull Shore Drive SBR																														0	**0**
	Hull Shore Drive @ New Street D																															
	D Street EBL								0	2						8	**10**										3%		2			2	**10**
	D Street EBR								0		12			12	4		**28**		6%		1		23%		7		6%		4			12	**40**
	Hull Shore Drive NBL								0	15				10	13		**38**	6%		2		23%		10		6%		5			17	**55**
	Hull Shore Drive NBT				**280**		**280**		280	330		5	-210	45	34	3	**487**	19%		8		12%		5		19%		15			28	**515**
	Hull Shore Drive SBT								0		150			5	56	3	**214**		19%		4		12%		3		19%		11		18	**230**
	Hull Shore Drive SBR								0					5		6	**11**									3%		2			2	**15**
	Hull Shore Drive @ Hull Shore Drive Extension																															
	Hull Shore Drive NBT			1001	1000		1065	-618	447	-385																						
	Hull Shore Drive NBR			279	**280**		**280**		280	280		5	-210																			
	Hull Shore Drive @ Water Street																															
	Water Street EBL			100	**100**		**105**		105	2			-59			3	**51**														0	**50**
	Water Street EBR				**0**		**0**				12						**12**														0	**10**
	Hull Shore Drive NBL			130	**130**		**135**		135	30		-35			3		**133**														0	**135**
	Hull Shore Drive NBT			1180	**1180**		**1240**	-618	622	-107		5	-151	54	46		**469**	25%		10		35%		15		25%		20			45	**515**
	Hull Shore Drive SBT				**0**		**0**				162				60		**222**		25%		5		35%		10		25%		15		30	**250**
	Hull Shore Drive SBR				**0**		**0**							17		3	**20**														0	**20**
	Hull Shore Drive @ Parrott Lot																															
	Parrott Lot EBL				**20**		**20**		20								**20**														0	**20**
	Parrott Lot EBR								0								**0**														0	**0**
	Hull Shore Drive NBL				**20**		**20**		20								**20**														0	**20**
	Hull Shore Drive NBT				**1180**		**1240**	-618	622	-77		5	-151	54	49		**502**	25%		10		35%		15		25%		20			45	**545**
	Hull Shore Drive SBT								0		174	35			60		**269**		25%		5		35%		10		25%		15		30	**300**
	Hull Shore Drive SBR								0								**0**														0	**0**
	Hull Shore Drive @ DCR Lot 1 (Bathhouse)																															
	DCR Lot 1 WBR				**10**		**10**		10																							
	Hull Shore Drive NBT				**1190**		**1250**	-618	632	-79		15	-151		49																	
	Hull Shore Drive NBR				**15**		**15**		15			-15																				
	Hull Shore Drive @ Bay Street																															
	Bay Street EBL								0	2				18			**20**														0	**20**
	Bay Street EBR							275	275		-198	-25					**52**														0	**50**
	Hull Shore Drive NBL								0	15							**15**														0	**15**

	Hull Shore Drive NBT			**1200**		**1260**	-618	642	-79			-151	36	49		**497**	25%		10		35%		15		25%		20			45	**540**
	Hull Shore Drive SBT							0		174	30			60		**264**		25%		5		35%		10		25%		15		30	**295**
	Hull Shore Drive SBR							0			5					**5**														0	**5**
3	**Samoset Avenue @ Phipps Street**																															
	Phipps Street EBL						200	200	-65							**135**														0	**135**
	Phipps Street EBT						60	60	2	12			6	12		**92**									0%		0			0	**90**
	Phipps Street WBT		158	**210**		**225**	20	245	80			-225	24	3	17	**144**										0%		0		0	**145**
	Phipps Street WBR		12	**15**		**15**		15	145						12	**172**										15%		10		10	**180**
	Samoset Avenue NBL		18	**20**		**20**	-20	0								**0**															
	Samoset Avenue NBT		164	**185**		**200**	-200	0								**0**															
	Samoset Avenue NBR		51	**60**		**60**	-60	0								**0**															
	Samoset Avenue SBL		1	**0**		**0**		0		70					22	**92**									15%		10			10	**100**
	Samoset Avenue SBR		38	**40**		**40**		40								**40**														0	**40**
4	**Nantasket Avenue @ Phipps Street @ Mountford Road**																															
	Mountford Road EBL		1	**0**		**0**		0								**0**														0	**0**
	Mountford Road EBT							0								**0**														0	**0**
	Mountford Road EBR		9	**10**		**10**		10								**10**														0	**10**
	Phipps Street WBL		178	**225**		**235**		235				-180	24	3		**82**														0	**80**
	Phipps Street WBT		0	**0**		**0**		0								**0**														0	**0**
	Phipps Street WBR		36	**45**		**50**		50	80			-45			17	**102**														0	**100**
	Nantasket Avenue NBL		4	**5**		**5**		5								**5**														0	**5**
	Nantasket Avenue NBT		626	**710**		**760**		760	-230						16	**546**		10%		5						25%		15		20	**565**
	Nantasket Avenue NBR						250	250	-63				6	12		**205**														0	**205**
	Nantasket Avenue SBL						10	10		12						**22**														0	**20**
	Nantasket Avenue SBT		640	**640**		**675**	-10	665		-114		-59			37	**529**	10%		5						25%		20			25	**555**
	Nantasket Avenue SBR		6	**5**		**5**		5								**5**														0	**5**
5	**Nantasket Avenue @ Samoset Avenue**																															
	Nantasket Avenue NBL	0		**715**		**765**		765	-228																							
	Nantasket Avenue NBR	0		**265**		**280**	-280	0																								
	Nantasket Avenue @ New Street A																															
	A Street WBL							0					16			**16**		17%		5						7.5%		5		10	**25**
	A Street WBR							0	15					12	2	**29**		2.5%		1						6%		4		5	**35**
	Nantasket Avenue NBT			**980**		**1045**	-20	1025	-308				4		14	**735**		7.5%		4						19%		11		15	**750**
	Nantasket Avenue NBR						20	20	2				12	10		**44**	17%		5						7.5%		6			11	**55**
	Nantasket Avenue SBL							0		12				3	7	**22**	2.5%		1						6%		5			6	**30**
	Nantasket Avenue SBT			**875**		**920**	-10	910		-126		-239	24		30	**599**	7.5%		4						19%		15			19	**620**
7	**Nantasket Avenue @ Whitehead Avenue**																															
	Whitehead Avenue EBL							0	5							**5**														0	**5**
	Whitehead Avenue EBR	20		**20**		**20**		20								**20**														0	**20**
	Nantasket Avenue NBL							0	20							**20**														0	**20**
	Nantasket Avenue NBT			**980**		**1045**		1045	-311				10	10	14	**768**	17%	7.5%	5	4					7.5%	19%	6	11		26	**795**
	Nantasket Avenue SBT			**860**		**905**	-10	895		-126		-239	40		29	**599**	7.5%	17%	4	5					19%	7.5%	15	5		29	**630**
	Nantasket Avenue SBR	15		**15**		**15**		15								**15**														0	**15**
8	**Nantasket Avenue @ Edgewater Road**																															
	Edgewater Road EBL	10		**10**		**10**		10	-5							**5**														0	**5**
	Edgewater Road EBT							0								**0**									5%		5			5	**5**
	Edgewater Road EBR	20		**20**		**20**		20								**20**														0	**20**
	Edgewater Road Ext WBL							0					19			**19**		16%		5						7.5%		5		10	**30**
	Edgewater Road Ext WBT							0								**0**										5%		5		5	**5**
	Edgewater Road Ext WBR							0	15					9	2	**26**		2.5%		1						6%		3		4	**30**
	Nantasket Avenue NB U-Turn	0		**0**		**0**		0								**0**														0	
	Nantasket Avenue NBL	40		**40**		**40**		40	-20							**20**														0	**20**
	Nantasket Avenue NBT	0		**960**		**1025**		1025	-301				14		12	**750**	17%	5.0%	5	3					7.5%	13%	6	8		22	**770**
	Nantasket Avenue NBR							0	2				11	15		**28**	16%		5						7.5%		7			12	**40**
	Nantasket Avenue SB U-Turn	10		**10**		**10**	-10	0								**0**														0	
	Nantasket Avenue SBL	0		**0**		**0**		0		12					7	**19**	2.5%		1						6%		5			6	**25**
	Nantasket Avenue SBT	-5		**855**		**900**		900		-138		-239	40		22	**585**	5.0%	17%	3	5					13%	7.5%	10	5		23	**610**
	Nantasket Avenue SBR	15		**15**		**15**		15								**15**														0	**15**
	Nantasket Avenue @ New Street B																															
	B Street WBL							0					15			**15**		16%		5		21%		8		7.5%		5		18	**35**
	B Street WBR							0	15					14	3	**32**		2.5%		2						6%		4		6	**40**
	Nantasket Avenue NBT			**1000**		**1065**		1065	-334				24		9	**764**	33%	2.5%	10	1					15.0%	7%	13	4		28	**790**
	Nantasket Avenue NBR							0	2				16	16		**34**	16%		5		21%		10		7.5%		6			21	**55**
	Nantasket Avenue SBL							0		12					6	**18**	2.5%		2						6%		5			7	**25**
	Nantasket Avenue SBT			**875**		**920**		920		-150		-239	63		15	**609**	2.5%	33%	1	10					7%	15.0%	5	10		26	**635**
	Nantasket Avenue @ New Street C																															
	C Street WBL																													0	**0**
	C Street WBR																													0	**0**
	Nantasket Avenue NBT																													0	**0**
	Nantasket Avenue NBR																													0	**0**
	Nantasket Avenue SBL																													0	**0**
	Nantasket Avenue SBT																													0	**0**
	Nantasket Avenue @ New Street D																															
	D Street WBL							0					15			**15**		16%		5		44%		17		7.5%		5		27	**40**
	D Street WBR							0	15					14	6	**35**		2.5%		1						7%		4		5	**40**
	Nantasket Avenue NBT			**1000**		**1065**		1065	-347				38		3	**759**	49%		15		21%		10		22.5%		19			44	**805**
	Nantasket Avenue NBR							0	2				11	4		**17**	16%		5		44%		20		7.5%		6			31	**50**
	Nantasket Avenue SBL							0		12					9	**21**	2.5%		1						7%		5			6	**25**
	Nantasket Avenue SBT			**875**		**920**		920		-162		-239	88		4	**611**		49%		15		21%		8		22.5%		15		38	**650**
11	**Nantasket Avenue @ Water Street @ Bay Street**																															
	Bay Street EBL							0								**0**									5%		5			5	**5**
	Bay Street EBT	46		**40**		**40**		40								**40**														0	**40**
	Bay Street EBR	23		**25**		**25**		25								**25**														0	**25**
	Water Street WBL	151		**95**		**100**		100			-35		17			**82**														0	**80**
	Water Street WBT	37		**35**		**35**		35	-20							**15**														0	**15**
	Water Street WBR							0	50					3	3	**56**														0	**55**
	Nantasket Avenue NBL							0	20							**20**														0	**20**
	Nantasket Avenue NBT						618	618	55				48			**721**	65%		20		65%		30		25%		20			70	**790**
	Nantasket Avenue NBR							0	2							**2**														0	**0**

	Nantasket Avenue SBL	58		60	65		65		12		-59			3	**21**													0	**20**
	Nantasket Avenue SBT	758		775	815		815		-174		-180	103			**564**		65%		20		65%		25		25%		15	60	**625**
	Nantasket Avenue SBR	42		40	40		40								**40**										5%		5	5	**45**
12	**Nantasket Avenue @ Parrot Lot Driveway**																												
	Parrot Lot Driveway WBL			20	20		20								**20**													0	**20**
	Parrot Lot Driveway WBR						0								**0**													0	**0**
	Nantasket Avenue NBT					618	618	77				48			**743**	65%		20		65%		30		25%		20		70	**815**
	Nantasket Avenue NBR						0								**0**													0	**0**
	Nantasket Avenue SBL			20	20		20								**20**													0	**20**
	Nantasket Avenue SBT			850	890		890		-174	-35	-180	120			**621**		65%		20		65%		25		25%		15	60	**680**
13	**Nantasket Avenue @ George Washington Bouelward @ Bay Street**																												
	Bay Street EBL						0								**0**													0	**0**
	Bay Street EBT					5	5								**5**													0	**5**
	Bay Street EBR						0								**0**													0	**0**
	Bay Street EBBR		3	5	5	-5	0								**0**													0	**0**
	Bay Street EBHR		66	65	70		70								**70**													0	**70**
	Bay Street WBL						0			5					**5**													0	**5**
	Bay Street WBT						0								**0**													0	**0**
	Bay Street WBR						0	15							**15**													0	**15**
	George Washington Blvd NB U Turn		2				0								**0**													0	**0**
	George Washington Blvd NBL						0								**0**													0	**0**
	George Washington Blvd NBHL		79	80	85		85								**85**													0	**85**
	George Washington Blvd NBT					618	618	62				48			**728**	65%		20		65%		30		25%		20		70	**800**
	George Washington Blvd NBR		27	25	25	-25	0	2				18			**20**													0	**20**
	Nantasket Avenue SBL					270	270		-198	-25					**47**													0	**45**
	Nantasket Avenue SBT		313	315	330	-270	60				-60				**0**													0	**0**
	Nantasket Avenue SBR						0								**0**													0	**0**
	Nantasket Avenue SBBR		532	530	555		555		24	-10	-120	120			**569**		65%		20		65%		25		25%		15	60	**630**
	Nantasket Avenue SBHR		23	25	25		25								**25**													0	**25**
15	**Nantasket Avenue @ Hull Shore Drive**																												
	Hull Shore Drive EBT		720	725	760	-618	142	-37			-102	18			**21**													0	**20**
	Hull Shore Drive EBR		0	0	0	25	25		12						**37**													0	**35**
	Hull Shore Drive WBL					275	275		-24				60		**311**		25%		5		35%		10		25%		15	30	**340**
	Hull Shore Drive WBT						0			5					**5**													0	**5**
	Nantasket Avenue NBL						0	15							**15**													0	**15**
	Nantasket Avenue NBR		482	480	505		505	-27			-49	18	49		**496**	25%		10		35%		15		25%		20		45	**540**
	Nantasket Avenue SBL		0	0	0		0																						
	Nantasket Avenue SBT		345	345	360	-300	60				-60																		
	Nantasket Avenue @ DCR Lot 2 (MJM Bathhouse) Driveway																												
	MJM Bathhouse Driveway WBL			25	25		25								**25**													0	**25**
	MJM Bathhouse Driveway WBR			10	10		10								**10**													0	**10**
	Nantasket Avenue NBT			460	485		485	-12			-49	18	49		**491**	25%		10		35%		15		25%		20		45	**535**
	Nantasket Avenue SBT			305	320		320		-12		-60		60		**308**		25%		5		35%		10		25%		15	30	**340**
17	**Nantasket Avenue @ DCR Lot 2 (Wharft Avenue) Driveway**																												
	Wharf Avenue EBL		78	80	85		85	3				18			**106**													0	**105**
	Wharf Avenue EBT		6	5	5		5								**5**													0	**5**
	Wharf Avenue EBR		55	55	60		60		12						**72**													0	**70**
	DCR Driveway 2 WBL		0	0	0		0								**0**													0	**0**
	DCR Driveway 2 WBT		0	0	0		0								**0**													0	**0**
	DCR Driveway 2 WBR		0	0	0		0								**0**													0	**0**
	Nantasket Avenue NBL		63	70	75		75	15							**90**													0	**90**
	Nantasket Avenue NBT		380	380	400		400	-15			-49		49		**385**	25%		10		35%		15		25%		20		45	**430**
	Nantasket Avenue NBR		12	10	10		10								**10**													0	**10**
	Nantasket Avenue SBL		7	5	5		5								**5**													0	**5**
	Nantasket Avenue SBT		281	280	295		295		-12		-60		60		**283**		25%		5		35%		10		25%		15	30	**315**
	Nantasket Avenue SBR		44	45	45		45								**45**													0	**45**
18	**Nantasket Avenue @ DCR Lot 3 (Pavilion) Driveway**																												
	DCR Driveway 3 WBL			10	10		10								**10**													0	**10**
	DCR Driveway 3 WBR			10	10		10								**10**													0	**10**
	Nantasket Avenue NBT			450	475		475				-49		49		**475**	25%		10		35%		15		25%		20		45	**520**
	Nantasket Avenue SBT			335	355		355				-60		60		**355**		25%		5		35%		10		25%		15	30	**385**
19	**Nantasket Avenue @ DCR Lot 4 (South Lot) Driveway**																												
	DCR Driveway 4 WBL			25	25		25								**25**													0	**25**
	DCR Driveway 4 WBR			25	25		25								**25**													0	**25**
	Nantasket Avenue NBT			425	450		450				-49		49		**450**	25%		10		35%		15		25%		20		45	**495**
	Nantasket Avenue NBR			25	25		25								**25**													0	**25**
	Nantasket Avenue SBL			25	25		25								**25**													0	**25**
	Nantasket Avenue SBT			320	340		340				-60		60		**340**		25%		5		35%		10		25%		15	30	**370**
	George Washington Bouelvard @ Hull Shore Drive																												
	Hull Shore Drive WBL						0			5					**5**													0	**5**
	Hull Shore Drive WBR						0	15							**15**													0	**15**
	George Washington Blvd NBT		27	105	110	593	703	49				66			**818**	65%		20		65%		30		25%		20		70	**890**
	George Washington Blvd NBR		720	725	760	-593	167	-37			-102	18			**46**													0	**45**
	George Washington Blvd SBL						0		12						**12**													0	**10**
	George Washington Blvd SBT			595	625		625		12	-5	-120	120			**632**		65%		20		65%		25		25%		15	60	**690**
	George Washington Boulevard @ Wharf Avenue																												
	Wharf Avenue EBL		12	10	10		10								**10**													0	**10**
	Wharf Avenue EBT		8	10	10		10								**10**													0	**10**
	Wharf Avenue EBR		25	25	25		25								**25**													0	**25**
	Wharf Avenue WB U-Turn		3	5	5		5								**5**													0	**5**
	Wharf Avenue WBL		76	75	80		80								**80**													0	**80**
	Wharf Avenue WBT		8	10	10		10								**10**													0	**10**
	Wharf Avenue WBR		28	30	30		30	15							**45**													0	**45**
	George Washington Blvd NBL		27	25	25		25								**25**													0	**25**
	George Washington Blvd NBT		788	790	830		830	-3			-102	84			**809**	65%		20		65%		30		25%		20		70	**880**
	George Washington Blvd NBR		110	110	115		115	3				18			**136**													0	**135**
	George Washington Blvd SBL		22	20	20		20		12						**32**													0	**30**
	George Washington Blvd SBT		556	555	585		585				-120	120			**585**		65%		20		65%		25		25%		15	60	**645**
	George Washington Blvd SBR		19	20	20		20								**20**													0	**20**

