Appendix A

Advisory Task Force, Comments, and Selection Process

1: Advisory Task Force

2: Review Comments

3: Support Letters

4: Study Location Selection Memorandum

Part 1: Advisory Task Force

Advisory Task Force Members

Route 1 Priority Corridor Study

Name	Affiliation
Paul Halkiotis	Norwood
Sarah Bouchard	Norwood
J A Collins	Norwood
Mark Ryan	Norwood
Tony Mazzucco	Norwood
Andy Murphy	Norwood
Michael Rosen	Norwood
Tom O'Rourke	Neponset River Regional Chamber
Karen Dumaine	Neponset Valley TMA
Pamela Haznar	MassDOT D5
Barbara Lachance	MassDOT D5
Adi Nochur	MAPC
David Soares	MassDOT D5
Cheryll-Ann Senior	MassDOT D5
Ahmad A Shuhibar	MassDOT D5
Makaela Niles	MassDOT Planning

Part 2: Review Comments

CTPS CENTRAL TRANSPORTATION PLANNING STAFF

Seth Asante <sasante@ctps.org>

MAPC comments on Route 1/Norwood study

1 message

Nochur, Aditya <ANochur@mapc.org> Tue, Oct 11, 2022 at 4:26 PM
To: "sasante@ctps.org" <sasante@ctps.org>
Cc: "Pollack, Travis" <TPollack@mapc.org>, "Bourassa, Eric" <EBourassa@mapc.org>

Hello Seth,

Thanks again for the opportunity to participate in the process for the Route 1 Priority Corridor Study in Norwood. Please see below for MAPC's comments and let us know if you have any questions or responses. I've also included a couple of comments from Travis on the 9/20 meeting presentation which are relevant for the final report as well.

Can you let us know if the final report will be presented at an upcoming MPO meeting and if so, when?

Best,
Adi

MAPC Comments on Route 1 Priority Corridor Study in Norwood

Page-specific study comments

Pg. 16: Can Figure 1 be updated to show the 34E bus in addition to the commuter rail routes?

Pg. 17: Can a mention of transit be added to the goal of "increasing the quality and quantity of walking and biking options"?

Pg. 17: The community survey should be mentioned under the Community Engagement heading.

Pg. 29: MAPC appreciates the mention of the Neponset Valley Route 1/1A study and its microtransit recommendations.

- Can the report also explicitly mention that the recommendation for a redesign of Route 1 (including walking, biking, and transit) was part of the Neponset study?
- Can the report also mention that long-term improvements along Route 1 will support potential future fixed-route transit in the corridor? Fixed-route transit is more efficient than micro-transit long-term.

Pgs. 32-33: Can the Walking Challenges subheading explicitly mention the fact that 90% of the northern direction of Route 1 and 60% of the southern direction lack sidewalks?

- This finding was verbally presented at the meeting on 9/20 and brings into stark and compelling focus the pedestrian infrastructure deficiencies along the corridor. However, this finding is not obvious from the report unless one takes the time to analyze Figure 4 on pg. 30 (which was also included on slide

12 from the 9/20 meeting presentation).

- See also Travis' comments below on the 9/20 meeting presentation re: being specific about unsafe conditions for pedestrians and cyclists.

Pg. 69: Can the installation of plastic flex posts to calm traffic and improve pedestrian safety be added to the list of Short-Term Improvements?

Pgs. 69-70: Can the installation of bumpouts/curb extensions, the removal of slip lanes, and "no right on red" and pedestrian-only signal phases be added to the list of Corridor Wide Improvements?

- Bumpouts/curb extensions (which can be installed in the short-term using plastic flex posts -- see also comment above for pg. 69) create narrower turning radii and travel lanes, calm traffic, reduce crossing distances, and improve pedestrian/driver visibility.

- Slip lanes interrupt the pedestrian environment and create safety hazards for people walking.

- "No right on red" and pedestrian-only signal phases reduce pedestrian/driver conflicts and improve safety for people walking.

Pg. 76: Can the report note the pros/cons of the rotary vs. diamond interchange at Pendergast Circle, especially for vulnerable road users (pedestrians, cyclists)? Some initial thoughts below.

- The proposed diamond interchange seems better for pedestrians than either of the rotary options, which would require people walking to go significantly out of their way to access crossings across Nahatan/Neponset Streets.

- The potential recommendation to "Convert [Pendergast] circle into a roundabout with accommodations for walking and biking and slip/bypass lanes to reduce speeds of vehicles and increase capacity" has some apparent contradictions.

    - Can the recommendation to include slip/bypass lanes be removed? Slip/bypass lanes can *increase* vehicle speeds and also interrupt the pedestrian environment and create safety hazards for people walking (see also comment above for pgs. 69-70).

Other study comments

- Can the visual Summary of Improvements (slide 35 from the 9/20 meeting presentation) be included in the report?

- Slide 35 from the 9/20 meeting presentation (see comment above) also proposes the installation of two midblock crossings at specific locations, but this recommendation has not been included in the report.

- Is CTPS no longer proposing these midblock crossings and if so, why?

- If CTPS is still proposing these midblock crossings, can they be explicitly mentioned in the report? Will these crossings be signalized in some fashion?

- Can the report mention the need for the Town of Norwood to consider walking/biking improvements along the local roads that intersect with Route 1 to maximize pedestrian/bicycle/transit access and connectivity along the corridor?

  - Pgs. 19-22 of the report note the lack of sidewalks on parts of several local roadways, including Union Street, Morse Street, and Access Road.

- Can the report include a map of local land uses and/or more information on destinations people are accessing along the corridor?

  - Pgs. 23-26 of the report briefly describe the land uses in the vicinity of the study intersections.

  - The community survey may have relevant information on destinations along the corridor.

Comments from Travis on 9/20 meeting presentation

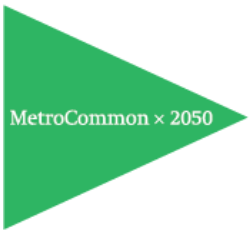
- Slide 7 (LOS Existing PM Peak hour). I've said similar comments before to Seth and CTPS on the Dedham corridor study. At a minimum, I would not show green-yellow-red in the circles; **maybe** just show red for "F" without green or yellow for anything better than "F". I prefer if they did not assign A-F scores on the delay, since these are placing a score/grade on queuing time that may not be universal for all users. Just show the number of seconds of delay as a fact, without a grade or score, especially if we're not assigning any type of grade/scores on the pedestrian or bicyclists level of service or level of comfort/safety (see next comment).

- Slide 12 (Mobility): Good information here, but as noted above there's no "Level of Service" for pedestrians or cyclists included. I would like the final report to note the distance between signalized crossings (i.e., how far does someone need to walk to get to a signalized crossing), and note how much of the corridor has no sidewalk(!) Be specific on data such as the lack of a cycling network. The report should be specific on the unsafe conditions for peds/cyclists, which are reflected in the community survey as well. I'm sure Seth will include that in the report, but just noting I don't see it in the slide show.

- Slides 27-29: Love the idea of sidewalk level bike path. I'm seeing that street level bike paths with flex posts that get run over by big vehicles are not working.

Adi Nochur
Senior Transportation Planner
anochur@mapc.org | 617-933-0759
Pronouns: he, him, his

Metropolitan Area Planning Council
60 Temple Place, Boston, MA 02111
www.mapc.org



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MetroCommon.mapc.org

MAPC Comments on Route 1 Priority Corridor Study in Norwood

Page-specific study comments

Pg. 16: Can Figure 1 be updated to show the 34E bus in addition to the commuter rail routes?

MPO staff updated Figure 1 to include bus route 34E.

Pg. 17: Can a mention of transit be added to the goal of "increasing the quality and quantity of walking and biking options"?

MPO staff added transit option to the goals.

Pg. 17: The community survey should be mentioned under the Community Engagement heading.

MPO staff mentioned the community survey in the heading on Community Engagement.

Pg. 29: MAPC appreciates the mention of the Neponset Valley Route 1/1A study and its microtransit recommendations.

- Can the report also explicitly mention that the recommendation for a redesign of Route 1 (including walking, biking, and transit) was part of the Neponset study?

- Can the report also mention that long-term improvements along Route 1 will support potential future fixed-route transit in the corridor? Fixed-route transit is more efficient than micro-transit long-term.

MPO staff incorporated those two recommendations into the report.

Pgs. 32-33: Can the Walking Challenges subheading explicitly mention the fact that 90% of the northern direction of Route 1 and 60% of the southern direction lack sidewalks?

- This finding was verbally presented at the meeting on 9/20 and brings into stark and compelling focus the pedestrian infrastructure deficiencies along the corridor. However, this finding is not obvious from the report unless one takes the time to analyze Figure 4 on pg. 30 (which was also included on slide 12 from the 9/20 meeting presentation).

- See also Travis' comments below on the 9/20 meeting presentation re: being specific about unsafe conditions for pedestrians and cyclists.

In addition to Figure 4, MPO staff stated the percentages in each direction of Route 1 in Norwood that are without sidewalks.

Pg. 69: Can the installation of plastic flex posts to calm traffic and improve pedestrian safety be added to the list of Short-Term Improvements?

Route 1 in Norwood is a high-speed corridor (45 mph and 50 mph) and would require stronger and well-designed barriers to separate people who bike from vehicular traffic. May not be a short-term improvement.

Pgs. 69-70: Can the installation of bumpouts/curb extensions, the removal of slip lanes, and "no right on red" and pedestrian-only signal phases be added to the list of Corridor Wide Improvements?

- Bumpouts/curb extensions (which can be installed in the short-term using plastic flex posts -- see also comment above for pg. 69) create narrower turning radii and travel lanes, calm traffic, reduce crossing distances, and improve pedestrian/driver visibility.
- Slip lanes interrupt the pedestrian environment and create safety hazards for people walking.
- "No right on red" and pedestrian-only signal phases reduce pedestrian/driver conflicts and improve safety for people walking.

The Route 1 intersections in Norwood are large. They have been designed to accommodate the high volume of large tractor-trailers that service businesses in the corridor (automobile dealerships, big-box stores, manufacturing, and science and medical technology industries).

Good idea! No Turn on Red signs at selected intersections with poor sight distances.

All crossings on Route 1 have exclusive pedestrian signal phases.

Pg. 76: Can the report note the pros/cons of the rotary vs. diamond interchange at Pendergast Circle, especially for vulnerable road users (pedestrians, cyclists)? Some initial thoughts below.

- The proposed diamond interchange seems better for pedestrians than either of the rotary options, which would require people walking to go significantly out of their way to access crossings across Nahatan/Neponset Streets.

- The potential recommendation to "Convert [Pendergast] circle into a roundabout with accommodations for walking and biking and slip/bypass lanes to reduce speeds of vehicles and increase capacity" has some apparent contradictions.
- Can the recommendation to include slip/bypass lanes be removed? Slip/bypass lanes can *increase* vehicle speeds and interrupt the pedestrian environment and create safety hazards for people walking (see also comment above for pgs. 69-70).

MPO staff, added text to note the advantages and disadvantages of each the options.

At this planning stage the objective is to consider multiple control strategies when planning a new or modifying an existing intersection/interchange. At the design stage, a detailed review will be conducted to for each of the strategies to objectively select a control strategy that meets the project purpose and need that fits the location's context and roadway classification, while providing safe travel facilities for all road users.

Other study comments

- Can the visual Summary of Improvements (slide 35 from the 9/20 meeting presentation) be included in the report?

Yes, MPO staff included the visual summary of improvements as Figure 39 in the report.

- Slide 35 from the 9/20 meeting presentation (see comment above) also proposes the installation of two midblock crossings at specific locations, but this recommendation has not been included in the report.

- Is CTPS no longer proposing these midblock crossings and if so, why?
- If CTPS is still proposing these midblock crossings, can they be explicitly mentioned in the report? Will these crossings be signalized in some fashion?

Yes, MPO staff still recommend the midblock crossings north of Pendergast Circle and they are mentioned in the report. Because of the high vehicle speeds and multiple lanes on Route 1, the crossings would be signalized.

- Can the report mention the need for the Town of Norwood to consider walking/biking improvements along the local roads that intersect with Route 1 to maximize pedestrian/bicycle/transit access and connectivity along the corridor?

- Pgs. 19-22 of the report note the lack of sidewalks on parts of several local roadways, including Union Street, Morse Street, and Access Road.

Yes, MPO staff noted the Norwood Complete Streets Programs at several locations in the report. The walking and biking infrastructure improvements on Route 1 would be more beneficial if they also connect to the proposed Complete Streets improvements on local roads, especially on side streets connecting to Route 1.

- Can the report include a map of local land uses and/or more information on destinations people are accessing along the corridor?

- Pgs. 23-26 of the report briefly describe the land uses in the vicinity of the study intersections.

- The community survey may have relevant information on destinations along the corridor.

MPO staff do not have adequate information on trip destinations along the corridor.

Comments from Travis on 9/20 meeting presentation

- Slide 7 (LOS Existing PM Peak hour). I've said similar comments before to Seth and CTPS on the Dedham corridor study. At a minimum, I would not show green-yellow-red in the circles; **maybe** just show red for "F" without green or yellow for anything better than "F". I prefer if they did not assign A-F scores on the delay, since these are placing a score/grade on queuing time that may not be universal for all users. Just show the number of seconds of delay as a fact, without a grade or score, especially if we're not assigning any type of grade/scores on the pedestrian or bicyclists level of service or level of comfort/safety (see next comment).

MPO staff removed the color codes for the intersection LOS from all figures in the report.

- Slide 12 (Mobility): Good information here, but as noted above there's no "Level of Service" for pedestrians or cyclists included. I would like the final report to note the distance between signalized crossings (i.e., how far does someone need to walk to get to a signalized crossing), and note how much of the corridor has no sidewalk(!) Be specific on data such as the lack of a cycling network. The report should be specific on the unsafe conditions for peds/cyclists, which are reflected in the community survey as well. I'm sure Seth will include that in the report, but just noting I don't see it in the slide show.

Thank you! MPO staff added more text in the report to explain the walking and biking LOS

- Slides 27-29: Love the idea of sidewalk level bike path. I'm seeing that street level bike paths with flex posts that get run over by big vehicles are not working.

Thank you again!

CTPS CENTRAL TRANSPORTATION PLANNING STAFF

Seth Asante <sasante@ctps.org>

Re: Reminder: Review and Comment on the Route 1 Priority Corridor Study in Norwood

1 message

Holly Jones <hjones@norwoodma.gov> Tue, Oct 11, 2022 at 1:12 PM
To: sasante@ctps.org
Cc: Sarah Bouchard <sbouchard@norwoodma.gov>, Paul Halkiotis <phalkiotis@norwoodma.gov>

Hi Seth,

Sarah recently forwarded the Rte 1 Corridor Study to me for any potential comments. Here are my thoughts.

-I appreciated the figure 27 lower left hand precent image showing a partially seperated bike lane with a traffic calming stormwater bumpout. Route 1 is a lot of impervious that drains to the Neponset Watershed as well as tributaries including Traphole Brook, Meadow Brook, Plantingfield Brook, and Purgatory Brook. Many of these water bodies are impaired and the Neponset has a TMDL for bacteria. Combining traffic calming practices, seperated bicycle lanes, and green instrastructure BMPs like stormwater bumpouts is a win-win-win for water quality as well as increasing green space and reducing the urban heat island effect created by Rte 1.

-Although it may have been part of the selection criteria, the report omits that Rte 1 abuts or runs through several environmental justice neighborhoods in Norwood. In the south there is an EJ neighborhood for minority populations to the West of Rte 1 from the Walpole line to Dean St, while Rte 1 passes through another EJ neighborhood on the north side of town from East Cross St to Plantingfield Brook. These areas should be promoted to higher interest for upgrades to safety and accessibility as well as increased access to green space.

-Rte 1 contributes significantly to a heat island effect in Norwood; safety for bikers and pedestrians includes reducing the heat island effect using tools such as landscaping and green stormwater infrastructure. I would recommend creating bike lanes with concrete rather than asphalt or using a lighter paint in order to reduce heat island effects and extreme temperatures (as in the lower two precent images in figure 27)

-It wasn't mentioned in either short or long-term recommendations to ensure that bicycles are able to trigger traffic light changes at all intersections on Rte 1

-cars making turns or merging will be the most dangerous situation on rte 1 (since there is no parking allowing cyclists to get "doored"). Slowing right-hand turns, including into businesses as well as intersections, will assist this. I'm not sure of the solution for the "on-ramp" type entrances to Rte 1 (Access Rd, Neponset/Nahatan St) but those types of entrances crossing with the bike lanes should also be carefully thought out.

~Holly

From: "Sarah Bouchard" <sbouchard@norwoodma.gov>
To: "Holly Jones" <hjones@norwoodma.gov>
Sent: Tuesday, October 11, 2022 11:45:39 AM
Subject: Fwd: Reminder: Review and Comment on the Route 1 Priority Corridor Study in Norwood

Forwarding this over in case you have any comments or interest.

Sarah Dixon Bouchard
Assistant Town Planner
Town of Norwood
781-762-1240 x6055

From: "Seth Asante" <sasante@ctps.org>
To: "Paul Halkiotis" <phalkiotis@norwoodma.gov>, "Sarah Bouchard" <sbouchard@norwoodma.gov>, "Mark Ryan" <mryan@norwoodma.gov>, "Tony Mazzucco" <tmazzucco@norwoodma.gov>, "Michael Rosen" <mrosen@norwoodma.gov>, "Tom Orourke" <tom@nrrchamber.com>, director@neponsetvalleytma.org, "Pamela Haznar (DOT)" <pamela.haznar@state.ma.us>, "Barbara Lachance" <barbara.lachance@state.ma.us>, "Nochur, Aditya" <ANochur@mapc.org>, "Soares, David (DOT)" <david.soares@state.ma.us>, "Senior, Cheryll-Ann (DOT)" <cheryll-ann.senior@state.ma.us>, "Niles, Makaela (DOT)" <makaela.niles@state.ma.us>, "Krevat, Derek (DOT)" <derek.krevat@state.ma.us>, "Shuhibar, Ahmad A (DOT)" <ahmad.a.shuhibar@state.ma.us>
Sent: Tuesday, October 11, 2022 10:42:14 AM
Subject: Reminder: Review and Comment on the Route 1 Priority Corridor Study in Norwood

Good morning,

This is a friendly reminder for those who have not yet sent in their comments on the Route 1 Priority Corridor Study in Norwood. The deadline for submitting comments is October 11.

The link to the draft report is here

https://www.dropbox.com/sh/u79n0ptnuwlvu3z/AABb-OLpzFuroHyeCXb2DsZaa?dl=0

Thank you to those who have already submitted their comments.

Seth

Seth Asante
Chief Transportation Planner
Central Transportation Planning Staff
Boston Region Metropolitan Planning Organization
857.702.3644 | sasante@ctps.org | www.ctps.org
Facebook | YouTube | Twitter | Instagram | LinkedIn

Hi Holly,

Sarah recently forwarded the Route 1 Corridor Study to me for any potential comments. Here are my thoughts.

-I appreciated the figure 27 lower left hand precent image showing a partially separated bike lane with a traffic calming stormwater bump out. Route 1 is a lot of impervious that drains to the Neponset Watershed as well as tributaries including Traphole Brook, Meadow Brook, Plantingfield Brook, and Purgatory Brook. Many of these water bodies are impaired and the Neponset has a TMDL for bacteria. Combining traffic calming practices, separated bicycle lanes, and green infrastructure BMPs like stormwater bump outs is a win-win-win for water quality as well as increasing green space and reducing the urban heat island effect created by Route 1.

Thank you. We agree with your comments and will incorporate them in the report.

-Although it may have been part of the selection criteria, the report omits that Route 1 abuts or runs through several environmental justice neighborhoods in Norwood. In the south there is an EJ neighborhood for minority populations to the West of Route 1 from the Walpole line to Dean St, while Route 1 passes through another EJ neighborhood on the north side of town from East Cross St to Plantingfield Brook. These areas should be promoted to higher interest for upgrades to safety and accessibility as well as increased access to green space.

Thank you. Transportation equity was part of the selection criteria. Route 1 abuts and runs through several transportation equity neighborhoods in Norwood and these improvements would increase safety and mobility for those neighborhoods. We added more text to emphasize this benefit under the Summary of Proposed Improvements heading.

-Route 1 contributes significantly to a heat island effect in Norwood; safety for bikers and pedestrians includes reducing the heat island effect using tools such as landscaping and green stormwater infrastructure. I would recommend creating bike lanes with concrete rather than asphalt or using a lighter paint in order to reduce heat island effects and extreme temperatures (as in the lower two precent images in figure 27).

Thank you. Green infrastructure and landscaping improvements such as porous pavements, trees, swales, rain gardens, and bump-outs in the corridor would help to reduce pollution, stormwater runoff, and urban heat island effect. We have addressed this in the report.

-It wasn't mentioned in either short or long-term recommendations to ensure that bicycles are able to trigger traffic light changes at all intersections on Route 1

Thank you. We have included the recommendation in the short-term improvements.

-cars making turns or merging will be the most dangerous situation on Route 1 (since there is no parking allowing cyclists to get "doored"). Slowing right-hand turns, including into businesses as well as intersections, will assist this. I'm not sure of the solution for the "on-ramp" type entrances to Route 1 (Access Rd, Neponset/Nahatan St) but those types of entrances crossing with the bike lanes should also be carefully thought out.

Thank you. These issues would be addressed if the proposed improvements advance to the design and engineering stage. However, a well-designed protected intersection, signage, and pavement markings would minimize potential conflicts between users.

Seth

CTPS CENTRAL TRANSPORTATION PLANNING STAFF

Seth Asante <sasante@ctps.org>

Re: Route 1 Norwood Presentation Slide Deck

1 message

Joe A Collins <jacollins@norwoodma.gov> Mon, Oct 3, 2022 at 1:29 PM
To: Seth Asante <sasante@ctps.org>

Seth,

How many respondents to the survey indicated that they walk or cycle on Route 1? What percentage reported that they walked or cycled?

Here are my comments:

- Traffic speed and distance between places of interest are far too great to make the corridor walkable, even if we were to enhance the miles of sidewalk along Route 1.
- Even if we were to add pedestrian refuge islands, crossing Route 1 would still be a terrifying endeavor.
- We would be better served by enhancing the ability to walk or ride bikes in and around Norwood Center and South Norwood than trying to make the Route 1 Corridor something it's not.
- The intersections are massive for a reason: Many businesses on or along Route 1 in Norwood need tractor trailers to easily access their business to deliver raw materials/goods or pick up goods to be sold elsewhere.
- I agree that Route 1 looks awful, and we could do much to make it look nicer.

I believe your list of walking and cycling challenges (5.2.2) clarifies how much the Town and Commonwealth would need to accomplish for the corridor to become walkable and cycle friendly. Not only would this be incredibly expensive, but I am concerned that it would negatively affect the Town's commercial and industrial tax base by making it challenging for trucks to get to and from places of business along Route 1 in Norwood.

Best,

Joseph A. Collins, CEcD
Economic Development Director | Town of Norwood
JaCollins@norwoodma.gov | Office: 781-762-1240 | Cell: 781-686-7828
www.Norwoodma.gov

From: "Seth Asante" <sasante@ctps.org>
To: "Shuhibar, Ahmad A (DOT)" <ahmad.a.shuhibar@state.ma.us>, "JaCollins" <jacollins@norwoodma.gov>, "Mark Ryan" <mryan@norwoodma.gov>, "Paul Halkiotis" <phalkiotis@norwoodma.gov>, "Sarah Bouchard" <sbouchard@norwoodma.gov>, "Tony Mazzucco" <tmazzucco@norwoodma.gov>, "Andy Murphy" <amurphy@norwoodma.gov>, "Thomas O'Rourke" <tom@nrrchamber.com>, "Michael Rosen" <mrosen@norwoodma.gov>, "Pamela Haznar, DOT" <pamela.haznar@state.ma.us>, "Barbara Lachance" <barbara.lachance@state.ma.us>, "Cheryll-Ann Senior, DOT" <cheryll-ann.senior@state.ma.us>, "Medeiros, Michael P (DOT)" <michael.p.medeiros@state.ma.us>, "Aditya Nochur" <ANochur@mapc.org>, "David Soares, DOT" <david.soares@state.ma.us>, "Karen Dumaine" <director@neponsetvalleytma.org>, "Makaela Niles, DOT" <makaela.niles@state.ma.us>

Sent: Tuesday, September 20, 2022 2:54:40 PM
Subject: Route 1 Norwood Presentation Slide Deck

Good afternoon,

Thank you for meeting this morning. Your feedback is highly appreciated. The attached document is the presentation slide deck. Let me know if you have any questions or feedback.

Best,

Seth

Seth Asante
Chief Transportation Planner
Central Transportation Planning Staff
Boston Region Metropolitan Planning Organization
857.702.3644 | sasante@ctps.org | www.ctps.org
Facebook | YouTube | Twitter | Instagram | LinkedIn

CTPS CENTRAL TRANSPORTATION PLANNING STAFF

Seth Asante <sasante@ctps.org>

Re: Route 1 Norwood Presentation Slide Deck

1 message

Seth Asante <sasante@ctps.org> Mon, Oct 17, 2022 at 11:38 AM
To: Joe A Collins <jacollins@norwoodma.gov>

Hi Joe,

Thank you for your comments. They are very good comments and I have responded to them below.

- How many respondents to the survey indicated that they walk or cycle on Route 1? What percentage reported that they walked or cycled?
There were 270 respondents to the survey question: what challenges do you experience walking or biking in the corridor? This number represents about 34% of the total respondents to the survey.

- Traffic speed and distance between places of interest are far too great to make the corridor walkable, even if we were to enhance the miles of sidewalk along Route 1.
The enhancements to walking and biking infrastructure would address current and future needs of the corridor to be able to support the rezoning, smart growth, future transit services, and economic vitality of the Route 1 corridor. The improvements would support near-term microtransit pilots in the corridor to provide key first- and last-mile connections between the commuter rail stations and Route 34E bus stops to the employment centers along Route 1.

- Even if we were to add pedestrian refuge islands, crossing Route 1 would still be a terrifying endeavor.
Yes, I agree. In addition, providing pedestrians with enough time, countdown timers, and moving the pedestrian walk phase to occur before Route 1 through traffic would improve safety.

- We would be better served by enhancing the ability to walk or ride bikes in and around Norwood Center and South Norwood than trying to make the Route 1 Corridor something it's not.
Enhancing walking and biking in Norwood Center and South Norwood is also important. Please let me know which roadways to consider in both neighborhoods. MPO staff would review them for future studies.

- The intersections are massive for a reason: Many businesses on or along Route 1 in Norwood need tractor trailers to easily access their business to deliver raw materials/goods or pick up goods to be sold elsewhere.
The proposed walking and biking infrastructure will not remove any of the truck/tractor trailer accommodations at the intersections—they are very important to the businesses along Route 1.

- I agree that Route 1 looks awful, and we could do much to make it look nicer.
Yes, I agree with you. Route 1 needs improvements to make the corridor a welcoming environment for all users. Green infrastructure improvements such as trees, rain gardens, stormwater treatments, and bumpouts could be included in the design of the improvements to address landscaping and streetscape issues as well as urban heat index.

- I believe your list of walking and cycling challenges (5.2.2) clarifies how much the Town and Commonwealth would need to accomplish for the corridor to become walkable and cycle friendly. Not only would this be incredibly expensive, but I am concerned that it would negatively affect the Town's commercial and industrial tax base by making it challenging for trucks to get to and from places of business along Route 1 in Norwood.
The walking and biking infrastructure and other recommendations are long-term improvements. They would go through several review phases before advancing into projects. If implemented, they would support the economic vitality of the Route 1 corridor.

Thank you for your participation in the Route 1 Priority Corridor Study.

Seth

Seth Asante
Chief Transportation Planner
Central Transportation Planning Staff
Boston Region Metropolitan Planning Organization
857.702.3644 | sasante@ctps.org | www.ctps.org
Facebook | YouTube | Twitter | Instagram | LinkedIn

On Mon, Oct 3, 2022 at 1:29 PM Joe A Collins <jacollins@norwoodma.gov> wrote:

> Seth,
>
> How many respondents to the survey indicated that they walk or cycle on Route 1? What percentage reported that they walked or cycled?
>
> Here are my comments:
>
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>
> Best,
>
> Joseph A. Collins, CEcD
> Economic Development Director | Town of Norwood
> JaCollins@norwoodma.gov | Office: 781-762-1240 | Cell: 781-686-7828
> www.Norwoodma.gov
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>
> **From:** "Seth Asante" <sasante@ctps.org>
> **To:** "Shuhibar, Ahmad A (DOT)" <ahmad.a.shuhibar@state.ma.us>, "JaCollins" <jacollins@norwoodma.gov>, "Mark Ryan" <mryan@norwoodma.gov>, "Paul Halkiotis" <phalkiotis@norwoodma.gov>, "Sarah Bouchard" <sbouchard@norwoodma.gov>, "Tony Mazzucco" <tmazzucco@norwoodma.gov>, "Andy Murphy" <amurphy@norwoodma.gov>, "Thomas O'Rourke" <tom@nrrchamber.com>, "Michael Rosen" <mrosen@norwoodma.gov>, "Pamela Haznar, DOT" <pamela.haznar@state.ma.us>, "Barbara Lachance" <barbara.lachance@state.ma.us>, "Cheryll-Ann Senior, DOT" <cheryll-ann.senior@state.ma.us>, "Medeiros, Michael P (DOT)" <michael.p.medeiros@state.ma.us>, "Aditya Nochur" <ANochur@mapc.org>, "David Soares, DOT" <david.soares@state.ma.us>, "Karen Dumaine" <director@neponsetvalleytma.org>, "Makaela Niles, DOT" <makaela.niles@state.ma.us>
> **Sent:** Tuesday, September 20, 2022 2:54:40 PM
> **Subject:** Route 1 Norwood Presentation Slide Deck

Good afternoon,

Thank you for meeting this morning. Your feedback is highly appreciated. The attached document is the presentation slide deck. Let me know if you have any questions or feedback.