35 30 45 35 80 65

Closure of Samoset Avenue NBL	20				
Closure of Samoset Avenue NBT	190				
Closure of Samoset Avenue NBR	60				Park
Clourse of Nantasket Avenue SBT	360	270	25	5	60
Closure of Hull Shore Drive Extension Entrance	280	Through	Bay	Parking	
From GW to Nantasket via HSD	740	618	20	102	
Closure of Manomet NBL	35				
Closure of Manomet NBT	65				
Edgewater U-Turn to Samoset	10				

From Nantasket S to Nantasket	350		
From Nantasket to Nantasket via Wharf	15	A	
From Nantasket to Nantasket via New Cut	15	B	
From Nantasket to Nantasket via Bay	15	C	
From Nantasket to Nantasket via Water	15	D	
From Nantasket to Nantasket via D	15	E	
From Nantasket to Nantasket via C		F	
From Nantasket to Nantasket via B	15	G	
From Nantasket to Nantasket via Edgewater	15	H	
From Nantasket to Nantasket via A	15	I	
From Nantasket to Nantasket via Phippes	15	J	
From Nantasket to Nantasket via Samoset	215	145	70
From GW to Hull Shore Drive	20		
From GW to Hull Shore Drive via Wharf	3	M	
From GW to Hull Shore Drive via New Cut	3	N	
From GW to Hull Shore Drive via Bay	2	O	
From GW to Hull Shore Drive via Water	2	P	
From GW to Hull Shore Drive via D	2	Q	
From GW to Hull Shore Drive via C		R	
From GW to Hull Shore Drive via B	2	S	
From GW to Hull Shore Drive via Edgewater	2	T	
From GW to Hull Shore Drive via A	2	U	
From GW to Hull Shore Drive via Phipps	2	20 V	
From GW to Nantasket	35		
From GW to Bay	20		

EXISTING: From Nantasket N to Nantasket	210		
From Nantasket to Nantasket Pre Network	102	70	32
From Nantasket N to Nantasket via Phippes	12		
From Nantasket N to Nantasket via A	12		
From Nantasket N to Nantasket via Edgewater	12		
From Nantasket N to Nantasket via B	12		
From Nantasket N to Nantasket via C			
From Nantasket N to Nantasket via D	12		
From Nantasket N to Nantasket via Water	12		
From Nantasket N to Nantasket via Bay	12		
From Nantasket N to Nantasket via Cut-Through	12		
From Nantasket N to Nantasket via Water	12		
From Nantasket to Samoset	65		

			From GW	From Nan S	From Nan N			
Northern Lot In	210		102	49	59	102	49	59
	12	A	9	3	3			
	12	B	4	3	4			
	12	C	6	3	4			
	12	D	9	3	4			
	12	E	4	3	3			
	12	F						
	12	G	9	3	4			
	12	H	4	3	4			
	12	I	6	3	3			
	12	J	9	3	4			
	12	K	4	3	4			
	12	L	6	3	4			
	12	M	9	3	3			
	12	N	4	3	4			
	12	O	6	3	4			
	12	P	9	3	4			
	12	Q	4	4	3	210		
Northern Lot Out	225		120	60	45	120	60	45
	13	A	10	4	3			
	13	B	5	4	3			
	13	C	7	4	3			
	13	D	10	3	3			
	13	E	5	4	3			
	13	F						
	13	G	10	4	3			
	13	H	5	4	2			
	13	I	7	4	3			
	13	J	10	3	3			
	13	K	5	4	3			
	13	L	7	3	3			
	13	M	10	4	2			
	13	N	6	4	3			
	13	O	7	4	3			
	13	P	10	3	2			
	13	Q	6	4	3	225		
Lot 1 In	15							
Lot 1 Out	10							
Existing Rotary to South	0	0	0					
Existing Rotary to North	35	25	10					

Attachment D

Trip Generation Calculations

Site Generated Trip Assessment - Proposed

Project: T0597 - Two-Way Circulation
Location: Hull, Massachusetts
Date: January 29, 2016
Analyst: TEC, Inc. / Douglas S. Halpert, E.I.T.
Source: Institute of Transportation Engineers - Trip Generation - 9th Ed.

ITE Land Use Code (LUC) 230 - Residential Condominium/Townhouse

Average Vehicle Trips vs: Dwelling Units
Independent Variable (X): 123

AVERAGE WEEKDAY DAILY

Ln T = 0.87 Ln (X) + 2.46
Ln T = 0.87 Ln 123 + 2.46
Ln T = 6.65
T = **770** vehicle trips
with 50% (385 vpd) entering and 50% (385 vpd) exiting.

WEEKDAY MORNING PEAK HOUR OF ADJACENT STREET TRAFFIC

Ln T = 0.80 Ln (X) + 0.26
Ln T = 0.80 Ln 123 + 0.26
Ln T = 4.11
T = **61** vehicle trips
with 17% (10 vph) entering and 83% (51 vph) exiting.

WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC

Ln T = 0.82 Ln (X) + 0.32
Ln T = 0.82 Ln 123 + 0.32
Ln T = 4.27
T = **71** vehicle trips
with 67% (48 vph) entering and 33% (23 vph) exiting.

SATURDAY DAILY

T = 3.62 * (X) + 427.93
T = 3.62 * 123 + 427.93
T = **874** vehicle trips
with 50% (437 vpd) entering and 50% (437 vpd) exiting.

SATURDAY MIDDAY PEAK HOUR OF GENERATOR

T = 0.29 * (X) + 42.63
T = 0.29 * 123 + 42.63
T = **78** vehicle trips
with 54% (42 vph) entering and 46% (36 vph) exiting.

Site Generated Trip Assessment

Project: T0597 - Two-Way Circulation
Location: Hull, Massachusetts
Date: January 29, 2016
Analyst: TEC, Inc. / Douglas S. Halpert, E.I.T.
Source: Institute of Transportation Engineers - Trip Generation , 9th Edition

ITE Land Use Code (LUC) 310 - Hotel

Average Vehicle Trips vs: Dwelling Units
Independent Variable (X): 148 Rooms

AVERAGE WEEKDAY DAILY

T = 8.95 * (X) - 373.16
T = 8.95 * 148 - (373.16)
T = **952** vehicle trips
with 50% (476 vpd) entering and 50% (476 vpd) exiting.

WEEKDAY MORNING PEAK HOUR OF ADJACENT STREET TRAFFIC

T = 0.53 * (X)
T = 0.53 * 148
T = **78** vehicle trips
with 59% (46 vph) entering and 41% (32 vpd) exiting.

WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC

T = 0.60 * (X)
T = 0.60 * 148
T = **89** vehicle trips
with 51% (45 vph) entering and 49% (44 vpd) exiting.

SATURDAY DAILY

T = 9.62 * (X) - 294.56
T = 9.62 * 148 - 294.56
T = **1,130** vehicle trips
with 50% (565 vpd) entering and 50% (565 vpd) exiting.

SATURDAY PEAK HOUR OF GENERATOR

T = 0.69 * (X) + 4.32
T = 0.69 * 148 + (4.32)
T = **106** vehicle trips
with 56% (59 vph) entering and 44% (47 vpd) exiting.

Site Generated Trip Assessment

Project: T0597 - Two-Way Circulation
Location: Hull, Massachusetts
Date: January 29, 2016
Analyst: TEC, Inc. / Douglas S. Halpert, E.I.T.
Source: Institute of Transportation Engineers - Trip Generation , 9th Edition

ITE Land Use Code (LUC) 826 - Specialty Retail Center

Average Vehicle Trips vs: 1,000 Sq. Feet Gross Leasable Area
Independent Variable (X): 65 ksf

AVERAGE WEEKDAY DAILY

T = 44.32 * (X)
T = 44.32 * 65.0
T = **2,881** vehicle trips
with 50% (1,441 vpd) entering and 50% (1,440 vpd) exiting.

WEEKDAY MORNING PEAK HOUR OF ADJACENT STREET TRAFFIC

ITE LUC 820 Weekday Morning Trip Rate / ITE LUC 820 Weekday Evening Trip Rate = ITE LUC 826 Weekday Morning Trip Rate / ITE LUC 826 Weekday Evening Trip Rate

$\frac{0.96}{3.71} = \frac{(Y)}{2.71}$ Y = 0.7012399

T = Y * 65.0
T = **46** vehicle trips
with 62% (28 vph) entering and 38% (18 vph) exiting.

(same distribution split as ITE LUC 820 during the weekday morning peak hour of adjacent street traffic)

WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC

T = 2.71 * (X)
T = 2.71 * 65.0
T = **176** vehicle trips
with 44% (77 vph) entering and 56% (99 vph) exiting.

SATURDAY DAILY

T = 42.04 * (X)
T = 42.04 * 65.0
T = **2,733** vehicle trips
with 50% (1,367 vpd) entering and 50% (1,366 vpd) exiting.

SATURDAY MIDDAY PEAK HOUR

ITE LUC 820 Saturday Midday Trip Rate / ITE LUC 820 Saturday Daily Trip Rate = ITE LUC 826 Saturday Midday Trip Rate / ITE LUC 826 Saturday Daily Trip Rate

$\frac{4.82}{49.97} = \frac{(Y)}{42.04}$ Y = 4.0550891

T = Y * 65.0
T = **264** vehicle trips
with 52% (137 vph) entering and 48% (127 vph) exiting.

Trip Generation Assessment - Nantasket Beach Development

Project: Proposed Mixed Use Development - Nantaket Beach - Hull, MA
Date: November 1, 2015
Analyst: TEC, Inc. / Rebecca L. Brown, P.E.
Source: Institute of Transportation Engineers - Trip Generation - 9th Ed.

Proposed Development

123 Unit Condo/Townhouse (ITE LUC 230)

Units: 135 Units

	Total Trips		Total	% Distribution		# New Trips		Multi-Use Trips		Total New	Total New	# Passby Trips		# Primary Trips	
	Avg. Rates	Fitted Curve	Trips	IN	OUT	IN	OUT	IN	OUT	Pass-by Trips	Primary Trips	IN	OUT	IN	OUT
Weekday Daily	N/A	770	**770**	50%	50%	385	385	96	96	0	**578**	0	0	289	289
Weekday AM PH	N/A	61	**61**	17%	83%	10	51	3	13	0	**45**	0	0	7	38
Weekday PM PH	N/A	71	**71**	67%	33%	48	23	12	6	0	**53**	0	0	36	17
Saturday Daily	N/A	874	**874**	50%	50%	437	437	109	109	0	**656**	0	0	328	328
Sat Midday PH	N/A	78	**78**	54%	46%	42	36	11	9	0	**58**	0	0	31	27

148 Room Hotel (ITE LUC 310)

Units: 148 Rooms

	Total Trips		Total	% Distribution		# New Trips		Multi-Use Trips		Total New	Total New	# Passby Trips		# Primary Trips	
	Avg. Rates	Fitted Curve	New Trips	IN	OUT	IN	OUT	IN	OUT	Pass-by Trips	Primary Trips	IN	OUT	IN	OUT
Weekday Daily	N/A	952	**952**	50%	50%	476	476	119	119	0	**714**	0	0	357	357
Weekday AM PH	78	N/A	**78**	59%	41%	46	32	12	8	0	**58**	0	0	34	24
Weekday PM PH	89	N/A	**89**	51%	49%	45	44	11	11	0	**67**	0	0	34	33
Saturday Daily	N/A	1130	**1130**	50%	50%	565	565	141	141	0	**848**	0	0	424	424
Sat Midday PH	N/A	106	**106**	56%	44%	59	47	15	12	0	**79**	0	0	44	35

65,000 SF Specialty Retail Center (ITE LUC 826)

Units: 65 KSF

	Total Trips		Total	% Distribution		# New Trips		Multi-Use Trips		Total New	Total New	# Passby Trips		# Primary Trips	
	Avg. Rates	Fitted Curve	New Trips	IN	OUT	IN	OUT	IN	OUT	Pass-by Trips	Primary Trips	IN	OUT	IN	OUT
Weekday Daily	2881	N/A	**2881**	50%	50%	1441	1440	360	360	**562**	**1599**	281	281	800	799
Weekday AM PH	46	N/A	**46**	62%	38%	29	17	7	4	**10**	**25**	5	5	17	8
Weekday PM PH	176	N/A	**176**	44%	56%	77	99	19	25	**44**	**88**	22	22	36	52
Saturday Daily	2733	N/A	**2733**	50%	50%	1367	1366	342	342	**532**	**1517**	266	266	759	758
Sat Midday PH	264	N/A	**264**	52%	48%	137	127	34	32	**52**	**146**	26	26	77	69

Assumed 34% pass-by rate for weekday PM and 26% pass-by rate for all others (LUC 820 - Shopping Center - Trip Generation Handbook, 2nd Edition).