Best,

Seth

Seth Asante
Chief Transportation Planner
Central Transportation Planning Staff
Boston Region Metropolitan Planning Organization
857.702.3644 | sasante@ctps.org | www.ctps.org
Facebook | YouTube | Twitter | Instagram | LinkedIn

Part 3: Support Letters

From: Haznar, Pamela R. (DOT)
To: Seth Asante
Cc: Mark Abbott; Lachance, Barbara A. (DOT)
Subject: RE: Route 1 in Norwood
Date: Friday, November 19, 2021 7:24:27 AM

The District supports a study on Rte 1.
I am cc-ing Barbara Lachance, District Transportiaon Planner as point of contact.
Thank you for this important work
Pam

Pamela Haznar, P.E. District Five Project Development Engineer
MassDOT **– Highway Division**
1000 County Street, Taunton, MA 02780
857-368-5050 (office) | 508-809-0134 (cell)

From: Seth Asante <sasante@ctps.org>
Sent: Thursday, November 18, 2021 3:18 PM
To: Haznar, Pamela R. (DOT) <Pamela.Haznar@dot.state.ma.us>
Cc: Mark Abbott <mabbott@ctps.org>
Subject: Route 1 in Norwood

Good afternoon Pamela,

The Metropolitan Area Planning Council has been working with the Neponset Valley Transportation Management Association and communities along the Route 1 corridor from Dedham to Foxborough on addressing job/transit access. They are recommending various transit pilot projects but their long-term recommendation is to make that Route 1 corridor more transit, pedestrian, and bicycle friendly.

Also, the Route 1 corridor in Westwood, Norwood, and Walpole was identified in the Boston Region MPO's *Long-Range Transportation Plan's Needs Assessment* as in need of safety improvements and modernization to address multimodal transportation. The MPO's recurring study *Addressing Priority Corridors from the Long-Range Transportation Plan Needs Assessment* focuses on these corridors, where staff do a detailed analysis and develop improvement concepts of a corridor.

We are currently in the process of selecting a corridor for the FFY 2022 study. However, the length of Route 1 in these three communities is too long to be done in one study, so we could only possibly study one of them—Norwood. Route 1 in

Norwood is the busiest in the three communities, serves mixed land uses, and has the most pressing need for safe pedestrian and bicycle accommodations. In addition, safety and operations are concerns, as there are five HSIP crash clusters in this corridor.

I am contacting you to see if District 5 will support studying Route 1 in Norwood to address the corridor needs.
As usual let us know if you have any questions.

Thank you,
Seth

Seth A. Asante
Chief Transportation Planner
Central Transportation Planning Staff
Boston Region Metropolitan Planning Organization
857.702.3644 | sasante@ctps.org | www.ctps.org
Facebook | YouTube | Twitter | Instagram | LinkedIn

From: Pollack, Travis
To: Seth Asante; Mark Abbott
Subject: Corridor Long-Range Planning
Date: Monday, November 8, 2021 12:01:32 PM

Seth and Mark,

Hope you are doing well. I am working with the Neponset Valley TMA and communities along the Route 1 corridor from Dedham to Foxborough on addressing job/transit access. We're recommending various transit pilot projects but our draft long-term recommendation is to make that Route 1 corridor more transit/pedestrian friendly, similar to the Providence Highway/VFW Parkway recommendations from Dedham and West Roxbury that was just completed.

Eric B. here asked that we include in that recommendation, information on the Boston MPO *ADDRESSING PRIORITY CORRIDORS FROM THE LONG-RANGE TRANSPORTATION PLAN NEEDS ASSESSMENT* https://www.ctps.org/data/calendar/htmls/2021/MPO_1021_Work_Program_LRTP_Priority%20Corridors.html where staff do a very detailed conceptual design of a corridor.

Is this Route 1 corridor already evaluated in this program? What would it take for this corridor to be included in this program?

Also, since this corridor is MassDOT owned, are there other MassDOT funding sources that can be used to do a study and implement multi-modal changes?

Any information would be helpful. Happy to get on a short phone call if that might help. Thanks.

Travis Pollack, AICP – Senior Transportation Planner
Metropolitan Area Planning Council
617-933-0793
tpollack@mapc.org
www.mapc.org
Pronouns: he, him, his

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Part 4: Study Location Selection Memorandum

TECHNICAL MEMORANDUM

DATE: **January 20, 2022**
TO: **Boston Region Metropolitan Planning Organization]**
FROM: **Seth Asante, MPO Staff**
RE: **Selection of FFY 2022 LRTP Priority Corridor Study Location**

1 BACKGROUND

During the development of the Boston Region Metropolitan Planning Organization's (MPO) Long-Range Transportation Plan (LRTP), *Destination 2040*, the MPO staff identified existing needs for all transportation modes in the region.[1] The results were compiled in the LRTP Needs Assessment, which is used to guide the MPO's decision-making process for selecting transportation projects to fund in future Transportation Improvement Programs (TIP). The MPO's goals that guided the development of the LRTP Needs Assessment include the following:

- Safety—make all modes safe
- Preservation—maintain and modernize the system and plan for its resiliency
- Capacity Management and Mobility—use existing facility capacity more efficiently and increase healthy transportation capacity
- Clean Air/Clean Communities—create an environmentally friendly transportation system
- Transportation Equity—ensure that all people receive comparable benefits from, and are not disproportionately burdened by, MPO investments, regardless of race, color, national origin, age, income, ability, or sex
- Economic Vitality—ensure our transportation network serves as a strong foundation for economic vitality

Based on previous and ongoing transportation-planning work, including the MPO's Congestion Management Process (CMP) and planning studies, MPO staff identified several priority arterial roadway segments that require maintenance,

[1] *Destination 2040: The New Long-Range Transportation Plan of the Boston Region Metropolitan Planning Organization* was adopted by the Boston Region MPO in August 2019.

Civil Rights, nondiscrimination, and accessibility information is on the last page.

modernization, and safety and mobility improvements. These locations are documented in the LRTP Needs Assessment.

To address problems on some of these arterial segments, the *Addressing Priority Corridors from the Long-Range Transportation Plan Needs Assessment* study was included in the federal fiscal year (FFY) 2022 Unified Planning Work Program (UPWP).[2] This memorandum presents the results of the selection process and provides a recommended study location for the MPO board's review.

By focusing on arterial segments, planners can evaluate multimodal transportation needs comprehensively (with the goal of creating Complete Streets).[3] A holistic approach to analyzing problems and forming recommendations ensures that the needs of all transportation users are considered. Ultimately, this approach will result in roadways where it is safe to cross the street and walk, or bicycle to shops, schools, train stations, and recreational facilities, and where buses can run on time. Typically, the recommended improvements are within a roadway's right-of-way and the interests and support of stakeholders are also considered.

2 SELECTION PROCEDURE

The process for selecting study locations consisted of three steps.

1. MPO staff gathered and assembled data about the arterial segments from the LRTP Needs Assessment and used the data to identify and prioritize segments in need of improvement.
2. Staff examined the arterial segments more closely by applying specific criteria.
3. Staff scored each arterial segment and assigned a priority of *low*, *medium*, or *high* to each segment.

Details about each step in the process are provided below.

[2] The FFY 2022 UPWP was endorsed by the Boston Region MPO on August 19, 2021. The FFY 2022 UPWP was reviewed by the MPO's federal partners and went into effect on October 1, 2021.

[3] A Complete Street is one that provides safe and accessible options for all travel modes, such as walking, biking, transit, and vehicles, for people of all ages and abilities.

2.1 Gathering Data and Identifying Potential Arterial Segments

MPO staff identified 43 arterial segments in 33 municipalities in the Boston region based on the following data sources:

- The Massachusetts Department of Transportation (MassDOT) Road Inventory File and 2014–18 crash database was used to assemble the following information for each arterial segment: roadway jurisdiction, National Highway System status, average daily traffic (ADT), high-crash locations, and crashes involving people walking or biking
- The MPO's CMP data on arterial congestion were used to determine average travel speeds, travel-time index (travel time in the peak period divided by travel time during free-flow conditions), and speed index (average travel speed divided by the speed limit) on each arterial segment
- The MPO's data on gaps in the bicycle network and data on the location of bicycle facilities were used to identify the needs of people who bicycle, including locations where connectivity between bicycle facilities and accommodations could be improved[4]
- Data on Massachusetts Bay Transportation Authority (MBTA) bus service performance and passenger loads were used to determine the percentage of bus trips that do not adhere to the schedule (such as providing late service) or do not adhere to passenger load standards (resulting in crowding)
- Data on MBTA bus routes, subway lines, and commuter rail lines were used to identify which arterial segments serve MBTA buses or stations
- Data on the MPO's transportation equity analysis zones were used to identify areas of concern as relates to transportation equity
- Data selected from MassDOT's Project Information database, the MPO's FFYs 2022–26 TIP project database, MPO planning studies and other studies, and municipal websites were used to obtain data on projects, studies, and TIP projects that are planned or programmed for each arterial segment

Table 1, located at the end of the memorandum, presents the data and information gathered about each of the arterial segments:

- Community

[4] Beth Isler, Bicycle Network Evaluation (Boston Region Metropolitan Planning Organization, May 2014), https://www.ctps.org/data/pdf/programs/livability/MPO_0515_Bicycle_Network.pdf.

- Metropolitan Area Planning Council (MAPC) subregion
- Jurisdiction
- MassDOT district office
- National Highway System
- Number of crash clusters that are eligible for Highway Safety Improvement Program (HSIP) funding
- Transit service performance
- Proximity to a transportation equity analysis zone (within one-half mile distance)
- Relevant studies or projects within or near the segment

Table 1 also includes the score and priority rating that was determined by applying the selection criteria. The processes for scoring and assigning priority ratings to segments are described below.

2.2 Selection Criteria

MPO staff examined the arterial segments closer by applying the following six criteria and assigning points based on the number of criteria that apply to each location.

1. *Safety Conditions, 0–4 points (each of the four criteria is worth one point)*
    - Location has a higher-than-average crash rate for its functional class
    - Location contains an HSIP-eligible crash cluster
    - Location is identified in the Massachusetts *Top High-Crash Locations Report*
    - Location has a significant number of pedestrian and bicycle crashes per year (two or more per mile) or contains one or more HSIP-eligible bicycle-pedestrian crash cluster
2. *Congested Conditions, 0–2 points (each of the two criteria is worth one point)*
    - Travel-time index is at least 1.3
    - Travel-time index is at least 2.0
3. *Multimodal Significance, 0–3 points (each of the three criteria is worth one point)*
    - Location currently supports transit, bicycle, or pedestrian activities
    - Location needs to have improved transit, bicycle, or pedestrian facilities
    - Location has a high volume of truck traffic serving regional commerce

4. *Regional Significance, 0–4 points (each of the four criteria is worth one point*)
    - Location is in the National Highway System
    - Location carries a significant portion of regional traffic (ADT is greater than 20,000)
    - Location lies within 0.5 miles of a transportation equity analysis zone
    - Location is essential for the region's economic, cultural, or recreational development
5. *Regional Equity, 0–2 points (each of the two criteria is worth one point)*
    - Location is in an MAPC subregion where there has not been a priority corridors study
    - Location is in an MAPC subregion where there has not been a priority corridors study in the previous three years
6. *Implementation Potential, 0–3 points (each of the three criteria is worth one point)*
    - Location is proposed or endorsed for study by the agency that administers the roadway
    - Location is proposed or endorsed by its MAPC subregional group and is a priority for that subregional group
    - Other stakeholders strongly support improvements for the location

2.3 Rating Potential Roadways

MPO staff rated arterial segments with a total score of 11 or fewer points as *low* priority; those with a score of 12 to 13 points as *medium* priority; and those with a total score of 14 or more points as *high* priority. Staff gave six arterial segments a high-priority rating based on safety and operational needs, multimodal and regional significance, regional equity, and support for improvements from agencies and municipalities. Staff then examined high-priority segments more closely and excluded arterials for which there were projects that covered a substantial length of the corridor or if the segments met any of the following criteria excluding it from further consideration: recently completed, in construction, in design, under study, or programmed in the TIP with the 25 percent design completed.

The arterial segment of Route 1 in Norwood received the highest score. Staff also evaluated walking and biking accommodations and safety improvement needs for the segment with the highest score by applying the MPO's Pedestrian Report Card Assessment and Bicycle Level-of-Service Metric (Bicycle Report

Card).[5] Based on the assessments, accommodations for people who walk or bicycle on Route 1 in Norwood were rated poor. The location highly qualifies for study based on accommodation for people who walk or bicycle, or safety and operation improvement requirements. Appendix A (attached) contains detailed results of the assessments for Route 1 in Norwood. Based on this evaluation, staff recommends studying the segment on Route 1 in Norwood. Figure 1, located at the end of the memorandum, shows the study area with five HSIP intersection crash clusters.

3 ARTERIAL SEGMENT SELECTED FOR STUDY: ROUTE 1 IN NORWOOD

The arterial segment on Route 1 in Norwood received a total score of 16, based on the selection criteria. Route 1 runs north and south through Norwood, and it serves residential, commercial, industrial, educational, and recreational areas. Within the selected corridor, there are several transportation equity zones that exceed the threshold of the MPO, including minority, limited English proficiency, and carless households.

Being a principal arterial, Route 1 carries local and commuter traffic to and from Boston and connects major east-west roads—Everett Street, Neponset Street, Dean Street, Summer Street, Morse Street, and Union Street. Staff's evaluation indicates that there are safety and mobility problems in the segment. Five locations along the segment contain HSIP-eligible crash clusters, one of which is in the top 200 of intersection crash clusters in Massachusetts. Also, accommodation for people who bicycle is poor and better bicycle connections are needed in the corridor. Accommodations for people who walk need improvement as there are gaps in the sidewalk network.

MassDOT Highway District 5 has been fielding inquiries about improving the safety of people walking and biking along the corridor. MAPC has been working with the Neponset Valley Transportation Management Association and communities along the Route 1 corridor from Dedham to Foxborough on addressing job and transit access. They are recommending various transit pilot projects, but the long-term recommendation is to make the Route 1 corridor more friendly for people walking, biking, and taking the bus. Appendix B (attached) includes various letters of support for studying Route 1. MassDOT District 5, MAPC, and The Town of Norwood also support studying Route 1 in Norwood to identify solutions to these problems.

[5] Ryan Hicks and Casey-Marie Claude, Boston Region Metropolitan Planning Organization, *Pedestrian Level-of-Service Memorandum*, January 19, 2017; Casey-Marie Claude, Boston Region Metropolitan Planning Organization, *Development of a Scoring System for Bicycle Travel in the Boston Region*, November 8, 2018.

For the study, MPO staff would focus on segments of the corridor that would benefit the most, especially regarding safety and for people walking or biking. Staff would also work with stakeholders directly to identify problems and develop solutions. This recommendation meets the selection criteria and supports the transportation improvement policies of the MPO's LRTP.

4 NEXT STEPS

MPO staff will present the recommended study location to the MPO board. MPO staff will meet with officials from Norwood, MAPC, MassDOT, and other stakeholders to discuss the study specifics, conduct field visits, collect data, identify needs, and develop solutions.

TABLE 1
Arterial Segments Considered for Study: Priority Corridors for Long-Range Transportation Plan Needs Assessment Study

Arterial Segment	Community	MAPC Subregion	MassDOT District	Jurisdiction	National Highway System	Number of Top-200 High-Crash Locations 2015–17	Number of HSIP-Eligible Crash Clusters 2015–17**	Crowded or Late Bus	In or Near Transportation Equity Priority Area	Study, Project, or TIP Project	Safety Conditions***	Congested Conditions***	Multimodal Significance***	Regional Significance***	Regional Equity***	Implementation Potential***	Score	Priority Rating	Summary of Comments
Route 1	Norwood	TRIC	5	MassDOT	Yes	1	5	N/A	Yes	MassDOT's I-95 South Corridor Study provided a comprehensive evaluation of the I-95 and Route 1 corridors south of Route 128 that included a recommended plan of short-term and long-term improvements; June 2010. MassDOT Project #609371, Median jersey barrier and fencing upgrade; completed in 2020. MassDOT Project #608052, Route 1 at Morse Street; in design stage. MassDOT Project #608599, Stormwater improvements along Route 1 and I-95; programmed in FFY 2022. MassDOT Project #605857, Route 1 at University Avenue and Everett Street; programmed FFY 2025. MassDOT Project #606545, Median jersey barrier and fencing upgrade; completed in 2012.	3	2	3	4	1	3	16	High	MPO staff recommends studying Route 1 in Norwood to address safety, congestion, and multimodal transportation. This four-mile arterial segment serves mixed land uses and has pressing need for safe accommodations for people walking and biking. There are gaps in the sidewalk network and sections of the existing sidewalks are in poor conditions. The existing 6- to 10-foot shoulders need improvements to provide a safe environment for people biking. In addition, safety and operations are concerns, as five locations along the segment contain HSIP-eligible crash clusters, one of which is in the top 200 of intersection crash clusters in Massachusetts. Finally, MAPC has been working with the Neponset Valley Transportation Management Association and communities along the Route 1 corridor from Dedham to Foxborough on addressing job/transit access. They are recommending various transit pilot projects but their long-term recommendation is to make the Route 1 corridor more transit, pedestrian, and bicycle friendly.
Route 37	Braintree	SSC	6	MassDOT	Yes	1	2	Yes	Yes	MassDOT Project #608651, Adaptive traffic signal control on Route 37 (Granite Street). Installation of adaptive traffic control signal equipment, vehicle detection, communication equipment, and managing software at seven traffic signals on Route 37; in construction. MassDOT Project #607684, Bridge replacement, B-21-017, Washington Street (Route 37) over MBTA/CSX railroad; preliminary design.	3	2	2	4	2	2	15	High	The arterial segment has a 5- to 6-foot shoulder on either side of the roadway for most of the corridor. There are sidewalks on either side of the roadway throughout the corridor. However, the corridor needs upgrades of its infrastructure for safe accommodations of people walking, biking, or taking transit. MassDOT recently completed installing adaptive traffic control signal equipment, vehicle detection, communication equipment, and managing software at seven traffic signals on Route 37.
Route 3A	Burlington	NSPC	4	MassDOT	Yes	0	1	Yes	Yes	MassDOT Project #608068, Installation of an adaptive traffic control signal system on Cambridge Street, Middlessex Turnpike, and Burlington Mall Road. The project includes the installation of compatible traffic signal control equipment, video detection, communication devices and software to integrate 11 MassDOT and 16 town-owned traffic signal locations into one adaptive signal system; in construction.	3	1	3	4	2	1	14	High	On this segment, there are no accommodations for bicycles, gaps in the sidewalk network, and travel lanes that are very wide (drivers form two lanes in each direction). Land use is mixed along the corridor. There are three MBTA bus routes operating in the corridor. Pedestrian and bicycle crashes have occurred in the corridor. The installation of an adaptive traffic control signal system is underway on Cambridge Street, Middlessex Turnpike, and Burlington Mall Road to integrate 11 MassDOT and 16 town-owned traffic signal locations into one adaptive signal system.
Route 9	Framingham and Natick	MWRC	3	MassDOT	Yes	2	6	No data	Yes	MassDOT Project #609402, Framingham-Natick resurfacing and related work on Route 9; programmed FFY 2025; construction slated to begin summer 2026. MassDOT Project #607732, Framingham-Natick Cochituate Rail Trail. The project involves construction of 2.4 miles of rail trail and includes a grade separated crossing at Routes 9 and 30; in construction. MassDOT Project #608006, Framingham Pedestrian Hybrid Beacon Installation at Route 9 and Maynard Road and the Framingham Fire Station; in design. MassDOT Project #608281, Installation of adaptive traffic control signal equipment, vehicle detection, and communication equipment at five traffic signals in Framingham and Natick on Route 9; in construction. MassDOT Project #608836, Drainage improvements on Route 9 at Route 126 interchange and salt shed relocation (Phase 1); advertised for bids as of June 2021.	3	2	3	4	1	1	14	High	The FFY 2021 Priority Corridors for LRTP Needs Assessment Study and several MassDOT projects in the corridor will address issues.
Route 16	Medford	ICC	4	MassDOT	Yes	1	2	Yes	Yes	MassDOT Project #604660, Everett-Medford-Bridge Replacements, Revere Beach Parkway (Route 16), E-12-004=M-12-018 over the Malden River (Woods Memorial Bridge) and M-12-017 over MBTA and Rivers Edge Drive; under construction. MassDOT Project #605531, Structure maintenance, E-12-004=M-12-018, Revere Beach Parkway (Route 16) over the Malden River (Woods Memorial Draw Bridge); in construction.	3	2	3	4	0	2	14	High	In FFY 2019, MPO staff studied Route 16 in Chelsea and Everett and suggested improvements to address safety, congestion, multimodal transportation, and pedestrian and bicycle accommodations. The section of Route 16 in Medford has five HSIP intersection clusters, including two pedestrian clusters. The roadway experiences congestion and high truck volumes. It also carries vehicular, pedestrian, and bicycle traffic to Wellington Station. Studying this segment in Medford will provide MassDOT with improvement concepts to comprehensively address safety, capacity management and mobility, and accommodations for people walking or biking in the corridor.
Route 18	Weymouth	SSC	6	MassDOT	Yes	3	8	Yes	Yes	MassDOT Project #601630, Reconstruction and widening on Route 18 (Main Street) from Highland Place to Route 139 (4.0 miles) includes replacing W-32-013, Route 18 over the Old Colony Railroad (MBTA); in construction.	4	2	2	4	2	0	14	High	This arterial segment was not selected because a MassDOT project, currently in construction, would address problems in the entire segment.
Route 2A/3	Arlington	ICC	4	Arlington	Yes	0	1	Yes	Yes	None	3	2	3	4	0	1	13	Medium	None
Route 203	Boston	ICC	6	MassDOT	Yes	5	12	Yes	Yes	MassDOT Project #606318, Intersection improvements at Gallivan Boulevard (Route 203) and Morton Street; in construction. MassDOT Project #608755, Intersection improvements Morton Street (Route 203) at Blue Hill Ave, at Courtland Road/Havelock Street, and at Havard Street; programmed in the FFY 2019 TIP; in design. MassDOT Project #606896, Reconstruction on (Route 203) Gallivan Boulevard, from Neponset Circle to east of Morton Street intersection; in preliminary design. MassDOT Project #606897, Improvements on (Route 203) Morton Street, from west of Gallivan Boulevard to Shea Circle; in preliminary design.	4	2	2	4	0	1	13	Medium	The FFY 2012 Priority Corridors for LRTP Needs Assessment Study and several MassDOT projects in the corridor will address issues.

Arterial Segment	Community	MAPC Subregion	MassDOT District	Jurisdiction	National Highway System	Number of Top-200 High-Crash Locations 2015–17	Number of HSIP-Eligible Crash Clusters 2015–17**	Crowded or Late Bus	In or Near Transportation Equity Priority Area	Study, Project, or TIP Project	Safety Conditions***	Congested Conditions***	Multimodal Significance***	Regional Significance***	Regional Equity***	Implementation Potential***	Score	Priority Rating	Summary of Comments
Route 2A	Cambridge	ICC	6	Cambridge and DCR	Yes	1	5	Yes	Yes	The City has been transforming the Route 2A corridor to improve safety for people walking, biking, or riding transit and improve travel times and reliability of bus transit service. The City has implemented separated bike lanes, bus lanes, and parking/loading changes throughout the corridor.	4	2	2	4	0	1	13	Medium	The City has implemented several projects to transform Route 2A corridor into a route for everyone and improve safety for people walking, biking, or riding transit. The improvements include separated bike lanes, bus lane, parking/loading times, and traffic signal phase intervals to accomodate people biking.
Route 16	Chelsea and Everett	ICC	4	MassDOT	Yes	7	8	Yes	Yes	FFY 2019 Priority Corridor for LRTP Needs Assessment Study (Chelsea and Everett)	4	1	3	4	0	1	13	Medium	The FFY 2019 Priority Corridors for LRTP Needs Assessment Study and several MassDOT projects will address issues.
Route 135	Framingham	MWRC	3	Framingham	Yes	1	2	No data	Yes	MassDOT Project #606109, Intersection improvements at Route 126/135/MBTA and CSX railroad; in preliminary design.	4	1	2	4	1	1	13	Medium	MassDOT Project #606109, Intersection improvements at Route 126/135/MBTA and CSX railroad. Roadway has received improvements to address congestion and make it multimodal (accommodation for people walking or biking).
Route 107	Lynn	ICC	4	MassDOT and Lynn	Yes	4	10	Yes	Yes	MassDOT Project #808817, Resurfacing of Route 107 and related improvements; programmed FFY 2021. MassDOT Project #608927, Reconstruction of Route 107 in Lynn and Salem; in preliminary design. MassDOT project #609246, Rehabilitation of Western Avenue (Route 107); in preliminary design. MassDOT Project #604952, Bridge Replacement, Route 107 over the Saugus River; programmed 2019. MassDOT Project #26710, Bridge Replacement, Route 107 over the Saugus River (Fox Hill Bridge); completed spring 2013.	4	1	3	4	0	1	13	Medium	This arterial segment was the subject of a Route 107 Corridor Study in Lynn and Salem, which was completed by MassDOT in 2016. The proposed improvements would be addressed under Project #608927; currently in design.
Route 16	Milford	SWAP	3	MassDOT and Milford	Yes	0	3	No data	Yes	MassDOT Project #607428, Resurfacing and intersection improvements on Route 16 (Main Street), from Water Street west to approximately 120 feet west of the Milford/Hopedale town line and the intersection of Route 140; programmed FFY 2019. MassDOT Project #606142, Signal and intersection improvements on Route 16 (Main Street and East Main Street) at six locations; completed in 2013.	3	2	2	4	1	1	13	Medium	This corridor received improvements in 2013 based on a CTPS study, and a MassDOT resurfacing and intersection improvement project was programmed for FFY 2019.
Route 3A	Quincy	ICC	6	MassDOT, DCR, and Quincy	Yes	1	10	Yes	Yes	MassDOT Project #608569, Intersection improvements at Route 3A (Southern Artery) and Broad Street; programmed FFY 2022 TIP. MassDOT Project #605729, Intersection and signal improvements at Hancock Street and East/West Squantum streets; completed in 2015. An FFY 2012 CTPS safety and operations study addressed problems at the Route 3A and Coddington Street intersection.	4	2	2	4	0	1	13	Medium	Route 3A (Hancock Street and Southern Artery) has received several improvement projects and was the focus of a CTPS study. The location was suggested in the 2017 MPO Outreach Program.
Route 28	Randolph	TRIC	6	MassDOT and Randolph	Yes	3	9	Yes	Yes	MassDOT Project #609399, Resurfacing and related work on Route 28; in preliminary design. Arterial Coordination Study, CTPS study (2010).	4	2	2	4	0	1	13	Medium	The location has a potential MassDOT resurfacing project and could benefit from some upgrades for safe accommodations for people walking, biking, or riding bus transit.
Route 114	Salem	NSTF	4	MassDOT and Salem	Yes	0	1	Yes	Yes	MassDOT Project #608521, Bridge Maintenance, North Street (Route 114) over Bridge Street (Route 107) and MBTA; in construction. MassDOT Project #605332, Bridge Replacement (Route 114) North Street over North River; in design stage.	3	2	2	4	1	1	13	Medium	This roadway has had Complete Streets improvements, including sidewalks and bicycle lanes on either side of the roadway. The section that requires improvements to address safety, capacity management and mobility, and accommodate bicycles is between Bridge Street (Route 107) and Route 128.
Route 16	Wellesley	MWRC	6	MassDOT and Wellesley	Yes	0	0	N/A	Yes	MassDOT Project #94762, Bridge Rehabilitation, Br# W-13-014 Route 16 (Washington Street) over Route 9 including relocation of retaining wall; completed.	3	2	2	4	1	1	13	Medium	The location was suggested in 2014 LRTP outreach through verbal comments at a 495/MetroWest Partnership meeting.
Route 3A	Weymouth	SSC	6	MassDOT	Yes	0	1	Yes	Yes	MassDOT Project #608231, Reconstruction of Route 3A including pedestrian and traffic signal improvements; in design. MassDOT Project #604382, Route 3A (Washington Street) Bridge; in construction. MassDOT Project #608483, Work consists of resurfacing on Route 3A; in preliminary design.	2	2	2	4	2	1	13	Medium	A road safety audit was completed for Route 3A in Weymouth in September 2016. The audit identified the problems and needs on the roadway, and suggested short-, medium-, and long-term improvements. MassDOT Project #608321, in design, will address problems and needs identified in the corridor.
Routes 38/129	Wilmington	NSPC	4	MassDOT and Wilmington	Yes	0	3	N/A	Yes	MassDOT Project #608051, Reconstruction of Route 38 from Route 62 to the Woburn city line, add bike lanes, sidewalks, and turn lanes, and upgrade signals; programmed FFY 2024. MassDOT Project #609253, Intersection improvements at Lowell Street (Route 129) and Woburn Street; programmed FFY 2024. MassDOT Project #601732, Rehabilitation, Route 129 (Lowell Street) from Route 38 (Main Street) to Woburn Street; completed in 2009.	2	2	2	4	2	1	13	Medium	Several sections of the arterial have projects that are currently in design. These MassDOT projects would address problems in the corridor.