				Total New Trips		Total Multi-Use Trips					Total Pass-by Trips		Total Primary Trips	
Net Increase	***Total Trips***			***In***	***Out***	***In***	***Out***	***Total New Pass-by Trips***	***Total New Primary Trips***		***In***	***Out***	***In***	***Out***
Weekday Daily	**4603**			**2302**	**2301**	**575**	**575**	**562**	**2891**		**281**	**281**	**1446**	**1445**
Weekday AM Peak Hour	**185**			**85**	**100**	**22**	**25**	**10**	**128**		**5**	**5**	**58**	**70**
Weekday PM Peak Hour	**336**			**170**	**166**	**42**	**42**	**44**	**208**		**22**	**22**	**106**	**102**
Saturday Daily	**4737**			**2369**	**2368**	**592**	**592**	**532**	**3021**		**266**	**266**	**1511**	**1510**
Sat Midday Peak Hour	**448**			**238**	**210**	**60**	**53**	**52**	**283**		**26**	**26**	**152**	**131**

Attachment E

SimTraffic Analysis Worksheets

Summary of All Intervals

Run Number	1	2	3	Avg
Start Time	3:45	3:45	3:45	3:45
End Time	5:00	5:00	5:00	5:00
Total Time (min)	75	75	75	75
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	2491	2524	2496	2499
Vehs Exited	2505	2538	2466	2506
Starting Vehs	97	107	72	91
Ending Vehs	83	93	102	95
Travel Distance (mi)	2127	2158	2152	2146
Travel Time (hr)	98.8	102.0	105.2	102.0
Total Delay (hr)	23.4	25.8	29.4	26.2
Total Stops	4100	4069	4187	4112
Fuel Used (gal)	83.1	84.7	84.6	84.1

Interval #0 Information Seeding

Start Time	3:45
End Time	4:00
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.
No data recorded this interval.

Interval #1 Information 1

Start Time	4:00
End Time	4:15
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	Avg
Vehs Entered	595	578	605	588
Vehs Exited	600	598	582	591
Starting Vehs	97	107	72	91
Ending Vehs	92	87	95	82
Travel Distance (mi)	511	516	537	521
Travel Time (hr)	23.2	23.7	24.6	23.8
Total Delay (hr)	5.3	5.6	5.7	5.5
Total Stops	917	845	955	908
Fuel Used (gal)	19.9	20.1	20.7	20.2

Interval #2 Information 2

Start Time 4:15
End Time 4:30
Total Time (min) 15
Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	Avg
Vehs Entered	711	750	752	738
Vehs Exited	692	720	713	710
Starting Vehs	92	87	95	82
Ending Vehs	111	117	134	114
Travel Distance (mi)	567	576	604	582
Travel Time (hr)	27.8	28.9	32.7	29.8
Total Delay (hr)	7.3	8.4	11.1	9.0
Total Stops	1314	1274	1474	1351
Fuel Used (gal)	22.8	23.0	24.8	23.5

Interval #3 Information 3

Start Time 4:30
End Time 4:45
Total Time (min) 15
Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	Avg
Vehs Entered	633	615	562	601
Vehs Exited	641	633	613	629
Starting Vehs	111	117	134	114
Ending Vehs	103	99	83	91
Travel Distance (mi)	559	537	522	539
Travel Time (hr)	25.5	25.0	25.6	25.4
Total Delay (hr)	5.8	6.1	7.5	6.5
Total Stops	994	1013	871	956
Fuel Used (gal)	21.6	20.9	20.8	21.1

Interval #4 Information 4

Start Time 4:45
End Time 5:00
Total Time (min) 15
Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	Avg
Vehs Entered	552	581	577	568
Vehs Exited	572	587	558	570
Starting Vehs	103	99	83	91
Ending Vehs	83	93	102	95
Travel Distance (mi)	491	529	490	503
Travel Time (hr)	22.3	24.4	22.2	23.0
Total Delay (hr)	5.0	5.8	5.0	5.3
Total Stops	875	937	887	899
Fuel Used (gal)	18.8	20.7	18.3	19.3

1: Hull Shore Drive Extension/Manomet Avenue & Phipps Street Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.0
Total Del/Veh (s)	0.1	4.0	2.9	3.1

2: Hull Shore Drive Extension & Phipps Street Performance by approach

Approach	EB	WB	NB	All
Denied Del/Veh (s)	0.0	0.0	2.8	2.4
Total Del/Veh (s)	0.3	2.0	11.8	10.3

3: Samoset Avenue & Phipps Street Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	2.5	0.0	0.1	1.4
Total Del/Veh (s)	21.4	4.9	7.7	14.6

4: Nantasket Avenue & Mountford Road/Phipps Street Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	2.3	0.0	0.4	0.4
Total Del/Veh (s)	7.6	34.8	1.1	1.2	5.1

5: Hull Shore Drive Extension Performance by approach

Approach	NB	All
Denied Del/Veh (s)	0.0	0.0
Total Del/Veh (s)	1.2	1.2

7: Hull Shore Drive Extension & DCR Northern Lot Performance by approach

Approach	EB	NB	All
Denied Del/Veh (s)	0.1	0.0	0.0
Total Del/Veh (s)	3.8	0.6	1.5

8: Nantasket Avenue & Hull Shore Drive Performance by approach

Approach	WB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	0.6	0.5	0.5

12: Hull Shore Drive & Hull Shore Drive Extension Performance by approach

Approach	NB	All
Denied Del/Veh (s)	0.0	0.0
Total Del/Veh (s)	0.3	0.3

13: Hull Shore Drive & Water Street Performance by approach

Approach	EB	NB	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	13.6	1.2	1.9

14: Hull Shore Drive & Parrott Lot Driveway Performance by approach

Approach	EB	NB	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	8.1	1.0	1.2

15: Hull Shore Drive & DCR Lot 1 Performance by approach

Approach	WB	NB	All
Denied Del/Veh (s)	0.1	0.0	0.0
Total Del/Veh (s)	10.5	1.6	1.6

17: Nantasket Avenue & Hull Shore Drive Connection/Hull Shore Drive Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	10.0	7.0	10.0	9.1

18: Nantasket Avenue & DCR Lot 2 Exit Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.2	0.0	0.0	0.0
Total Del/Veh (s)	6.5	0.8	0.9	1.1

19: Nantasket Avenue & Wharf Avenue/DCR Lot 2 Enter Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	17.9	8.1	6.3	8.1

20: Nantasket Avenue & DCR Lot 3 Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.4	0.0	0.2
Total Del/Veh (s)	6.0	0.4	1.3	1.0

22: Hull Shore Drive Extension & Grass Lot 1 Performance by approach

Approach	EB	NB	All
Denied Del/Veh (s)	0.1	0.0	0.0
Total Del/Veh (s)	3.4	0.8	1.3

23: Nantasket Avenue & Whitehead Avenue/Samoset Avenue Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Del/Veh (s)	3.1	0.3	1.0	0.7

24: Nantasket Avenue & Edgewater Road Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Del/Veh (s)	8.7	1.2	0.4	0.9

28: Nantasket Avenue & Bay Street/Water Street Performance by approach

Approach	EB	WB	SB	All
Denied Del/Veh (s)	0.2	0.0	0.0	0.0
Total Del/Veh (s)	12.1	17.8	3.5	5.8

29: Nantasket Avenue & Parrott Lot Driveway Performance by approach

Approach	WB	SB	All
Denied Del/Veh (s)	0.0	0.1	0.1
Total Del/Veh (s)	23.1	3.4	3.7

30: Nantasket Avenue & George Washington Boulevard Performance by approach

Approach	EB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	3.5	1.9	2.0

31: George Washington Boulevard & Hull Shore Drive Connection Performance by approach

Approach	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	3.1	0.1	1.7

32: George Washington Boulevard & Wharf Avenue Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.2	0.0	0.1
Total Del/Veh (s)	15.9	21.0	7.1	6.9	9.0

33: George Washington Boulevard & Bay Street Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Del/Veh (s)	7.3	6.2	0.3	1.7

35: Hull Shore Drive & Mid Block 3 Performance by approach

Approach	NB	All
Denied Del/Veh (s)	0.0	0.0
Total Del/Veh (s)	4.1	4.1

39: Hull Shore Drive & Mid Block 2 Performance by approach

Approach	NB	All
Denied Del/Veh (s)	0.0	0.0
Total Del/Veh (s)	3.0	3.0

43: Nantasket Avenue & Crossing 1 Performance by approach

Approach	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	2.8	4.1	3.4

46: Hull Shore Drive & Mid Block 4 Performance by approach

Approach	NB	All
Denied Del/Veh (s)	0.0	0.0
Total Del/Veh (s)	4.4	4.4

48: Mid Block 1 & Hull Shore Drive Performance by approach

Approach	EB	All
Denied Del/Veh (s)	0.0	0.0
Total Del/Veh (s)	3.3	3.3

53: Hull Shore Drive Extension & Grass Lot 2 Performance by approach

Approach	EB	NB	All
Denied Del/Veh (s)	0.1	0.0	0.0
Total Del/Veh (s)	3.7	0.5	1.3

Total Network Performance

Denied Del/Veh (s)	0.8
Total Del/Veh (s)	35.5

Arterial Level of Service: NB Hull Shore Drive Extension

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Grass Lot 2	53	0.2	19.4	0.1	24
DCR Northern Lot	7	0.2	12.4	0.1	25
Grass Lot 1	22	0.3	11.1	0.1	25
Hull Shore Drive Ext	5	0.1	5.5	0.0	18
Phipps Street	2	13.2	21.6	0.0	7
Total		13.9	70.0	0.4	19

Arterial Level of Service: EB Phipps Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Hull Shore Drive Ext	2	0.3	8.0	0.0	19
Hull Shore Drive Ext	1	0.0	4.3	0.0	25
Total		0.3	12.3	0.1	21

Arterial Level of Service: WB Phipps Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Hull Shore Drive Ext	2	1.7	7.6	0.0	14
Samoset Avenue	3	17.7	34.8	0.0	7
Nantasket Avenue	4	37.8	46.6	0.0	3
Total		57.2	89.0	0.1	5

Arterial Level of Service: NB Samoset Avenue

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Phipps Street	3	5.1	25.7	0.1	14
Total		5.1	25.7	0.1	14

Arterial Level of Service: SB Samoset Avenue

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Phipps Street	3	7.7	29.4	0.1	17
Total		7.7	29.4	0.1	17

Arterial Level of Service: NB Nantasket Avenue

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
DCR Lot 3	20	0.4	16.6	0.1	25
DCR Lot 2 Enter	19	7.0	16.2	0.1	15
DCR Lot 2 Exit	18	0.8	6.6	0.0	21
Crossing 1	43	2.7	10.6	0.1	19
Hull Shore Drive	17	7.0	14.4	0.1	13
Edgewater Road	24	0.8	6.9	0.1	80
Samoset Avenue	23	0.3	4.9	0.1	38
Phipps Street	4	1.1	9.6	0.1	35
Total		20.1	85.8	0.6	26

Arterial Level of Service: SB Nantasket Avenue

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Mountford Road	4	1.2	16.3	0.2	38
Whitehead Avenue	23	1.0	8.6	0.1	39
Edgewater Road	24	0.3	5.1	0.1	37
Hull Shore Drive	8	0.5	13.3	0.1	37
Bay Street	28	3.6	10.0	0.1	27
Parrott Lot Driveway	29	3.5	31.1	0.2	24
George Washington Bo	30	0.6	4.8	0.0	21
Hull Shore Drive Con	17	10.1	21.1	0.1	13
Crossing 1	43	4.1	11.4	0.1	16
DCR Lot 2 Exit	18	0.9	8.6	0.1	24
Wharf Avenue	19	7.0	12.6	0.0	11
DCR Lot 3	20	1.4	11.0	0.1	22
Total		34.4	153.9	1.0	25

Arterial Level of Service: NB Hull Shore Drive

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Mid Block 1	48	4.1	9.4	0.0	10
DCR Lot 1	15	1.6	5.1	0.0	22
Mid Block 2	39	3.0	7.5	0.0	10
Parrott Lot Driveway	14	1.0	4.4	0.0	20
Mid Block 3	35	4.1	14.5	0.1	18
Mid Block 4	46	4.4	15.1	0.1	18
Water Street	13	1.1	9.9	0.1	23
Hull Shore Drive Ext	12	0.3	4.9	0.0	24
Nantasket Avenue	8	0.5	6.9	0.1	28
Total		20.2	77.8	0.4	18

Arterial Level of Service: EB Water Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Hull Shore Drive	13	14.6	20.9	0.0	6
Total		14.6	20.9	0.0	6

Arterial Level of Service: WB Water Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Nantasket Avenue	28	16.4	22.9	0.0	6
Total		16.4	22.9	0.0	6

Arterial Level of Service: EB Parrott Lot Driveway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Hull Shore Drive	14	8.1	14.4	0.0	7
Total		8.1	14.4	0.0	7

Arterial Level of Service: WB Parrott Lot Driveway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Nantasket Avenue	29	23.1	29.6	0.0	3
Total		23.1	29.6	0.0	3

Arterial Level of Service: EB Hull Shore Drive Connection

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Nantasket Avenue	17	10.0	21.6	0.1	10
Total		10.0	21.6	0.1	10

Arterial Level of Service: EB Wharf Avenue

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
George Washington Bo	32	16.6	21.6	0.0	7
Nantasket Avenue	19	14.7	19.1	0.0	8
Total		31.4	40.7	0.1	7

Arterial Level of Service: WB Wharf Avenue

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
George Washington Bo	32	21.6	28.7	0.0	5
Total		21.6	28.7	0.0	5

Arterial Level of Service: NB George Washington Boulevard

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Wharf Avenue	32	7.1	20.0	0.1	27
Hull Shore Drive Con	31	6.1	14.6	0.1	24
	11	2.6	9.6	0.1	29
Bay Street	33	2.0	5.2	0.0	27
Nantasket Avenue	30	3.3	7.2	0.0	12
Total		21.2	56.5	0.4	25

Arterial Level of Service: SB George Washington Boulevard

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Bay Street	33	0.3	5.8	0.0	15
	11	0.2	6.3	0.0	22
Hull Shore Drive Con	31	0.1	8.1	0.1	34
Wharf Avenue	32	6.2	15.2	0.1	23
Total		6.8	35.3	0.2	24

Intersection: 1: Hull Shore Drive Extension/Manomet Avenue & Phipps Street

Movement	NB	SB
Directions Served	LT	R
Maximum Queue (ft)	39	52
Average Queue (ft)	21	9
95th Queue (ft)	46	38
Link Distance (ft)	201	572
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: Hull Shore Drive Extension & Phipps Street

Movement	WB	NB	NB
Directions Served	T	L	R
Maximum Queue (ft)	10	91	25
Average Queue (ft)	2	43	5
95th Queue (ft)	14	91	22
Link Distance (ft)	80	129	129
Upstream Blk Time (%)		3	
Queuing Penalty (veh)		2	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: Samoset Avenue & Phipps Street