Arterial Segment	Community	MAPC Subregion	MassDOT District	Jurisdiction	National Highway System	Number of Top-200 High-Crash Locations 2015–17	Number of HSIP-Eligible Crash Clusters 2015–17**	Crowded or Late Bus	In or Near Transportation Equity Priority Area	Study, Project, or TIP Project	Safety Conditions***	Congested Conditions***	Multimodal Significance***	Regional Significance***	Regional Equity***	Implementation Potential***	Score	Priority Rating	Summary of Comments
Route 2/3/3A/16	Cambridge	ICC	6	DCR	Yes	3	4	Yes	Yes	DCR conducted a traffic study of several intersections along Mount Auburn Street and Fresh Pond Parkway, in partnership with the City of Cambridge, MassDOT, and the MBTA. MassDOT Project #608806, Multiuse Path Contruction (Phase II), Create a multiuse greenway on the former B&M railroad right-of-way extending from Concord Avenue in Cambridge through the Fresh Pond Reservation, under Huron Avenue and Mount Auburn Street and into Watertown; this project is in construction. MassDOT Project #609290, Intersection improvements at Fresh Pond Parkway/Gerrys Landing Road, from Brattle Road to Memorial Drive.	3	2	2	4	0	1	12	Medium	DCR and the City of Cambridge studied the portion of the corridor at and south of Mount Auburn Street . The study focused on safety measures, bus prioritization, and accessibility.
Route 2	Concord	MAGIC	4	MassDOT	Yes	0	3	N/A	Yes	MassDOT Project #602984, Crosby's Corner (Route 2 at Route 2A) improvements; completed. MassDOT Project #608015, Reconstruction and widening on Route 2, from Sandy Pond Road to Bridge over MBTA/B&M railroad; in preliminary design MassDOT Project #602091, Concord Rotary; in preliminary design. MassDOT Project #604069, Bridge Replacement over Sudbury River; in preliminary design. MassDOT Project #606223: Bruce Freeman Rail Trail Construction (Phase II-B) in Acton and Concord; in construction.	2	2	2	4	1	1	12	Medium	FFY 2013 Priority Corridors for LRTP Needs Assessment Study (Concord and Lincoln) Route 2 was suggested during MPO outreach as a route experiencing congestion that affects MAGIC communities and Cambridge. There are many projects and studies conducted for this corridor, including the Route 2 (Crosby's Corner) improvements and Concord Rotary upgrade and improvements.
Route 99	Everett	ICC	4	Everett	Yes	0	1	Yes	Yes	MassDOT Project #602383, Reconstructed Route 99 with a traffic signal upgrade, from Second Street to the Malden city line; completed in 2008. MassDOT Project #602382, Reconstructed Route 99 from Sweetser Circle to the Alford Street Bridge in 2013; completed spring 2013.	2	2	3	4	0	1	12	Medium	This roadway is not recommended for study because MassDOT completely reconstructed Route 99 with signal improvements from the Alford Street Bridge to the Malden city line. Route 99 (Lower Broadway) has also received improvements, including pedestrian and bicycle accommodation, as a result of the Encore Boston Harbor mitigation improvements.
Route 3A	Hingham	SSC	5	MassDOT	Yes	0	1	Yes	Yes	MassDOT Project #605168, Improvements on Route 3A from Otis Street/Cole Road including Summer Street and rotary and Rockland Street to George Washington Boulevard; in design.	2	1	2	4	2	1	12	Medium	In FFY 2015, a subregional priority roadway study was conducted for Route 3A in Hingham and Hull. The location received strong support from the Towns of Hingham and Hull, as well as the South Shore Coalition and the MassDOT Highway Division District 5 Office.
Route 28	Milton	ICC and TRIC	6	MassDOT and Milton	Yes	1	3	Yes	Yes	MassDOT Project #607342, Intersection and Signal Improvements at Route 28 (Randolph Avenue) and Chickatawbut Road; programmed FFY 2022. MassDOT Project #609396, Resurfacing and related work on Route 28; programmed FFY 2024. MassDOT Project # 106901, Reconstruction on Route 28 (Randolph Avenue) from Reedsdale Road to Quincy town line; completed in 2008.	4	2	3	3	0	0	12	Medium	This arterial segment was studied in FFY 2020. There are four HSIP intersection clusters in the segment. There is no accommodation for bicycles in the segment, which presents a significant connectivity problem because several of the side streets have bicycle lanes. There are peak period traffic congestion problems that create safety, operations, and mobility issues for the residents. In addition, recommendations from the study could be incorporated into MassDOT Project #609396 or a new project.
Route 114	Peabody	NSTF	4	MassDOT and Peabody	Yes	0	2	Yes	Yes	MassDOT Project # 608567, Improvements at Route 114 at Sylvan Street, Cross Street, Northshore Mall, Loris Road, Route 128 Interchange, and Esquire Drive; in design.	3	2	2	3	1	1	12	Medium	Route 114 in Peabody was listed as a potential corridor in need of signal progression and improvements to accommodate people who walk and bike. However, the arterial segment was not selected because, according to MassDOT Highway District 4, a road safety audit was completed for the segment in August 2016, and a consultant has started design work as part of Project #608567; in design.
Route 16 (Revere Beach Parkway)	Revere	ICC	4	MassDOT	Yes	0	1	Yes	Yes	None	2	2	3	4	0	1	12	Medium	This location is not recommended for study because the Suffolk Downs Redevelopment project is evaluating several scenarios that would affect traffic on Route 16 and Route 1A.
Route 107	Salem	NSTF	4	MassDOT and Salem	Yes	0	1	Yes	Yes	Route 107 Corridor Study in Salem and Lynn; completed in 2016. MassDOT Project #608059, Stormwater improvements along Route 107 (Salem Bypass Road); in construction. MassDOT Project #608650, Adaptive Signal Controls on Route 107 (Highland Avenue); in construction. MassDOT Project #608817, Resurfacing and related work on Route 107; in construction. MassDOT Project #608927, Reconstruction of Route 107; in preliminary design.	3	2	2	4	1	0	12	Medium	The Route 107 corridor in Lynn and Salem was studied in 2016 and many of the recommendations have advanced into MassDOT projects. The proposed improvements would be addressed under Project #608927; currently in design.
Route 1A	Salem	NSTF	4	MassDOT and Salem	Yes	0	0	Yes	Yes	MassDOT Project #605146, Reconstruction of Canal Street from Washington Street and Mill Street to Loring Avenue (Route 1A) and Jefferson Street; completed in 2018. MassDOT Project #601017, Reconstruction of Route 1A (Bridge Street) from the Beverly/Salem Bridge to Washington Street (6,000 feet); completed in 2013.	3	1	2	4	1	1	12	Medium	The southern end of this arterial segment was included in the study of Route 1A at Vinnin Square in Marblehead and in Swampscott; this location was selected as the subject of the FFY 2016 Priority Corridors Study. The intersection of Route 1A and Jefferson Street and Canal Street was reconstructed in 2018.
Route 16	Sherborn	SWAP	3	Sherborn	Yes	0	2	N/A	Yes	None	2	2	1	4	1	2	12	Medium	This location was suggested during 2014 LRTP outreach at a 495/MetroWest Partnership meeting. The section that experiences the most crashes and congestion is in the town center, where Route 16 and Route 27 combine and split.

Arterial Segment	Community	MAPC Subregion	MassDOT District	Jurisdiction	National Highway System	Number of Top-200 High-Crash Locations 2015–17	Number of HSIP-Eligible Crash Clusters 2015–17**	Crowded or Late Bus	In or Near Transportation Equity Priority Area	Study, Project, or TIP Project	Safety Conditions***	Congested Conditions***	Multimodal Significance***	Regional Significance***	Regional Equity***	Implementation Potential***	Score	Priority Rating	Summary of Comments
Route 20	Waltham	ICC	6	MassDOT and Waltham	Yes	0	3	Yes	Yes	City of Waltham Transportation Master Plan, January 2017.	3	2	2	4	0	1	12	Medium	This location had been studied and improvements proposed in the Waltham Transportation Master Plan.
Route 20	Weston	MWRC	6	MassDOT	Yes	0	3	Yes	No	Intersection improvements on Boston Post Road (Route 20) at Wellesley Street; in design stage.	3	2	2	3	1	1	12	Medium	A suggestion to study this location was resubmitted in a comment on the Draft FFY 2014 UPWP and during the 2017 MPO Outreach Program.
Route 60	Arlington	ICC	4	Arlington	Yes	0	1	Yes	Yes	CTPS and MAPC Community Transportation Technical Assistance Program evaluated the high-crash location at the intersection at Massachusetts Avenue in March 2010. MassDOT Project #606885, Reconstructed the intersection of Route 3 and Route 60; completed in 2017.	2	2	3	3	0	1	11	Low	None
Route 16	Holliston	MWRC	3	MassDOT and Holliston	Yes	0	2	No data	No	2011 CTPS study, Route 126 Corridor: Transportation Improvement Study. 2008 CTPS study, Washington Street (Route 16/126) at Hollis Street.	2	1	2	3	1	2	11	Low	This location has MassDOT projects and CTPS studies, which have not been implemented. The 495/MetroWest Partnership expressed interest in a Route 16 study. The section that experiences the most crashes is the town center portion (under Holliston jurisdiction). A road safety audit was performed for the town center portion in December 2012.
Route 60	Medford	ICC	4	Medford	No	0	1	Yes	Yes	None	3	2	3	2	0	1	11	Low	None
Route 138	Milton	ICC and TRIC	6	MassDOT	Yes	0	1	Yes	Yes	MassDOT Project #608484, Roadway Improvements on Route 138; programmed FFY 2020. FFY 2018 LRTP Priority Corridor Study	2	2	2	4	0	1	11	Low	FFY 2018 Priority Corridors for LRTP Needs Assessment Study. MassDOT Project #608484, Roadway Improvements on Route 138, will address problems and needs in the corridor.
Route 9	Newton	ICC	6	MassDOT	Yes	0	4	Yes	Yes	MassDOT Project #608821, Resurfacing and related work on Route 9; in preliminary design. MassDOT Project #604327, Resurfacing and Related Work on Route 9 (Boylston Street) from the Wellesley/Newton city line to Newton/Brookline city line; completed in summer 2012. MassDOT Project #606635, Reconstruction of Highland Avenue, Needham Street, and Charles River Bridge, from Webster Street to Route 9; programmed FFY 2019.	2	2	2	4	0	1	11	Low	According to MassDOT District 6, improvements were recently made to accommodate new developments. An analysis of the new existing conditions would be helpful to compare with the future projected conditions.
Route 129	Reading	NSPC	4	MassDOT and Reading	Yes	0	0	Yes	Yes	No projects	3	1	2	2	2	1	11	Low	None
Route 9	Wellesley	MWRC	6	MassDOT	Yes	0	3	No data	Yes	MassDOT Project #608180, Resurfacing on Route 9, from limit of add-a-lane to east of Overbrook intersection; in construction. MassDOT Project #606530, Drainage improvements along Route 9 Boulder Brook Culvert (design only); in design. MassDOT Project #607340, Resurfacing and related work on Route 9 from Dearborn Street to Natick town line; in preliminary design. MassDOT Project #609402, Resurfacing and related work on Route 9; in preliminary design. MassDOT Project #94762, Bridge Rehabilitation, Route 16 (Washington Street) over Route 9, including relocation of retaining wall; completed summer 2010. MAPC Land Use/Corridor Study (fall 2013).	2	1	2	4	1	1	11	Low	MassDOT Project #609402 has completed a preliminary assessment of this corridor that will develop into 25 percent design plans for roadway improvements. This project is planned to be funded through the 2026 TIP.
Route 1	Westwood	TRIC	6	MassDOT	Yes	0	0	N/A	Yes	MassDOT's I-95 South Corridor Study provided a comprehensive evaluation of the I-95 and Route 1 corridors south of Route 128 and included a recommended plan of short-term and long-term improvements; June 2010. MassDOT Project #603162, Route 128 Add-a-Lane Bridges (Bridge III), Route 1 and 1A over I-95/128; completed in 2012.	2	2	2	4	0	1	11	Low	This arterial segment serves mixed land uses but there are no safe accommodations for people walking or biking as there are no sidewalks in the segment and the existing 6- to 10-foot shoulders need improvements to provide safe environment for people biking. MAPC has been working with the Neponset Valley Transportation Management Association and communities along the Route 1 corridor from Dedham to Foxborough on addressing job/transit access are recommending long-term improvements to make Route 1 corridor more transit, pedestrian, and bicycle friendly.
Route 62	Concord	MAGIC	4	Concord	Yes	0	2	N/A	Yes	MassDOT Project #604646, Reconstruction of Main Street (Route 62) from Water Street to the Acton town line; completed 2010.	2	2	2	2	1	1	10	Low	None

Arterial Segment	Community	MAPC Subregion	MassDOT District	Jurisdiction	National Highway System	Number of Top-200 High-Crash Locations 2015–17	Number of HSIP-Eligible Crash Clusters 2015–17**	Crowded or Late Bus	In or Near Transportation Equity Priority Area	Study, Project, or TIP Project	Safety Conditions***	Congested Conditions***	Multimodal Significance***	Regional Significance***	Regional Equity***	Implementation Potential***	Score	Priority Rating	Summary of Comments
Route 135	Natick	MWRC	3	MassDOT and Natick	Yes	0	1	No data	Yes	MassDOT Project #600573, Reconstructed Route 135 in Natick in 2008. More extensive improvements were proposed in the downtown area, on East Central Street between North Main Street and Union Street, including signal upgrades, new sidewalks, pavement rehabilitation, and shoulders; all construction operations were suspended (as of June 30, 2007). 2010 CTPS study, West Central Street (Route 135) at Speen Street.	3	1	2	2	1	1	10	Low	There is congestion in the downtown area and the likely focus area would be on the intersection of Route 135 at Route 27 and the intersection of Route 135 at Speen Street due to the crash history of those locations.
Route 1	Walpole	TRIC	5	MassDOT	Yes	0	3	N/A	No	MassDOT's I-95 South Corridor Study presented a comprehensive evaluation of the I-95 and Route 1 corridors south of Route 128 and included a recommended plan of short-term and long-term improvements; June 2010. MassDOT Project #608480, Resurfacing and related work on Route 1; programmed FFY 2020.	2	1	3	3	0	1	10	Low	This arterial segment serves mixed land uses but there are no safe accommodations for people walking or biking as there are no sidewalks in the segment and the existing 6- to 10-foot shoulders need improvements to provide safe environment for people biking. MAPC has been working with the Neponset Valley Transportation Management Association and communities along the Route 1 corridor from Dedham to Foxborough on addressing job/transit access. They are recommending long-term improvements to make Route 1 corridor more transit, pedestrian, and bicycle friendly.
Route 117	Bolton	MAGIC	3	Bolton		0	0	N/A	Yes	None	1	1	2	3	1	1	9	Low	None

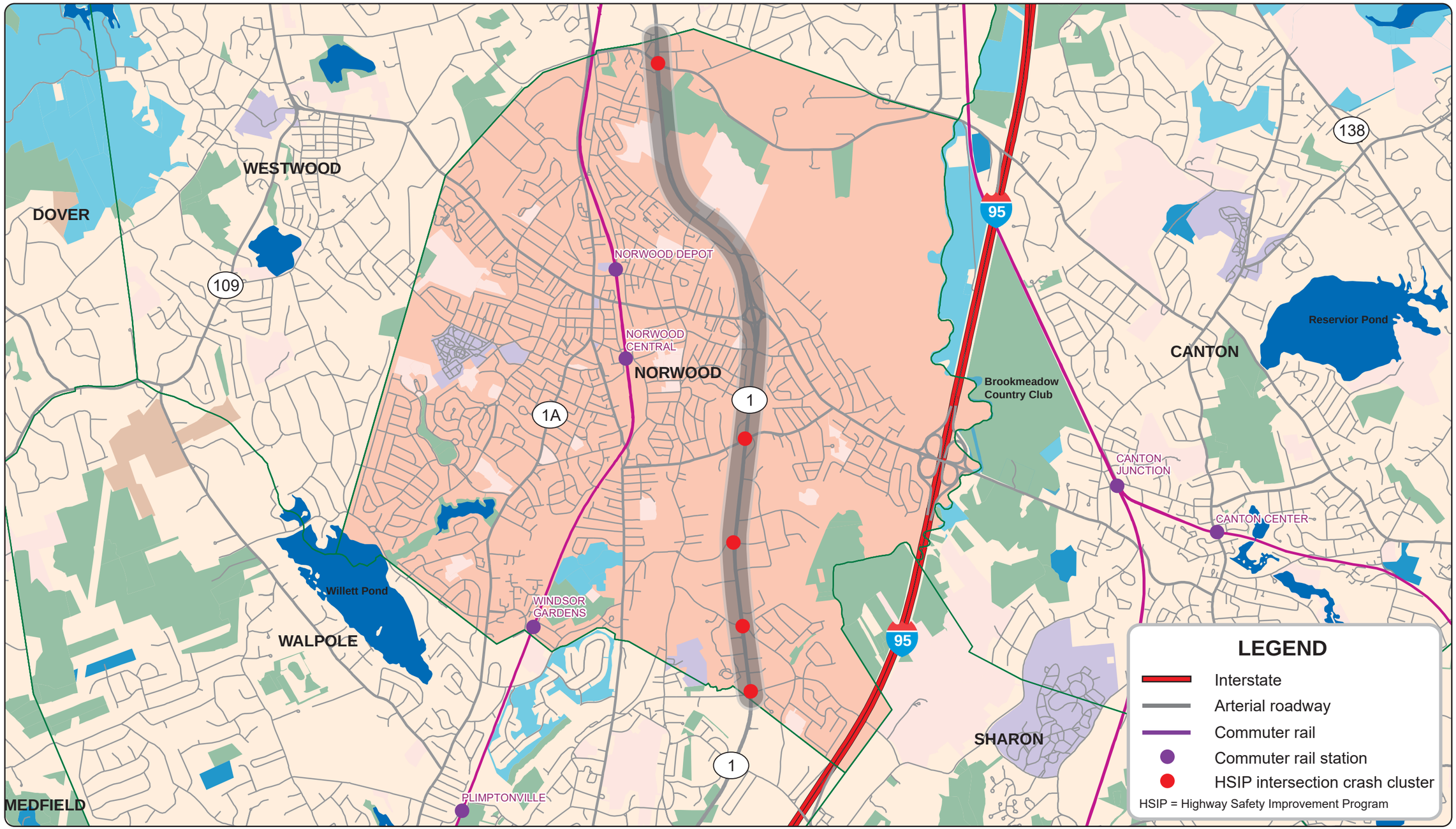
Notes:

**Number of HSIP-eligible crash clusters
EPDO is a method of combining the number of crashes with the severity of crashes based on a weighted scale. Since 2018, MassDOT applied a new EPDO method (where actual crash costs are factored in) to rank high-crash locations in the state. All of the fatal and injury crashes were weighted together (about 30 percent of all crashes in Massachusetts), which resulted in any crash resulting in an injury (including fatal, incapacitating, non-incapacitating, and possible injuries) having a weighting factor of 21 compared to a crash that resulted in property damage only, which would have a weighting factor of one.

***Selection Criteria
Safety Conditions: Segment has a high crash rate for its functional class, contains an HSIP-eligible crash location, a top-200 high-crash location, and/or a significant number or HSIP-eligible clusters of pedestrian or bicycle crashes.
Congested Conditions: Segment has a Travel Time Index of at least 1.3 and/or of at least 2.0, that is, which signify that it experiences delays during peak periods.
Multimodal Significance: Segment supports transit or bicycle or pedestrian activities, has a need to improve these activities, and/or has a high volume of truck traffic serving regional commerce.
Regional Significance: Segment is in the National Highway System, carries a significant proportion of regional traffic, lies within 0.5 miles of environmental justice transportation analysis zones, and/or is essential for regional economic, cultural, or recreational development in the area.
Regional Equity: Location is in a subregion that has not had a priority corridor study before, or location is in a subregion that has not had a priority corridor study in the last three years.
Implementation Potential: Improvements to the segment are proposed or endorsed by the roadway administrative agency (agencies), proposed or endorsed by the subregion and are a priority for the subregion, and/or have strong support

ADA = Americans with Disabilities Act. BAT = Brockton Area Transit Authority. CTPS = Central Transportation Planning Staff. DCR = Department of Conservation and Recreation. EPDO = Equivalent Property Damage Only. FFY = federal fiscal year. HSIP = Highway Safety Improvement Program. I-95 = Interstate 95. ICC = Inner Core Committee. LRTP = Long-Range Transportation Plan. MAGIC = Minuteman Advisory Group on Interlocal Coordination. MAPC = Metropolitan Area Planning Council. MassDOT = Massachusetts Department of Transportation. MBTA = Massachusetts Bay Transportation Authority. MPO = Metropolitan Planning Organization. MWRC = MetroWest Regional Collaborative. MWRTA = MetroWest Regional Transit Authority. NSPC = North Suburban Planning Council. NSTF = North Shore Task Force. PRC = Project Review Committee. SSC = South Shore Coalition. SWAP = South West Advisory Planning Committee. TIP = Transportation Improvement Program. TRIC = Three Rivers Interlocal Council. UPWP = Unified Planning Work Program.

Source: Central Transportation Planning Staff.



BOSTON REGION MPO

FIGURE 1
Study Area

Addressing Priority Corridors from the LRTP Needs Assessment
Route 1 in Norwood

The Boston Region Metropolitan Planning Organization (MPO) operates its programs, services, and activities in compliance with federal nondiscrimination laws including Title VI of the Civil Rights Act of 1964 (Title VI), the Civil Rights Restoration Act of 1987, and related statutes and regulations. Title VI prohibits discrimination in federally assisted programs and requires that no person in the United States of America shall, on the grounds of race, color, or national origin (including limited English proficiency), be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination under any program or activity that receives federal assistance. Related federal nondiscrimination laws administered by the Federal Highway Administration, Federal Transit Administration, or both, prohibit discrimination on the basis of age, sex, and disability. The Boston Region MPO considers these protected populations in its Title VI Programs, consistent with federal interpretation and administration. In addition, the Boston Region MPO provides meaningful access to its programs, services, and activities to individuals with limited English proficiency, in compliance with U.S. Department of Transportation policy and guidance on federal Executive Order 13166.

The Boston Region MPO also complies with the Massachusetts Public Accommodation Law, M.G.L. c 272 sections 92a, 98, 98a, which prohibits making any distinction, discrimination, or restriction in admission to, or treatment in a place of public accommodation based on race, color, religious creed, national origin, sex, sexual orientation, disability, or ancestry. Likewise, the Boston Region MPO complies with the Governor's Executive Order 526, section 4, which requires that all programs, activities, and services provided, performed, licensed, chartered, funded, regulated, or contracted for by the state shall be conducted without unlawful discrimination based on race, color, age, gender, ethnicity, sexual orientation, gender identity or expression, religion, creed, ancestry, national origin, disability, veteran's status (including Vietnam-era veterans), or background.

A complaint form and additional information can be obtained by contacting the MPO or at http://www.bostonmpo.org/mpo_non_discrimination.

To request this information in a different language or in an accessible format, please contact

Title VI Specialist
Boston Region MPO
10 Park Plaza, Suite 2150
Boston, MA 02116
civilrights@ctps.org

By Telephone:
857.702.3702 (voice)

For people with hearing or speaking difficulties, connect through the state MassRelay service:

- **Relay Using TTY or Hearing Carry-over:** 800.439.2370
- **Relay Using Voice Carry-over:** 866.887.6619
- **Relay Using Text to Speech: 8**66.645.9870

For more information, including numbers for Spanish speakers, visit https://www.mass.gov/massrelay

Appendix B

Pedestrian and Bicycle Report Cards

1: Pedestrian Report Card Assessment

2: Bicycle Report Card Assessment

Part 1: Pedestrian Report Card Assessment

BOSTON REGION METROPOLITAN PLANNING ORGANIZATION

Pedestrian Report Card Assessment (PRCA):

Roadway Segment

Central Transportation Planning Staff (CTPS) to the Boston Region MPO:
www.ctps.org | 857.702.3700 | ctps@ctps.org

Ryan Hicks, Congestion Management Process Manager:
www.ctps.org/cmp | 857.702.3661 | rhicks@ctps.org

Casey Claude, Bicycle and Pedestrian Program Manager:
www.ctps.org/bicycle-pedestrian-activities | 857.702.3707 | cclaude@ctps.org

Roadway Segment Location
Route 1 in Norwood: Existing Conditions

Grading Categories[1]	Score	Rating
Safety	1.2	Poor
System Preservation	1.0	Poor
Capacity Management and Mobility	1.0	Poor
Economic Vitality	2.0	Fair

Transportation Equity[2]	
High Priority Area	Yes
Moderate Priority Area	
Low Priority Area	

[1] Poor = 0 to 1.7; **Fair** = 1.7 < 2.3; **Good** = 2.3 to 3.0
[2] Low = 0 or 1 Factor; **Moderate** = 2 or 3 Factors; **High** = 4 or 5 Factors

Grading Categories: Scoring Breakdown **Roadway Segment**

Capacity Management and Mobility

Performance Measure[1]	Percentage	Score (out of 3.0)	Rating
Sidewalk Presence	50%	1	Poor
Crosswalk Presence	33%	1	Poor
Walkway Width	17%	1	Poor
GRADING CATEGORY TOTAL[2] (Sidewalk Presence Score * 0.5) + (Crosswalk Presence Score * 0.33) + (Walkway Width Score * 0.17)	**100%**	**1.0**	**Poor**

Economic Vitality

Performance Measure[1]	Percentage	Score (out of 3.0)	Rating
Pedestrian Volumes	50%	2	Fair
Adjacent Bicycle Accommodations	50%	2	Fair
GRADING CATEGORY TOTAL[2] (Pedestrian Volumes Score * 0.5) + (Adjacent Bicycle Accommodations Score * 0.5)	**100%**	**2.0**	**Fair**

[1] **Poor** = 1.0; **Fair** = 2.0; **Good** = 3.0

[2] **Poor** = 0 to 1.7; **Fair** = 1.7 < 2.3; **Good** = 2.3 to 3.0

[3] Use these factors to determine Transportation Equity priority level (front)

Safety

Performance Measure[1]	Percentage	Score (out of 3.0)	Rating
Pedestrian Crashes	60%	1	Poor
Pedestrian-Vehicle Buffer	20%	2	Fair
Vehicle Travel Speed	20%	1	Poor
GRADING CATEGORY TOTAL[2] (Pedestrian Crashes Score * 0.6) + (Pedestrian-Vehicle Buffer Score * 0.2) + (Vehicle Travel Speed Score * 0.2)	**100%**	**1.2**	**Poor**

System Preservation

Performance Measure[1]	Percentage	Score (out of 3.0)	Rating
Sidewalk Condition	100%	1.0	Poor

Transportation Equity Factors[3]

Area Condition	Yes/No
Low-income Population ≥ 32.32%	No
Minority Population ≥ 28.19%	Yes
More than 6.69% of Population > 75 Years of Age	Yes
More than 16.15% of Households w/o Vehicle	Yes
Within 1/4 Mile of School/College	Yes

Roadway Segment Notes

Detailed Performance Measure Information

Grading Category	Performance Measure	Features of Analyzed Locations
Capacity Management and Mobility	Sidewalk Presence	Large gaps in sidewalk network
	Crosswalk Presence	Roadway with fewer than seven crosswalk per mile
	Walkway Width	Roadway segment with less than half of the sidewalks measuring at least five feet wide
Economic Vitality	Pedestrian Volumes	Roadway segment traversed by five to 60 pedestrians per hour
	Adjacent Bicycle Accommodations	Roadway segments without space for bicycle travel
Safety	Pedestrian Crashes	Roadway segment with two pedestrian crashes
	Pedestrian-Vehicle Buffer	Roadway segments with a 5- to 10-foot buffer
	Vehicle Travel Speed	Roadway segments where average vehicle travel speed is 45 miles per hour or more
System Preservation	Sidewalk Condition	Roadway segments with less than half of sidewalks in good condition

BOSTON REGION METROPOLITAN PLANNING ORGANIZATION

Pedestrian Report Card Assessment (PRCA):

Roadway Segment

Central Transportation Planning Staff (CTPS) to the Boston Region MPO:
www.ctps.org | 857.702.3700 | ctps@ctps.org

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Casey Claude, Bicycle and Pedestrian Program Manager:
www.ctps.org/bicycle-pedestrian-activities | 857.702.3707 | cclaude@ctps.org

Roadway Segment Location
Route 1 in Norwood: With improvements

Grading Categories[1]	Score	Rating
Safety	2.0	Fair
System Preservation	3.0	Good
Capacity Management and Mobility	2.7	Good
Economic Vitality	3.0	Good

Transportation Equity[2]	
High Priority Area	Yes
Moderate Priority Area	
Low Priority Area	

[1] Poor = 0 to 1.7; **Fair** = 1.7 < 2.3; **Good** = 2.3 to 3.0
[2] Low = 0 or 1 Factor; **Moderate** = 2 or 3 Factors; **High** = 4 or 5 Factors

Grading Categories: Scoring Breakdown **Roadway Segment**

Capacity Management and Mobility

Performance Measure[1]	Percentage	Score (out of 3.0)	Rating
Sidewalk Presence	50%	3	Good
Crosswalk Presence	33%	2	Fair
Walkway Width	17%	3	Good
GRADING CATEGORY TOTAL[2] (Sidewalk Presence Score * 0.5) + (Crosswalk Presence Score * 0.33) + (Walkway Width Score * 0.17)	**100%**	**2.7**	**Good**

Economic Vitality

Performance Measure[1]	Percentage	Score (out of 3.0)	Rating
Pedestrian Volumes	50%	3	Good
Adjacent Bicycle Accommodations	50%	3	Good
GRADING CATEGORY TOTAL[2] (Pedestrian Volumes Score * 0.5) + (Adjacent Bicycle Accommodations Score * 0.5)	**100%**	**3.0**	**Good**

[1] **Poor** = 1.0; **Fair** = 2.0; **Good** = 3.0

[2] **Poor** = 0 to 1.7; **Fair** = 1.7 < 2.3; **Good** = 2.3 to 3.0

[3] Use these factors to determine Transportation Equity priority level (front)

Safety

Performance Measure[1]	Percentage	Score (out of 3.0)	Rating
Pedestrian Crashes	60%	2	Fair
Pedestrian-Vehicle Buffer	20%	3	Good
Vehicle Travel Speed	20%	1	Poor
GRADING CATEGORY TOTAL[2] (Pedestrian Crashes Score * 0.6) + (Pedestrian-Vehicle Buffer Score * 0.2) + (Vehicle Travel Speed Score * 0.2)	**100%**	**2.0**	**Fair**

System Preservation

Performance Measure[1]	Percentage	Score (out of 3.0)	Rating
Sidewalk Condition	100%	3.0	Good

Transportation Equity Factors[3]

Area Condition	Yes/No
Low-income Population ≥ 32.32%	No
Minority Population ≥ 28.19%	Yes
More than 6.69% of Population > 75 Years of Age	Yes
More than 16.15% of Households w/o Vehicle	Yes
Within 1/4 Mile of School/College	Yes

Roadway Segment Notes

Detailed Performance Measure Information

Grading Category	Performance Measure	Features of Analyzed Locations
Capacity Management and Mobility	Sidewalk Presence	Propose improvements close all gaps in sidewalk network
	Crosswalk Presence	Propose improvements adds new crossing opportunities where needed
	Walkway Width	Proposed improvements recommend upgrading sidewalks to MassDOT standards
Economic Vitality	Pedestrian Volumes	Roadway segment traversed by five to 60 pedestrians per hour
	Adjacent Bicycle Accommodations	Proposed improvements add sidewalk-level or street-level separated bike lanes in the study corridor
Safety	Pedestrian Crashes	Proposed improvements improves accommodations for people who walk or bike
	Pedestrian-Vehicle Buffer	Proposed improvements add separated bike lanes on Route 1
	Vehicle Travel Speed	Roadway segments where average vehicle travel speed is 45 miles per hour or more
System Preservation	Sidewalk Condition	Proposed improvements add new sidewalks on Route 1

Part 2: Bicycle Report Card Assessment

BOSTON REGION METROPOLITAN PLANNING ORGANIZATION

Central Transportation Planning Staff (CTPS) to the Boston Region MPO:
www.ctps.org | 857.702.3700 | ctps@ctps.org

Casey Claude, Bicycle and Pedestrian Program Manager:
www.ctps.org/bicycle-pedestrian-activities | 857.702.3707 | cclaude@ctps.org

Bicycle Report Card

Roadway Segment Location
Route 1 in Norwood: Existing Conditions

Grading Categories	Score	Grade
Safety	38	F
System Preservation	0	F
Capacity Management and Mobility	17	F
Economic Vitality	50	F

Transportation Equity	
High Priority Area	Yes
Moderate Priority Area	
Low Priority Area	

Grading
A: 90–100 *Excellent*
B: 80–89 *Satisfactory*
C: 70–79 *Acceptable*
D: 60–69 *Needs Improvement*
F: 59–0 *Not recommended for bicycle travel*

Transportation Equity Priority
High: Four (4) or Five (5) Factors
Moderate: Two (2) or Three (3) Factors
Low: Zero (0) or One (1) Factor

Grading Categories: Scoring Breakdown

Capacity Management and Mobility

Performance Measure	Percentage	Points	Grade
Bicycle Facility Presence	50%	0	F
Proximity to Bike Network	33%	0	F
Proximity to Transit	17%	100	A
Total	**100%**	**17**	**F**

Economic Vitality

Performance Measure	Percentage	Points	Grade
Bike Rack Presence	50%	0	F
Land Use	50%	100	A
Total	**100%**	**50**	**F**

Grading
A: 90–100 *Excellent*
B: 80–89 *Satisfactory*
C: 70–79 *Acceptable*
D: 60–69 *Needs Improvement*
F: 59–0 *Not recommended for bicycle travel*

Transportation Equity Priority
High: Four (4) or Five (5) Factors
Moderate: Two (2) or Three (3) Factors
Low: Zero (0) or One (1) Factor

Safety

Performance Measure	Percentage	Points	Grade
Bicycle Facility Presence	33%	0	F
Absence of Bicycle Crashes	33%	40	F
Bicyclist Operating Space	17%	70	C
Number of Travel Lanes	17%	75	C
Total	**100%**	**38**	**F**

System Preservation

Performance Measure	Percentage	Points	Grade
Bicycle Facility Continuity	50%	0	F
Bicycle Facility Condition	50%	0	F
Total	**100%**	**0**	**F**

Transportation Equity Priority

Area Condition	Yes/No
Low-income Population =/> 32.32%	No
Minority Population =/> 28.19%	Yes
18.2%+ of Population < 16 Years Old	Yes
16.15%+ of Households w/o Vehicle	Yes
Within 1/4 Mile of School/College	Yes

Notes

Detailed Performance Measure Information

Goal	Performance Measure	Features of Analyzed Locations
Capacity Management and Mobility	Bicycle Facility Presence	None in the corridor, people biking mostly stay on the shoulder
	Proximity to Bike Network	No bicycle facility within one-quarter mile
	Proximity to Transit	Yes, bus route 34E, commuter rail stations Norwood Center, Norwood Depot, and University Station are within one-half mile of the study area
Economic Vitality	Bike Rack Presence	None in the corridor
	Land Use	Land uses in the corridor, including commercial and retail, residential, and recreational, would support biking
Safety	Bicycle Facility Presence	None in the corridor
	Absence of Bicycle Crashes	Two bicycle crashes in five years (2014–19)
	Bicyclist Operating Space	People biking mostly stay on the shoulder, but sometimes have to share lane with vehicles at locations where a right-turn lane uses up the shoulder
	Number of Travel Lanes	Two travel lanes each direction
System Preservation	Bicycle Facility Continuity	No bicycle facility
	Bicycle Facility Condition	No bicycle facility

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www.ctps.org/bicycle-pedestrian-activities | 857.702.3707 | cclaude@ctps.org

Bicycle Report Card

Roadway Segment Location
Route 1 in Norwood: With Improvements

Grading Categories	Score	Grade
Safety	89	B
System Preservation	100	A
Capacity Management and Mobility	93	A
Economic Vitality	100	A

Transportation Equity	
High Priority Area	Yes
Moderate Priority Area	
Low Priority Area	

Grading
A: 90–100 *Excellent*
B: 80–89 *Satisfactory*
C: 70–79 *Acceptable*
D: 60–69 *Needs Improvement*
F: 59–0 *Not recommended for bicycle travel*

Transportation Equity Priority
High: Four (4) or Five (5) Factors
Moderate: Two (2) or Three (3) Factors
Low: Zero (0) or One (1) Factor

Grading Categories: Scoring Breakdown

Capacity Management and Mobility

Performance Measure	Percentage	Points	Grade
Bicycle Facility Presence	50%	100	A
Proximity to Bike Network	33%	80	B
Proximity to Transit	17%	100	A
Total	**100%**	**93**	**A**

Economic Vitality

Performance Measure	Percentage	Points	Grade
Bike Rack Presence	50%	100	A
Land Use	50%	100	A
Total	**100%**	**100**	**A**

Grading
A: 90–100 *Excellent*
B: 80–89 *Satisfactory*
C: 70–79 *Acceptable*
D: 60–69 *Needs Improvement*
F: 59–0 *Not recommended for bicycle travel*

Transportation Equity Priority
High: Four (4) or Five (5) Factors
Moderate: Two (2) or Three (3) Factors
Low: Zero (0) or One (1) Factor

Safety

Performance Measure	Percentage	Points	Grade
Bicycle Facility Presence	33%	100	A
Absence of Bicycle Crashes	33%	80	B
Bicyclist Operating Space	17%	100	A
Number of Travel Lanes	17%	75	C
Total	**100%**	**89**	**B**

System Preservation

Performance Measure	Percentage	Points	Grade
Bicycle Facility Continuity	50%	100	A
Bicycle Facility Condition	50%	100	A
Total	**100%**	**100**	**A**

Transportation Equity Priority

Area Condition	Yes/No
Low-income Population =/> 32.32%	No
Minority Population =/> 28.19%	Yes
18.2%+ of Population < 16 Years Old	Yes
16.15%+ of Households w/o Vehicle	Yes
Within 1/4 Mile of School/College	Yes

Notes

Detailed Performance Measure Information

Goal	Performance Measure	Features of Analyzed Locations
Capacity Management and Mobility	Bicycle Facility Presence	Proposed improvements has sidewalk- or street-level separated bike lanes
	Proximity to Bike Network	No bicycle facility within one-quarter mile
	Proximity to Transit	Yes, bus route 34E, commuter rail stations Norwood Center, Norwood Depot, and University Station are within one-half mile of the study area
Economic Vitality	Bike Rack Presence	Proposed improvements include bike sharing in the corridor
	Land Use	Land uses in the corridor, including commercial and retail, residential, and recreational, would support biking
Safety	Bicycle Facility Presence	Proposed improvements has sidewalk- or street-level separated bike lanes
	Absence of Bicycle Crashes	Proposed sidewalk- or street-level separated bike lanes will improve safety for people who bike
	Bicyclist Operating Space	Proposed improvements has sidewalk- or street-level separated bike lanes
	Number of Travel Lanes	Two travel lanes each direction
System Preservation	Bicycle Facility Continuity	Proposed improvements has sidewalk- or street-level separated bike lanes in the entire corridor
	Bicycle Facility Condition	New sidewalk- or street-level separated bike lanes

Appendix C

Traffic and Signal Timing Data

1: Traffic Data

2: Signal Timing Data

Part 1: Traffic Data

228451 (1) Route 1 @ University Ave TMC - TMC

Thu Mar 31, 2022
Full Length (11 AM-2 PM, 6 AM-9 AM, 3 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936936, Location: 42.210768, -71.183742

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Providence Hwy (Route 1)						University Avenue						Providence Hwy (Route 1)						Everett Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2022-03-31 6:00AM	31	56	14	5	**106**	0	18	3	7	0	**28**	0	36	268	5	6	**315**	1	7	15	31	0	**53**	0	**502**
6:15AM	22	80	16	2	**120**	2	18	13	9	0	**40**	0	35	359	16	4	**414**	0	1	15	42	0	**58**	0	**632**
6:30AM	25	78	18	5	**126**	1	33	10	16	0	**59**	0	44	313	10	3	**370**	0	7	18	55	0	**80**	0	**635**
6:45AM	51	154	22	10	**237**	1	47	24	13	0	**84**	0	43	313	16	4	**376**	1	4	27	56	0	**87**	0	**784**
Hourly Total	129	368	70	22	**589**	4	116	50	45	0	**211**	0	158	1253	47	17	**1475**	2	19	75	184	0	**278**	0	**2553**
7:00AM	46	130	18	11	**205**	0	81	45	10	0	**136**	0	35	269	13	2	**319**	0	10	44	65	0	**119**	0	**779**
7:15AM	60	157	21	2	**240**	0	69	35	19	0	**123**	0	29	289	13	2	**333**	0	13	37	82	0	**132**	0	**828**
7:30AM	61	176	22	11	**270**	0	97	36	26	0	**159**	0	37	304	16	2	**359**	0	22	55	107	0	**184**	0	**972**
7:45AM	65	203	43	12	**323**	0	70	55	30	0	**155**	0	58	259	19	4	**340**	0	21	67	76	0	**164**	0	**982**
Hourly Total	232	666	104	36	**1038**	0	317	171	85	0	**573**	0	159	1121	61	10	**1351**	0	66	203	330	0	**599**	0	**3561**
8:00AM	73	204	37	18	**332**	0	71	43	27	0	**141**	0	59	264	35	2	**360**	0	37	60	87	0	**184**	0	**1017**
8:15AM	51	229	36	16	**332**	0	62	25	26	0	**113**	0	62	271	28	12	**373**	0	24	76	76	0	**176**	0	**994**
8:30AM	58	219	32	13	**322**	0	48	40	25	0	**113**	0	77	271	22	5	**375**	1	11	60	65	0	**136**	0	**946**
8:45AM	64	251	43	18	**376**	0	44	34	26	0	**104**	0	79	269	20	5	**373**	0	24	68	73	0	**165**	0	**1018**
Hourly Total	246	903	148	65	**1362**	0	225	142	104	0	**471**	0	277	1075	105	24	**1481**	1	96	264	301	0	**661**	0	**3975**
3:00PM	29	330	39	11	**409**	0	41	44	67	0	**152**	0	40	225	42	7	**314**	0	17	50	44	0	**111**	0	**986**
3:15PM	25	330	40	15	**410**	0	28	41	59	0	**128**	0	50	226	35	6	**317**	0	16	43	56	0	**115**	0	**970**
3:30PM	36	304	43	13	**396**	0	28	47	58	0	**133**	0	56	240	26	6	**328**	0	20	46	41	0	**107**	0	**964**
3:45PM	30	330	38	12	**410**	1	30	44	48	0	**122**	0	60	220	30	8	**318**	0	19	58	43	0	**120**	0	**970**
Hourly Total	120	1294	160	51	**1625**	1	127	176	232	0	**535**	0	206	911	133	27	**1277**	0	72	197	184	0	**453**	0	**3890**
4:00PM	19	336	38	18	**411**	0	46	45	76	0	**167**	0	49	294	32	10	**385**	0	24	35	49	0	**108**	0	**1071**
4:15PM	23	355	42	12	**432**	0	28	54	63	0	**145**	0	50	234	31	9	**324**	1	20	55	34	0	**109**	0	**1010**
4:30PM	17	371	39	13	**440**	0	41	46	88	0	**175**	0	48	247	28	7	**330**	0	25	37	35	0	**97**	0	**1042**
4:45PM	32	325	41	11	**409**	1	41	51	67	0	**159**	0	50	234	36	12	**332**	0	16	53	45	0	**114**	0	**1014**
Hourly Total	91	1387	160	54	**1692**	1	156	196	294	0	**646**	0	197	1009	127	38	**1371**	1	85	180	163	0	**428**	0	**4137**
5:00PM	31	354	33	13	**431**	0	50	55	76	0	**181**	0	57	296	39	10	**402**	0	21	53	46	0	**120**	0	**1134**
5:15PM	18	354	36	17	**425**	0	38	52	74	0	**164**	0	60	301	48	5	**414**	0	21	46	47	0	**114**	0	**1117**
5:30PM	42	343	44	10	**439**	0	36	51	66	0	**153**	0	46	242	29	13	**330**	0	24	45	52	0	**121**	0	**1043**
5:45PM	25	278	44	8	**355**	0	40	54	73	0	**167**	0	56	235	20	11	**322**	0	25	50	38	0	**113**	0	**957**
Hourly Total	116	1329	157	48	**1650**	0	164	212	289	0	**665**	0	219	1074	136	39	**1468**	0	91	194	183	0	**468**	0	**4251**
2022-04-02 11:00AM	43	287	30	26	**386**	0	53	30	60	0	**143**	0	53	292	33	17	**395**	0	29	45	61	0	**135**	0	**1059**
11:15AM	46	271	42	21	**380**	0	45	42	59	0	**146**	0	45	260	46	13	**364**	0	27	41	41	0	**109**	0	**999**
11:30AM	21	291	31	23	**366**	2	34	33	37	0	**104**	0	63	311	43	13	**430**	0	23	47	55	0	**125**	0	**1025**
11:45AM	48	311	28	24	**411**	0	41	35	43	0	**119**	0	47	303	34	19	**403**	0	47	51	50	0	**148**	0	**1081**
Hourly Total	158	1160	131	94	**1543**	2	173	140	199	0	**512**	0	208	1166	156	62	**1592**	0	126	184	207	0	**517**	0	**4164**
12:00PM	33	339	35	26	**433**	1	35	48	53	0	**136**	0	59	310	41	14	**424**	0	30	39	56	0	**125**	0	**1118**
12:15PM	35	321	37	20	**413**	2	26	55	61	0	**142**	0	56	313	30	15	**414**	0	37	42	56	0	**135**	1	**1104**
12:30PM	26	302	40	19	**387**	1	28	45	56	0	**129**	0	48	286	32	22	**388**	0	23	52	54	0	**129**	0	**1033**
12:45PM	31	321	41	16	**409**	0	34	44	46	0	**124**	0	86	325	46	8	**465**	0	36	62	52	0	**150**	0	**1148**
Hourly Total	125	1283	153	81	**1642**	4	123	192	216	0	**531**	0	249	1234	149	59	**1691**	0	126	195	218	0	**539**	1	**4403**
1:00PM	18	328	39	14	**399**	1	45	46	35	0	**126**	0	65	298	34	8	**405**	0	28	49	55	0	**132**	0	**1062**
1:15PM	25	330	26	32	**413**	0	37	38	60	0	**135**	0	52	284	34	17	**387**	0	33	46	71	0	**150**	0	**1085**
1:30PM	34	292	30	28	**384**	1	40	57	53	0	**150**	0	50	291	38	14	**393**	1	30	46	57	0	**133**	0	**1060**
1:45PM	35	325	33	29	**422**	0	27	50	52	0	**129**	0	66	302	42	16	**426**	0	17	62	62	0	**141**	0	**1118**
Hourly Total	112	1275	128	103	**1618**	2	149	191	200	0	**540**	0	233	1175	148	55	**1611**	1	108	203	245	0	**556**	0	**4325**
Total	1329	9665	1211	554	**12759**	14	1550	1470	1664	0	**4684**	0	1906	10018	1062	331	**13317**	5	789	1695	2015	0	**4499**	1	**35259**
% Approach	10.4%	75.8%	9.5%	4.3%	**-**	-	33.1%	31.4%	35.5%	0%	**-**	-	14.3%	75.2%	8.0%	2.5%	**-**	-	17.5%	37.7%	44.8%	0%	**-**	-	**-**
% Total	3.8%	27.4%	3.4%	1.6%	**36.2%**	-	4.4%	4.2%	4.7%	0%	**13.3%**	-	5.4%	28.4%	3.0%	0.9%	**37.8%**	-	2.2%	4.8%	5.7%	0%	**12.8%**	-	**-**
Lights	1273	9483	1140	533	**12429**	-	1413	1425	1622	0	**4460**	-	1848	9817	1042	323	**13030**	-	773	1647	1960	0	**4380**	-	34299
% Lights	95.8%	98.1%	94.1%	96.2%	**97.4%**	-	91.2%	96.9%	97.5%	0%	**95.2%**	-	97.0%	98.0%	98.1%	97.6%	**97.8%**	-	98.0%	97.2%	97.3%	0%	**97.4%**	-	97.3%
Single-Unit Trucks	44	138	47	18	**247**	-	112	24	33	0	**169**	-	33	150	14	6	**203**	-	13	32	36	0	**81**	-	700
% Single-Unit Trucks	3.3%	1.4%	3.9%	3.2%	**1.9%**	-	7.2%	1.6%	2.0%	0%	**3.6%**	-	1.7%	1.5%	1.3%	1.8%	**1.5%**	-	1.6%	1.9%	1.8%	0%	**1.8%**	-	2.0%
Articulated Trucks	8	35	23	2	**68**	-	25	6	9	0	**40**	-	24	40	3	1	**68**	-	2	3	11	0	**16**	-	192
% Articulated Trucks	0.6%	0.4%	1.9%	0.4%	**0.5%**	-	1.6%	0.4%	0.5%	0%	**0.9%**	-	1.3%	0.4%	0.3%	0.3%	**0.5%**	-	0.3%	0.2%	0.5%	0%	**0.4%**	-	0.5%
Buses	4	8	1	1	**14**	-	0	9	0	0	**9**	-	1	11	3	1	**16**	-	1	9	8	0	**18**	-	57
% Buses	0.3%	0.1%	0.1%	0.2%	**0.1%**	-	0%	0.6%	0%	0%	**0.2%**	-	0.1%	0.1%	0.3%	0.3%	**0.1%**	-	0.1%	0.5%	0.4%	0%	**0.4%**	-	0.2%
Bicycles on Road	0	1	0	0	**1**	-	0	6	0	0	**6**	-	0	0	0	0	**0**	-	0	4	0	0	**4**	-	11
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0.4%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0%	0.2%	0%	0%	**0.1%**	-	0%
Pedestrians	-	-	-	-	-	13	-	-	-	-	-	0	-	-	-	-	-	4	-	-	-	-	-	1	
% Pedestrians	-	-	-	-	-	92.9%	-	-	-	-	-	-	-	-	-	-	-	80.0%	-	-	-	-	-	100%	-

Leg Direction	Providence Hwy (Route 1) Southbound						University Avenue Westbound						Providence Hwy (Route 1) Northbound						Everett Street Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
Bicycles on Crosswalk	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	7.1%	-	-	-	-	-	-	-	-	-	-	-	20.0%	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (1) Route 1 @ University Ave TMC - TMC

Thu Mar 31, 2022
AM Peak (Mar 31 2022 8AM - 9 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936936, Location: 42.210768, -71.183742

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg Direction	Providence Hwy (Route 1) Southbound						University Avenue Westbound						Providence Hwy (Route 1) Northbound						Everett Street Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-03-31 8:00AM	73	204	37	18	**332**	0	71	43	27	0	**141**	0	59	264	35	2	**360**	0	37	60	87	0	**184**	0	**1017**
8:15AM	51	229	36	16	**332**	0	62	25	26	0	**113**	0	62	271	28	12	**373**	0	24	76	76	0	**176**	0	**994**
8:30AM	58	219	32	13	**322**	0	48	40	25	0	**113**	0	77	271	22	5	**375**	1	11	60	65	0	**136**	0	**946**
8:45AM	64	251	43	18	**376**	0	44	34	26	0	**104**	0	79	269	20	5	**373**	0	24	68	73	0	**165**	0	**1018**
Total	246	903	148	65	**1362**	0	225	142	104	0	**471**	0	277	1075	105	24	**1481**	1	96	264	301	0	**661**	0	**3975**
% Approach	18.1%	66.3%	10.9%	4.8%	**-**	-	47.8%	30.1%	22.1%	0%	**-**	-	18.7%	72.6%	7.1%	1.6%	**-**	-	14.5%	39.9%	45.5%	0%	**-**	-	-
% Total	6.2%	22.7%	3.7%	1.6%	**34.3%**	-	5.7%	3.6%	2.6%	0%	**11.8%**	-	7.0%	27.0%	2.6%	0.6%	**37.3%**	-	2.4%	6.6%	7.6%	0%	**16.6%**	-	-
PHF	0.842	0.899	0.860	0.903	**0.906**	-	0.792	0.826	0.963	-	**0.835**	-	0.877	0.992	0.750	0.500	**0.987**	-	0.649	0.868	0.865	-	**0.898**	-	0.976
Lights	225	865	137	60	**1287**	-	211	137	99	0	**447**	-	267	1025	100	24	**1416**	-	95	254	286	0	**635**	-	3785
% Lights	91.5%	95.8%	92.6%	92.3%	**94.5%**	-	93.8%	96.5%	95.2%	0%	**94.9%**	-	96.4%	95.3%	95.2%	100%	**95.6%**	-	99.0%	96.2%	95.0%	0%	**96.1%**	-	95.2%
Single-Unit Trucks	16	30	5	3	**54**	-	11	4	5	0	**20**	-	4	37	5	0	**46**	-	1	8	11	0	**20**	-	140
% Single-Unit Trucks	6.5%	3.3%	3.4%	4.6%	**4.0%**	-	4.9%	2.8%	4.8%	0%	**4.2%**	-	1.4%	3.4%	4.8%	0%	**3.1%**	-	1.0%	3.0%	3.7%	0%	**3.0%**	-	3.5%
Articulated Trucks	4	5	5	2	**16**	-	3	0	0	0	**3**	-	6	11	0	0	**17**	-	0	0	2	0	**2**	-	38
% Articulated Trucks	1.6%	0.6%	3.4%	3.1%	**1.2%**	-	1.3%	0%	0%	0%	**0.6%**	-	2.2%	1.0%	0%	0%	**1.1%**	-	0%	0%	0.7%	0%	**0.3%**	-	1.0%
Buses	1	3	1	0	**5**	-	0	1	0	0	**1**	-	0	2	0	0	**2**	-	0	2	2	0	**4**	-	12
% Buses	0.4%	0.3%	0.7%	0%	**0.4%**	-	0%	0.7%	0%	0%	**0.2%**	-	0%	0.2%	0%	0%	**0.1%**	-	0%	0.8%	0.7%	0%	**0.6%**	-	0.3%
Bicycles on Road	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%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (1) Route 1 @ University Ave TMC - TMC

Thu Mar 31, 2022
PM Peak (Mar 31 2022 4:45PM - 5:45 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936936, Location: 42.210768, -71.183742

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg Direction	Providence Hwy (Route 1) Southbound						University Avenue Westbound						Providence Hwy (Route 1) Northbound						Everett Street Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-03-31 4:45PM	32	325	41	11	**409**	1	41	51	67	0	**159**	0	50	234	36	12	**332**	0	16	53	45	0	**114**	0	**1014**
5:00PM	31	354	33	13	**431**	0	50	55	76	0	**181**	0	57	296	39	10	**402**	0	21	53	46	0	**120**	0	**1134**
5:15PM	18	354	36	17	**425**	0	38	52	74	0	**164**	0	60	301	48	5	**414**	0	21	46	47	0	**114**	0	**1117**
5:30PM	42	343	44	10	**439**	0	36	51	66	0	**153**	0	46	242	29	13	**330**	0	24	45	52	0	**121**	0	**1043**
Total	123	1376	154	51	**1704**	1	165	209	283	0	**657**	0	213	1073	152	40	**1478**	0	82	197	190	0	**469**	0	**4308**
% Approach	7.2%	80.8%	9.0%	3.0%	**-**	-	25.1%	31.8%	43.1%	0%	**-**	-	14.4%	72.6%	10.3%	2.7%	**-**	-	17.5%	42.0%	40.5%	0%	**-**	-	-
% Total	2.9%	31.9%	3.6%	1.2%	**39.6%**	-	3.8%	4.9%	6.6%	0%	**15.3%**	-	4.9%	24.9%	3.5%	0.9%	**34.3%**	-	1.9%	4.6%	4.4%	0%	**10.9%**	-	-
PHF	0.732	0.972	0.875	0.750	**0.970**	-	0.825	0.932	0.931	-	**0.902**	-	0.888	0.891	0.792	0.769	**0.893**	-	0.854	0.929	0.913	-	**0.969**	-	0.949
Lights	120	1351	142	50	**1663**	-	153	201	278	0	**632**	-	208	1058	149	39	**1454**	-	81	194	187	0	**462**	-	4211
% Lights	97.6%	98.2%	92.2%	98.0%	**97.6%**	-	92.7%	96.2%	98.2%	0%	**96.2%**	-	97.7%	98.6%	98.0%	97.5%	**98.4%**	-	98.8%	98.5%	98.4%	0%	**98.5%**	-	97.7%
Single-Unit Trucks	2	22	9	1	**34**	-	9	2	4	0	**15**	-	3	10	3	1	**17**	-	0	2	2	0	**4**	-	70
% Single-Unit Trucks	1.6%	1.6%	5.8%	2.0%	**2.0%**	-	5.5%	1.0%	1.4%	0%	**2.3%**	-	1.4%	0.9%	2.0%	2.5%	**1.2%**	-	0%	1.0%	1.1%	0%	**0.9%**	-	1.6%
Articulated Trucks	0	2	3	0	**5**	-	3	2	1	0	**6**	-	2	3	0	0	**5**	-	1	0	0	0	**1**	-	17
% Articulated Trucks	0%	0.1%	1.9%	0%	**0.3%**	-	1.8%	1.0%	0.4%	0%	**0.9%**	-	0.9%	0.3%	0%	0%	**0.3%**	-	1.2%	0%	0%	0%	**0.2%**	-	0.4%
Buses	1	1	0	0	**2**	-	0	0	0	0	**0**	-	0	2	0	0	**2**	-	0	1	1	0	**2**	-	6
% Buses	0.8%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0%	0.2%	0%	0%	**0.1%**	-	0%	0.5%	0.5%	0%	**0.4%**	-	0.1%
Bicycles on Road	0	0	0	0	**0**	-	0	4	0	0	**4**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	4
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	1.9%	0%	0%	**0.6%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (1) Route 1 @ University Ave TMC - TMC

Sat Apr 2, 2022
Midday Peak (WKND) (Apr 02 2022 12PM - 1 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936936, Location: 42.210768, -71.183742

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Providence Hwy (Route 1)						University Avenue						Providence Hwy (Route 1)						Everett Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-04-02 12:00PM	33	339	35	26	**433**	1	35	48	53	0	**136**	0	59	310	41	14	**424**	0	30	39	56	0	**125**	0	**1118**
12:15PM	35	321	37	20	**413**	2	26	55	61	0	**142**	0	56	313	30	15	**414**	0	37	42	56	0	**135**	1	**1104**
12:30PM	26	302	40	19	**387**	1	28	45	56	0	**129**	0	48	286	32	22	**388**	0	23	52	54	0	**129**	0	**1033**
12:45PM	31	321	41	16	**409**	0	34	44	46	0	**124**	0	86	325	46	8	**465**	0	36	62	52	0	**150**	0	**1148**
Total	125	1283	153	81	**1642**	4	123	192	216	0	**531**	0	249	1234	149	59	**1691**	0	126	195	218	0	**539**	1	**4403**
% Approach	7.6%	78.1%	9.3%	4.9%	**-**	-	23.2%	36.2%	40.7%	0%	**-**	-	14.7%	73.0%	8.8%	3.5%	**-**	-	23.4%	36.2%	40.4%	0%	**-**	-	-
% Total	2.8%	29.1%	3.5%	1.8%	**37.3%**	-	2.8%	4.4%	4.9%	0%	**12.1%**	-	5.7%	28.0%	3.4%	1.3%	**38.4%**	-	2.9%	4.4%	5.0%	0%	**12.2%**	-	-
PHF	0.893	0.946	0.933	0.779	**0.948**	-	0.879	0.864	0.885	-	**0.931**	-	0.724	0.949	0.810	0.670	**0.909**	-	0.851	0.786	0.973	-	**0.898**	-	0.958
Lights	122	1273	151	79	**1625**	-	123	188	214	0	**525**	-	246	1227	147	58	**1678**	-	125	192	217	0	**534**	-	4362
% Lights	97.6%	99.2%	98.7%	97.5%	**99.0%**	-	100%	97.9%	99.1%	0%	**98.9%**	-	98.8%	99.4%	98.7%	98.3%	**99.2%**	-	99.2%	98.5%	99.5%	0%	**99.1%**	-	99.1%
Single-Unit Trucks	2	8	2	2	**14**	-	0	1	2	0	**3**	-	3	6	2	1	**12**	-	1	3	0	0	**4**	-	33
% Single-Unit Trucks	1.6%	0.6%	1.3%	2.5%	**0.9%**	-	0%	0.5%	0.9%	0%	**0.6%**	-	1.2%	0.5%	1.3%	1.7%	**0.7%**	-	0.8%	1.5%	0%	0%	**0.7%**	-	0.7%
Articulated Trucks	1	2	0	0	**3**	-	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	0	1	0	**1**	-	5
% Articulated Trucks	0.8%	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0.5%	0%	**0.2%**	-	0.1%
Buses	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1
% Buses	0%	0%	0%	0%	**0%**	-	0%	0.5%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Bicycles on Road	0	0	0	0	**0**	-	0	2	0	0	**2**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	2
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	1.0%	0%	0%	**0.4%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	4	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (1) Route 1 @ University Ave TMC - TMC

Sat Apr 2, 2022
PM Peak (WKND) (Apr 02 2022 1PM - 2 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936936, Location: 42.210768, -71.183742