Movement	WB	NB	SB
Directions Served	TR	TR	R
Maximum Queue (ft)	133	54	39
Average Queue (ft)	51	29	12
95th Queue (ft)	121	48	34
Link Distance (ft)	150	431	695
Upstream Blk Time (%)	7		
Queuing Penalty (veh)	13		
Storage Bay Dist (ft)			
Storage Blk Time (%)		2	
Queuing Penalty (veh)		0	

Intersection: 4: Nantasket Avenue & Mountford Road/Phipps Street

Movement	EB	WB	WB	NB	SB
Directions Served	R	L	R	LT	TR
Maximum Queue (ft)	26	128	48	119	36
Average Queue (ft)	7	74	8	12	2
95th Queue (ft)	26	134	33	56	19
Link Distance (ft)	375	117	117	373	856
Upstream Blk Time (%)		12			
Queuing Penalty (veh)		14			
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 5: Hull Shore Drive Extension

Movement	NB
Directions Served	T
Maximum Queue (ft)	33
Average Queue (ft)	3
95th Queue (ft)	27
Link Distance (ft)	89
Upstream Blk Time (%)	1
Queuing Penalty (veh)	1
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 7: Hull Shore Drive Extension & DCR Northern Lot

Movement	EB
Directions Served	L
Maximum Queue (ft)	55
Average Queue (ft)	25
95th Queue (ft)	51
Link Distance (ft)	81
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 8: Nantasket Avenue & Hull Shore Drive

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 12: Hull Shore Drive & Hull Shore Drive Extension

Movement	NB
Directions Served	T
Maximum Queue (ft)	17
Average Queue (ft)	1
95th Queue (ft)	10
Link Distance (ft)	104
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 13: Hull Shore Drive & Water Street

Movement	EB	NB	NB
Directions Served	L	LT	T
Maximum Queue (ft)	68	10	7
Average Queue (ft)	31	2	0
95th Queue (ft)	62	14	4
Link Distance (ft)	151	290	290
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 14: Hull Shore Drive & Parrott Lot Driveway

Movement	EB	NB	NB
Directions Served	L	LT	T
Maximum Queue (ft)	50	72	84
Average Queue (ft)	17	22	18
95th Queue (ft)	43	64	58
Link Distance (ft)	114	90	90
Upstream Blk Time (%)		0	0
Queuing Penalty (veh)		0	0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 15: Hull Shore Drive & DCR Lot 1

Movement	WB	NB	NB
Directions Served	R	T	TR
Maximum Queue (ft)	14	107	104
Average Queue (ft)	2	35	31
95th Queue (ft)	9	91	84
Link Distance (ft)	12	83	83
Upstream Blk Time (%)	2	1	0
Queuing Penalty (veh)	0	3	2
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 17: Nantasket Avenue & Hull Shore Drive Connection/Hull Shore Drive

Movement	EB	EB	NB	NB	SB	SB
Directions Served	T	T	R	R	T	T
Maximum Queue (ft)	131	138	121	137	159	111
Average Queue (ft)	56	76	51	57	81	46
95th Queue (ft)	112	120	81	99	131	85
Link Distance (ft)	174	174	170	170	324	324
Upstream Blk Time (%)	0	0	0	0		
Queuing Penalty (veh)	0	0	0	0		
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 18: Nantasket Avenue & DCR Lot 2 Exit

Movement	WB	SB
Directions Served	LR	T
Maximum Queue (ft)	50	53
Average Queue (ft)	22	4
95th Queue (ft)	46	26
Link Distance (ft)	35	252
Upstream Blk Time (%)	3	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 19: Nantasket Avenue & Wharf Avenue/DCR Lot 2 Enter

Movement	EB	EB	NB	NB	SB	SB
Directions Served	LT	R	LT	TR	LT	R
Maximum Queue (ft)	55	60	163	135	156	59
Average Queue (ft)	22	18	66	31	75	20
95th Queue (ft)	48	45	129	87	159	53
Link Distance (ft)	137	137	284	284	147	147
Upstream Blk Time (%)					2	
Queuing Penalty (veh)					3	
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 20: Nantasket Avenue & DCR Lot 3

Movement	WB
Directions Served	LR
Maximum Queue (ft)	48
Average Queue (ft)	15
95th Queue (ft)	40
Link Distance (ft)	45
Upstream Blk Time (%)	0
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 22: Hull Shore Drive Extension & Grass Lot 1

Movement	EB	NB
Directions Served	L	LT
Maximum Queue (ft)	63	19
Average Queue (ft)	24	1
95th Queue (ft)	48	11
Link Distance (ft)	58	339
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 23: Nantasket Avenue & Whitehead Avenue/Samoset Avenue

Movement	EB
Directions Served	R
Maximum Queue (ft)	25
Average Queue (ft)	6
95th Queue (ft)	20
Link Distance (ft)	420
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 24: Nantasket Avenue & Edgewater Road

Movement	EB	NB	SB	SB
Directions Served	LR	UL	U	TR
Maximum Queue (ft)	25	57	29	7
Average Queue (ft)	8	21	5	0
95th Queue (ft)	22	48	23	4
Link Distance (ft)	491			191
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		100	100	
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 28: Nantasket Avenue & Bay Street/Water Street

Movement	EB	WB	SB	SB
Directions Served	TR	LT	LT	TR
Maximum Queue (ft)	80	118	84	104
Average Queue (ft)	31	53	30	49
95th Queue (ft)	61	97	65	85
Link Distance (ft)	293	151	341	341
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 29: Nantasket Avenue & Parrott Lot Driveway

Movement	WB	SB	SB
Directions Served	L	LT	T
Maximum Queue (ft)	50	96	226
Average Queue (ft)	16	9	37
95th Queue (ft)	45	49	137
Link Distance (ft)	114	1043	1043
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 30: Nantasket Avenue & George Washington Boulevard

Movement	EB	SB	SB
Directions Served	R	T	TR
Maximum Queue (ft)	24	36	99
Average Queue (ft)	12	2	45
95th Queue (ft)	32	17	108
Link Distance (ft)	18	93	93
Upstream Blk Time (%)	2		2
Queuing Penalty (veh)	0		8
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 31: George Washington Boulevard & Hull Shore Drive Connection

Movement	
Directions Served	
Maximum Queue (ft)	
Average Queue (ft)	
95th Queue (ft)	
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 32: George Washington Boulevard & Wharf Avenue

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	58	139	138	72	110	122
Average Queue (ft)	22	82	72	30	51	53
95th Queue (ft)	51	137	123	65	87	96
Link Distance (ft)	179	137	740	740	452	452
Upstream Blk Time (%)		1				
Queuing Penalty (veh)		2				
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 33: George Washington Boulevard & Bay Street

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	72	70	45
Average Queue (ft)	28	31	11
95th Queue (ft)	54	64	37
Link Distance (ft)	206	157	18
Upstream Blk Time (%)			0
Queuing Penalty (veh)			2
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 35: Hull Shore Drive & Mid Block 3

Movement	NB	NB
Directions Served	T	T
Maximum Queue (ft)	162	108
Average Queue (ft)	54	42
95th Queue (ft)	117	86
Link Distance (ft)	325	325
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 39: Hull Shore Drive & Mid Block 2

Movement	NB	NB
Directions Served	T	T
Maximum Queue (ft)	107	89
Average Queue (ft)	39	33
95th Queue (ft)	93	80
Link Distance (ft)	82	82
Upstream Blk Time (%)	1	0
Queuing Penalty (veh)	3	2
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 43: Nantasket Avenue & Crossing 1

Movement	NB	NB	SB	SB
Directions Served	T	T	T	T
Maximum Queue (ft)	67	85	108	68
Average Queue (ft)	12	15	21	9
95th Queue (ft)	44	56	74	40
Link Distance (ft)	252	252	170	170
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 46: Hull Shore Drive & Mid Block 4

Movement	NB	NB
Directions Served	T	T
Maximum Queue (ft)	156	110
Average Queue (ft)	59	39
95th Queue (ft)	121	89
Link Distance (ft)	358	358
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 48: Mid Block 1 & Hull Shore Drive

Movement	EB	EB
Directions Served	T	T
Maximum Queue (ft)	116	116
Average Queue (ft)	40	44
95th Queue (ft)	95	104
Link Distance (ft)	99	99
Upstream Blk Time (%)	0	0
Queuing Penalty (veh)	1	1
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 53: Hull Shore Drive Extension & Grass Lot 2

Movement	EB
Directions Served	L
Maximum Queue (ft)	48
Average Queue (ft)	23
95th Queue (ft)	47
Link Distance (ft)	80
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 57

Summary of All Intervals

Run Number	1	2	3	Avg
Start Time	11:45	11:45	11:45	11:45
End Time	1:00	1:00	1:00	1:00
Total Time (min)	75	75	75	75
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	3051	3092	3008	3053
Vehs Exited	3016	3073	2967	3019
Starting Vehs	135	140	111	123
Ending Vehs	170	159	152	155
Travel Distance (mi)	2502	2497	2534	2511
Travel Time (hr)	150.3	176.9	174.3	167.2
Total Delay (hr)	60.7	87.5	84.4	77.5
Total Stops	6017	5837	5776	5879
Fuel Used (gal)	105.9	112.3	112.5	110.2

Interval #0 Information Seeding

Start Time	11:45
End Time	12:00
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.
No data recorded this interval.

Interval #1 Information 1

Start Time	12:00
End Time	12:15
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	Avg
Vehs Entered	703	756	715	726
Vehs Exited	699	742	697	713
Starting Vehs	135	140	111	123
Ending Vehs	139	154	129	133
Travel Distance (mi)	606	631	603	613
Travel Time (hr)	31.2	35.1	30.1	32.1
Total Delay (hr)	9.5	12.4	8.8	10.2
Total Stops	1371	1550	1264	1394
Fuel Used (gal)	24.4	26.4	24.1	25.0

Interval #2 Information 2

Start Time	12:15
End Time	12:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	Avg
Vehs Entered	898	872	855	871
Vehs Exited	874	834	819	839
Starting Vehs	139	154	129	133
Ending Vehs	163	192	165	170
Travel Distance (mi)	675	637	652	655
Travel Time (hr)	40.1	46.9	40.0	42.3
Total Delay (hr)	15.8	24.1	17.0	19.0
Total Stops	1721	1478	1461	1553
Fuel Used (gal)	28.6	29.1	27.7	28.5

Interval #3 Information 3

Start Time	12:30
End Time	12:45
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	Avg
Vehs Entered	716	682	732	708
Vehs Exited	725	729	720	725
Starting Vehs	163	192	165	170
Ending Vehs	154	145	177	154
Travel Distance (mi)	597	585	637	606
Travel Time (hr)	38.3	48.7	48.6	45.2
Total Delay (hr)	17.0	27.7	25.9	23.6
Total Stops	1429	1371	1507	1434
Fuel Used (gal)	25.6	27.5	29.6	27.6

Interval #4 Information 4

Start Time	12:45
End Time	1:00
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	Avg
Vehs Entered	734	782	706	737
Vehs Exited	718	768	731	737
Starting Vehs	154	145	177	154
Ending Vehs	170	159	152	155
Travel Distance (mi)	623	645	641	636
Travel Time (hr)	40.7	46.2	55.6	47.5
Total Delay (hr)	18.3	23.3	32.8	24.8
Total Stops	1496	1438	1544	1489
Fuel Used (gal)	27.2	29.3	31.1	29.2

1: Hull Shore Drive Extension/Manomet Avenue & Phipps Street Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.0
Total Del/Veh (s)	0.1	13.7	28.7	9.9

2: Hull Shore Drive Extension & Phipps Street Performance by approach

Approach	EB	WB	NB	All
Denied Del/Veh (s)	0.0	3.7	0.0	0.7
Total Del/Veh (s)	0.4	38.2	93.5	61.3

3: Samoset Avenue & Phipps Street Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	7.5	0.0	0.2	3.0
Total Del/Veh (s)	99.3	8.7	409.5	73.9

4: Nantasket Avenue & Mountford Road/Phipps Street Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	80.6	0.0	0.5	11.9
Total Del/Veh (s)	13.1	68.9	1.7	1.9	11.3

5: Hull Shore Drive Extension Performance by approach

Approach	NB	All
Denied Del/Veh (s)	0.4	0.4
Total Del/Veh (s)	25.2	25.2

7: Hull Shore Drive Extension & DCR Northern Lot Performance by approach

Approach	EB	NB	All
Denied Del/Veh (s)	38.9	0.0	7.6
Total Del/Veh (s)	42.9	28.7	31.4

12: Nantasket Avenue & Hull Shore Drive Extension Performance by approach

Approach	NB	All
Denied Del/Veh (s)	0.0	0.0
Total Del/Veh (s)	0.7	0.7

13: Hull Shore Drive/Nantasket Avenue & Water Street Performance by approach

Approach	EB	NB	All
Denied Del/Veh (s)	0.5	0.0	0.0
Total Del/Veh (s)	32.7	2.3	4.4

14: Hull Shore Drive & Parrott Lot Driveway Performance by approach

Approach	EB	NB	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	11.9	1.4	1.6

16: Hull Shore Drive & DCR Lot 1 Performance by approach

Approach	WB	NB	All
Denied Del/Veh (s)	0.4	0.0	0.0
Total Del/Veh (s)	11.8	2.3	2.4

17: Hull Shore Drive Connector/Hull Shore Drive & Nantasket Avenue Performance by approach

Approach	NB	SB	NE	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	10.0	10.1	11.5	10.7

18: Nantasket Avenue & DCR Lot 2 Exit Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Del/Veh (s)	3.6	0.8	0.7	0.9

19: Nantasket Avenue & Wharf Avenue/DCR Lot 2 Enter Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.0
Total Del/Veh (s)	21.4	9.8	7.3	11.0

20: Nantasket Avenue & DCR Lot 3 Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.3	0.0	0.2
Total Del/Veh (s)	5.7	1.0	1.6	1.4

22: Hull Shore Drive Extension & Grass Lot 1 Performance by approach

Approach	EB	NB	All
Denied Del/Veh (s)	417.1	0.0	75.8
Total Del/Veh (s)	73.5	75.3	75.0

23: Nantasket Avenue & Whitehead Avenue & Samoset Avenue Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Del/Veh (s)	3.0	0.4	1.2	0.8

24: Nantasket Avenue & Edgewater Road Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Del/Veh (s)	20.2	1.1	0.4	1.0

27: Nantasket Avenue Performance by approach

Approach	WB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	0.7	0.6	0.6

28: Nantasket Avenue & Bay Street/Water Street Performance by approach

Approach	EB	WB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0
Total Del/Veh (s)	15.6	22.7	5.5	8.5

29: Nantasket Avenue & Parrott Lot Driveway Performance by approach

Approach	WB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	8.8	2.9	3.0

30: Nantasket Avenue & George Washington Boulevard Performance by approach

Approach	EB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	2.9	1.2	1.3

31: George Washington Boulevard & Hull Shore Drive Connector Performance by approach

Approach	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	4.4	0.1	2.7

32: George Washington Boulevard & Wharf Avenue Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.1	0.2	0.0	0.1
Total Del/Veh (s)	14.2	22.4	11.2	8.2	11.0

33: George Washington Boulevard & Bay Street Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Del/Veh (s)	7.6	6.4	0.3	1.9

38: Hull Shore Drive & Mid Block 2 Performance by approach

Approach	NB	All
Denied Del/Veh (s)	0.0	0.0
Total Del/Veh (s)	3.3	3.3

40: Nantasket Avenue & Crossing 1 Performance by approach

Approach	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	3.0	4.0	3.4

44: Mid Block 1 & Hull Shore Drive Performance by approach

Approach	EB	All
Denied Del/Veh (s)	0.1	0.1
Total Del/Veh (s)	3.5	3.5

46: Hull Shore Drive & Mid Block 4 Performance by approach

Approach	NB	All
Denied Del/Veh (s)	0.1	0.1
Total Del/Veh (s)	5.6	5.6

48: Hull Shore Drive & Mid Block 3 Performance by approach

Approach	NB	All
Denied Del/Veh (s)	0.0	0.0
Total Del/Veh (s)	4.7	4.7

52: Hull Shore Drive Extension & Grass Lot 2 Performance by approach

Approach	EB	NB	All
Denied Del/Veh (s)	1.1	0.0	0.2
Total Del/Veh (s)	6.3	0.9	2.1

Total Network Performance

Denied Del/Veh (s)	16.7
Total Del/Veh (s)	71.8

Arterial Level of Service: NB Hull Shore Drive Extension

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Grass Lot 2	52	0.6	21.4	0.1	22
DCR Northern Lot	7	26.3	38.2	0.1	8
Grass Lot 1	22	71.1	81.5	0.1	3
Hull Shore Drive Ext	5	0.2	6.1	0.0	17
Phipps Street	2	98.4	104.2	0.0	1
Total		196.7	251.4	0.4	5

Arterial Level of Service: EB Phipps Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Hull Shore Drive Ext	2	0.6	2.7	0.0	58
Hull Shore Drive Ext	1	0.1	5.1	0.0	21
Total		0.7	7.8	0.1	33

Arterial Level of Service: WB Phipps Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Hull Shore Drive Ext	2	27.1	32.7	0.0	3
Samoset Avenue	3	96.6	130.3	0.0	1
Nantasket Avenue	4	82.8	195.7	0.0	1
Total		206.5	358.8	0.1	2

Arterial Level of Service: NB Samoset Avenue

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Phipps Street	3	6.4	26.3	0.1	14
Total		6.4	26.3	0.1	14

Arterial Level of Service: SB Samoset Avenue

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Phipps Street	3	409.5	428.9	0.1	1
Total		409.5	428.9	0.1	1

Arterial Level of Service: NB Nantasket Avenue

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
DCR Lot 3	20	1.0	17.1	0.1	24
DCR Lot 2 Enter	19	9.2	18.5	0.1	13
DCR Lot 2 Exit	18	0.9	6.7	0.0	20
Crossing 1	40	3.0	11.1	0.1	18
Hull Shore Drive	17	10.1	17.4	0.1	11
Edgewater Road	24	0.4	5.7	0.1	91
Samoset Avenue	23	0.3	5.0	0.1	37
Phipps Street	4	1.6	9.9	0.1	34
Total		26.6	91.5	0.6	24

Arterial Level of Service: SB Nantasket Avenue

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Mountford Road	4	1.9	17.4	0.2	37
Whitehead Avenue	23	1.2	9.2	0.1	37
Edgewater Road	24	0.3	5.0	0.1	38
Nantasket Avenue	27	0.6	13.3	0.1	37
Bay Street	28	-	-	0.1	-
Parrott Lot Driveway	29	3.1	32.6	0.2	23
George Washington Bo	30	0.5	4.6	0.0	22
Hull Shore Drive Con	17	10.2	21.2	0.1	13
Crossing 1	40	4.0	11.3	0.1	16
DCR Lot 2 Exit	18	0.7	8.1	0.1	25
Wharf Avenue	19	8.1	13.6	0.0	10
DCR Lot 3	20	1.7	11.5	0.1	21
Total		32.3	147.7	1.1	26

Arterial Level of Service: NB Hull Shore Drive

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Mid Block 1	44	4.3	9.5	0.0	10
DCR Lot 1	16	2.3	5.8	0.0	19
Mid Block 2	38	3.3	7.8	0.0	10
Parrott Lot Driveway	14	1.4	4.8	0.0	19
Mid Block 3	48	4.8	15.2	0.1	17
Mid Block 4	46	5.6	16.0	0.1	17
Water Street	13	2.2	11.0	0.1	20
Total		23.8	70.1	0.3	16

Arterial Level of Service: EB Water Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Hull Shore Drive	13	39.0	46.7	0.0	3
Total		39.0	46.7	0.0	3

Arterial Level of Service: WB Water Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Nantasket Avenue	28	22.4	29.2	0.0	5
Total		22.4	29.2	0.0	5

Arterial Level of Service: EB Parrott Lot Driveway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Hull Shore Drive	14	11.9	18.2	0.0	6
Total		11.9	18.2	0.0	6

Arterial Level of Service: WB Parrott Lot Driveway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Nantasket Avenue	29	9.3	15.5	0.0	7
Total		9.3	15.5	0.0	7

Arterial Level of Service: NE Hull Shore Drive Connector

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Nantasket Avenue	17	11.4	23.0	0.1	10
Total		11.4	23.0	0.1	10

Arterial Level of Service: EB Wharf Avenue

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
George Washington Bo	32	19.9	24.9	0.0	6
Nantasket Avenue	19	21.4	24.3	0.0	6
Total		41.2	49.3	0.1	6

Arterial Level of Service: WB Wharf Avenue

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
George Washington Bo	32	18.9	26.1	0.0	6
Total		18.9	26.1	0.0	6

Arterial Level of Service: NB George Washington Boulevard

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Wharf Avenue	32	11.4	24.4	0.1	22
Hull Shore Drive Con	31	7.1	15.4	0.1	23
	11	3.2	10.2	0.1	27
Bay Street	33	3.2	6.3	0.0	22
Nantasket Avenue	30	3.0	7.1	0.0	12
Total		27.9	63.5	0.4	22

Arterial Level of Service: SB George Washington Boulevard

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Bay Street	33	0.3	5.9	0.0	14
	11	0.5	5.4	0.0	26
Hull Shore Drive Con	31	0.1	6.9	0.1	40
Wharf Avenue	32	7.7	16.6	0.1	21
Total		8.6	34.7	0.2	24

Intersection: 1: Hull Shore Drive Extension/Manomet Avenue & Phipps Street

Movement	NB	SB
Directions Served	LT	R
Maximum Queue (ft)	109	51
Average Queue (ft)	38	20
95th Queue (ft)	83	51
Link Distance (ft)	211	577
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: Hull Shore Drive Extension & Phipps Street

Movement	EB	WB	NB	NB
Directions Served	T	T	L	R
Maximum Queue (ft)	10	96	151	25
Average Queue (ft)	1	36	115	6
95th Queue (ft)	8	87	181	23
Link Distance (ft)	150	81	138	138
Upstream Blk Time (%)		11	51	
Queuing Penalty (veh)		6	48	
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: Samoset Avenue & Phipps Street

Movement	WB	NB	NB	SB
Directions Served	TR	L	TR	LTR
Maximum Queue (ft)	163	57	83	297
Average Queue (ft)	145	18	41	120
95th Queue (ft)	207	47	69	412
Link Distance (ft)	150		444	709
Upstream Blk Time (%)	61			
Queuing Penalty (veh)	137			
Storage Bay Dist (ft)		40		
Storage Blk Time (%)		4	8	
Queuing Penalty (veh)		10	2	

Intersection: 4: Nantasket Avenue & Mountford Road/Phipps Street

Movement	EB	WB	WB	NB	SB
Directions Served	R	L	R	LT	TR
Maximum Queue (ft)	40	135	51	102	89
Average Queue (ft)	8	114	22	16	7
95th Queue (ft)	29	143	48	62	45
Link Distance (ft)	372	117	117	390	876
Upstream Blk Time (%)		62			
Queuing Penalty (veh)		85			
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 5: Hull Shore Drive Extension

Movement	NB
Directions Served	T
Maximum Queue (ft)	97
Average Queue (ft)	56
95th Queue (ft)	123
Link Distance (ft)	79
Upstream Blk Time (%)	44
Queuing Penalty (veh)	62
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 7: Hull Shore Drive Extension & DCR Northern Lot

Movement	EB	NB	NB
Directions Served	L	LT	T
Maximum Queue (ft)	90	278	259
Average Queue (ft)	44	65	42
95th Queue (ft)	84	266	213
Link Distance (ft)	81	391	391
Upstream Blk Time (%)	12	2	1
Queuing Penalty (veh)	0	3	1
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 12: Nantasket Avenue & Hull Shore Drive Extension

Movement	NB
Directions Served	TR
Maximum Queue (ft)	10
Average Queue (ft)	0
95th Queue (ft)	6
Link Distance (ft)	103
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 13: Hull Shore Drive/Nantasket Avenue & Water Street

Movement	EB	NB	NB
Directions Served	L	LT	T
Maximum Queue (ft)	138	185	112
Average Queue (ft)	51	51	26
95th Queue (ft)	109	124	79
Link Distance (ft)	151	284	284
Upstream Blk Time (%)	0	0	
Queuing Penalty (veh)	0	0	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 14: Hull Shore Drive & Parrott Lot Driveway

Movement	EB	NB	NB
Directions Served	L	LT	T
Maximum Queue (ft)	38	101	93
Average Queue (ft)	14	33	32
95th Queue (ft)	39	89	83
Link Distance (ft)	114	92	92
Upstream Blk Time (%)		0	0
Queuing Penalty (veh)		2	1
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 16: Hull Shore Drive & DCR Lot 1

Movement	WB	NB	NB
Directions Served	R	T	TR
Maximum Queue (ft)	14	101	100
Average Queue (ft)	2	51	52
95th Queue (ft)	10	105	108
Link Distance (ft)	12	83	83
Upstream Blk Time (%)	4	2	2
Queuing Penalty (veh)	0	11	10
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 17: Hull Shore Drive Connector/Hull Shore Drive & Nantasket Avenue

Movement	NB	NB	SB	SB	NE	NE
Directions Served	R	R	T	T	T	T
Maximum Queue (ft)	130	144	138	91	164	197
Average Queue (ft)	71	77	71	35	78	104
95th Queue (ft)	113	128	119	75	153	177
Link Distance (ft)	170	170	324	324	172	172
Upstream Blk Time (%)		0			0	1
Queuing Penalty (veh)		0			1	4
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 18: Nantasket Avenue & DCR Lot 2 Exit

Movement	WB	SB
Directions Served	LR	T
Maximum Queue (ft)	42	52
Average Queue (ft)	15	2
95th Queue (ft)	38	19
Link Distance (ft)	35	252
Upstream Blk Time (%)	1	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 19: Nantasket Avenue & Wharf Avenue/DCR Lot 2 Enter

Movement	EB	EB	NB	NB	SB	SB
Directions Served	LT	R	LT	TR	LT	R
Maximum Queue (ft)	112	66	148	134	157	44
Average Queue (ft)	47	33	68	45	63	13
95th Queue (ft)	87	64	124	104	130	37
Link Distance (ft)	137	137	284	284	147	147
Upstream Blk Time (%)	0				1	
Queuing Penalty (veh)	0				1	
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 20: Nantasket Avenue & DCR Lot 3

Movement	WB	NB	SB
Directions Served	LR	T	T
Maximum Queue (ft)	44	90	90
Average Queue (ft)	15	20	13
95th Queue (ft)	39	61	54
Link Distance (ft)	45	575	284
Upstream Blk Time (%)	0		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 22: Hull Shore Drive Extension & Grass Lot 1

Movement	EB	NB	NB
Directions Served	L	LT	T
Maximum Queue (ft)	66	285	248
Average Queue (ft)	38	153	90
95th Queue (ft)	60	414	329
Link Distance (ft)	58	339	339
Upstream Blk Time (%)	45	22	8
Queuing Penalty (veh)	0	31	11
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 23: Nantasket Avenue & Whitehead Avenue & Samoset Avenue

Movement	EB
Directions Served	R
Maximum Queue (ft)	29
Average Queue (ft)	8
95th Queue (ft)	27
Link Distance (ft)	422
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 24: Nantasket Avenue & Edgewater Road

Movement	EB	NB	SB
Directions Served	LR	L	U
Maximum Queue (ft)	51	50	30
Average Queue (ft)	10	18	6
95th Queue (ft)	33	43	26
Link Distance (ft)	491		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		100	100
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 27: Nantasket Avenue

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 28: Nantasket Avenue & Bay Street/Water Street

Movement	EB	WB	SB	SB
Directions Served	TR	LT	LT	TR
Maximum Queue (ft)	83	124	142	131
Average Queue (ft)	30	66	54	65
95th Queue (ft)	63	111	101	110
Link Distance (ft)	293	151	344	344
Upstream Blk Time (%)		0		
Queuing Penalty (veh)		0		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 29: Nantasket Avenue & Parrott Lot Driveway

Movement	WB	SB	SB
Directions Served	L	LT	T
Maximum Queue (ft)	45	31	77
Average Queue (ft)	15	3	14
95th Queue (ft)	42	18	52
Link Distance (ft)	114	1041	1041
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 30: Nantasket Avenue & George Washington Boulevard

Movement	EB	SB	SB
Directions Served	R	T	TR
Maximum Queue (ft)	24	30	111
Average Queue (ft)	13	1	33
95th Queue (ft)	32	10	90
Link Distance (ft)	21	93	93
Upstream Blk Time (%)	2		0
Queuing Penalty (veh)	1		2
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 31: George Washington Boulevard & Hull Shore Drive Connector

Movement	NB	NB
Directions Served	TR	R
Maximum Queue (ft)	60	50
Average Queue (ft)	3	4
95th Queue (ft)	27	27
Link Distance (ft)	452	452
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 32: George Washington Boulevard & Wharf Avenue

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	80	133	232	184	136	123
Average Queue (ft)	28	64	124	85	62	66
95th Queue (ft)	63	117	206	159	108	112
Link Distance (ft)	179	137	742	742	452	452
Upstream Blk Time (%)		1				
Queuing Penalty (veh)		1				
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 33: George Washington Boulevard & Bay Street

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	82	89	55
Average Queue (ft)	32	33	13
95th Queue (ft)	62	72	46
Link Distance (ft)	208	154	21
Upstream Blk Time (%)			1
Queuing Penalty (veh)			5
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 38: Hull Shore Drive & Mid Block 2

Movement	NB	NB
Directions Served	T	T
Maximum Queue (ft)	97	99
Average Queue (ft)	47	50
95th Queue (ft)	99	101
Link Distance (ft)	81	81
Upstream Blk Time (%)	1	1
Queuing Penalty (veh)	7	6
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 40: Nantasket Avenue & Crossing 1

Movement	NB	NB	SB	SB
Directions Served	T	T	T	T
Maximum Queue (ft)	97	91	101	64
Average Queue (ft)	19	21	19	8
95th Queue (ft)	61	68	68	35
Link Distance (ft)	252	252	170	170
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 44: Mid Block 1 & Hull Shore Drive

Movement	EB	EB
Directions Served	T	T
Maximum Queue (ft)	116	133
Average Queue (ft)	53	60
95th Queue (ft)	112	124
Link Distance (ft)	99	99
Upstream Blk Time (%)	1	1
Queuing Penalty (veh)	4	6
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 46: Hull Shore Drive & Mid Block 4

Movement	NB	NB
Directions Served	T	T
Maximum Queue (ft)	188	212
Average Queue (ft)	84	78
95th Queue (ft)	158	157
Link Distance (ft)	353	353
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 48: Hull Shore Drive & Mid Block 3

Movement	NB	NB
Directions Served	T	T
Maximum Queue (ft)	179	157
Average Queue (ft)	61	59
95th Queue (ft)	137	120
Link Distance (ft)	325	325
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 52: Hull Shore Drive Extension & Grass Lot 2

Movement	EB	NB	NB
Directions Served	L	LT	T
Maximum Queue (ft)	80	41	10
Average Queue (ft)	33	1	0
95th Queue (ft)	61	17	6
Link Distance (ft)	77	633	633
Upstream Blk Time (%)	1		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 457

Summary of All Intervals

Run Number	1	2	3	Avg
Start Time	3:45	3:45	3:45	3:45
End Time	5:00	5:00	5:00	5:00
Total Time (min)	75	75	75	75
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	2743	2770	2680	2727
Vehs Exited	2747	2757	2736	2748
Starting Vehs	113	101	131	110
Ending Vehs	109	114	75	91
Travel Distance (mi)	2425	2442	2408	2425
Travel Time (hr)	112.2	115.6	113.0	113.6
Total Delay (hr)	28.0	30.3	28.8	29.0
Total Stops	4045	4252	4175	4158
Fuel Used (gal)	89.6	91.2	89.8	90.2

Interval #0 Information Seeding

Start Time	3:45
End Time	4:00
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.
No data recorded this interval.