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Providence Hwy (Route 1)						University Avenue						Providence Hwy (Route 1)						Everett Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-04-02 1:00PM	18	328	39	14	**399**	1	45	46	35	0	**126**	0	65	298	34	8	**405**	0	28	49	55	0	**132**	0	**1062**
1:15PM	25	330	26	32	**413**	0	37	38	60	0	**135**	0	52	284	34	17	**387**	0	33	46	71	0	**150**	0	**1085**
1:30PM	34	292	30	28	**384**	1	40	57	53	0	**150**	0	50	291	38	14	**393**	1	30	46	57	0	**133**	0	**1060**
1:45PM	35	325	33	29	**422**	0	27	50	52	0	**129**	0	66	302	42	16	**426**	0	17	62	62	0	**141**	0	**1118**
Total	112	1275	128	103	**1618**	2	149	191	200	0	**540**	0	233	1175	148	55	**1611**	1	108	203	245	0	**556**	0	**4325**
% Approach	6.9%	78.8%	7.9%	6.4%	**-**	-	27.6%	35.4%	37.0%	0%	**-**	-	14.5%	72.9%	9.2%	3.4%	**-**	-	19.4%	36.5%	44.1%	0%	**-**	-	-
% Total	2.6%	29.5%	3.0%	2.4%	**37.4%**	-	3.4%	4.4%	4.6%	0%	**12.5%**	-	5.4%	27.2%	3.4%	1.3%	**37.2%**	-	2.5%	4.7%	5.7%	0%	**12.9%**	-	-
PHF	0.800	0.966	0.821	0.805	**0.959**	-	0.828	0.838	0.833	-	**0.900**	-	0.883	0.973	0.881	0.809	**0.945**	-	0.818	0.819	0.863	-	**0.927**	-	0.967
Lights	111	1269	121	102	**1603**	-	146	189	200	0	**535**	-	230	1164	146	53	**1593**	-	105	200	241	0	**546**	-	4277
% Lights	99.1%	99.5%	94.5%	99.0%	**99.1%**	-	98.0%	99.0%	100%	0%	**99.1%**	-	98.7%	99.1%	98.6%	96.4%	**98.9%**	-	97.2%	98.5%	98.4%	0%	**98.2%**	-	98.9%
Single-Unit Trucks	1	6	6	1	**14**	-	3	1	0	0	**4**	-	3	10	0	2	**15**	-	3	3	3	0	**9**	-	42
% Single-Unit Trucks	0.9%	0.5%	4.7%	1.0%	**0.9%**	-	2.0%	0.5%	0%	0%	**0.7%**	-	1.3%	0.9%	0%	3.6%	**0.9%**	-	2.8%	1.5%	1.2%	0%	**1.6%**	-	1.0%
Articulated Trucks	0	0	1	0	**1**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	0	1	0	**1**	-	3
% Articulated Trucks	0%	0%	0.8%	0%	**0.1%**	-	0%	0.5%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0.4%	0%	**0.2%**	-	0.1%
Buses	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	1	2	0	**3**	-	0	0	0	0	**0**	-	3
% Buses	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0.1%	1.4%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Bicycles on Road	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%
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	50.0%	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	50.0%	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (2) Route 1 @ Pleasant Street TMC - TMC

Thu Mar 31, 2022
Full Length (11 AM-2 PM, 6 AM-9 AM, 3 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936939, Location: 42.197991, -71.186277

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Providence Hwy (Route 1)						U-Haul Driveway						Providence Hwy (Route 1)						Pleasant Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-03-31 6:00AM	16	39	0	0	**55**	0	0	0	0	0	**0**	0	0	352	0	0	**352**	0	4	0	0	0	**4**	0	**411**
6:15AM	7	71	0	0	**78**	0	0	0	0	0	**0**	0	0	414	0	0	**414**	0	4	0	0	0	**4**	0	**496**
6:30AM	17	92	0	0	**109**	0	0	0	0	0	**0**	0	0	406	0	0	**406**	0	6	0	0	0	**6**	0	**521**
6:45AM	17	123	0	0	**140**	0	0	0	0	0	**0**	0	0	417	0	0	**417**	0	5	0	0	0	**5**	0	**562**
Hourly Total	57	325	0	0	**382**	0	0	0	0	0	**0**	0	0	1589	0	0	**1589**	0	19	0	0	0	**19**	0	**1990**
7:00AM	48	142	0	0	**190**	0	0	0	0	0	**0**	0	4	478	0	0	**482**	0	12	0	0	0	**12**	0	**684**
7:15AM	50	155	0	0	**205**	0	0	0	0	0	**0**	0	0	404	0	0	**404**	0	11	0	0	0	**11**	0	**620**
7:30AM	46	203	0	0	**249**	0	0	0	0	0	**0**	0	1	395	0	0	**396**	0	15	0	0	0	**15**	0	**660**
7:45AM	46	228	0	0	**274**	0	0	0	0	0	**0**	0	0	403	0	0	**403**	0	8	0	0	0	**8**	0	**685**
Hourly Total	190	728	0	0	**918**	0	0	0	0	0	**0**	0	5	1680	0	0	**1685**	0	46	0	0	0	**46**	0	**2649**
8:00AM	45	238	0	0	**283**	0	1	0	0	0	**1**	1	1	363	0	0	**364**	0	14	0	0	0	**14**	0	**662**
8:15AM	46	233	0	0	**279**	0	0	0	0	0	**0**	4	2	446	0	0	**448**	0	17	0	0	0	**17**	0	**744**
8:30AM	55	237	0	0	**292**	0	0	0	0	0	**0**	3	0	447	0	0	**447**	0	15	0	0	0	**15**	0	**754**
8:45AM	59	262	0	0	**321**	0	0	0	0	0	**0**	3	0	385	0	0	**385**	0	16	0	0	0	**16**	0	**722**
Hourly Total	205	970	0	0	**1175**	0	1	0	0	0	**1**	11	3	1641	0	0	**1644**	0	62	0	0	0	**62**	0	**2882**
3:00PM	53	423	0	0	**476**	0	0	0	0	0	**0**	1	0	327	0	0	**327**	0	17	0	0	0	**17**	0	**820**
3:15PM	57	437	0	0	**494**	0	0	0	0	0	**0**	0	0	344	0	0	**344**	0	16	0	0	0	**16**	0	**854**
3:30PM	59	425	0	0	**484**	0	0	0	0	0	**0**	0	0	341	0	0	**341**	1	25	0	0	0	**25**	0	**850**
3:45PM	47	407	0	0	**454**	0	0	0	0	0	**0**	0	0	338	0	0	**338**	0	18	0	0	0	**18**	0	**810**
Hourly Total	216	1692	0	0	**1908**	0	0	0	0	0	**0**	1	0	1350	0	0	**1350**	1	76	0	0	0	**76**	0	**3334**
4:00PM	54	410	0	0	**464**	0	0	0	0	0	**0**	0	3	385	0	0	**388**	0	24	0	0	0	**24**	0	**876**
4:15PM	57	440	0	0	**497**	0	4	0	0	0	**4**	2	1	324	0	0	**325**	0	21	0	0	0	**21**	0	**847**
4:30PM	55	464	0	0	**519**	0	1	0	0	0	**1**	0	1	348	0	0	**349**	0	26	0	0	0	**26**	0	**895**
4:45PM	55	442	0	0	**497**	0	1	0	0	0	**1**	0	1	384	0	0	**385**	0	18	0	0	0	**18**	0	**901**
Hourly Total	221	1756	0	0	**1977**	0	6	0	0	0	**6**	2	6	1441	0	0	**1447**	0	89	0	0	0	**89**	0	**3519**
5:00PM	85	433	0	0	**518**	0	1	0	0	1	**2**	3	2	432	0	0	**434**	0	23	0	0	0	**23**	0	**977**
5:15PM	56	467	0	0	**523**	0	0	0	0	0	**0**	0	1	369	0	0	**370**	0	19	0	0	0	**19**	0	**912**
5:30PM	78	418	0	0	**496**	0	1	0	0	0	**1**	4	3	328	0	0	**331**	0	18	0	0	0	**18**	0	**846**
5:45PM	67	376	0	0	**443**	0	1	0	0	0	**1**	0	0	320	0	0	**320**	0	16	0	0	0	**16**	0	**780**
Hourly Total	286	1694	0	0	**1980**	0	3	0	0	1	**4**	7	6	1449	0	0	**1455**	0	76	0	0	0	**76**	0	**3515**
2022-04-02 11:00AM	41	369	0	0	**410**	0	2	0	0	1	**3**	1	5	427	0	0	**432**	0	10	0	0	0	**10**	0	**855**
11:15AM	63	351	0	0	**414**	0	0	0	0	0	**0**	1	1	433	0	0	**434**	0	13	0	0	0	**13**	0	**861**
11:30AM	41	363	0	0	**404**	0	0	0	0	1	**1**	0	3	447	0	0	**450**	0	15	0	0	0	**15**	0	**870**
11:45AM	49	356	0	0	**405**	0	1	0	0	1	**2**	1	2	406	0	0	**408**	0	16	0	0	0	**16**	0	**831**
Hourly Total	194	1439	0	0	**1633**	0	3	0	0	3	**6**	3	11	1713	0	0	**1724**	0	54	0	0	0	**54**	0	**3417**
12:00PM	55	428	0	0	**483**	0	0	0	0	0	**0**	0	1	468	0	0	**469**	0	10	0	0	0	**10**	0	**962**
12:15PM	56	415	0	0	**471**	0	2	0	0	0	**2**	3	6	484	0	0	**490**	0	15	0	0	0	**15**	0	**978**
12:30PM	66	373	0	0	**439**	0	0	0	0	0	**0**	6	6	464	0	0	**470**	0	17	0	0	0	**17**	0	**926**
12:45PM	64	439	0	0	**503**	0	2	0	0	0	**2**	9	2	482	0	0	**484**	0	13	0	0	0	**13**	0	**1002**
Hourly Total	241	1655	0	0	**1896**	0	4	0	0	0	**4**	18	15	1898	0	0	**1913**	0	55	0	0	0	**55**	0	**3868**
1:00PM	54	392	0	0	**446**	0	0	0	0	0	**0**	1	4	413	0	0	**417**	0	11	0	0	0	**11**	0	**874**
1:15PM	55	432	0	0	**487**	0	1	0	0	0	**1**	0	0	413	0	0	**413**	0	15	0	0	0	**15**	1	**916**
1:30PM	43	403	0	0	**446**	0	0	0	0	0	**0**	0	0	442	0	0	**442**	0	13	0	0	0	**13**	0	**901**
1:45PM	51	419	0	0	**470**	0	1	0	0	1	**2**	0	2	402	0	0	**404**	0	15	0	0	0	**15**	0	**891**
Hourly Total	203	1646	0	0	**1849**	0	2	0	0	1	**3**	1	6	1670	0	0	**1676**	0	54	0	0	0	**54**	1	**3582**
Total	1813	11905	0	0	**13718**	0	19	0	0	5	**24**	43	52	14431	0	0	**14483**	1	531	0	0	0	**531**	1	**28756**
% Approach	13.2%	86.8%	0%	0%	**-**	-	79.2%	0%	0%	20.8%	**-**	-	0.4%	99.6%	0%	0%	**-**	-	100%	0%	0%	0%	**-**	-	-
% Total	6.3%	41.4%	0%	0%	**47.7%**	-	0.1%	0%	0%	0%	**0.1%**	-	0.2%	50.2%	0%	0%	**50.4%**	-	1.8%	0%	0%	0%	**1.8%**	-	-
Lights	1776	11686	0	0	**13462**	-	19	0	0	5	**24**	-	46	14114	0	0	**14160**	-	518	0	0	0	**518**	-	28164
% Lights	98.0%	98.2%	0%	0%	**98.1%**	-	100%	0%	0%	100%	**100%**	-	88.5%	97.8%	0%	0%	**97.8%**	-	97.6%	0%	0%	0%	**97.6%**	-	97.9%
Single-Unit Trucks	31	168	0	0	**199**	-	0	0	0	0	**0**	-	5	231	0	0	**236**	-	8	0	0	0	**8**	-	443
% Single-Unit Trucks	1.7%	1.4%	0%	0%	**1.5%**	-	0%	0%	0%	0%	**0%**	-	9.6%	1.6%	0%	0%	**1.6%**	-	1.5%	0%	0%	0%	**1.5%**	-	1.5%

Leg Direction	Providence Hwy (Route 1) Southbound						U-Haul Driveway Westbound						Providence Hwy (Route 1) Northbound						Pleasant Street Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
Articulated Trucks	6	43	0	0	**49**	-	0	0	0	0	**0**	-	1	73	0	0	**74**	-	5	0	0	0	**5**	-	128
% Articulated Trucks	0.3%	0.4%	0%	0%	**0.4%**	-	0%	0%	0%	0%	**0%**	-	1.9%	0.5%	0%	0%	**0.5%**	-	0.9%	0%	0%	0%	**0.9%**	-	0.4%
Buses	0	8	0	0	**8**	-	0	0	0	0	**0**	-	0	13	0	0	**13**	-	0	0	0	0	**0**	-	21
% Buses	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Bicycles on Road	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%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	43	-	-	-	-	-	1	-	-	-	-	-	1	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (2) Route 1 @ Pleasant Street TMC - TMC

Thu Mar 31, 2022
AM Peak (Mar 31 2022 8AM - 9 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936939, Location: 42.197991, -71.186277

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg / Direction	Providence Hwy (Route 1) Southbound						U-Haul Driveway Westbound						Providence Hwy (Route 1) Northbound						Pleasant Street Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-03-31 8:00AM	45	238	0	0	**283**	0	1	0	0	0	**1**	1	1	363	0	0	**364**	0	14	0	0	0	**14**	0	**662**
8:15AM	46	233	0	0	**279**	0	0	0	0	0	**0**	4	2	446	0	0	**448**	0	17	0	0	0	**17**	0	**744**
8:30AM	55	237	0	0	**292**	0	0	0	0	0	**0**	3	0	447	0	0	**447**	0	15	0	0	0	**15**	0	**754**
8:45AM	59	262	0	0	**321**	0	0	0	0	0	**0**	3	0	385	0	0	**385**	0	16	0	0	0	**16**	0	**722**
Total	205	970	0	0	**1175**	0	1	0	0	0	**1**	11	3	1641	0	0	**1644**	0	62	0	0	0	**62**	0	**2882**
% Approach	17.4%	82.6%	0%	0%	**-**	-	100%	0%	0%	0%	**-**	-	0.2%	99.8%	0%	0%	**-**	-	100%	0%	0%	0%	**-**	-	-
% Total	7.1%	33.7%	0%	0%	**40.8%**	-	0%	0%	0%	0%	**0%**	-	0.1%	56.9%	0%	0%	**57.0%**	-	2.2%	0%	0%	0%	**2.2%**	-	-
PHF	0.869	0.926	-	-	**0.915**	-	0.250	-	-	-	**0.250**	-	0.375	0.918	-	-	**0.917**	-	0.912	-	-	-	**0.912**	-	0.956
Lights	195	933	0	0	**1128**	-	1	0	0	0	**1**	-	3	1570	0	0	**1573**	-	57	0	0	0	**57**	-	2759
% Lights	95.1%	96.2%	0%	0%	**96.0%**	-	100%	0%	0%	0%	**100%**	-	100%	95.7%	0%	0%	**95.7%**	-	91.9%	0%	0%	0%	**91.9%**	-	95.7%
Single-Unit Trucks	10	29	0	0	**39**	-	0	0	0	0	**0**	-	0	59	0	0	**59**	-	3	0	0	0	**3**	-	101
% Single-Unit Trucks	4.9%	3.0%	0%	0%	**3.3%**	-	0%	0%	0%	0%	**0%**	-	0%	3.6%	0%	0%	**3.6%**	-	4.8%	0%	0%	0%	**4.8%**	-	3.5%
Articulated Trucks	0	5	0	0	**5**	-	0	0	0	0	**0**	-	0	11	0	0	**11**	-	2	0	0	0	**2**	-	18
% Articulated Trucks	0%	0.5%	0%	0%	**0.4%**	-	0%	0%	0%	0%	**0%**	-	0%	0.7%	0%	0%	**0.7%**	-	3.2%	0%	0%	0%	**3.2%**	-	0.6%
Buses	0	3	0	0	**3**	-	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	4
% Buses	0%	0.3%	0%	0%	**0.3%**	-	0%	0%	0%	0%	**0%**	-	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Bicycles on Road	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%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	11	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (2) Route 1 @ Pleasant Street TMC - TMC

Thu Mar 31, 2022
PM Peak (Mar 31 2022 4:30PM - 5:30 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936939, Location: 42.197991, -71.186277

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg Direction	Providence Hwy (Route 1) Southbound						U-Haul Driveway Westbound						Providence Hwy (Route 1) Northbound						Pleasant Street Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-03-31 4:30PM	55	464	0	0	**519**	0	1	0	0	0	**1**	0	1	348	0	0	**349**	0	26	0	0	0	**26**	0	**895**
4:45PM	55	442	0	0	**497**	0	1	0	0	0	**1**	0	1	384	0	0	**385**	0	18	0	0	0	**18**	0	**901**
5:00PM	85	433	0	0	**518**	0	1	0	0	1	**2**	3	2	432	0	0	**434**	0	23	0	0	0	**23**	0	**977**
5:15PM	56	467	0	0	**523**	0	0	0	0	0	**0**	0	1	369	0	0	**370**	0	19	0	0	0	**19**	0	**912**
Total	251	1806	0	0	**2057**	0	3	0	0	1	**4**	3	5	1533	0	0	**1538**	0	86	0	0	0	**86**	0	**3685**
% Approach	12.2%	87.8%	0%	0%	**-**	-	75.0%	0%	0%	25.0%	**-**	-	0.3%	99.7%	0%	0%	**-**	-	100%	0%	0%	0%	**-**	-	-
% Total	6.8%	49.0%	0%	0%	**55.8%**	-	0.1%	0%	0%	0%	**0.1%**	-	0.1%	41.6%	0%	0%	**41.7%**	-	2.3%	0%	0%	0%	**2.3%**	-	-
PHF	0.738	0.967	-	-	**0.983**	-	0.750	-	-	0.250	**0.500**	-	0.625	0.887	-	-	**0.886**	-	0.827	-	-	-	**0.827**	-	0.943
Lights	246	1779	0	0	**2025**	-	3	0	0	1	**4**	-	5	1510	0	0	**1515**	-	82	0	0	0	**82**	-	3626
% Lights	98.0%	98.5%	0%	0%	**98.4%**	-	100%	0%	0%	100%	**100%**	-	100%	98.5%	0%	0%	**98.5%**	-	95.3%	0%	0%	0%	**95.3%**	-	98.4%
Single-Unit Trucks	5	23	0	0	**28**	-	0	0	0	0	**0**	-	0	14	0	0	**14**	-	2	0	0	0	**2**	-	44
% Single-Unit Trucks	2.0%	1.3%	0%	0%	**1.4%**	-	0%	0%	0%	0%	**0%**	-	0%	0.9%	0%	0%	**0.9%**	-	2.3%	0%	0%	0%	**2.3%**	-	1.2%
Articulated Trucks	0	2	0	0	**2**	-	0	0	0	0	**0**	-	0	7	0	0	**7**	-	2	0	0	0	**2**	-	11
% Articulated Trucks	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0%	0.5%	0%	0%	**0.5%**	-	2.3%	0%	0%	0%	**2.3%**	-	0.3%
Buses	0	2	0	0	**2**	-	0	0	0	0	**0**	-	0	2	0	0	**2**	-	0	0	0	0	**0**	-	4
% Buses	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Bicycles on Road	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%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (2) Route 1 @ Pleasant Street TMC - TMC

Sat Apr 2, 2022
Midday Peak (WKND) (Apr 02 2022 12PM - 1 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936939, Location: 42.197991, -71.186277

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg / Direction	Providence Hwy (Route 1) Southbound						U-Haul Driveway Westbound						Providence Hwy (Route 1) Northbound						Pleasant Street Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-04-02 12:00PM	55	428	0	0	**483**	0	0	0	0	0	**0**	0	1	468	0	0	**469**	0	10	0	0	0	**10**	0	**962**
12:15PM	56	415	0	0	**471**	0	2	0	0	0	**2**	3	6	484	0	0	**490**	0	15	0	0	0	**15**	0	**978**
12:30PM	66	373	0	0	**439**	0	0	0	0	0	**0**	6	6	464	0	0	**470**	0	17	0	0	0	**17**	0	**926**
12:45PM	64	439	0	0	**503**	0	2	0	0	0	**2**	9	2	482	0	0	**484**	0	13	0	0	0	**13**	0	**1002**
Total	241	1655	0	0	**1896**	0	4	0	0	0	**4**	18	15	1898	0	0	**1913**	0	55	0	0	0	**55**	0	**3868**
% Approach	12.7%	87.3%	0%	0%	**-**	-	100%	0%	0%	0%	**-**	-	0.8%	99.2%	0%	0%	**-**	-	100%	0%	0%	0%	**-**	-	-
% Total	6.2%	42.8%	0%	0%	**49.0%**	-	0.1%	0%	0%	0%	**0.1%**	-	0.4%	49.1%	0%	0%	**49.5%**	-	1.4%	0%	0%	0%	**1.4%**	-	-
PHF	0.913	0.942	-	-	**0.942**	-	0.500	-	-	-	**0.500**	-	0.625	0.980	-	-	**0.976**	-	0.809	-	-	-	**0.809**	-	0.965
Lights	238	1638	0	0	**1876**	-	4	0	0	0	**4**	-	12	1883	0	0	**1895**	-	54	0	0	0	**54**	-	3829
% Lights	98.8%	99.0%	0%	0%	**98.9%**	-	100%	0%	0%	0%	**100%**	-	80.0%	99.2%	0%	0%	**99.1%**	-	98.2%	0%	0%	0%	**98.2%**	-	99.0%
Single-Unit Trucks	2	14	0	0	**16**	-	0	0	0	0	**0**	-	3	13	0	0	**16**	-	1	0	0	0	**1**	-	33
% Single-Unit Trucks	0.8%	0.8%	0%	0%	**0.8%**	-	0%	0%	0%	0%	**0%**	-	20.0%	0.7%	0%	0%	**0.8%**	-	1.8%	0%	0%	0%	**1.8%**	-	0.9%
Articulated Trucks	1	3	0	0	**4**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	4
% Articulated Trucks	0.4%	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Buses	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	2	0	0	**2**	-	0	0	0	0	**0**	-	2
% Buses	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Bicycles on Road	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%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	18	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (2) Route 1 @ Pleasant Street TMC - TMC

Sat Apr 2, 2022
PM Peak (WKND) (Apr 02 2022 1PM - 2 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936939, Location: 42.197991, -71.186277

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg / Direction	Providence Hwy (Route 1) Southbound						U-Haul Driveway Westbound						Providence Hwy (Route 1) Northbound						Pleasant Street Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-04-02 1:00PM	54	392	0	0	**446**	0	0	0	0	0	**0**	1	4	413	0	0	**417**	0	11	0	0	0	**11**	0	**874**
1:15PM	55	432	0	0	**487**	0	1	0	0	0	**1**	0	0	413	0	0	**413**	0	15	0	0	0	**15**	1	**916**
1:30PM	43	403	0	0	**446**	0	0	0	0	0	**0**	0	0	442	0	0	**442**	0	13	0	0	0	**13**	0	**901**
1:45PM	51	419	0	0	**470**	0	1	0	0	1	**2**	0	2	402	0	0	**404**	0	15	0	0	0	**15**	0	**891**
Total	203	1646	0	0	**1849**	0	2	0	0	1	**3**	1	6	1670	0	0	**1676**	0	54	0	0	0	**54**	1	**3582**
% Approach	11.0%	89.0%	0%	0%	**-**	-	66.7%	0%	0%	33.3%	**-**	-	0.4%	99.6%	0%	0%	**-**	-	100%	0%	0%	0%	**-**	-	-
% Total	5.7%	46.0%	0%	0%	**51.6%**	-	0.1%	0%	0%	0%	**0.1%**	-	0.2%	46.6%	0%	0%	**46.8%**	-	1.5%	0%	0%	0%	**1.5%**	-	-
PHF	0.923	0.953	-	-	**0.949**	-	0.500	-	-	0.250	**0.375**	-	0.375	0.945	-	-	**0.948**	-	0.900	-	-	-	**0.900**	-	0.978
Lights	201	1638	0	0	**1839**	-	2	0	0	1	**3**	-	6	1662	0	0	**1668**	-	54	0	0	0	**54**	-	3564
% Lights	99.0%	99.5%	0%	0%	**99.5%**	-	100%	0%	0%	100%	**100%**	-	100%	99.5%	0%	0%	**99.5%**	-	100%	0%	0%	0%	**100%**	-	99.5%
Single-Unit Trucks	2	7	0	0	**9**	-	0	0	0	0	**0**	-	0	7	0	0	**7**	-	0	0	0	0	**0**	-	16
% Single-Unit Trucks	1.0%	0.4%	0%	0%	**0.5%**	-	0%	0%	0%	0%	**0%**	-	0%	0.4%	0%	0%	**0.4%**	-	0%	0%	0%	0%	**0%**	-	0.4%
Articulated Trucks	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	2
% Articulated Trucks	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Buses	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Buses	0%	0%	0%	0%	**0%**	-	0%	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
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	1	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (3) Route 1 @ Neponset Street TMC - TMC

Thu Mar 31, 2022
Full Length (11 AM-2 PM, 6 AM-9 AM, 3 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936941, Location: 42.193451, -71.183626

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg / Direction	Providence Hwy (Route 1) Southbound						Access Road Westbound						Providence Hwy (Route 1) Northbound						Neponset Street Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-03-31 6:00AM	0	43	0	0	**43**	0	6	0	0	0	**6**	0	1	348	0	0	**349**	0	2	0	0	0	**2**	0	**400**
6:15AM	0	75	0	0	**75**	0	3	0	0	0	**3**	0	0	408	0	0	**408**	0	4	0	0	0	**4**	0	**490**
6:30AM	1	93	0	0	**94**	0	2	0	0	0	**2**	0	1	413	0	0	**414**	0	5	0	0	0	**5**	0	**515**
6:45AM	3	130	0	0	**133**	0	4	0	0	0	**4**	0	5	419	0	0	**424**	0	7	0	0	0	**7**	0	**568**
Hourly Total	4	341	0	0	**345**	0	15	0	0	0	**15**	0	7	1588	0	0	**1595**	0	18	0	0	0	**18**	0	**1973**
7:00AM	2	146	0	0	**148**	0	4	0	0	0	**4**	0	7	470	0	0	**477**	0	13	0	0	0	**13**	0	**642**
7:15AM	3	168	0	0	**171**	0	9	0	0	0	**9**	0	9	390	0	0	**399**	0	8	0	0	0	**8**	0	**587**
7:30AM	2	208	0	0	**210**	0	5	0	0	0	**5**	0	10	399	0	0	**409**	0	11	0	0	0	**11**	0	**635**
7:45AM	4	225	0	0	**229**	0	7	0	0	0	**7**	0	6	382	0	0	**388**	0	10	0	0	0	**10**	0	**634**
Hourly Total	11	747	0	0	**758**	0	25	0	0	0	**25**	0	32	1641	0	0	**1673**	0	42	0	0	0	**42**	0	**2498**
8:00AM	5	238	0	0	**243**	0	4	0	0	0	**4**	0	4	343	0	0	**347**	0	17	0	0	0	**17**	0	**611**
8:15AM	2	255	0	0	**257**	0	17	0	0	0	**17**	0	4	415	0	0	**419**	0	15	0	0	0	**15**	0	**708**
8:30AM	6	237	0	0	**243**	0	9	0	0	0	**9**	0	4	421	0	0	**425**	0	13	0	0	0	**13**	0	**690**
8:45AM	6	254	0	0	**260**	0	19	0	0	0	**19**	0	16	362	0	0	**378**	0	13	0	0	0	**13**	0	**670**
Hourly Total	19	984	0	0	**1003**	0	49	0	0	0	**49**	0	28	1541	0	0	**1569**	0	58	0	0	0	**58**	0	**2679**
3:00PM	2	446	0	0	**448**	0	19	0	0	0	**19**	0	15	304	0	0	**319**	0	12	0	0	0	**12**	0	**798**
3:15PM	2	445	0	0	**447**	0	17	0	0	0	**17**	0	18	312	0	0	**330**	0	16	0	0	0	**16**	0	**810**
3:30PM	4	456	0	0	**460**	0	21	0	0	0	**21**	0	14	295	0	0	**309**	0	15	0	0	0	**15**	0	**805**
3:45PM	3	427	0	0	**430**	0	18	0	0	0	**18**	0	12	309	0	0	**321**	0	19	0	0	0	**19**	0	**788**
Hourly Total	11	1774	0	0	**1785**	0	75	0	0	0	**75**	0	59	1220	0	0	**1279**	0	62	0	0	0	**62**	0	**3201**
4:00PM	5	438	0	0	**443**	0	16	0	0	0	**16**	0	11	401	0	0	**412**	0	24	0	0	0	**24**	0	**895**
4:15PM	7	465	0	0	**472**	0	30	0	0	0	**30**	0	12	289	0	0	**301**	0	21	0	0	0	**21**	0	**824**
4:30PM	0	504	0	0	**504**	0	15	0	0	0	**15**	0	13	348	0	0	**361**	0	14	0	0	0	**14**	0	**894**
4:45PM	3	467	0	0	**470**	0	20	0	0	0	**20**	0	10	381	0	0	**391**	0	19	0	0	0	**19**	0	**900**
Hourly Total	15	1874	0	0	**1889**	0	81	0	0	0	**81**	0	46	1419	0	0	**1465**	0	78	0	0	0	**78**	0	**3513**
5:00PM	5	437	0	0	**442**	0	25	0	0	0	**25**	0	10	454	0	0	**464**	0	25	0	0	0	**25**	0	**956**
5:15PM	8	495	0	0	**503**	0	19	0	0	0	**19**	0	8	400	0	0	**408**	0	24	0	0	0	**24**	0	**954**
5:30PM	6	432	0	0	**438**	0	16	0	0	0	**16**	0	8	355	0	0	**363**	0	19	0	0	0	**19**	0	**836**
5:45PM	5	395	0	0	**400**	0	23	0	0	0	**23**	0	4	331	0	0	**335**	0	20	0	0	0	**20**	0	**778**
Hourly Total	24	1759	0	0	**1783**	0	83	0	0	0	**83**	0	30	1540	0	0	**1570**	0	88	0	0	0	**88**	0	**3524**
2022-04-02 11:00AM	2	368	0	0	**370**	0	25	0	0	0	**25**	0	18	390	0	0	**408**	0	13	0	0	0	**13**	0	**816**
11:15AM	5	357	0	0	**362**	0	39	0	0	0	**39**	0	17	403	0	0	**420**	0	12	0	0	0	**12**	0	**833**
11:30AM	4	365	0	0	**369**	0	34	0	0	0	**34**	0	17	399	0	0	**416**	0	15	0	0	0	**15**	0	**834**
11:45AM	4	364	0	0	**368**	0	37	0	0	0	**37**	0	23	405	0	0	**428**	0	13	0	0	0	**13**	0	**846**
Hourly Total	15	1454	0	0	**1469**	0	135	0	0	0	**135**	0	75	1597	0	0	**1672**	0	53	0	0	0	**53**	0	**3329**
12:00PM	8	433	0	0	**441**	0	42	0	0	0	**42**	0	15	433	0	0	**448**	0	12	0	0	0	**12**	0	**943**
12:15PM	6	436	0	0	**442**	0	39	0	0	0	**39**	0	13	429	0	0	**442**	0	14	0	0	0	**14**	0	**937**
12:30PM	5	389	0	0	**394**	0	46	0	0	0	**46**	0	16	442	0	0	**458**	0	25	0	0	0	**25**	0	**923**
12:45PM	8	463	0	0	**471**	0	43	0	0	0	**43**	0	17	433	0	0	**450**	0	19	0	0	0	**19**	0	**983**
Hourly Total	27	1721	0	0	**1748**	0	170	0	0	0	**170**	0	61	1737	0	0	**1798**	0	70	0	0	0	**70**	0	**3786**
1:00PM	3	382	0	0	**385**	0	44	0	0	0	**44**	0	14	410	0	0	**424**	0	21	0	0	0	**21**	0	**874**
1:15PM	7	440	0	0	**447**	0	37	0	0	0	**37**	0	30	387	0	0	**417**	0	10	0	0	0	**10**	0	**911**
1:30PM	2	392	0	0	**394**	0	45	0	0	0	**45**	0	24	402	0	0	**426**	0	20	0	0	0	**20**	0	**885**
1:45PM	8	392	0	0	**400**	0	39	0	0	0	**39**	0	22	368	0	0	**390**	0	20	0	0	0	**20**	0	**849**
Hourly Total	20	1606	0	0	**1626**	0	165	0	0	0	**165**	0	90	1567	0	0	**1657**	0	71	0	0	0	**71**	0	**3519**
Total	146	12260	0	0	**12406**	0	798	0	0	0	**798**	0	428	13850	0	0	**14278**	0	540	0	0	0	**540**	0	**28022**
% Approach	1.2%	98.8%	0%	0%	**-**	-	100%	0%	0%	0%	**-**	-	3.0%	97.0%	0%	0%	**-**	-	100%	0%	0%	0%	**-**	-	-
% Total	0.5%	43.8%	0%	0%	**44.3%**	-	2.8%	0%	0%	0%	**2.8%**	-	1.5%	49.4%	0%	0%	**51.0%**	-	1.9%	0%	0%	0%	**1.9%**	-	-
Lights	146	12032	0	0	**12178**	-	785	0	0	0	**785**	-	411	13552	0	0	**13963**	-	532	0	0	0	**532**	-	27458
% Lights	100%	98.1%	0%	0%	**98.2%**	-	98.4%	0%	0%	0%	**98.4%**	-	96.0%	97.8%	0%	0%	**97.8%**	-	98.5%	0%	0%	0%	**98.5%**	-	98.0%
Single-Unit Trucks	0	168	0	0	**168**	-	13	0	0	0	**13**	-	17	215	0	0	**232**	-	7	0	0	0	**7**	-	420
% Single-Unit Trucks	0%	1.4%	0%	0%	**1.4%**	-	1.6%	0%	0%	0%	**1.6%**	-	4.0%	1.6%	0%	0%	**1.6%**	-	1.3%	0%	0%	0%	**1.3%**	-	1.5%