Interval #1 Information 1

Start Time	4:00
End Time	4:15
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	Avg
Vehs Entered	670	674	645	658
Vehs Exited	664	658	678	666
Starting Vehs	113	101	131	110
Ending Vehs	119	117	98	101
Travel Distance (mi)	590	583	595	589
Travel Time (hr)	26.4	27.9	27.7	27.3
Total Delay (hr)	5.9	7.7	6.8	6.8
Total Stops	909	1046	969	979
Fuel Used (gal)	21.4	21.9	22.2	21.8

Interval #2 Information 2

Start Time	4:15
End Time	4:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	Avg
Vehs Entered	741	743	741	737
Vehs Exited	743	740	722	736
Starting Vehs	119	117	98	101
Ending Vehs	117	120	117	114
Travel Distance (mi)	647	647	636	643
Travel Time (hr)	30.5	30.8	30.4	30.6
Total Delay (hr)	8.1	8.2	8.1	8.1
Total Stops	1126	1091	1162	1125
Fuel Used (gal)	24.0	24.1	23.8	24.0

Interval #3 Information 3

Start Time	4:30
End Time	4:45
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	Avg
Vehs Entered	650	697	704	681
Vehs Exited	662	704	697	688
Starting Vehs	117	120	117	114
Ending Vehs	105	113	124	108
Travel Distance (mi)	594	637	643	625
Travel Time (hr)	27.4	30.5	30.8	29.6
Total Delay (hr)	6.6	8.1	8.3	7.7
Total Stops	1014	1179	1180	1125
Fuel Used (gal)	22.0	24.2	24.3	23.5

Interval #4 Information 4

Start Time	4:45
End Time	5:00
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	Avg
Vehs Entered	682	656	590	640
Vehs Exited	678	655	639	657
Starting Vehs	105	113	124	108
Ending Vehs	109	114	75	91
Travel Distance (mi)	594	575	534	568
Travel Time (hr)	27.9	26.4	24.2	26.1
Total Delay (hr)	7.4	6.3	5.5	6.4
Total Stops	996	936	864	926
Fuel Used (gal)	22.1	21.1	19.5	20.9

2: Hull Shore Drive Extension & Phipps Street Performance by approach

Approach	EB	WB	NB	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	0.7	1.7	5.8	4.0

3: Phipps Street & Samoset Avenue Performance by approach

Approach	EB	WB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.9	0.2
Total Del/Veh (s)	2.1	1.0	5.6	2.4

4: Nantasket Avenue N & Mountford Road/Phipps Street Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.6	0.3
Total Del/Veh (s)	7.7	12.6	1.5	1.3	2.3

6: Hull Shore Drive & A Street Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.3	0.8	0.4	1.0

8: Hull Shore Drive & Edgewater Road Extension Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.0	1.0	0.3	1.0

10: Hull Shore Drive & B Street Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Del/Veh (s)	2.6	1.2	0.3	1.1

11: Hull Shore Drive & C Street Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	2.3	1.2	0.4	1.0

13: Hull Shore Drive & Water Street Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	10.9	2.6	0.5	2.4

14: Hull Shore Drive & Parrott Lot Driveway Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	11.5	1.2	1.2	1.5

15: Hull Shore Drive & Bay Street Extension Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	6.8	1.2	0.5	1.3

16: Nantasket Avenue & DCR Lot 3 Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.4	0.0	0.2
Total Del/Veh (s)	8.5	0.5	1.9	1.3

17: Nantasket Avenue & Hull Shore Drive Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	7.0	1.5	1.0	1.7

18: Nantasket Avenue & DCR Lot 2 Exit Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Del/Veh (s)	7.6	1.1	1.6	1.7

20: Nantasket Avenue & Wharf Avenue/DCR Lot 2 Enter Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	17.5	10.4	7.5	9.8

22: Nantasket Avenue N & A Street Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	8.6	0.6	1.2	1.2

23: Nantasket Avenue N & Whitehead Avenue Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Del/Veh (s)	12.5	1.2	0.4	1.0

24: Nantasket Avenue N & Edgewater Road/Edgewater Road Extension Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	4.5	9.8	1.7	1.1	1.9

26: Nantasket Avenue N & B Street Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	8.8	1.7	1.3	1.9

27: Nantasket Avenue N & C Street Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Del/Veh (s)	14.7	3.1	1.1	2.9

28: Nantasket Avenue N & Bay Street/Water Street Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	16.1	18.3	11.3	7.4	10.5

29: Nantasket Avenue N & Parrott Lot Driveway Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.3	0.1
Total Del/Veh (s)	42.4	1.4	4.6	3.5

30: George Washington Boulevard/Nantasket Avenue N & Bay Street/Bay Street Extension Performance

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	11.9	25.0	2.9	2.2	3.3

31: George Washington Boulevard & Hull Shore Drive Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	13.3	3.3	1.6	2.7

32: George Washington Boulevard & Wharf Avenue Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.2	0.0	0.1
Total Del/Veh (s)	13.7	18.0	11.2	12.9	12.8

35: Hull Shore Drive & Mid Block 3 Performance by approach

Approach	NB	SB	All
Denied Del/Veh (s)	0.0	0.1	0.0
Total Del/Veh (s)	4.8	4.5	4.6

42: Nantasket Avenue & Crossing 1 Performance by approach

Approach	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0
Total Del/Veh (s)	4.4	3.5	3.9

46: Hull Shore Drive & Mid Block 4 Performance by approach

Approach	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	5.0	3.9	4.5

Total Network Performance

Denied Del/Veh (s)	0.5
Total Del/Veh (s)	36.4

Arterial Level of Service: NB Hull Shore Drive Extension

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Phipps Street	2	6.4	18.1	0.1	17
Total		6.4	18.1	0.1	17

Arterial Level of Service: SB Hull Shore Drive Extension

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
A Street	6	0.3	13.7	0.1	23
Total		0.3	13.7	0.1	23

Arterial Level of Service: EB Phipps Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Samoset Avenue	3	0.6	7.3	0.0	17
Hull Shore Drive Ext	2	1.2	5.4	0.0	29
	1	0.2	3.5	0.0	30
Total		2.0	16.3	0.1	24

Arterial Level of Service: WB Phipps Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Hull Shore Drive Ext	2	0.4	3.1	0.0	34
Samoset Avenue	3	0.9	5.7	0.0	27
Nantasket Avenue N	4	21.5	27.2	0.0	5
Total		22.8	36.1	0.1	11

Arterial Level of Service: NB Nantasket Avenue N

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Parrott Lot Driveway	29	1.5	6.8	0.0	24
Water Street	28	11.1	36.0	0.2	21
C Street	27	3.3	11.4	0.1	22
B Street	26	1.8	10.6	0.1	25
Edgewater Road Exten	24	1.6	10.3	0.1	25
Whitehead Avenue	23	1.0	7.1	0.0	25
A Street	22	0.6	3.7	0.0	27
Phipps Street	4	1.5	9.5	0.1	25
Total		22.5	95.5	0.6	23

Arterial Level of Service: SB Nantasket Avenue N

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Mountford Road	4	1.1	21.1	0.2	29
A Street	22	1.0	9.2	0.1	26
Whitehead Avenue	23	0.3	2.9	0.0	35
Edgewater Road	24	0.9	6.9	0.0	25
B Street	26	1.0	9.9	0.1	26
C Street	27	1.0	9.7	0.1	27
Bay Street	28	7.2	15.6	0.1	16
Parrott Lot Driveway	29	4.6	28.4	0.2	27
Bay Street	30	1.5	6.4	0.0	25
Total		18.6	110.1	0.8	26

Arterial Level of Service: NB Hull Shore Drive

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Nantasket Avenue	17	11.2	17.7	0.0	8
Bay Street Extension	15	1.4	11.8	0.1	26
Parrott Lot Driveway	14	1.1	5.6	0.0	24
Mid Block 3	35	4.8	13.3	0.1	19
Mid Block 4	46	5.0	13.9	0.1	20
Water Street	13	2.1	9.3	0.1	23
C Street	11	0.9	8.5	0.1	29
B Street	10	0.9	9.8	0.1	27
Edgewater Road Exten	8	0.7	9.4	0.1	28
A Street	6	0.6	10.5	0.1	28
Phipps Street	2	6.4	18.1	0.1	17
Total		35.0	127.8	0.8	21

Arterial Level of Service: SB Hull Shore Drive

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
A Street	6	0.3	13.7	0.1	23
Edgewater Road Exten	8	0.3	10.3	0.1	29
B Street	10	0.3	8.9	0.1	29
C Street	11	0.4	9.2	0.1	29
Water Street	13	0.5	8.7	0.1	28
Mid Block 4	46	3.9	11.5	0.1	19
Mid Block 3	35	4.5	12.5	0.1	22
Parrott Lot Driveway	14	1.2	9.3	0.1	27
Bay Street Extension	15	0.5	5.0	0.0	27
Hull Shore Drive	17	0.3	12.7	0.1	24
George Washington Bo	31	13.4	21.4	0.0	6
Total		25.4	123.4	0.8	22

Arterial Level of Service: EB A Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Hull Shore Drive	6	6.4	17.2	0.1	12
Total		6.4	17.2	0.1	12

Arterial Level of Service: WB A Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Nantasket Avenue N	22	11.8	19.3	0.1	11
Total		11.8	19.3	0.1	11

Arterial Level of Service: EB Edgewater Road Extension

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Hull Shore Drive	8	5.3	9.4	0.1	24
Total		5.3	9.4	0.1	24

Arterial Level of Service: WB Edgewater Road Extension

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Nantasket Avenue N	24	5.3	12.3	0.1	18
Total		5.3	12.3	0.1	18

Arterial Level of Service: EB B Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Hull Shore Drive	10	7.4	17.5	0.1	13
Total		7.4	17.5	0.1	13

Arterial Level of Service: WB B Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Nantasket Avenue N	26	20.7	30.3	0.1	7
Total		20.7	30.3	0.1	7

Arterial Level of Service: EB C Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Hull Shore Drive	11	8.0	17.1	0.1	12
Total		8.0	17.1	0.1	12

Arterial Level of Service: WB C Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Nantasket Avenue N	27	10.9	17.5	0.1	12
Total		10.9	17.5	0.1	12

Arterial Level of Service: EB Water Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Hull Shore Drive	13	12.1	18.2	0.0	8
Total		12.1	18.2	0.0	8

Arterial Level of Service: WB Water Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Nantasket Avenue N	28	26.1	32.2	0.0	5
Total		26.1	32.2	0.0	5

Arterial Level of Service: EB Parrott Lot Driveway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Hull Shore Drive	14	11.5	17.5	0.0	6
Total		11.5	17.5	0.0	6

Arterial Level of Service: WB Parrott Lot Driveway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Nantasket Avenue N	29	42.4	48.1	0.0	2
Total		42.4	48.1	0.0	2

Arterial Level of Service: EB Bay Street Extension

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Hull Shore Drive	15	17.3	24.0	0.0	6
Total		17.3	24.0	0.0	6

Arterial Level of Service: WB Bay Street Extension

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Nantasket Avenue N	30	27.7	35.5	0.0	4
Total		27.7	35.5	0.0	4

Arterial Level of Service: NB Nantasket Avenue

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
DCR Lot 3	16	0.5	14.3	0.1	30
DCR Lot 2 Enter	20	7.9	15.9	0.1	15
DCR Lot 2 Exit	18	1.2	5.9	0.0	22
Crossing 1	42	4.4	11.1	0.1	19
Hull Shore Drive	17	1.4	5.7	0.0	23
Total		15.4	52.9	0.3	22

Arterial Level of Service: SB Nantasket Avenue

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Crossing 1	42	3.6	8.4	0.0	16
DCR Lot 2 Exit	18	1.6	8.2	0.1	25
Wharf Avenue	20	8.7	13.2	0.0	10
DCR Lot 3	16	2.0	10.3	0.1	24
Total		15.9	40.0	0.2	18

Arterial Level of Service: EB Wharf Avenue

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
George Washington Bo	32	13.4	17.5	0.0	9
Nantasket Avenue	20	29.4	34.3	0.0	4
Total		42.8	51.8	0.1	6

Arterial Level of Service: WB Wharf Avenue

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
George Washington Bo	32	17.5	24.3	0.0	6
Total		17.5	24.3	0.0	6

Arterial Level of Service: NB George Washington Boulevard

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Wharf Avenue	32	11.1	24.2	0.1	22
Hull Shore Drive	31	3.7	19.3	0.1	25
Bay Street Extension	30	2.4	12.1	0.1	24
Total		17.1	55.7	0.4	24

Arterial Level of Service: SB George Washington Boulevard

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Hull Shore Drive	31	1.2	11.3	0.1	26
Wharf Avenue	32	11.8	24.4	0.1	20
Total		13.0	35.6	0.2	22

Intersection: 2: Hull Shore Drive Extension & Phipps Street

Movement	EB	WB	NB	NB
Directions Served	TR	LT	L	R
Maximum Queue (ft)	7	44	107	96
Average Queue (ft)	0	7	47	36
95th Queue (ft)	0	30	82	66
Link Distance (ft)	156	86	393	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				75
Storage Blk Time (%)			1	0
Queuing Penalty (veh)			1	0

Intersection: 3: Phipps Street & Samoset Avenue

Movement	EB	WB	SB	SB
Directions Served	LT	TR	L	R
Maximum Queue (ft)	54	27	75	26
Average Queue (ft)	17	1	34	11
95th Queue (ft)	47	10	58	31
Link Distance (ft)	117	156	695	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				75
Storage Blk Time (%)			0	
Queuing Penalty (veh)			0	

Intersection: 4: Nantasket Avenue N & Mountford Road/Phipps Street

Movement	EB	WB	WB	NB	NB	SB	SB
Directions Served	R	L	R	L	TR	L	TR
Maximum Queue (ft)	30	62	66	30	58	37	37
Average Queue (ft)	10	29	26	5	4	11	3
95th Queue (ft)	33	62	55	22	28	35	19
Link Distance (ft)	375		117		295		854
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		100		25		100	
Storage Blk Time (%)		0		1	0		
Queuing Penalty (veh)		0		4	0		

Intersection: 6: Hull Shore Drive & A Street

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	57	39	20
Average Queue (ft)	28	4	1
95th Queue (ft)	51	24	9
Link Distance (ft)	246	380	393
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 8: Hull Shore Drive & Edgewater Road Extension

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	54	60	21
Average Queue (ft)	27	12	1
95th Queue (ft)	49	42	11
Link Distance (ft)	264	328	380
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 10: Hull Shore Drive & B Street

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	54	62	7
Average Queue (ft)	27	16	0
95th Queue (ft)	49	52	4
Link Distance (ft)	261	337	328
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 11: Hull Shore Drive & C Street

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	50	62	20
Average Queue (ft)	22	15	1
95th Queue (ft)	47	49	10
Link Distance (ft)	246	305	337
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 13: Hull Shore Drive & Water Street

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	74	96	21
Average Queue (ft)	33	27	2
95th Queue (ft)	66	67	14
Link Distance (ft)	151	280	305
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 14: Hull Shore Drive & Parrott Lot Driveway

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	48	84	38
Average Queue (ft)	17	20	3
95th Queue (ft)	44	62	19
Link Distance (ft)	98	141	317
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 15: Hull Shore Drive & Bay Street Extension

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	75	64	45
Average Queue (ft)	32	8	3
95th Queue (ft)	59	34	21
Link Distance (ft)	139	395	141
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 16: Nantasket Avenue & DCR Lot 3

Movement	WB
Directions Served	LR
Maximum Queue (ft)	44
Average Queue (ft)	16
95th Queue (ft)	42
Link Distance (ft)	176
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 17: Nantasket Avenue & Hull Shore Drive

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	81	102	31
Average Queue (ft)	32	16	3
95th Queue (ft)	61	62	17
Link Distance (ft)	126	155	395
Upstream Blk Time (%)	0		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 18: Nantasket Avenue & DCR Lot 2 Exit

Movement	WB	NB	SB
Directions Served	LR	T	T
Maximum Queue (ft)	50	10	114
Average Queue (ft)	24	0	8
95th Queue (ft)	49	6	55
Link Distance (ft)	44	146	259
Upstream Blk Time (%)	1		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 20: Nantasket Avenue & Wharf Avenue/DCR Lot 2 Enter

Movement	EB	EB	NB	NB	SB	SB
Directions Served	LT	R	L	TR	LT	R
Maximum Queue (ft)	95	71	172	208	159	52
Average Queue (ft)	27	22	58	82	80	22
95th Queue (ft)	62	52	120	159	151	47
Link Distance (ft)	139	139		298	146	146
Upstream Blk Time (%)					2	
Queuing Penalty (veh)					4	
Storage Bay Dist (ft)			200			
Storage Blk Time (%)				0		
Queuing Penalty (veh)				0		

Intersection: 22: Nantasket Avenue N & A Street

Movement	WB	NB	SB	SB
Directions Served	LR	TR	L	T
Maximum Queue (ft)	54	68	44	53
Average Queue (ft)	24	4	10	5
95th Queue (ft)	49	28	35	28
Link Distance (ft)	246	70		295
Upstream Blk Time (%)		0		
Queuing Penalty (veh)		1		
Storage Bay Dist (ft)			100	
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 23: Nantasket Avenue N & Whitehead Avenue

Movement	EB	NB	NB	SB
Directions Served	LR	L	T	TR
Maximum Queue (ft)	49	38	78	61
Average Queue (ft)	12	11	8	4
95th Queue (ft)	31	35	42	25
Link Distance (ft)	427		199	70
Upstream Blk Time (%)				0
Queuing Penalty (veh)				0
Storage Bay Dist (ft)		100		
Storage Blk Time (%)			0	
Queuing Penalty (veh)			0	

Intersection: 24: Nantasket Avenue N & Edgewater Road/Edgewater Road Extension

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	TR	L	TR
Maximum Queue (ft)	33	62	28	75	32	70
Average Queue (ft)	7	29	9	8	8	8
95th Queue (ft)	24	56	31	40	28	39
Link Distance (ft)	479	264		328		199
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			100		100	
Storage Blk Time (%)						0
Queuing Penalty (veh)						0

Intersection: 26: Nantasket Avenue N & B Street

Movement	WB	NB	SB	SB
Directions Served	LR	TR	L	T
Maximum Queue (ft)	80	119	39	66
Average Queue (ft)	32	12	10	6
95th Queue (ft)	68	59	34	32
Link Distance (ft)	261	332		328
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			100	
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 27: Nantasket Avenue N & C Street

Movement	WB	NB	SB	SB
Directions Served	LR	TR	L	T
Maximum Queue (ft)	90	112	31	68
Average Queue (ft)	37	12	5	7
95th Queue (ft)	69	61	24	39
Link Distance (ft)	246	312		332
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			100	
Storage Blk Time (%)				0
Queuing Penalty (veh)				0

Intersection: 28: Nantasket Avenue N & Bay Street/Water Street

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	TR	L	TR
Maximum Queue (ft)	76	131	76	298	92	236
Average Queue (ft)	31	58	7	140	10	101
95th Queue (ft)	61	108	36	258	46	176
Link Distance (ft)	303	151		1042		312
Upstream Blk Time (%)		0				0
Queuing Penalty (veh)		0				0
Storage Bay Dist (ft)			100		100	
Storage Blk Time (%)				10		6
Queuing Penalty (veh)				1		1

Intersection: 29: Nantasket Avenue N & Parrott Lot Driveway

Movement	WB	NB	SB	SB
Directions Served	LR	TR	L	T
Maximum Queue (ft)	74	86	43	81
Average Queue (ft)	17	17	12	13
95th Queue (ft)	52	60	37	54
Link Distance (ft)	98	154		1042
Upstream Blk Time (%)	1			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)			50	
Storage Blk Time (%)			0	1
Queuing Penalty (veh)			2	0

Intersection: 30: George Washington Boulevard/Nantasket Avenue N & Bay Street/Bay Street Extension

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	TR	L	TR
Maximum Queue (ft)	83	59	87	133	94	116
Average Queue (ft)	32	24	30	25	28	24
95th Queue (ft)	64	53	64	88	60	75
Link Distance (ft)	699	139	375	375		154
Upstream Blk Time (%)						0
Queuing Penalty (veh)						1
Storage Bay Dist (ft)					100	
Storage Blk Time (%)					0	0
Queuing Penalty (veh)					0	0

Intersection: 31: George Washington Boulevard & Hull Shore Drive

Movement	WB	NB	NB	SB	SB
Directions Served	LR	T	TR	LT	T
Maximum Queue (ft)	46	39	118	98	89
Average Queue (ft)	18	2	14	27	10
95th Queue (ft)	46	15	70	68	48
Link Distance (ft)	126	636	636	375	375
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 32: George Washington Boulevard & Wharf Avenue

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	60	151	166	228	159	172
Average Queue (ft)	23	85	56	111	79	90
95th Queue (ft)	52	142	127	199	141	156
Link Distance (ft)	179	139	747	747	636	636
Upstream Blk Time (%)		2				
Queuing Penalty (veh)		4				
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 35: Hull Shore Drive & Mid Block 3

Movement	NB	SB
Directions Served	T	T
Maximum Queue (ft)	98	66
Average Queue (ft)	28	21
95th Queue (ft)	74	57
Link Distance (ft)	317	363
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 42: Nantasket Avenue & Crossing 1

Movement	NB	SB
Directions Served	T	T
Maximum Queue (ft)	136	75
Average Queue (ft)	24	21
95th Queue (ft)	74	59
Link Distance (ft)	259	155
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 46: Hull Shore Drive & Mid Block 4

Movement	NB	SB
Directions Served	T	T
Maximum Queue (ft)	89	66
Average Queue (ft)	31	20
95th Queue (ft)	74	53
Link Distance (ft)	363	280
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 19

Summary of All Intervals

Run Number	1	2	3	Avg
Start Time	11:45	11:45	11:45	11:45
End Time	1:00	1:00	1:00	1:00
Total Time (min)	75	75	75	75
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	3235	3104	3109	3146
Vehs Exited	3232	3100	3110	3148
Starting Vehs	125	131	157	131
Ending Vehs	128	135	156	134
Travel Distance (mi)	2845	2784	2792	2807
Travel Time (hr)	145.0	141.6	142.7	143.1
Total Delay (hr)	44.9	44.1	45.2	44.7
Total Stops	5489	5255	5278	5344
Fuel Used (gal)	109.6	107.4	106.7	107.9

Interval #0 Information Seeding

Start Time	11:45
End Time	12:00
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.
No data recorded this interval.

Interval #1 Information 1

Start Time	12:00
End Time	12:15
Total Time (min)	15

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	Avg
Vehs Entered	795	761	725	762
Vehs Exited	790	748	734	759
Starting Vehs	125	131	157	131
Ending Vehs	130	144	148	129
Travel Distance (mi)	696	684	670	683
Travel Time (hr)	34.5	34.4	33.6	34.2
Total Delay (hr)	10.0	10.3	10.2	10.2
Total Stops	1279	1279	1264	1270
Fuel Used (gal)	26.7	26.4	25.6	26.2

Interval #2 Information 2

Start Time 12:15
End Time 12:30
Total Time (min) 15
Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	Avg
Vehs Entered	880	851	836	856
Vehs Exited	877	834	828	845
Starting Vehs	130	144	148	129
Ending Vehs	133	161	156	142
Travel Distance (mi)	751	759	746	752
Travel Time (hr)	39.1	40.3	38.7	39.4
Total Delay (hr)	12.6	14.0	12.8	13.1
Total Stops	1465	1520	1414	1474
Fuel Used (gal)	28.7	29.7	28.4	28.9

Interval #3 Information 3

Start Time 12:30
End Time 12:45
Total Time (min) 15
Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	Avg
Vehs Entered	773	758	765	763
Vehs Exited	774	796	799	790
Starting Vehs	133	161	156	142
Ending Vehs	132	123	122	111
Travel Distance (mi)	703	691	699	698
Travel Time (hr)	36.3	35.5	36.0	35.9
Total Delay (hr)	11.5	11.1	11.5	11.4
Total Stops	1398	1351	1363	1369
Fuel Used (gal)	27.5	26.8	26.5	26.9

Interval #4 Information 4

Start Time 12:45
End Time 1:00
Total Time (min) 15
Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	Avg
Vehs Entered	787	734	783	765
Vehs Exited	791	722	749	751
Starting Vehs	132	123	122	111
Ending Vehs	128	135	156	134
Travel Distance (mi)	694	649	677	673
Travel Time (hr)	35.1	31.4	34.4	33.6
Total Delay (hr)	10.7	8.7	10.8	10.0
Total Stops	1347	1105	1237	1230
Fuel Used (gal)	26.6	24.6	26.1	25.8

2: Hull Shore Drive Extension & Phipps Street Performance by approach

Approach	EB	WB	NB	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	1.0	1.6	7.3	5.1

3: Phipps Street & Samoset Avenue Performance by approach

Approach	EB	WB	SB	All
Denied Del/Veh (s)	0.0	0.0	1.3	0.3
Total Del/Veh (s)	3.1	2.8	11.1	4.5

4: Nantasket Avenue N & Mountford Road/Phipps Street Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.6	0.2
Total Del/Veh (s)	9.0	29.3	3.2	2.3	6.1

6: Hull Shore Drive & A Street Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	4.0	1.2	0.4	1.5

8: Hull Shore Drive & Edgewater Road Extension Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	4.3	1.3	0.4	1.4

10: Hull Shore Drive & B Street Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.7	1.5	0.5	1.5

11: Hull Shore Drive & C Street Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.5	1.7	0.6	1.6

13: Hull Shore Drive & Water Street Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	23.3	3.9	0.7	4.3

14: Hull Shore Drive & Parrott Lot Driveway Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	12.1	1.5	1.2	1.6

15: Hull Shore Drive & Bay Street Extension Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	7.5	1.8	0.4	1.6

17: Nantasket Avenue & Hull Shore Drive Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	9.0	1.9	0.9	2.1

18: Nantasket Avenue & DCR Lot 2 Exit Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.2	0.0	0.0	0.0
Total Del/Veh (s)	8.8	1.5	1.1	1.6

19: Nantasket Avenue & Wharf Avenue/DCR Lot 2 Enter Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	18.4	12.2	8.8	12.1

20: Nantasket Avenue & DCR Lot 3 Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.2	0.4	0.0	0.2
Total Del/Veh (s)	6.7	0.5	1.7	1.2

22: Nantasket Avenue N & A Street Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Del/Veh (s)	17.2	1.0	1.8	2.2

23: Nantasket Avenue N & Whitehead Avenue Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Del/Veh (s)	17.7	1.7	0.5	1.5

24: Nantasket Avenue N & Edgewater Road/Edgewater Road Extension Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	14.0	23.8	2.2	1.4	3.4

26: Nantasket Avenue N & B Street Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Del/Veh (s)	22.4	2.9	1.5	3.6

27: Nantasket Avenue N & C Street Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.5	0.0	0.0	0.0
Total Del/Veh (s)	26.4	4.2	1.6	4.7

28: Nantasket Avenue N & Bay Street/Water Street Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	22.3	24.4	13.5	9.6	13.3

29: Nantasket Avenue N & Parrott Lot Driveway Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	45.8	1.9	4.3	3.6

30: George Washington Boulevard/Nantasket Avenue N & Bay Street/Bay Street Extension Performance

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	18.3	30.3	4.4	2.2	4.4

31: George Washington Boulevard & Hull Shore Drive Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	14.2	4.8	2.0	3.7

32: George Washington Boulevard & Wharf Avenue Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.2	0.3	0.0	0.2
Total Del/Veh (s)	16.5	25.2	15.0	14.4	15.5

35: Hull Shore Drive & Mid Block 3 Performance by approach

Approach	NB	SB	All
Denied Del/Veh (s)	0.0	0.1	0.0
Total Del/Veh (s)	5.4	4.7	5.2

42: Nantasket Avenue & Crossing 1 Performance by approach

Approach	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	4.7	3.4	4.2

46: Hull Shore Drive & Mid Block 4 Performance by approach

Approach	NB	SB	All
Denied Del/Veh (s)	0.4	0.0	0.3
Total Del/Veh (s)	6.3	4.0	5.6

Total Network Performance

Denied Del/Veh (s)	0.5
Total Del/Veh (s)	48.5

Arterial Level of Service: NB Hull Shore Drive Extension

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Phipps Street	2	8.1	19.7	0.1	16
Total		8.1	19.7	0.1	16

Arterial Level of Service: SB Hull Shore Drive Extension

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
A Street	6	0.4	13.4	0.1	23
Total		0.4	13.4	0.1	23

Arterial Level of Service: EB Phipps Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Samoset Avenue	3	0.3	0.8	0.0	162
Hull Shore Drive Ext	2	1.5	6.2	0.0	25
	1	0.4	3.9	0.0	27
Total		2.2	10.9	0.1	36

Arterial Level of Service: WB Phipps Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Hull Shore Drive Ext	2	0.6	3.4	0.0	31
Samoset Avenue	3	2.9	7.4	0.0	21
Nantasket Avenue N	4	55.7	61.3	0.0	2
Total		59.1	72.1	0.1	5

Arterial Level of Service: NB Nantasket Avenue N

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Parrott Lot Driveway	29	1.9	7.2	0.0	22
Water Street	28	13.2	38.1	0.2	20
C Street	27	4.5	12.9	0.1	20
B Street	26	3.0	11.8	0.1	22
Edgewater Road Exten	24	2.2	10.9	0.1	24
Whitehead Avenue	23	1.6	7.7	0.0	23
A Street	22	1.1	4.2	0.0	24
Phipps Street	4	3.6	11.5	0.1	21
Total		31.1	104.3	0.6	21