Leg Direction	Providence Hwy (Route 1) Southbound						Access Road Westbound						Providence Hwy (Route 1) Northbound						Neponset Street Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
Articulated Trucks	0	47	0	0	**47**	-	0	0	0	0	**0**	-	0	66	0	0	**66**	-	0	0	0	0	**0**	-	113
% Articulated Trucks	0%	0.4%	0%	0%	**0.4%**	-	0%	0%	0%	0%	**0%**	-	0%	0.5%	0%	0%	**0.5%**	-	0%	0%	0%	0%	**0%**	-	0.4%
Buses	0	12	0	0	**12**	-	0	0	0	0	**0**	-	0	16	0	0	**16**	-	1	0	0	0	**1**	-	29
% Buses	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0%	0.1%	0%	0%	**0.1%**	-	0.2%	0%	0%	0%	**0.2%**	-	0.1%
Bicycles on Road	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	2
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (3) Route 1 @ Neponset Street TMC - TMC

Thu Mar 31, 2022
AM Peak (Mar 31 2022 8AM - 9 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936941, Location: 42.193451, -71.183626

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg / Direction	Providence Hwy (Route 1) Southbound						Access Road Westbound						Providence Hwy (Route 1) Northbound						Neponset Street Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-03-31 8:00AM	5	238	0	0	**243**	0	4	0	0	0	**4**	0	4	343	0	0	**347**	0	17	0	0	0	**17**	0	**611**
8:15AM	2	255	0	0	**257**	0	17	0	0	0	**17**	0	4	415	0	0	**419**	0	15	0	0	0	**15**	0	**708**
8:30AM	6	237	0	0	**243**	0	9	0	0	0	**9**	0	4	421	0	0	**425**	0	13	0	0	0	**13**	0	**690**
8:45AM	6	254	0	0	**260**	0	19	0	0	0	**19**	0	16	362	0	0	**378**	0	13	0	0	0	**13**	0	**670**
Total	19	984	0	0	**1003**	0	49	0	0	0	**49**	0	28	1541	0	0	**1569**	0	58	0	0	0	**58**	0	**2679**
% Approach	1.9%	98.1%	0%	0%	**-**	-	100%	0%	0%	0%	**-**	-	1.8%	98.2%	0%	0%	**-**	-	100%	0%	0%	0%	**-**	-	-
% Total	0.7%	36.7%	0%	0%	**37.4%**	-	1.8%	0%	0%	0%	**1.8%**	-	1.0%	57.5%	0%	0%	**58.6%**	-	2.2%	0%	0%	0%	**2.2%**	-	-
PHF	0.792	0.965	-	-	**0.964**	-	0.645	-	-	-	**0.645**	-	0.438	0.915	-	-	**0.923**	-	0.853	-	-	-	**0.853**	-	0.946
Lights	19	944	0	0	**963**	-	40	0	0	0	**40**	-	27	1484	0	0	**1511**	-	55	0	0	0	**55**	-	2569
% Lights	100%	95.9%	0%	0%	**96.0%**	-	81.6%	0%	0%	0%	**81.6%**	-	96.4%	96.3%	0%	0%	**96.3%**	-	94.8%	0%	0%	0%	**94.8%**	-	95.9%
Single-Unit Trucks	0	30	0	0	**30**	-	9	0	0	0	**9**	-	1	43	0	0	**44**	-	2	0	0	0	**2**	-	85
% Single-Unit Trucks	0%	3.0%	0%	0%	**3.0%**	-	18.4%	0%	0%	0%	**18.4%**	-	3.6%	2.8%	0%	0%	**2.8%**	-	3.4%	0%	0%	0%	**3.4%**	-	3.2%
Articulated Trucks	0	6	0	0	**6**	-	0	0	0	0	**0**	-	0	12	0	0	**12**	-	0	0	0	0	**0**	-	18
% Articulated Trucks	0%	0.6%	0%	0%	**0.6%**	-	0%	0%	0%	0%	**0%**	-	0%	0.8%	0%	0%	**0.8%**	-	0%	0%	0%	0%	**0%**	-	0.7%
Buses	0	4	0	0	**4**	-	0	0	0	0	**0**	-	0	2	0	0	**2**	-	1	0	0	0	**1**	-	7
% Buses	0%	0.4%	0%	0%	**0.4%**	-	0%	0%	0%	0%	**0%**	-	0%	0.1%	0%	0%	**0.1%**	-	1.7%	0%	0%	0%	**1.7%**	-	0.3%
Bicycles on Road	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%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (3) Route 1 @ Neponset Street TMC - TMC

Thu Mar 31, 2022
PM Peak (Mar 31 2022 4:30PM - 5:30 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936941, Location: 42.193451, -71.183626

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Providence Hwy (Route 1)						Access Road						Providence Hwy (Route 1)						Neponset Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-03-31 4:30PM	0	504	0	0	**504**	0	15	0	0	0	**15**	0	13	348	0	0	**361**	0	14	0	0	0	**14**	0	**894**
4:45PM	3	467	0	0	**470**	0	20	0	0	0	**20**	0	10	381	0	0	**391**	0	19	0	0	0	**19**	0	**900**
5:00PM	5	437	0	0	**442**	0	25	0	0	0	**25**	0	10	454	0	0	**464**	0	25	0	0	0	**25**	0	**956**
5:15PM	8	495	0	0	**503**	0	19	0	0	0	**19**	0	8	400	0	0	**408**	0	24	0	0	0	**24**	0	**954**
Total	16	1903	0	0	**1919**	0	79	0	0	0	**79**	0	41	1583	0	0	**1624**	0	82	0	0	0	**82**	0	**3704**
% Approach	0.8%	99.2%	0%	0%	**-**	-	100%	0%	0%	0%	**-**	-	2.5%	97.5%	0%	0%	**-**	-	100%	0%	0%	0%	**-**	-	-
% Total	0.4%	51.4%	0%	0%	**51.8%**	-	2.1%	0%	0%	0%	**2.1%**	-	1.1%	42.7%	0%	0%	**43.8%**	-	2.2%	0%	0%	0%	**2.2%**	-	-
PHF	0.500	0.944	-	-	**0.952**	-	0.790	-	-	-	**0.790**	-	0.788	0.872	-	-	**0.875**	-	0.820	-	-	-	**0.820**	-	0.969
Lights	16	1872	0	0	**1888**	-	78	0	0	0	**78**	-	40	1560	0	0	**1600**	-	80	0	0	0	**80**	-	3646
% Lights	100%	98.4%	0%	0%	**98.4%**	-	98.7%	0%	0%	0%	**98.7%**	-	97.6%	98.5%	0%	0%	**98.5%**	-	97.6%	0%	0%	0%	**97.6%**	-	98.4%
Single-Unit Trucks	0	25	0	0	**25**	-	1	0	0	0	**1**	-	1	14	0	0	**15**	-	2	0	0	0	**2**	-	43
% Single-Unit Trucks	0%	1.3%	0%	0%	**1.3%**	-	1.3%	0%	0%	0%	**1.3%**	-	2.4%	0.9%	0%	0%	**0.9%**	-	2.4%	0%	0%	0%	**2.4%**	-	1.2%
Articulated Trucks	0	4	0	0	**4**	-	0	0	0	0	**0**	-	0	7	0	0	**7**	-	0	0	0	0	**0**	-	11
% Articulated Trucks	0%	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0%	0.4%	0%	0%	**0.4%**	-	0%	0%	0%	0%	**0%**	-	0.3%
Buses	0	2	0	0	**2**	-	0	0	0	0	**0**	-	0	2	0	0	**2**	-	0	0	0	0	**0**	-	4
% Buses	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Bicycles on Road	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%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (3) Route 1 @ Neponset Street TMC - TMC

Sat Apr 2, 2022
Midday Peak (WKND) (Apr 02 2022 12PM - 1 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936941, Location: 42.193451, -71.183626

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg / Direction	Providence Hwy (Route 1) Southbound						Access Road Westbound						Providence Hwy (Route 1) Northbound						Neponset Street Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-04-02 12:00PM	8	433	0	0	**441**	0	42	0	0	0	**42**	0	15	433	0	0	**448**	0	12	0	0	0	**12**	0	**943**
12:15PM	6	436	0	0	**442**	0	39	0	0	0	**39**	0	13	429	0	0	**442**	0	14	0	0	0	**14**	0	**937**
12:30PM	5	389	0	0	**394**	0	46	0	0	0	**46**	0	16	442	0	0	**458**	0	25	0	0	0	**25**	0	**923**
12:45PM	8	463	0	0	**471**	0	43	0	0	0	**43**	0	17	433	0	0	**450**	0	19	0	0	0	**19**	0	**983**
Total	27	1721	0	0	**1748**	0	170	0	0	0	**170**	0	61	1737	0	0	**1798**	0	70	0	0	0	**70**	0	**3786**
% Approach	1.5%	98.5%	0%	0%	**-**	-	100%	0%	0%	0%	**-**	-	3.4%	96.6%	0%	0%	**-**	-	100%	0%	0%	0%	**-**	-	**-**
% Total	0.7%	45.5%	0%	0%	**46.2%**	-	4.5%	0%	0%	0%	**4.5%**	-	1.6%	45.9%	0%	0%	**47.5%**	-	1.8%	0%	0%	0%	**1.8%**	-	**-**
PHF	0.844	0.929	-	-	**0.927**	-	0.924	-	-	-	**0.924**	-	0.897	0.982	-	-	**0.981**	-	0.700	-	-	-	**0.700**	-	0.962
Lights	27	1706	0	0	**1733**	-	170	0	0	0	**170**	-	60	1725	0	0	**1785**	-	69	0	0	0	**69**	-	3757
% Lights	100%	99.1%	0%	0%	**99.1%**	-	100%	0%	0%	0%	**100%**	-	98.4%	99.3%	0%	0%	**99.3%**	-	98.6%	0%	0%	0%	**98.6%**	-	99.2%
Single-Unit Trucks	0	11	0	0	**11**	-	0	0	0	0	**0**	-	1	9	0	0	**10**	-	1	0	0	0	**1**	-	22
% Single-Unit Trucks	0%	0.6%	0%	0%	**0.6%**	-	0%	0%	0%	0%	**0%**	-	1.6%	0.5%	0%	0%	**0.6%**	-	1.4%	0%	0%	0%	**1.4%**	-	0.6%
Articulated Trucks	0	2	0	0	**2**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	2
% Articulated Trucks	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Buses	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	2	0	0	**2**	-	0	0	0	0	**0**	-	3
% Buses	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Bicycles on Road	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	2
% Bicycles on Road	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (3) Route 1 @ Neponset Street TMC - TMC

Sat Apr 2, 2022
PM Peak (WKND) (Apr 02 2022 1PM - 2 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936941, Location: 42.193451, -71.183626

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg / Direction	Providence Hwy (Route 1) Southbound						Access Road Westbound						Providence Hwy (Route 1) Northbound						Neponset Street Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-04-02 1:00PM	3	382	0	0	**385**	0	44	0	0	0	**44**	0	14	410	0	0	**424**	0	21	0	0	0	**21**	0	**874**
1:15PM	7	440	0	0	**447**	0	37	0	0	0	**37**	0	30	387	0	0	**417**	0	10	0	0	0	**10**	0	**911**
1:30PM	2	392	0	0	**394**	0	45	0	0	0	**45**	0	24	402	0	0	**426**	0	20	0	0	0	**20**	0	**885**
1:45PM	8	392	0	0	**400**	0	39	0	0	0	**39**	0	22	368	0	0	**390**	0	20	0	0	0	**20**	0	**849**
Total	20	1606	0	0	**1626**	0	165	0	0	0	**165**	0	90	1567	0	0	**1657**	0	71	0	0	0	**71**	0	**3519**
% Approach	1.2%	98.8%	0%	0%	**-**	-	100%	0%	0%	0%	**-**	-	5.4%	94.6%	0%	0%	**-**	-	100%	0%	0%	0%	**-**	-	-
% Total	0.6%	45.6%	0%	0%	**46.2%**	-	4.7%	0%	0%	0%	**4.7%**	-	2.6%	44.5%	0%	0%	**47.1%**	-	2.0%	0%	0%	0%	**2.0%**	-	-
PHF	0.625	0.913	-	-	**0.909**	-	0.917	-	-	-	**0.917**	-	0.750	0.955	-	-	**0.972**	-	0.845	-	-	-	**0.845**	-	0.966
Lights	20	1599	0	0	**1619**	-	165	0	0	0	**165**	-	89	1555	0	0	**1644**	-	70	0	0	0	**70**	-	3498
% Lights	100%	99.6%	0%	0%	**99.6%**	-	100%	0%	0%	0%	**100%**	-	98.9%	99.2%	0%	0%	**99.2%**	-	98.6%	0%	0%	0%	**98.6%**	-	99.4%
Single-Unit Trucks	0	6	0	0	**6**	-	0	0	0	0	**0**	-	1	11	0	0	**12**	-	1	0	0	0	**1**	-	19
% Single-Unit Trucks	0%	0.4%	0%	0%	**0.4%**	-	0%	0%	0%	0%	**0%**	-	1.1%	0.7%	0%	0%	**0.7%**	-	1.4%	0%	0%	0%	**1.4%**	-	0.5%
Articulated Trucks	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1
% Articulated Trucks	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Buses	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	1
% Buses	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0.1%	0%	0%	**0.1%**	-	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
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (4) Rotary @ Neponset Street TMC - TMC

Thu Mar 31, 2022
Full Length (11 AM-2 PM, 6 AM-9 AM, 3 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936944, Location: 42.18863, -71.183701

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Route 1 NB Onramp						Neponset Street						Rotary						Rotary						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-03-31 6:00AM	0	0	0	0	**0**	0	139	34	0	0	**173**	0	0	17	15	0	**32**	0	0	0	0	0	**0**	0	**205**
6:15AM	0	0	0	0	**0**	0	164	57	0	0	**221**	0	0	23	21	0	**44**	0	0	0	0	0	**0**	0	**265**
6:30AM	0	0	0	0	**0**	1	143	95	0	0	**238**	0	0	33	31	0	**64**	0	0	0	0	0	**0**	0	**302**
6:45AM	0	0	0	0	**0**	1	137	84	0	0	**221**	0	0	23	46	0	**69**	0	0	0	0	0	**0**	0	**290**
Hourly Total	0	0	0	0	**0**	2	583	270	0	0	**853**	0	0	96	113	0	**209**	0	0	0	0	0	**0**	0	**1062**
7:00AM	0	0	0	0	**0**	0	126	134	0	0	**260**	0	0	34	39	0	**73**	0	0	0	0	0	**0**	0	**333**
7:15AM	0	0	0	0	**0**	0	83	131	0	0	**214**	0	0	35	70	0	**105**	0	0	0	0	0	**0**	0	**319**
7:30AM	0	0	0	0	**0**	0	102	214	0	0	**316**	0	0	46	80	0	**126**	0	0	0	0	0	**0**	0	**442**
7:45AM	0	0	0	0	**0**	0	74	169	0	0	**243**	0	0	44	15	0	**59**	0	0	0	0	0	**0**	0	**302**
Hourly Total	0	0	0	0	**0**	0	385	648	0	0	**1033**	0	0	159	204	0	**363**	0	0	0	0	0	**0**	0	**1396**
8:00AM	0	0	0	0	**0**	0	79	142	0	0	**221**	0	0	44	71	0	**115**	0	0	0	0	0	**0**	0	**336**
8:15AM	0	0	0	0	**0**	0	99	98	0	0	**197**	0	0	46	79	0	**125**	0	0	0	0	0	**0**	0	**322**
8:30AM	0	0	0	0	**0**	1	107	106	0	0	**213**	0	0	42	53	0	**95**	0	0	0	0	0	**0**	0	**308**
8:45AM	0	0	0	0	**0**	0	99	127	0	0	**226**	0	0	46	64	0	**110**	0	0	0	0	0	**0**	0	**336**
Hourly Total	0	0	0	0	**0**	1	384	473	0	0	**857**	0	0	178	267	0	**445**	0	0	0	0	0	**0**	0	**1302**
3:00PM	0	0	0	0	**0**	0	42	93	0	0	**135**	0	0	95	64	0	**159**	0	0	0	0	0	**0**	0	**294**
3:15PM	0	0	0	0	**0**	0	46	106	0	0	**152**	0	0	92	56	0	**148**	0	0	0	0	0	**0**	0	**300**
3:30PM	0	0	0	0	**0**	0	48	99	0	0	**147**	0	0	74	46	0	**120**	0	0	0	0	0	**0**	0	**267**
3:45PM	0	0	0	0	**0**	0	49	103	0	0	**152**	0	0	83	65	0	**148**	0	0	0	0	0	**0**	0	**300**
Hourly Total	0	0	0	0	**0**	0	185	401	0	0	**586**	0	0	344	231	0	**575**	0	0	0	0	0	**0**	0	**1161**
4:00PM	0	0	0	0	**0**	0	47	89	0	0	**136**	0	0	110	51	0	**161**	0	0	0	0	0	**0**	0	**297**
4:15PM	0	0	0	0	**0**	0	45	100	0	0	**145**	0	0	70	54	0	**124**	0	0	0	0	0	**0**	0	**269**
4:30PM	0	0	0	0	**0**	0	47	110	0	0	**157**	0	0	96	73	0	**169**	0	0	0	0	0	**0**	0	**326**
4:45PM	0	0	0	0	**0**	1	72	114	0	0	**186**	0	0	110	62	0	**172**	0	0	0	0	0	**0**	0	**358**
Hourly Total	0	0	0	0	**0**	1	211	413	0	0	**624**	0	0	386	240	0	**626**	0	0	0	0	0	**0**	0	**1250**
5:00PM	0	0	0	0	**0**	0	53	108	0	0	**161**	0	0	98	48	0	**146**	0	0	0	0	0	**0**	0	**307**
5:15PM	0	0	0	0	**0**	0	62	111	0	0	**173**	0	0	109	58	0	**167**	0	0	0	0	0	**0**	0	**340**
5:30PM	0	0	0	0	**0**	0	50	104	0	0	**154**	0	0	100	75	0	**175**	0	0	0	0	0	**0**	0	**329**
5:45PM	0	0	0	0	**0**	0	35	107	0	0	**142**	0	0	86	43	0	**129**	0	0	0	0	0	**0**	0	**271**
Hourly Total	0	0	0	0	**0**	0	200	430	0	0	**630**	0	0	393	224	0	**617**	0	0	0	0	0	**0**	0	**1247**
2022-04-02 11:00AM	0	0	0	0	**0**	0	78	85	0	0	**163**	0	0	96	65	0	**161**	0	0	0	0	0	**0**	0	**324**
11:15AM	0	0	0	0	**0**	0	63	80	0	0	**143**	0	0	108	63	0	**171**	0	0	0	0	0	**0**	0	**314**
11:30AM	0	0	0	0	**0**	0	72	109	0	0	**181**	0	0	90	69	0	**159**	0	0	0	0	0	**0**	0	**340**
11:45AM	0	0	0	0	**0**	0	62	75	0	0	**137**	0	0	115	61	0	**176**	0	0	0	0	0	**0**	0	**313**
Hourly Total	0	0	0	0	**0**	0	275	349	0	0	**624**	0	0	409	258	0	**667**	0	0	0	0	0	**0**	0	**1291**
12:00PM	0	0	0	0	**0**	0	86	102	0	0	**188**	0	0	111	70	0	**181**	0	0	0	0	0	**0**	0	**369**
12:15PM	0	0	0	0	**0**	0	87	98	0	0	**185**	0	0	113	81	0	**194**	0	0	0	0	0	**0**	0	**379**
12:30PM	0	0	0	0	**0**	0	78	106	0	0	**184**	0	0	108	64	0	**172**	0	0	0	0	0	**0**	0	**356**
12:45PM	0	0	0	0	**0**	0	99	102	0	0	**201**	0	0	108	77	0	**185**	0	0	0	0	0	**0**	0	**386**
Hourly Total	0	0	0	0	**0**	0	350	408	0	0	**758**	0	0	440	292	0	**732**	0	0	0	0	0	**0**	0	**1490**
1:00PM	0	0	0	0	**0**	0	85	95	0	0	**180**	0	0	101	59	0	**160**	0	0	0	0	0	**0**	0	**340**
1:15PM	0	0	0	0	**0**	0	61	107	0	0	**168**	0	0	105	62	0	**167**	0	0	0	0	0	**0**	0	**335**
1:30PM	0	0	0	0	**0**	0	66	110	0	0	**176**	0	0	91	82	0	**173**	0	0	0	0	0	**0**	0	**349**
1:45PM	0	0	0	0	**0**	0	53	117	0	0	**170**	0	0	115	69	0	**184**	0	0	0	0	0	**0**	0	**354**
Hourly Total	0	0	0	0	**0**	0	265	429	0	0	**694**	0	0	412	272	0	**684**	0	0	0	0	0	**0**	0	**1378**
Total	0	0	0	0	**0**	4	2838	3821	0	0	**6659**	0	0	2817	2101	0	**4918**	0	0	0	0	0	**0**	0	**11577**
% Approach	0%	0%	0%	0%	**-**	-	42.6%	57.4%	0%	0%	**-**	-	0%	57.3%	42.7%	0%	**-**	-	0%	0%	0%	0%	**-**	-	-
% Total	0%	0%	0%	0%	**0%**	-	24.5%	33.0%	0%	0%	**57.5%**	-	0%	24.3%	18.1%	0%	**42.5%**	-	0%	0%	0%	0%	**0%**	-	-
Lights	0	0	0	0	**0**	-	2767	3725	0	0	**6492**	-	0	2752	2074	0	**4826**	-	0	0	0	0	**0**	-	11318
% Lights	0%	0%	0%	0%	**-**	-	97.5%	97.5%	0%	0%	**97.5%**	-	0%	97.7%	98.7%	0%	**98.1%**	-	0%	0%	0%	0%	**-**	-	97.8%
Single-Unit Trucks	0	0	0	0	**0**	-	57	73	0	0	**130**	-	0	50	24	0	**74**	-	0	0	0	0	**0**	-	204
% Single-Unit Trucks	0%	0%	0%	0%	**-**	-	2.0%	1.9%	0%	0%	**2.0%**	-	0%	1.8%	1.1%	0%	**1.5%**	-	0%	0%	0%	0%	**-**	-	1.8%

Leg	Route 1 NB Onramp						Neponset Street						Rotary						Rotary						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
Articulated Trucks	0	0	0	0	**0**	-	12	15	0	0	**27**	-	0	9	2	0	**11**	-	0	0	0	0	**0**	-	38
% Articulated Trucks	0%	0%	0%	0%	**-**	-	0.4%	0.4%	0%	0%	**0.4%**	-	0%	0.3%	0.1%	0%	**0.2%**	-	0%	0%	0%	0%	**-**	-	0.3%
Buses	0	0	0	0	**0**	-	1	8	0	0	**9**	-	0	5	1	0	**6**	-	0	0	0	0	**0**	-	15
% Buses	0%	0%	0%	0%	**-**	-	0%	0.2%	0%	0%	**0.1%**	-	0%	0.2%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**-**	-	0.1%
Bicycles on Road	0	0	0	0	**0**	-	1	0	0	0	**1**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	2
% Bicycles on Road	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**-**	-	0%
Pedestrians	-	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	75.0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	25.0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (4) Rotary @ Neponset Street TMC - TMC

Thu Mar 31, 2022
AM Peak (Mar 31 2022 7:30AM - 8:30 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936944, Location: 42.18863, -71.183701

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Route 1 NB Onramp						Neponset Street						Rotary						Rotary						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-03-31 7:30AM	0	0	0	0	**0**	0	102	214	0	0	**316**	0	0	46	80	0	**126**	0	0	0	0	0	**0**	0	**442**
7:45AM	0	0	0	0	**0**	0	74	169	0	0	**243**	0	0	44	15	0	**59**	0	0	0	0	0	**0**	0	**302**
8:00AM	0	0	0	0	**0**	0	79	142	0	0	**221**	0	0	44	71	0	**115**	0	0	0	0	0	**0**	0	**336**
8:15AM	0	0	0	0	**0**	0	99	98	0	0	**197**	0	0	46	79	0	**125**	0	0	0	0	0	**0**	0	**322**
Total	0	0	0	0	**0**	0	354	623	0	0	**977**	0	0	180	245	0	**425**	0	0	0	0	0	**0**	0	**1402**
% Approach	0%	0%	0%	0%	**-**	-	36.2%	63.8%	0%	0%	**-**	-	0%	42.4%	57.6%	0%	**-**	-	0%	0%	0%	0%	**-**	-	-
% Total	0%	0%	0%	0%	**0%**	-	25.2%	44.4%	0%	0%	**69.7%**	-	0%	12.8%	17.5%	0%	**30.3%**	-	0%	0%	0%	0%	**0%**	-	-
PHF	-	-	-	-	**-**	-	0.868	0.728	-	-	**0.773**	-	-	0.978	0.766	-	**0.843**	-	-	-	-	-	**-**	-	0.793
Lights	0	0	0	0	**0**	-	343	608	0	0	**951**	-	0	168	242	0	**410**	-	0	0	0	0	**0**	-	1361
% Lights	0%	0%	0%	0%	**-**	-	96.9%	97.6%	0%	0%	**97.3%**	-	0%	93.3%	98.8%	0%	**96.5%**	-	0%	0%	0%	0%	**-**	-	97.1%
Single-Unit Trucks	0	0	0	0	**0**	-	8	10	0	0	**18**	-	0	9	3	0	**12**	-	0	0	0	0	**0**	-	30
% Single-Unit Trucks	0%	0%	0%	0%	**-**	-	2.3%	1.6%	0%	0%	**1.8%**	-	0%	5.0%	1.2%	0%	**2.8%**	-	0%	0%	0%	0%	**-**	-	2.1%
Articulated Trucks	0	0	0	0	**0**	-	3	4	0	0	**7**	-	0	3	0	0	**3**	-	0	0	0	0	**0**	-	10
% Articulated Trucks	0%	0%	0%	0%	**-**	-	0.8%	0.6%	0%	0%	**0.7%**	-	0%	1.7%	0%	0%	**0.7%**	-	0%	0%	0%	0%	**-**	-	0.7%
Buses	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1
% Buses	0%	0%	0%	0%	**-**	-	0%	0.2%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**-**	-	0.1%
Bicycles on Road	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%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (4) Rotary @ Neponset Street TMC - TMC

Thu Mar 31, 2022
PM Peak (Mar 31 2022 4:45PM - 5:45 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936944, Location: 42.18863, -71.183701