Arterial Level of Service: SB Nantasket Avenue N

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Mountford Road	4	1.5	21.6	0.2	29
A Street	22	1.3	9.5	0.1	25
Whitehead Avenue	23	0.5	3.0	0.0	34
Edgewater Road	24	1.0	7.1	0.0	25
B Street	26	1.1	10.1	0.1	26
C Street	27	1.1	9.9	0.1	26
Bay Street	28	8.8	17.2	0.1	15
Parrott Lot Driveway	29	4.5	28.8	0.2	26
Bay Street	30	1.9	6.6	0.0	24
Total		21.7	113.9	0.8	25

Arterial Level of Service: NB Hull Shore Drive

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Nantasket Avenue	17	16.4	23.8	0.0	6
Bay Street Extension	15	2.1	13.5	0.1	23
Parrott Lot Driveway	14	1.4	5.9	0.0	23
Mid Block 3	35	5.4	13.9	0.1	18
Mid Block 4	46	6.3	15.1	0.1	18
Water Street	13	3.6	10.8	0.1	20
C Street	11	1.5	9.7	0.1	25
B Street	10	1.3	10.3	0.1	26
Edgewater Road Exten	8	1.1	9.8	0.1	27
A Street	6	1.0	10.9	0.1	27
Phipps Street	2	8.1	19.7	0.1	16
Total		48.2	143.4	0.8	19

Arterial Level of Service: SB Hull Shore Drive

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
A Street	6	0.4	13.4	0.1	23
Edgewater Road Exten	8	0.4	10.1	0.1	29
B Street	10	0.6	9.3	0.1	28
C Street	11	0.6	9.5	0.1	28
Water Street	13	0.7	8.9	0.1	28
Mid Block 4	46	4.0	11.6	0.1	19
Mid Block 3	35	4.7	13.2	0.1	21
Parrott Lot Driveway	14	1.2	9.3	0.1	27
Bay Street Extension	15	0.5	4.9	0.0	27
Hull Shore Drive	17	0.2	13.0	0.1	24
George Washington Bo	31	39.9	47.8	0.0	3
Total		53.2	151.0	0.8	18

Arterial Level of Service: EB A Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Hull Shore Drive	6	7.8	19.1	0.1	11
Total		7.8	19.1	0.1	11

Arterial Level of Service: WB A Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Nantasket Avenue N	22	37.8	47.5	0.1	4
Total		37.8	47.5	0.1	4

Arterial Level of Service: EB Edgewater Road Extension

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Hull Shore Drive	8	9.9	15.1	0.1	15
Total		9.9	15.1	0.1	15

Arterial Level of Service: WB Edgewater Road Extension

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Nantasket Avenue N	24	0.3	8.1	0.1	28
Total		0.3	8.1	0.1	28

Arterial Level of Service: EB B Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Hull Shore Drive	10	13.3	24.5	0.1	9
Total		13.3	24.5	0.1	9

Arterial Level of Service: WB B Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Nantasket Avenue N	26	49.3	58.6	0.1	4
Total		49.3	58.6	0.1	4

Arterial Level of Service: EB C Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Hull Shore Drive	11	16.3	26.8	0.1	8
Total		16.3	26.8	0.1	8

Arterial Level of Service: WB C Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Nantasket Avenue N	27	52.6	63.5	0.1	3
Total		52.6	63.5	0.1	3

Arterial Level of Service: EB Water Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Hull Shore Drive	13	23.6	29.8	0.0	5
Total		23.6	29.8	0.0	5

Arterial Level of Service: WB Water Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Nantasket Avenue N	28	18.3	24.2	0.0	6
Total		18.3	24.2	0.0	6

Arterial Level of Service: EB Parrott Lot Driveway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Hull Shore Drive	14	12.1	18.2	0.0	6
Total		12.1	18.2	0.0	6

Arterial Level of Service: WB Parrott Lot Driveway

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Nantasket Avenue N	29	-	-	0.0	-
Total		-	-	0.0	-

Arterial Level of Service: EB Bay Street Extension

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Hull Shore Drive	15	10.7	16.4	0.0	9
Total		10.7	16.4	0.0	9

Arterial Level of Service: WB Bay Street Extension

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Nantasket Avenue N	30	47.7	53.1	0.0	3
Total		47.7	53.1	0.0	3

Arterial Level of Service: NB Nantasket Avenue

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
DCR Lot 3	20	0.5	14.3	0.1	30
DCR Lot 2 Enter	19	10.6	18.5	0.1	13
DCR Lot 2 Exit	18	1.7	6.5	0.0	21
Crossing 1	42	4.8	11.7	0.1	18
Hull Shore Drive	17	1.8	6.1	0.0	22
Total		19.4	57.0	0.3	20

Arterial Level of Service: SB Nantasket Avenue

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Crossing 1	42	3.6	8.4	0.0	16
DCR Lot 2 Exit	18	1.1	7.5	0.1	27
Wharf Avenue	19	9.1	13.7	0.0	10
DCR Lot 3	20	2.0	10.0	0.1	24
Total		15.8	39.6	0.2	18

Arterial Level of Service: EB Wharf Avenue

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
George Washington Bo	32	26.1	30.5	0.0	5
Nantasket Avenue	19	11.0	18.0	0.0	8
Total		37.1	48.5	0.1	6

Arterial Level of Service: WB Wharf Avenue

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
George Washington Bo	32	27.2	33.5	0.0	4
Total		27.2	33.5	0.0	4

Arterial Level of Service: NB George Washington Boulevard

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Wharf Avenue	32	14.9	27.9	0.1	19
Hull Shore Drive	31	4.9	20.8	0.1	23
Bay Street Extension	30	3.7	13.4	0.1	22
Total		23.5	62.2	0.4	21

Arterial Level of Service: SB George Washington Boulevard

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Hull Shore Drive	31	1.5	11.6	0.1	25
Wharf Avenue	32	11.7	24.2	0.1	20
Total		13.2	35.8	0.2	21

Intersection: 2: Hull Shore Drive Extension & Phipps Street

Movement	EB	WB	NB	NB
Directions Served	TR	LT	L	R
Maximum Queue (ft)	36	43	134	97
Average Queue (ft)	3	5	61	42
95th Queue (ft)	17	26	107	75
Link Distance (ft)	156	86	393	
Upstream Blk Time (%)		0		
Queuing Penalty (veh)		0		
Storage Bay Dist (ft)				75
Storage Blk Time (%)			3	0
Queuing Penalty (veh)			4	1

Intersection: 3: Phipps Street & Samoset Avenue

Movement	EB	WB	SB	SB
Directions Served	LT	TR	L	R
Maximum Queue (ft)	108	116	116	79
Average Queue (ft)	41	14	37	23
95th Queue (ft)	85	71	74	54
Link Distance (ft)	117	156	695	
Upstream Blk Time (%)	0	1		
Queuing Penalty (veh)	1	4		
Storage Bay Dist (ft)				75
Storage Blk Time (%)			1	2
Queuing Penalty (veh)			0	2

Intersection: 4: Nantasket Avenue N & Mountford Road/Phipps Street

Movement	EB	WB	WB	NB	NB	SB	SB
Directions Served	R	L	R	L	TR	L	TR
Maximum Queue (ft)	38	116	142	28	191	62	90
Average Queue (ft)	9	55	43	2	34	14	16
95th Queue (ft)	31	96	91	15	117	46	58
Link Distance (ft)	375		117		292		854
Upstream Blk Time (%)		2	3		0		
Queuing Penalty (veh)		0	6		0		
Storage Bay Dist (ft)		100		50		100	
Storage Blk Time (%)		4	4		2	1	0
Queuing Penalty (veh)		4	3		0	3	0

Intersection: 6: Hull Shore Drive & A Street

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	64	80	27
Average Queue (ft)	33	10	1
95th Queue (ft)	54	43	10
Link Distance (ft)	246	380	393
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 8: Hull Shore Drive & Edgewater Road Extension

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	67	74	28
Average Queue (ft)	30	15	1
95th Queue (ft)	55	54	14
Link Distance (ft)	264	328	380
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 10: Hull Shore Drive & B Street

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	55	71	36
Average Queue (ft)	30	15	2
95th Queue (ft)	52	48	19
Link Distance (ft)	261	337	328
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 11: Hull Shore Drive & C Street

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	64	74	31
Average Queue (ft)	29	21	3
95th Queue (ft)	55	60	18
Link Distance (ft)	246	305	337
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 13: Hull Shore Drive & Water Street

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	114	208	46
Average Queue (ft)	46	49	5
95th Queue (ft)	91	139	26
Link Distance (ft)	151	280	305
Upstream Blk Time (%)		0	
Queuing Penalty (veh)		3	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 14: Hull Shore Drive & Parrott Lot Driveway

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	39	154	38
Average Queue (ft)	14	25	5
95th Queue (ft)	41	82	23
Link Distance (ft)	99	141	317
Upstream Blk Time (%)		0	
Queuing Penalty (veh)		1	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 15: Hull Shore Drive & Bay Street Extension

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	61	136	53
Average Queue (ft)	27	17	4
95th Queue (ft)	53	68	26
Link Distance (ft)	139	395	141
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 17: Nantasket Avenue & Hull Shore Drive

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	74	124	38
Average Queue (ft)	36	24	3
95th Queue (ft)	63	86	19
Link Distance (ft)	126	155	395
Upstream Blk Time (%)		0	
Queuing Penalty (veh)		0	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 18: Nantasket Avenue & DCR Lot 2 Exit

Movement	WB	SB
Directions Served	LR	T
Maximum Queue (ft)	64	20
Average Queue (ft)	24	1
95th Queue (ft)	54	10
Link Distance (ft)	57	259
Upstream Blk Time (%)	1	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 19: Nantasket Avenue & Wharf Avenue/DCR Lot 2 Enter

Movement	EB	EB	NB	NB	SB	SB
Directions Served	LT	R	L	TR	LT	R
Maximum Queue (ft)	133	86	133	240	150	51
Average Queue (ft)	51	27	43	100	79	17
95th Queue (ft)	102	60	83	173	139	44
Link Distance (ft)	129	129		291	151	151
Upstream Blk Time (%)	0				0	
Queuing Penalty (veh)	0				1	
Storage Bay Dist (ft)			200			
Storage Blk Time (%)				1		
Queuing Penalty (veh)				1		

Intersection: 20: Nantasket Avenue & DCR Lot 3

Movement	WB
Directions Served	LR
Maximum Queue (ft)	55
Average Queue (ft)	17
95th Queue (ft)	44
Link Distance (ft)	51
Upstream Blk Time (%)	0
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 22: Nantasket Avenue N & A Street

Movement	WB	NB	SB	SB
Directions Served	LR	TR	L	T
Maximum Queue (ft)	112	74	67	55
Average Queue (ft)	39	12	18	10
95th Queue (ft)	79	51	49	38
Link Distance (ft)	246	70		292
Upstream Blk Time (%)		0		
Queuing Penalty (veh)		4		
Storage Bay Dist (ft)			150	
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 23: Nantasket Avenue N & Whitehead Avenue

Movement	EB	NB	NB	SB
Directions Served	LR	L	T	TR
Maximum Queue (ft)	48	53	104	60
Average Queue (ft)	15	10	16	8
95th Queue (ft)	33	34	62	36
Link Distance (ft)	427		199	70
Upstream Blk Time (%)				0
Queuing Penalty (veh)				0
Storage Bay Dist (ft)		75		
Storage Blk Time (%)		0	0	
Queuing Penalty (veh)		0	0	

Intersection: 24: Nantasket Avenue N & Edgewater Road/Edgewater Road Extension

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	TR	L	TR
Maximum Queue (ft)	44	110	36	91	38	72
Average Queue (ft)	15	46	9	13	13	8
95th Queue (ft)	35	90	31	57	35	35
Link Distance (ft)	479	264		328		199
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			75		75	
Storage Blk Time (%)				0		0
Queuing Penalty (veh)				0		0

Intersection: 26: Nantasket Avenue N & B Street

Movement	WB	NB	SB	SB
Directions Served	LR	TR	L	T
Maximum Queue (ft)	110	144	51	59
Average Queue (ft)	51	22	14	7
95th Queue (ft)	97	90	42	34
Link Distance (ft)	261	332		328
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			150	
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 27: Nantasket Avenue N & C Street

Movement	WB	NB	SB	SB
Directions Served	LR	TR	L	T
Maximum Queue (ft)	140	138	45	88
Average Queue (ft)	54	15	14	8
95th Queue (ft)	113	71	41	42
Link Distance (ft)	246	313		332
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			150	
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 28: Nantasket Avenue N & Bay Street/Water Street

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	T	L	TR
Maximum Queue (ft)	159	151	171	378	104	272
Average Queue (ft)	42	72	18	180	19	131
95th Queue (ft)	94	127	80	314	49	239
Link Distance (ft)	302	151		1044		313
Upstream Blk Time (%)		1				0
Queuing Penalty (veh)		2				0
Storage Bay Dist (ft)			150		150	
Storage Blk Time (%)				9		5
Queuing Penalty (veh)				2		1

Intersection: 29: Nantasket Avenue N & Parrott Lot Driveway

Movement	WB	NB	SB	SB
Directions Served	LR	TR	L	T
Maximum Queue (ft)	67	120	36	90
Average Queue (ft)	22	17	9	10
95th Queue (ft)	58	70	33	46
Link Distance (ft)	99	154		1044
Upstream Blk Time (%)	1	0		
Queuing Penalty (veh)	0	0		
Storage Bay Dist (ft)			50	
Storage Blk Time (%)			0	0
Queuing Penalty (veh)			1	0

Intersection: 30: George Washington Boulevard/Nantasket Avenue N & Bay Street/Bay Street Extension

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	TR	L	TR
Maximum Queue (ft)	123	52	98	231	44	141
Average Queue (ft)	42	18	40	47	12	33
95th Queue (ft)	86	49	77	132	38	91
Link Distance (ft)	698	139	375	375		154
Upstream Blk Time (%)						0
Queuing Penalty (veh)						1
Storage Bay Dist (ft)					100	
Storage Blk Time (%)						1
Queuing Penalty (veh)						0

Intersection: 31: George Washington Boulevard & Hull Shore Drive

Movement	WB	NB	NB	SB	SB
Directions Served	LR	T	TR	LT	T
Maximum Queue (ft)	37	80	161	111	109
Average Queue (ft)	15	4	30	33	13
95th Queue (ft)	39	38	103	86	56
Link Distance (ft)	126	636	636	375	375
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 32: George Washington Boulevard & Wharf Avenue

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	74	135	246	318	189	188
Average Queue (ft)	30	73	97	169	85	97
95th Queue (ft)	66	131	193	277	167	171
Link Distance (ft)	179	129	747	747	636	636
Upstream Blk Time (%)		2				
Queuing Penalty (veh)		3				
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 35: Hull Shore Drive & Mid Block 3

Movement	NB	SB
Directions Served	T	T
Maximum Queue (ft)	157	94
Average Queue (ft)	39	24
95th Queue (ft)	100	64
Link Distance (ft)	317	363
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 42: Nantasket Avenue & Crossing 1

Movement	NB	SB
Directions Served	T	T
Maximum Queue (ft)	131	66
Average Queue (ft)	33	20
95th Queue (ft)	96	54
Link Distance (ft)	259	155
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 46: Hull Shore Drive & Mid Block 4

Movement	NB	SB
Directions Served	T	T
Maximum Queue (ft)	191	70
Average Queue (ft)	51	18
95th Queue (ft)	128	54
Link Distance (ft)	363	280
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 50