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Route 1 NB Onramp						Neponset Street						Rotary						Rotary						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-03-31 4:45PM	0	0	0	0	**0**	1	72	114	0	0	**186**	0	0	110	62	0	**172**	0	0	0	0	0	**0**	0	**358**
5:00PM	0	0	0	0	**0**	0	53	108	0	0	**161**	0	0	98	48	0	**146**	0	0	0	0	0	**0**	0	**307**
5:15PM	0	0	0	0	**0**	0	62	111	0	0	**173**	0	0	109	58	0	**167**	0	0	0	0	0	**0**	0	**340**
5:30PM	0	0	0	0	**0**	0	50	104	0	0	**154**	0	0	100	75	0	**175**	0	0	0	0	0	**0**	0	**329**
Total	0	0	0	0	**0**	1	237	437	0	0	**674**	0	0	417	243	0	**660**	0	0	0	0	0	**0**	0	**1334**
% Approach	0%	0%	0%	0%	**-**	-	35.2%	64.8%	0%	0%	**-**	-	0%	63.2%	36.8%	0%	**-**	-	0%	0%	0%	0%	**-**	-	**-**
% Total	0%	0%	0%	0%	**0%**	-	17.8%	32.8%	0%	0%	**50.5%**	-	0%	31.3%	18.2%	0%	**49.5%**	-	0%	0%	0%	0%	**0%**	-	**-**
PHF	-	-	-	-	**-**	-	0.823	0.958	-	-	**0.906**	-	-	0.948	0.810	-	**0.943**	-	-	-	-	-	**-**	-	0.932
Lights	0	0	0	0	**0**	-	230	436	0	0	**666**	-	0	415	240	0	**655**	-	0	0	0	0	**0**	-	1321
% Lights	0%	0%	0%	0%	**-**	-	97.0%	99.8%	0%	0%	**98.8%**	-	0%	99.5%	98.8%	0%	**99.2%**	-	0%	0%	0%	0%	**-**	-	99.0%
Single-Unit Trucks	0	0	0	0	**0**	-	6	1	0	0	**7**	-	0	2	3	0	**5**	-	0	0	0	0	**0**	-	12
% Single-Unit Trucks	0%	0%	0%	0%	**-**	-	2.5%	0.2%	0%	0%	**1.0%**	-	0%	0.5%	1.2%	0%	**0.8%**	-	0%	0%	0%	0%	**-**	-	0.9%
Articulated Trucks	0	0	0	0	**0**	-	1	0	0	0	**1**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1
% Articulated Trucks	0%	0%	0%	0%	**-**	-	0.4%	0%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**-**	-	0.1%
Buses	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Buses	0%	0%	0%	0%	**-**	-	0%	0%	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
% Bicycles on Road	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**-**	-	0%
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (4) Rotary @ Neponset Street TMC - TMC

Sat Apr 2, 2022
Midday Peak (WKND) (Apr 02 2022 12PM - 1 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936944, Location: 42.18863, -71.183701

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Route 1 NB Onramp						Neponset Street						Rotary						Rotary						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-04-02 12:00PM	0	0	0	0	**0**	0	86	102	0	0	**188**	0	0	111	70	0	**181**	0	0	0	0	0	**0**	0	**369**
12:15PM	0	0	0	0	**0**	0	87	98	0	0	**185**	0	0	113	81	0	**194**	0	0	0	0	0	**0**	0	**379**
12:30PM	0	0	0	0	**0**	0	78	106	0	0	**184**	0	0	108	64	0	**172**	0	0	0	0	0	**0**	0	**356**
12:45PM	0	0	0	0	**0**	0	99	102	0	0	**201**	0	0	108	77	0	**185**	0	0	0	0	0	**0**	0	**386**
Total	0	0	0	0	**0**	0	350	408	0	0	**758**	0	0	440	292	0	**732**	0	0	0	0	0	**0**	0	**1490**
% Approach	0%	0%	0%	0%	**-**	-	46.2%	53.8%	0%	0%	**-**	-	0%	60.1%	39.9%	0%	**-**	-	0%	0%	0%	0%	**-**	-	-
% Total	0%	0%	0%	0%	**0%**	-	23.5%	27.4%	0%	0%	**50.9%**	-	0%	29.5%	19.6%	0%	**49.1%**	-	0%	0%	0%	0%	**0%**	-	-
PHF	-	-	-	-	**-**	-	0.884	0.962	-	-	**0.943**	-	-	0.971	0.901	-	**0.942**	-	-	-	-	-	**-**	-	0.964
Lights	0	0	0	0	**0**	-	349	403	0	0	**752**	-	0	435	292	0	**727**	-	0	0	0	0	**0**	-	1479
% Lights	0%	0%	0%	0%	**-**	-	99.7%	98.8%	0%	0%	**99.2%**	-	0%	98.9%	100%	0%	**99.3%**	-	0%	0%	0%	0%	**-**	-	99.3%
Single-Unit Trucks	0	0	0	0	**0**	-	1	5	0	0	**6**	-	0	4	0	0	**4**	-	0	0	0	0	**0**	-	10
% Single-Unit Trucks	0%	0%	0%	0%	**-**	-	0.3%	1.2%	0%	0%	**0.8%**	-	0%	0.9%	0%	0%	**0.5%**	-	0%	0%	0%	0%	**-**	-	0.7%
Articulated Trucks	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Articulated Trucks	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**-**	-	0%
Buses	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Buses	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	1	0	0	**1**	-	0	0	0	0	**0**	-	1
% Bicycles on Road	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**0%**	-	0%	0.2%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**-**	-	0.1%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (4) Rotary @ Neponset Street TMC - TMC

Sat Apr 2, 2022
PM Peak (WKND) (Apr 02 2022 1PM - 2 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936944, Location: 42.18863, -71.183701

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Route 1 NB Onramp						Neponset Street						Rotary						Rotary						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-04-02 1:00PM	0	0	0	0	**0**	0	85	95	0	0	**180**	0	0	101	59	0	**160**	0	0	0	0	0	**0**	0	**340**
1:15PM	0	0	0	0	**0**	0	61	107	0	0	**168**	0	0	105	62	0	**167**	0	0	0	0	0	**0**	0	**335**
1:30PM	0	0	0	0	**0**	0	66	110	0	0	**176**	0	0	91	82	0	**173**	0	0	0	0	0	**0**	0	**349**
1:45PM	0	0	0	0	**0**	0	53	117	0	0	**170**	0	0	115	69	0	**184**	0	0	0	0	0	**0**	0	**354**
Total	0	0	0	0	**0**	0	265	429	0	0	**694**	0	0	412	272	0	**684**	0	0	0	0	0	**0**	0	**1378**
% Approach	0%	0%	0%	0%	**-**	-	38.2%	61.8%	0%	0%	**-**	-	0%	60.2%	39.8%	0%	**-**	-	0%	0%	0%	0%	**-**	-	-
% Total	0%	0%	0%	0%	**0%**	-	19.2%	31.1%	0%	0%	**50.4%**	-	0%	29.9%	19.7%	0%	**49.6%**	-	0%	0%	0%	0%	**0%**	-	-
PHF	-	-	-	-	**-**	-	0.779	0.917	-	-	**0.964**	-	-	0.896	0.829	-	**0.929**	-	-	-	-	-	**-**	-	0.973
Lights	0	0	0	0	**0**	-	261	422	0	0	**683**	-	0	407	268	0	**675**	-	0	0	0	0	**0**	-	1358
% Lights	0%	0%	0%	0%	**-**	-	98.5%	98.4%	0%	0%	**98.4%**	-	0%	98.8%	98.5%	0%	**98.7%**	-	0%	0%	0%	0%	**-**	-	98.5%
Single-Unit Trucks	0	0	0	0	**0**	-	4	4	0	0	**8**	-	0	5	4	0	**9**	-	0	0	0	0	**0**	-	17
% Single-Unit Trucks	0%	0%	0%	0%	**-**	-	1.5%	0.9%	0%	0%	**1.2%**	-	0%	1.2%	1.5%	0%	**1.3%**	-	0%	0%	0%	0%	**-**	-	1.2%
Articulated Trucks	0	0	0	0	**0**	-	0	2	0	0	**2**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	2
% Articulated Trucks	0%	0%	0%	0%	**-**	-	0%	0.5%	0%	0%	**0.3%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**-**	-	0.1%
Buses	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1
% Buses	0%	0%	0%	0%	**-**	-	0%	0.2%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**-**	-	0.1%
Bicycles on Road	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%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (5) Route 1 SB Offramp @ Rotary TMC - TMC

Thu Mar 31, 2022
Full Length (11 AM-2 PM, 6 AM-9 AM, 3 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936945, Location: 42.188782, -71.185157

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Route 1 SB Offramp						Rotary						Rotary						Nahatan Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2022-03-31 6:00AM	2	3	0	0	**5**	1	0	45	4	0	**49**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**54**
6:15AM	5	11	0	0	**16**	0	0	76	2	0	**78**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**94**
6:30AM	4	17	0	0	**21**	1	0	119	5	0	**124**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**145**
6:45AM	8	18	0	0	**26**	1	0	124	7	0	**131**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**157**
Hourly Total	19	49	0	0	**68**	3	0	364	18	0	**382**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**450**
7:00AM	13	26	0	0	**39**	2	0	161	12	0	**173**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**212**
7:15AM	15	33	0	0	**48**	0	0	188	12	0	**200**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**248**
7:30AM	21	46	0	0	**67**	0	0	236	12	0	**248**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**315**
7:45AM	9	47	0	0	**56**	0	0	184	3	0	**187**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**243**
Hourly Total	58	152	0	0	**210**	2	0	769	39	0	**808**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**1018**
8:00AM	22	48	0	0	**70**	0	0	191	23	0	**214**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**284**
8:15AM	13	62	0	0	**75**	0	0	162	12	0	**174**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**249**
8:30AM	14	56	0	0	**70**	1	0	139	14	0	**153**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**223**
8:45AM	12	51	0	0	**63**	0	0	160	26	0	**186**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**249**
Hourly Total	61	217	0	0	**278**	1	0	652	75	0	**727**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**1005**
3:00PM	16	125	0	0	**141**	0	0	139	23	0	**162**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**303**
3:15PM	24	121	0	0	**145**	0	0	138	22	0	**160**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**305**
3:30PM	30	121	0	0	**151**	0	0	125	20	0	**145**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**296**
3:45PM	21	121	0	0	**142**	0	0	133	35	0	**168**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**310**
Hourly Total	91	488	0	0	**579**	0	0	535	100	0	**635**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**1214**
4:00PM	20	127	0	0	**147**	0	0	115	23	0	**138**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**285**
4:15PM	27	124	0	0	**151**	0	0	126	30	0	**156**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**307**
4:30PM	35	141	0	0	**176**	0	0	144	36	0	**180**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**356**
4:45PM	25	132	0	0	**157**	1	0	144	39	0	**183**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**340**
Hourly Total	107	524	0	0	**631**	1	0	529	128	0	**657**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**1288**
5:00PM	30	112	0	0	**142**	0	0	130	31	0	**161**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**303**
5:15PM	30	145	0	0	**175**	0	0	154	18	0	**172**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**347**
5:30PM	28	120	0	0	**148**	1	0	153	27	0	**180**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**328**
5:45PM	31	103	0	0	**134**	0	0	136	13	0	**149**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**283**
Hourly Total	119	480	0	0	**599**	1	0	573	89	0	**662**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**1261**
2022-04-02 11:00AM	21	101	0	0	**122**	0	0	121	30	0	**151**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**273**
11:15AM	24	97	0	0	**121**	0	0	111	29	0	**140**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**261**
11:30AM	23	94	0	0	**117**	0	0	145	33	0	**178**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**295**
11:45AM	20	110	0	0	**130**	0	0	114	24	0	**138**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**268**
Hourly Total	88	402	0	0	**490**	0	0	491	116	0	**607**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**1097**
12:00PM	25	113	0	0	**138**	0	0	140	35	0	**175**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**313**
12:15PM	32	102	0	0	**134**	0	0	142	35	0	**177**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**311**
12:30PM	30	107	0	0	**137**	0	0	134	38	0	**172**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**309**
12:45PM	24	130	0	0	**154**	0	0	146	32	0	**178**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**332**
Hourly Total	111	452	0	0	**563**	0	0	562	140	0	**702**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**1265**
1:00PM	36	118	0	0	**154**	0	0	125	27	0	**152**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**306**
1:15PM	32	109	0	0	**141**	0	0	133	38	0	**171**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**312**
1:30PM	32	96	0	0	**128**	0	0	150	43	0	**193**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**321**
1:45PM	29	110	0	0	**139**	0	0	142	39	0	**181**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**320**
Hourly Total	129	433	0	0	**562**	0	0	550	147	0	**697**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**1259**
Total	783	3197	0	0	**3980**	8	0	5025	852	0	**5877**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**9857**
% Approach	19.7%	80.3%	0%	0%	**-**	-	0%	85.5%	14.5%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	-
% Total	7.9%	32.4%	0%	0%	**40.4%**	-	0%	51.0%	8.6%	0%	**59.6%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	-
Lights	756	3149	0	0	**3905**	-	0	4928	835	0	**5763**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	9668
% Lights	96.6%	98.5%	0%	0%	**98.1%**	-	0%	98.1%	98.0%	0%	**98.1%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	98.1%
Single-Unit Trucks	20	38	0	0	**58**	-	0	73	15	0	**88**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	146
% Single-Unit Trucks	2.6%	1.2%	0%	0%	**1.5%**	-	0%	1.5%	1.8%	0%	**1.5%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	1.5%

Leg	Route 1 SB Offramp						Rotary						Rotary						Nahatan Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
Articulated Trucks	4	7	0	0	**11**	-	0	19	1	0	**20**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	31
% Articulated Trucks	0.5%	0.2%	0%	0%	**0.3%**	-	0%	0.4%	0.1%	0%	**0.3%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0.3%
Buses	2	3	0	0	**5**	-	0	5	1	0	**6**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	11
% Buses	0.3%	0.1%	0%	0%	**0.1%**	-	0%	0.1%	0.1%	0%	**0.1%**	-	0%	0%	0%	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**	-	1
% Bicycles on Road	0.1%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0%
Pedestrians	-	-	-	-	-	8	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (5) Route 1 SB Offramp @ Rotary TMC - TMC

Thu Mar 31, 2022
AM Peak (Mar 31 2022 7:30AM - 8:30 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936945, Location: 42.188782, -71.185157

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Route 1 SB Offramp						Rotary						Rotary						Nahatan Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2022-03-31 7:30AM	21	46	0	0	**67**	0	0	236	12	0	**248**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**315**
7:45AM	9	47	0	0	**56**	0	0	184	3	0	**187**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**243**
8:00AM	22	48	0	0	**70**	0	0	191	23	0	**214**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**284**
8:15AM	13	62	0	0	**75**	0	0	162	12	0	**174**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**249**
Total	65	203	0	0	**268**	0	0	773	50	0	**823**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**1091**
% Approach	24.3%	75.7%	0%	0%	**-**	-	0%	93.9%	6.1%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	-
% Total	6.0%	18.6%	0%	0%	**24.6%**	-	0%	70.9%	4.6%	0%	**75.4%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	-
PHF	0.739	0.819	-	-	**0.893**	-	-	0.819	0.543	-	**0.830**	-	-	-	-	-	**-**	-	-	-	-	-	**-**	-	0.866
Lights	60	200	0	0	**260**	-	0	755	48	0	**803**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1063
% Lights	92.3%	98.5%	0%	0%	**97.0%**	-	0%	97.7%	96.0%	0%	**97.6%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	97.4%
Single-Unit Trucks	4	2	0	0	**6**	-	0	12	2	0	**14**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	20
% Single-Unit Trucks	6.2%	1.0%	0%	0%	**2.2%**	-	0%	1.6%	4.0%	0%	**1.7%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	1.8%
Articulated Trucks	1	1	0	0	**2**	-	0	5	0	0	**5**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	7
% Articulated Trucks	1.5%	0.5%	0%	0%	**0.7%**	-	0%	0.6%	0%	0%	**0.6%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0.6%
Buses	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1
% Buses	0%	0%	0%	0%	**0%**	-	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0.1%
Bicycles on Road	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%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (5) Route 1 SB Offramp @ Rotary TMC - TMC

Thu Mar 31, 2022
PM Peak (Mar 31 2022 4:30PM - 5:30 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936945, Location: 42.188782, -71.185157

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Route 1 SB Offramp						Rotary						Rotary						Nahatan Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2022-03-31 4:30PM	35	141	0	0	**176**	0	0	144	36	0	**180**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**356**
4:45PM	25	132	0	0	**157**	1	0	144	39	0	**183**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**340**
5:00PM	30	112	0	0	**142**	0	0	130	31	0	**161**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**303**
5:15PM	30	145	0	0	**175**	0	0	154	18	0	**172**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**347**
Total	120	530	0	0	**650**	1	0	572	124	0	**696**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**1346**
% Approach	18.5%	81.5%	0%	0%	**-**	-	0%	82.2%	17.8%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	-
% Total	8.9%	39.4%	0%	0%	**48.3%**	-	0%	42.5%	9.2%	0%	**51.7%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	-
PHF	0.857	0.914	-	-	**0.923**	-	-	0.929	0.795	-	**0.951**	-	-	-	-	-	**-**	-	-	-	-	-	**-**	-	0.945
Lights	116	527	0	0	**643**	-	0	567	122	0	**689**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1332
% Lights	96.7%	99.4%	0%	0%	**98.9%**	-	0%	99.1%	98.4%	0%	**99.0%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	99.0%
Single-Unit Trucks	3	2	0	0	**5**	-	0	5	2	0	**7**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	12
% Single-Unit Trucks	2.5%	0.4%	0%	0%	**0.8%**	-	0%	0.9%	1.6%	0%	**1.0%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0.9%
Articulated Trucks	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1
% Articulated Trucks	0%	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0.1%
Buses	1	0	0	0	**1**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1
% Buses	0.8%	0%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0.1%
Bicycles on Road	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%
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (5) Route 1 SB Offramp @ Rotary TMC - TMC

Sat Apr 2, 2022
Midday Peak (WKND) (Apr 02 2022 12:45PM - 1:45 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936945, Location: 42.188782, -71.185157

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Route 1 SB Offramp						Rotary						Rotary						Nahatan Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2022-04-02 12:45PM	24	130	0	0	**154**	0	0	146	32	0	**178**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**332**
1:00PM	36	118	0	0	**154**	0	0	125	27	0	**152**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**306**
1:15PM	32	109	0	0	**141**	0	0	133	38	0	**171**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**312**
1:30PM	32	96	0	0	**128**	0	0	150	43	0	**193**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**321**
Total	124	453	0	0	**577**	0	0	554	140	0	**694**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**1271**
% Approach	21.5%	78.5%	0%	0%	**-**	-	0%	79.8%	20.2%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	-
% Total	9.8%	35.6%	0%	0%	**45.4%**	-	0%	43.6%	11.0%	0%	**54.6%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	-
PHF	0.861	0.871	-	-	**0.937**	-	-	0.923	0.814	-	**0.899**	-	-	-	-	-	**-**	-	-	-	-	-	**-**	-	0.957
Lights	122	449	0	0	**571**	-	0	548	137	0	**685**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1256
% Lights	98.4%	99.1%	0%	0%	**99.0%**	-	0%	98.9%	97.9%	0%	**98.7%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	98.8%
Single-Unit Trucks	2	4	0	0	**6**	-	0	4	3	0	**7**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	13
% Single-Unit Trucks	1.6%	0.9%	0%	0%	**1.0%**	-	0%	0.7%	2.1%	0%	**1.0%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	1.0%
Articulated Trucks	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1
% Articulated Trucks	0%	0%	0%	0%	**0%**	-	0%	0.2%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0.1%
Buses	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1
% Buses	0%	0%	0%	0%	**0%**	-	0%	0.2%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0.1%
Bicycles on Road	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%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (5) Route 1 SB Offramp @ Rotary TMC - TMC

Sat Apr 2, 2022
PM Peak (WKND) (Apr 02 2022 1PM - 2 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936945, Location: 42.188782, -71.185157

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Route 1 SB Offramp						Rotary						Rotary						Nahatan Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2022-04-02 1:00PM	36	118	0	0	**154**	0	0	125	27	0	**152**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**306**
1:15PM	32	109	0	0	**141**	0	0	133	38	0	**171**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**312**
1:30PM	32	96	0	0	**128**	0	0	150	43	0	**193**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**321**
1:45PM	29	110	0	0	**139**	0	0	142	39	0	**181**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**320**
Total	129	433	0	0	**562**	0	0	550	147	0	**697**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	**1259**
% Approach	23.0%	77.0%	0%	0%	**-**	-	0%	78.9%	21.1%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	-
% Total	10.2%	34.4%	0%	0%	**44.6%**	-	0%	43.7%	11.7%	0%	**55.4%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	-
PHF	0.896	0.917	-	-	**0.912**	-	-	0.917	0.855	-	**0.903**	-	-	-	-	-	**-**	-	-	-	-	-	**-**	-	0.981
Lights	128	430	0	0	**558**	-	0	544	145	0	**689**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1247
% Lights	99.2%	99.3%	0%	0%	**99.3%**	-	0%	98.9%	98.6%	0%	**98.9%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	99.0%
Single-Unit Trucks	1	3	0	0	**4**	-	0	4	2	0	**6**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	10
% Single-Unit Trucks	0.8%	0.7%	0%	0%	**0.7%**	-	0%	0.7%	1.4%	0%	**0.9%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0.8%
Articulated Trucks	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1
% Articulated Trucks	0%	0%	0%	0%	**0%**	-	0%	0.2%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0.1%
Buses	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1
% Buses	0%	0%	0%	0%	**0%**	-	0%	0.2%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0.1%
Bicycles on Road	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%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (6) Nahatan St @ Rotary TMC - TMC

Thu Mar 31, 2022
Full Length (11 AM-2 PM, 6 AM-9 AM, 3 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936946, Location: 42.187921, -71.185318

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Rotary						Rotary						Route 1 SB Onramp						Nahatan Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2022-03-31 6:00AM	0	3	7	0	**10**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	1	39	0	0	**40**	0	**50**
6:15AM	0	1	12	0	**13**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	7	39	0	0	**46**	0	**59**
6:30AM	0	5	17	0	**22**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	10	73	0	0	**83**	0	**105**
6:45AM	0	6	19	0	**25**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	11	56	0	0	**67**	0	**92**
Hourly Total	0	15	55	0	**70**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	29	207	0	0	**236**	0	**306**
7:00AM	0	12	26	0	**38**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	11	73	0	0	**84**	0	**122**
7:15AM	0	12	32	0	**44**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	20	76	0	0	**96**	0	**140**
7:30AM	0	14	46	0	**60**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	21	109	0	0	**130**	0	**190**
7:45AM	0	10	48	0	**58**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	32	91	0	0	**123**	0	**181**
Hourly Total	0	48	152	0	**200**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	84	349	0	0	**433**	0	**633**
8:00AM	0	25	49	0	**74**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	23	114	0	0	**137**	0	**211**
8:15AM	0	14	62	0	**76**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	20	99	0	0	**119**	0	**195**
8:30AM	0	19	55	0	**74**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	22	89	0	0	**111**	0	**185**
8:45AM	0	26	51	0	**77**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	36	90	0	0	**126**	0	**203**
Hourly Total	0	84	217	0	**301**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	101	392	0	0	**493**	0	**794**
3:00PM	0	21	123	0	**144**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	40	166	0	0	**206**	0	**350**
3:15PM	0	20	124	0	**144**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	42	164	0	0	**206**	0	**350**
3:30PM	0	20	122	0	**142**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	44	140	0	0	**184**	0	**326**
3:45PM	0	34	121	0	**155**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	32	148	0	0	**180**	0	**335**
Hourly Total	0	95	490	0	**585**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	158	618	0	0	**776**	0	**1361**
4:00PM	0	23	129	0	**152**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	29	175	0	0	**204**	0	**356**
4:15PM	0	27	128	0	**155**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	30	134	0	0	**164**	0	**319**
4:30PM	0	34	140	0	**174**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	33	175	0	0	**208**	0	**382**
4:45PM	0	35	138	0	**173**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	23	154	0	0	**177**	0	**350**
Hourly Total	0	119	535	0	**654**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	115	638	0	0	**753**	0	**1407**
5:00PM	0	32	110	0	**142**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	44	146	0	0	**190**	0	**332**
5:15PM	0	19	151	0	**170**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	36	171	0	0	**207**	0	**377**
5:30PM	0	30	120	0	**150**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	34	137	0	0	**171**	0	**321**
5:45PM	0	12	101	0	**113**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	30	135	0	0	**165**	0	**278**
Hourly Total	0	93	482	0	**575**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	144	589	0	0	**733**	0	**1308**
2022-04-02 11:00AM	0	32	97	0	**129**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	32	127	0	0	**159**	0	**288**
11:15AM	0	27	99	0	**126**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	59	125	0	0	**184**	0	**310**
11:30AM	0	34	93	0	**127**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	42	131	0	0	**173**	0	**300**
11:45AM	0	26	106	0	**132**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	56	155	0	0	**211**	0	**343**
Hourly Total	0	119	395	0	**514**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	189	538	0	0	**727**	0	**1241**
12:00PM	0	31	119	0	**150**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	55	139	0	0	**194**	0	**344**
12:15PM	0	36	101	0	**137**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	47	165	0	0	**212**	0	**349**
12:30PM	0	32	114	0	**146**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	33	139	0	0	**172**	0	**318**
12:45PM	0	35	128	0	**163**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	1	51	124	0	0	**175**	0	**338**
Hourly Total	0	134	462	0	**596**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	1	186	567	0	0	**753**	0	**1349**
1:00PM	0	25	120	0	**145**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	28	119	0	0	**147**	0	**292**
1:15PM	0	39	110	0	**149**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	42	132	0	0	**174**	0	**323**
1:30PM	0	37	102	0	**139**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	35	136	0	0	**171**	0	**310**
1:45PM	0	39	111	0	**150**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	45	142	0	0	**187**	0	**337**
Hourly Total	0	140	443	0	**583**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	150	529	0	0	**679**	0	**1262**
Total	0	847	3231	0	**4078**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	1	1156	4427	0	0	**5583**	0	**9661**
% Approach	0%	20.8%	79.2%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	20.7%	79.3%	0%	0%	**-**	-	-
% Total	0%	8.8%	33.4%	0%	**42.2%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	12.0%	45.8%	0%	0%	**57.8%**	-	-
Lights	0	826	3184	0	**4010**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1135	4331	0	0	**5466**	-	9476
% Lights	0%	97.5%	98.5%	0%	**98.3%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	98.2%	97.8%	0%	0%	**97.9%**	-	98.1%
Single-Unit Trucks	0	19	37	0	**56**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	14	73	0	0	**87**	-	143
% Single-Unit Trucks	0%	2.2%	1.1%	0%	**1.4%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	1.2%	1.6%	0%	0%	**1.6%**	-	1.5%

Leg	Rotary						Rotary						Route 1 SB Onramp						Nahatan Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
Articulated Trucks	0	1	8	0	**9**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	6	11	0	0	**17**	-	26
% Articulated Trucks	0%	0.1%	0.2%	0%	**0.2%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0.5%	0.2%	0%	0%	**0.3%**	-	0.3%
Buses	0	1	2	0	**3**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1	11	0	0	**12**	-	15
% Buses	0%	0.1%	0.1%	0%	**0.1%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0.1%	0.2%	0%	0%	**0.2%**	-	0.2%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	1	0	0	**1**	-	1
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (6) Nahatan St @ Rotary TMC - TMC

Thu Mar 31, 2022
AM Peak (Mar 31 2022 8AM - 9 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936946, Location: 42.187921, -71.185318

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Rotary						Rotary						Route 1 SB Onramp						Nahatan Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-03-31 8:00AM	0	25	49	0	**74**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	23	114	0	0	**137**	0	**211**
8:15AM	0	14	62	0	**76**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	20	99	0	0	**119**	0	**195**
8:30AM	0	19	55	0	**74**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	22	89	0	0	**111**	0	**185**
8:45AM	0	26	51	0	**77**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	36	90	0	0	**126**	0	**203**
Total	0	84	217	0	**301**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	101	392	0	0	**493**	0	**794**
% Approach	0%	27.9%	72.1%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	20.5%	79.5%	0%	0%	**-**	-	-
% Total	0%	10.6%	27.3%	0%	**37.9%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	12.7%	49.4%	0%	0%	**62.1%**	-	-
PHF	-	0.808	0.875	-	**0.977**	-	-	-	-	-	**-**	-	-	-	-	-	**-**	-	0.701	0.860	-	-	**0.900**	-	0.941
Lights	0	79	211	0	**290**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	97	368	0	0	**465**	-	755
% Lights	0%	94.0%	97.2%	0%	**96.3%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	96.0%	93.9%	0%	0%	**94.3%**	-	95.1%
Single-Unit Trucks	0	5	3	0	**8**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1	19	0	0	**20**	-	28
% Single-Unit Trucks	0%	6.0%	1.4%	0%	**2.7%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	1.0%	4.8%	0%	0%	**4.1%**	-	3.5%
Articulated Trucks	0	0	2	0	**2**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	2	2	0	0	**4**	-	6
% Articulated Trucks	0%	0%	0.9%	0%	**0.7%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	2.0%	0.5%	0%	0%	**0.8%**	-	0.8%
Buses	0	0	1	0	**1**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1	3	0	0	**4**	-	5
% Buses	0%	0%	0.5%	0%	**0.3%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	1.0%	0.8%	0%	0%	**0.8%**	-	0.6%
Bicycles on Road	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%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (6) Nahatan St @ Rotary TMC - TMC

Thu Mar 31, 2022
PM Peak (Mar 31 2022 4:30PM - 5:30 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936946, Location: 42.187921, -71.185318

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Rotary						Rotary						Route 1 SB Onramp						Nahatan Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-03-31 4:30PM	0	34	140	0	**174**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	33	175	0	0	**208**	0	**382**
4:45PM	0	35	138	0	**173**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	23	154	0	0	**177**	0	**350**
5:00PM	0	32	110	0	**142**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	44	146	0	0	**190**	0	**332**
5:15PM	0	19	151	0	**170**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	36	171	0	0	**207**	0	**377**
Total	0	120	539	0	**659**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	136	646	0	0	**782**	0	**1441**
% Approach	0%	18.2%	81.8%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	17.4%	82.6%	0%	0%	**-**	-	**-**
% Total	0%	8.3%	37.4%	0%	**45.7%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	9.4%	44.8%	0%	0%	**54.3%**	-	**-**
PHF	-	0.857	0.892	-	**0.947**	-	-	-	-	-	**-**	-	-	-	-	-	**-**	-	0.773	0.923	-	-	**0.940**	-	0.943
Lights	0	117	536	0	**653**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	134	639	0	0	**773**	-	1426
% Lights	0%	97.5%	99.4%	0%	**99.1%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	98.5%	98.9%	0%	0%	**98.8%**	-	99.0%
Single-Unit Trucks	0	3	2	0	**5**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	2	6	0	0	**8**	-	13
% Single-Unit Trucks	0%	2.5%	0.4%	0%	**0.8%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	1.5%	0.9%	0%	0%	**1.0%**	-	0.9%
Articulated Trucks	0	0	1	0	**1**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	1	0	0	**1**	-	2
% Articulated Trucks	0%	0%	0.2%	0%	**0.2%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0%	0.2%	0%	0%	**0.1%**	-	0.1%
Buses	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Buses	0%	0%	0%	0%	**0%**	-	0%	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
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (6) Nahatan St @ Rotary TMC - TMC

Sat Apr 2, 2022
Midday Peak (WKND) (Apr 02 2022 11:45AM - 12:45 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936946, Location: 42.187921, -71.185318

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Rotary						Rotary						Route 1 SB Onramp						Nahatan Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-04-02 11:45AM	0	26	106	0	**132**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	56	155	0	0	**211**	0	**343**
12:00PM	0	31	119	0	**150**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	55	139	0	0	**194**	0	**344**
12:15PM	0	36	101	0	**137**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	47	165	0	0	**212**	0	**349**
12:30PM	0	32	114	0	**146**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	33	139	0	0	**172**	0	**318**
Total	0	125	440	0	**565**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	191	598	0	0	**789**	0	**1354**
% Approach	0%	22.1%	77.9%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	24.2%	75.8%	0%	0%	**-**	-	**-**
% Total	0%	9.2%	32.5%	0%	**41.7%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	14.1%	44.2%	0%	0%	**58.3%**	-	**-**
PHF	-	0.868	0.924	-	**0.942**	-	-	-	-	-	**-**	-	-	-	-	-	**-**	-	0.853	0.905	-	-	**0.929**	-	0.969
Lights	0	125	436	0	**561**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	188	588	0	0	**776**	-	1337
% Lights	0%	100%	99.1%	0%	**99.3%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	98.4%	98.3%	0%	0%	**98.4%**	-	98.7%
Single-Unit Trucks	0	0	4	0	**4**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	3	7	0	0	**10**	-	14
% Single-Unit Trucks	0%	0%	0.9%	0%	**0.7%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	1.6%	1.2%	0%	0%	**1.3%**	-	1.0%
Articulated Trucks	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Articulated Trucks	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**0%**	-	0%
Buses	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	2	0	0	**2**	-	2
% Buses	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0%	0.3%	0%	0%	**0.3%**	-	0.1%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	1	0	0	**1**	-	1
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0%	0.2%	0%	0%	**0.1%**	-	0.1%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (6) Nahatan St @ Rotary TMC - TMC

Sat Apr 2, 2022
PM Peak (WKND) (Apr 02 2022 1PM - 2 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936946, Location: 42.187921, -71.185318

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg / Direction	Rotary Southbound						Rotary Westbound						Route 1 SB Onramp Northbound						Nahatan Street Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-04-02 1:00PM	0	25	120	0	**145**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	28	119	0	0	**147**	0	**292**
1:15PM	0	39	110	0	**149**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	42	132	0	0	**174**	0	**323**
1:30PM	0	37	102	0	**139**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	35	136	0	0	**171**	0	**310**
1:45PM	0	39	111	0	**150**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	45	142	0	0	**187**	0	**337**
Total	0	140	443	0	**583**	0	0	0	0	0	**0**	0	0	0	0	0	**0**	0	150	529	0	0	**679**	0	**1262**
% Approach	0%	24.0%	76.0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	22.1%	77.9%	0%	0%	**-**	-	**-**
% Total	0%	11.1%	35.1%	0%	**46.2%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	11.9%	41.9%	0%	0%	**53.8%**	-	**-**
PHF	-	0.897	0.923	-	**0.972**	-	-	-	-	-	**-**	-	-	-	-	-	**-**	-	0.833	0.931	-	-	**0.908**	-	0.936
Lights	0	137	442	0	**579**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	149	519	0	0	**668**	-	1247
% Lights	0%	97.9%	99.8%	0%	**99.3%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	99.3%	98.1%	0%	0%	**98.4%**	-	98.8%
Single-Unit Trucks	0	3	1	0	**4**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	10	0	0	**10**	-	14
% Single-Unit Trucks	0%	2.1%	0.2%	0%	**0.7%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0%	1.9%	0%	0%	**1.5%**	-	1.1%
Articulated Trucks	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1	0	0	0	**1**	-	1
% Articulated Trucks	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0.7%	0%	0%	0%	**0.1%**	-	0.1%
Buses	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Buses	0%	0%	0%	0%	**0%**	-	0%	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
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (7) Neponset St @ Route 1 NB Offramp ... - TMC

Thu Mar 31, 2022
Full Length (11 AM-2 PM, 6 AM-9 AM, 3 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936947, Location: 42.187701, -71.184024

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Rotary						Neponset Street						Route 1 NB Offramp						Rotary						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-03-31 6:00AM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	0	13	0	0	**13**	0	0	25	20	0	**45**	0	**58**
6:15AM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	2	22	0	0	**24**	0	0	29	22	0	**51**	0	**75**
6:30AM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	4	35	0	0	**39**	0	0	58	32	0	**90**	0	**129**
6:45AM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	6	48	0	0	**54**	0	0	49	26	0	**75**	0	**129**
Hourly Total	0	0	0	0	**0**	0	0	0	0	0	**0**	0	12	118	0	0	**130**	0	0	161	100	0	**261**	0	**391**
7:00AM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	4	43	0	0	**47**	0	0	68	31	0	**99**	0	**146**
7:15AM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	5	70	0	0	**75**	0	0	68	40	0	**108**	0	**183**
7:30AM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	8	91	0	0	**99**	0	0	113	41	0	**154**	0	**253**
7:45AM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	13	66	0	0	**79**	0	0	99	39	0	**138**	0	**217**
Hourly Total	0	0	0	0	**0**	0	0	0	0	0	**0**	0	30	270	0	0	**300**	0	0	348	151	0	**499**	0	**799**
8:00AM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	13	68	0	0	**81**	0	0	123	42	0	**165**	0	**246**
8:15AM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	13	80	0	0	**93**	0	0	110	46	0	**156**	0	**249**
8:30AM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	7	53	0	0	**60**	0	0	104	42	0	**146**	0	**206**
8:45AM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	14	62	0	0	**76**	0	0	98	42	0	**140**	0	**216**
Hourly Total	0	0	0	0	**0**	0	0	0	0	0	**0**	0	47	263	0	0	**310**	0	0	435	172	0	**607**	0	**917**
3:00PM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	17	63	0	0	**80**	0	0	201	98	0	**299**	0	**379**
3:15PM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	22	60	0	0	**82**	0	0	202	90	0	**292**	0	**374**
3:30PM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	15	49	0	0	**64**	0	0	191	72	0	**263**	0	**327**
3:45PM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	27	69	0	0	**96**	0	0	192	82	0	**274**	0	**370**
Hourly Total	0	0	0	0	**0**	0	0	0	0	0	**0**	0	81	241	0	0	**322**	0	0	786	342	0	**1128**	0	**1450**
4:00PM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	20	51	0	0	**71**	0	0	203	106	0	**309**	0	**380**
4:15PM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	16	50	0	0	**66**	0	0	195	72	0	**267**	0	**333**
4:30PM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	22	75	0	0	**97**	0	0	227	95	0	**322**	0	**419**
4:45PM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	19	63	0	0	**82**	0	0	185	109	0	**294**	0	**376**
Hourly Total	0	0	0	0	**0**	0	0	0	0	0	**0**	0	77	239	0	0	**316**	0	0	810	382	0	**1192**	0	**1508**
5:00PM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	24	53	0	0	**77**	0	0	155	101	0	**256**	0	**333**
5:15PM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	27	59	0	0	**86**	0	0	205	112	0	**317**	0	**403**
5:30PM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	18	73	0	0	**91**	0	0	153	105	0	**258**	0	**349**
5:45PM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	18	42	0	0	**60**	0	0	150	88	0	**238**	0	**298**
Hourly Total	0	0	0	0	**0**	0	0	0	0	0	**0**	0	87	227	0	0	**314**	0	0	663	406	0	**1069**	0	**1383**
2022-04-02 11:00AM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	13	68	0	0	**81**	0	0	134	92	0	**226**	0	**307**
11:15AM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	14	69	0	0	**83**	0	0	118	106	0	**224**	0	**307**
11:30AM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	17	69	0	0	**86**	0	0	135	90	0	**225**	0	**311**
11:45AM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	17	71	0	0	**88**	0	0	146	113	0	**259**	0	**347**
Hourly Total	0	0	0	0	**0**	0	0	0	0	0	**0**	0	61	277	0	0	**338**	0	0	533	401	0	**934**	0	**1272**
12:00PM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	31	75	0	0	**106**	0	0	142	116	0	**258**	0	**364**
12:15PM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	15	79	0	0	**94**	0	0	144	124	0	**268**	0	**362**
12:30PM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	22	65	0	0	**87**	0	0	136	116	0	**252**	0	**339**
12:45PM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	14	76	0	0	**90**	0	0	139	110	0	**249**	0	**339**
Hourly Total	0	0	0	0	**0**	0	0	0	0	0	**0**	0	82	295	0	0	**377**	0	0	561	466	0	**1027**	0	**1404**
1:00PM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	24	60	0	0	**84**	0	0	137	102	0	**239**	0	**323**
1:15PM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	15	69	0	0	**84**	0	0	147	96	0	**243**	0	**327**
1:30PM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	20	82	0	0	**102**	0	0	142	97	0	**239**	0	**341**
1:45PM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	23	70	0	0	**93**	0	0	140	113	0	**253**	0	**346**
Hourly Total	0	0	0	0	**0**	0	0	0	0	0	**0**	0	82	281	0	0	**363**	0	0	566	408	0	**974**	0	**1337**
Total	0	0	0	0	**0**	0	0	0	0	0	**0**	0	559	2211	0	0	**2770**	0	0	4863	2828	0	**7691**	0	**10461**
% Approach	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	20.2%	79.8%	0%	0%	**-**	-	0%	63.2%	36.8%	0%	**-**	-	-
% Total	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	5.3%	21.1%	0%	0%	**26.5%**	-	0%	46.5%	27.0%	0%	**73.5%**	-	-
Lights	0	0	0	0	**0**	-	0	0	0	0	**0**	-	541	2178	0	0	**2719**	-	0	4785	2765	0	**7550**	-	10269
% Lights	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	96.8%	98.5%	0%	0%	**98.2%**	-	0%	98.4%	97.8%	0%	**98.2%**	-	98.2%
Single-Unit Trucks	0	0	0	0	**0**	-	0	0	0	0	**0**	-	12	29	0	0	**41**	-	0	62	50	0	**112**	-	153
% Single-Unit Trucks	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	2.1%	1.3%	0%	0%	**1.5%**	-	0%	1.3%	1.8%	0%	**1.5%**	-	1.5%

Leg	Rotary						Neponset Street						Route 1 NB Offramp						Rotary						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
Articulated Trucks	0	0	0	0	**0**	-	0	0	0	0	**0**	-	3	2	0	0	**5**	-	0	8	8	0	**16**	-	21
% Articulated Trucks	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0.5%	0.1%	0%	0%	**0.2%**	-	0%	0.2%	0.3%	0%	**0.2%**	-	0.2%
Buses	0	0	0	0	**0**	-	0	0	0	0	**0**	-	3	2	0	0	**5**	-	0	8	4	0	**12**	-	17
% Buses	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0.5%	0.1%	0%	0%	**0.2%**	-	0%	0.2%	0.1%	0%	**0.2%**	-	0.2%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	1	0	**1**	-	1
% Bicycles on Road	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (7) Neponset St @ Route 1 NB Offramp ... - TMC

Thu Mar 31, 2022
AM Peak (Mar 31 2022 7:30AM - 8:30 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936947, Location: 42.187701, -71.184024

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg / Direction	Rotary Southbound						Neponset Street Westbound						Route 1 NB Offramp Northbound						Rotary Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-03-31 7:30AM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	8	91	0	0	**99**	0	0	113	41	0	**154**	0	**253**
7:45AM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	13	66	0	0	**79**	0	0	99	39	0	**138**	0	**217**
8:00AM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	13	68	0	0	**81**	0	0	123	42	0	**165**	0	**246**
8:15AM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	13	80	0	0	**93**	0	0	110	46	0	**156**	0	**249**
Total	0	0	0	0	**0**	0	0	0	0	0	**0**	0	47	305	0	0	**352**	0	0	445	168	0	**613**	0	**965**
% Approach	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	13.4%	86.6%	0%	0%	**-**	-	0%	72.6%	27.4%	0%	**-**	-	**-**
% Total	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	4.9%	31.6%	0%	0%	**36.5%**	-	0%	46.1%	17.4%	0%	**63.5%**	-	**-**
PHF	-	-	-	-	**-**	-	-	-	-	-	**-**	-	0.904	0.838	-	-	**0.889**	-	-	0.904	0.913	-	**0.929**	-	0.954
Lights	0	0	0	0	**0**	-	0	0	0	0	**0**	-	44	301	0	0	**345**	-	0	436	157	0	**593**	-	938
% Lights	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	93.6%	98.7%	0%	0%	**98.0%**	-	0%	98.0%	93.5%	0%	**96.7%**	-	97.2%
Single-Unit Trucks	0	0	0	0	**0**	-	0	0	0	0	**0**	-	3	3	0	0	**6**	-	0	7	9	0	**16**	-	22
% Single-Unit Trucks	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	6.4%	1.0%	0%	0%	**1.7%**	-	0%	1.6%	5.4%	0%	**2.6%**	-	2.3%
Articulated Trucks	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	2	2	0	**4**	-	5
% Articulated Trucks	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0%	0.3%	0%	0%	**0.3%**	-	0%	0.4%	1.2%	0%	**0.7%**	-	0.5%
Buses	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Buses	0%	0%	0%	0%	**-**	-	0%	0%	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
% Bicycles on Road	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (7) Neponset St @ Route 1 NB Offramp ... - TMC

Thu Mar 31, 2022
PM Peak (Mar 31 2022 4:30PM - 5:30 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936947, Location: 42.187701, -71.184024

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Rotary						Neponset Street						Route 1 NB Offramp						Rotary						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-03-31 4:30PM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	22	75	0	0	**97**	0	0	227	95	0	**322**	0	**419**
4:45PM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	19	63	0	0	**82**	0	0	185	109	0	**294**	0	**376**
5:00PM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	24	53	0	0	**77**	0	0	155	101	0	**256**	0	**333**
5:15PM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	27	59	0	0	**86**	0	0	205	112	0	**317**	0	**403**
Total	0	0	0	0	**0**	0	0	0	0	0	**0**	0	92	250	0	0	**342**	0	0	772	417	0	**1189**	0	**1531**
% Approach	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	26.9%	73.1%	0%	0%	**-**	-	0%	64.9%	35.1%	0%	**-**	-	**-**
% Total	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	6.0%	16.3%	0%	0%	**22.3%**	-	0%	50.4%	27.2%	0%	**77.7%**	-	**-**
PHF	-	-	-	-	**-**	-	-	-	-	-	**-**	-	0.852	0.833	-	-	**0.881**	-	-	0.850	0.931	-	**0.923**	-	0.913
Lights	0	0	0	0	**0**	-	0	0	0	0	**0**	-	89	244	0	0	**333**	-	0	762	416	0	**1178**	-	1511
% Lights	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	96.7%	97.6%	0%	0%	**97.4%**	-	0%	98.7%	99.8%	0%	**99.1%**	-	98.7%
Single-Unit Trucks	0	0	0	0	**0**	-	0	0	0	0	**0**	-	2	6	0	0	**8**	-	0	9	1	0	**10**	-	18
% Single-Unit Trucks	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	2.2%	2.4%	0%	0%	**2.3%**	-	0%	1.2%	0.2%	0%	**0.8%**	-	1.2%
Articulated Trucks	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1	0	0	0	**1**	-	0	1	0	0	**1**	-	2
% Articulated Trucks	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	1.1%	0%	0%	0%	**0.3%**	-	0%	0.1%	0%	0%	**0.1%**	-	0.1%
Buses	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Buses	0%	0%	0%	0%	**-**	-	0%	0%	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
% Bicycles on Road	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (7) Neponset St @ Route 1 NB Offramp ... - TMC

Sat Apr 2, 2022
Midday Peak (WKND) (Apr 02 2022 11:45AM - 12:45 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936947, Location: 42.187701, -71.184024

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg / Direction	Rotary Southbound						Neponset Street Westbound						Route 1 NB Offramp Northbound						Rotary Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-04-02 11:45AM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	17	71	0	0	**88**	0	0	146	113	0	**259**	0	**347**
12:00PM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	31	75	0	0	**106**	0	0	142	116	0	**258**	0	**364**
12:15PM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	15	79	0	0	**94**	0	0	144	124	0	**268**	0	**362**
12:30PM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	22	65	0	0	**87**	0	0	136	116	0	**252**	0	**339**
Total	0	0	0	0	**0**	0	0	0	0	0	**0**	0	85	290	0	0	**375**	0	0	568	469	0	**1037**	0	**1412**
% Approach	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	22.7%	77.3%	0%	0%	**-**	-	0%	54.8%	45.2%	0%	**-**	-	**-**
% Total	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	6.0%	20.5%	0%	0%	**26.6%**	-	0%	40.2%	33.2%	0%	**73.4%**	-	**-**
PHF	-	-	-	-	**-**	-	-	-	-	-	**-**	-	0.685	0.918	-	-	**0.884**	-	-	0.973	0.944	-	**0.966**	-	0.972
Lights	0	0	0	0	**0**	-	0	0	0	0	**0**	-	85	290	0	0	**375**	-	0	563	460	0	**1023**	-	1398
% Lights	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	100%	100%	0%	0%	**100%**	-	0%	99.1%	98.1%	0%	**98.6%**	-	99.0%
Single-Unit Trucks	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	4	7	0	**11**	-	11
% Single-Unit Trucks	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**0%**	-	0%	0.7%	1.5%	0%	**1.1%**	-	0.8%
Articulated Trucks	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Articulated Trucks	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Buses	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	1	1	0	**2**	-	2
% Buses	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**0%**	-	0%	0.2%	0.2%	0%	**0.2%**	-	0.1%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	1	0	**1**	-	1
% Bicycles on Road	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0.2%	0%	**0.1%**	-	0.1%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (7) Neponset St @ Route 1 NB Offramp ... - TMC

Sat Apr 2, 2022
PM Peak (WKND) (Apr 02 2022 1PM - 2 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936947, Location: 42.187701, -71.184024

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Rotary						Neponset Street						Route 1 NB Offramp						Rotary						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-04-02 1:00PM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	24	60	0	0	**84**	0	0	137	102	0	**239**	0	**323**
1:15PM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	15	69	0	0	**84**	0	0	147	96	0	**243**	0	**327**
1:30PM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	20	82	0	0	**102**	0	0	142	97	0	**239**	0	**341**
1:45PM	0	0	0	0	**0**	0	0	0	0	0	**0**	0	23	70	0	0	**93**	0	0	140	113	0	**253**	0	**346**
Total	0	0	0	0	**0**	0	0	0	0	0	**0**	0	82	281	0	0	**363**	0	0	566	408	0	**974**	0	**1337**
% Approach	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	22.6%	77.4%	0%	0%	**-**	-	0%	58.1%	41.9%	0%	**-**	-	**-**
% Total	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	6.1%	21.0%	0%	0%	**27.2%**	-	0%	42.3%	30.5%	0%	**72.8%**	-	**-**
PHF	-	-	-	-	**-**	-	-	-	-	-	**-**	-	0.854	0.857	-	-	**0.890**	-	-	0.963	0.903	-	**0.962**	-	0.966
Lights	0	0	0	0	**0**	-	0	0	0	0	**0**	-	82	278	0	0	**360**	-	0	560	403	0	**963**	-	1323
% Lights	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	100%	98.9%	0%	0%	**99.2%**	-	0%	98.9%	98.8%	0%	**98.9%**	-	99.0%
Single-Unit Trucks	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	3	0	0	**3**	-	0	6	5	0	**11**	-	14
% Single-Unit Trucks	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0%	1.1%	0%	0%	**0.8%**	-	0%	1.1%	1.2%	0%	**1.1%**	-	1.0%
Articulated Trucks	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Articulated Trucks	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Buses	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Buses	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
% Bicycles on Road	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (8 TMC - TMC

Thu Mar 31, 2022
Full Length (11 AM-2 PM, 6 AM-9 AM, 3 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936953, Location: 42.178795, -71.191666

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Route 1 SB Offramp						Dean Street						Plaza Driveway						Dean Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2022-03-31 6:00AM	6	0	3	0	**9**	0	0	26	0	0	**26**	0	0	0	0	0	**0**	0	1	38	0	0	**39**	0	**74**
6:15AM	9	0	2	0	**11**	0	2	33	0	0	**35**	0	0	0	0	0	**0**	2	0	46	0	0	**46**	0	**92**
6:30AM	14	0	9	0	**23**	0	2	57	0	0	**59**	0	0	0	1	0	**1**	1	1	58	0	0	**59**	0	**142**
6:45AM	16	0	9	0	**25**	0	5	63	0	0	**68**	0	0	0	0	0	**0**	0	3	83	0	0	**86**	0	**179**
Hourly Total	45	0	23	0	**68**	0	9	179	0	0	**188**	0	0	0	1	0	**1**	3	5	225	0	0	**230**	0	**487**
7:00AM	20	1	16	0	**37**	0	2	70	0	0	**72**	0	4	0	5	0	**9**	0	1	95	0	0	**96**	0	**214**
7:15AM	13	0	9	0	**22**	0	5	64	2	0	**71**	0	1	0	0	0	**1**	0	0	85	1	0	**86**	0	**180**
7:30AM	21	0	23	0	**44**	0	6	65	1	0	**72**	0	0	0	0	0	**0**	1	1	109	0	0	**110**	0	**226**
7:45AM	19	1	23	0	**43**	4	4	65	1	1	**71**	0	0	0	0	0	**0**	1	1	66	3	0	**70**	0	**184**
Hourly Total	73	2	71	0	**146**	4	17	264	4	1	**286**	0	5	0	5	0	**10**	2	3	355	4	0	**362**	0	**804**
8:00AM	25	1	16	0	**42**	0	4	51	3	1	**59**	0	3	0	2	0	**5**	0	2	96	2	0	**100**	2	**206**
8:15AM	18	0	21	0	**39**	0	3	56	4	1	**64**	0	5	0	1	0	**6**	0	4	118	1	0	**123**	0	**232**
8:30AM	23	2	17	0	**42**	0	4	69	3	0	**76**	0	4	0	4	0	**8**	0	3	102	2	0	**107**	0	**233**
8:45AM	27	2	31	0	**60**	0	2	66	5	0	**73**	0	1	0	2	0	**3**	0	3	112	3	0	**118**	0	**254**
Hourly Total	93	5	85	0	**183**	0	13	242	15	2	**272**	0	13	0	9	0	**22**	0	12	428	8	0	**448**	2	**925**
3:00PM	46	7	34	0	**87**	0	11	64	11	0	**86**	0	11	1	11	0	**23**	2	11	95	5	0	**111**	0	**307**
3:15PM	25	4	35	0	**64**	1	13	49	10	0	**72**	0	21	0	8	0	**29**	1	4	118	4	0	**126**	0	**291**
3:30PM	41	5	36	0	**82**	1	10	88	7	0	**105**	0	11	0	3	0	**14**	1	5	136	3	0	**144**	0	**345**
3:45PM	47	10	40	0	**97**	1	13	85	14	1	**113**	0	13	0	6	0	**19**	0	7	111	4	0	**122**	0	**351**
Hourly Total	159	26	145	0	**330**	3	47	286	42	1	**376**	0	56	1	28	0	**85**	4	27	460	16	0	**503**	0	**1294**
4:00PM	28	6	45	0	**79**	0	11	60	8	1	**80**	0	12	0	7	0	**19**	0	10	145	3	0	**158**	0	**336**
4:15PM	51	4	26	0	**81**	0	8	76	9	0	**93**	0	5	0	8	0	**13**	1	7	125	2	0	**134**	0	**321**
4:30PM	46	10	39	0	**95**	0	5	72	12	0	**89**	0	10	1	7	0	**18**	0	5	97	3	0	**105**	0	**307**
4:45PM	55	10	38	0	**103**	1	12	81	10	1	**104**	0	13	0	9	0	**22**	1	4	114	1	0	**119**	1	**348**
Hourly Total	180	30	148	0	**358**	1	36	289	39	2	**366**	0	40	1	31	0	**72**	2	26	481	9	0	**516**	1	**1312**
5:00PM	54	1	41	0	**96**	0	7	76	11	0	**94**	0	11	2	5	0	**18**	0	6	142	3	0	**151**	0	**359**
5:15PM	53	0	41	0	**94**	0	5	77	10	2	**94**	0	14	1	6	0	**21**	1	10	114	4	0	**128**	0	**337**
5:30PM	41	0	36	0	**77**	0	8	77	13	0	**98**	0	12	1	7	0	**20**	1	8	98	4	0	**110**	0	**305**
5:45PM	36	0	31	0	**67**	0	10	68	13	0	**91**	0	12	0	6	0	**18**	0	8	93	5	0	**106**	0	**282**
Hourly Total	184	1	149	0	**334**	0	30	298	47	2	**377**	0	49	4	24	0	**77**	2	32	447	16	0	**495**	0	**1283**
2022-04-02 11:00AM	35	11	48	0	**94**	0	14	65	12	0	**91**	0	14	0	4	0	**18**	2	10	104	4	1	**119**	0	**322**
11:15AM	39	4	47	0	**90**	0	13	72	15	0	**100**	0	14	1	6	0	**21**	1	14	113	5	0	**132**	0	**343**
11:30AM	37	5	53	0	**95**	0	10	59	17	1	**87**	0	24	0	6	0	**30**	0	8	116	5	0	**129**	0	**341**
11:45AM	35	7	56	0	**98**	1	12	63	11	0	**86**	0	17	0	6	0	**23**	0	3	126	3	0	**132**	1	**339**
Hourly Total	146	27	204	0	**377**	1	49	259	55	1	**364**	0	69	1	22	0	**92**	3	35	459	17	1	**512**	1	**1345**
12:00PM	39	7	46	0	**92**	0	10	58	17	0	**85**	0	18	2	6	0	**26**	0	13	129	6	0	**148**	0	**351**
12:15PM	50	11	59	0	**120**	0	7	57	21	0	**85**	2	16	0	7	0	**23**	0	11	101	5	0	**117**	0	**345**
12:30PM	47	12	53	0	**112**	0	11	61	16	0	**88**	2	14	0	11	0	**25**	1	12	107	5	0	**124**	0	**349**
12:45PM	33	12	49	0	**94**	0	15	53	24	1	**93**	0	15	2	11	0	**28**	0	6	93	4	0	**103**	0	**318**
Hourly Total	169	42	207	0	**418**	0	43	229	78	1	**351**	4	63	4	35	0	**102**	1	42	430	20	0	**492**	0	**1363**
1:00PM	26	6	50	0	**82**	0	13	62	13	1	**89**	0	16	1	14	0	**31**	0	6	94	7	0	**107**	1	**309**
1:15PM	39	5	51	0	**95**	0	15	52	14	0	**81**	0	16	1	9	0	**26**	1	13	99	3	0	**115**	1	**317**
1:30PM	50	16	56	0	**122**	0	14	55	20	2	**91**	0	18	0	7	0	**25**	0	7	97	4	0	**108**	1	**346**
1:45PM	39	7	54	0	**100**	0	15	69	19	0	**103**	0	23	2	12	0	**37**	0	8	93	5	0	**106**	0	**346**
Hourly Total	154	34	211	0	**399**	0	57	238	66	3	**364**	0	73	4	42	0	**119**	1	34	383	19	0	**436**	3	**1318**
Total	1203	167	1243	0	**2613**	9	301	2284	346	13	**2944**	4	368	15	197	0	**580**	18	216	3668	109	1	**3994**	7	**10131**
% Approach	46.0%	6.4%	47.6%	0%	**-**	-	10.2%	77.6%	11.8%	0.4%	**-**	-	63.4%	2.6%	34.0%	0%	**-**	-	5.4%	91.8%	2.7%	0%	**-**	-	-
% Total	11.9%	1.6%	12.3%	0%	**25.8%**	-	3.0%	22.5%	3.4%	0.1%	**29.1%**	-	3.6%	0.1%	1.9%	0%	**5.7%**	-	2.1%	36.2%	1.1%	0%	**39.4%**	-	-
Lights	1173	166	1217	0	**2556**	-	297	2230	340	12	**2879**	-	363	15	196	0	**574**	-	215	3583	109	1	**3908**	-	9917
% Lights	97.5%	99.4%	97.9%	0%	**97.8%**	-	98.7%	97.6%	98.3%	92.3%	**97.8%**	-	98.6%	100%	99.5%	0%	**99.0%**	-	99.5%	97.7%	100%	100%	**97.8%**	-	97.9%
Single-Unit Trucks	27	1	19	0	**47**	-	4	35	3	1	**43**	-	3	0	0	0	**3**	-	0	64	0	0	**64**	-	157
% Single-Unit Trucks	2.2%	0.6%	1.5%	0%	**1.8%**	-	1.3%	1.5%	0.9%	7.7%	**1.5%**	-	0.8%	0%	0%	0%	**0.5%**	-	0%	1.7%	0%	0%	**1.6%**	-	1.5%
Articulated Trucks	3	0	3	0	**6**	-	0	8	0	0	**8**	-	0	0	0	0	**0**	-	0	11	0	0	**11**	-	25
% Articulated Trucks	0.2%	0%	0.2%	0%	**0.2%**	-	0%	0.4%	0%	0%	**0.3%**	-	0%	0%	0%	0%	**0%**	-	0%	0.3%	0%	0%	**0.3%**	-	0.2%
Buses	0	0	4	0	**4**	-	0	10	3	0	**13**	-	1	0	1	0	**2**	-	0	10	0	0	**10**	-	29
% Buses	0%	0%	0.3%	0%	**0.2%**	-	0%	0.4%	0.9%	0%	**0.4%**	-	0.3%	0%	0.5%	0%	**0.3%**	-	0%	0.3%	0%	0%	**0.3%**	-	0.3%
Bicycles on Road	0	0	0	0	**0**	-	0	1	0	0	**1**	-	1	0	0	0	**1**	-	1	0	0	0	**1**	-	3
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0.3%	0%	0%	0%	**0.2%**	-	0.5%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	9	-	-	-	-	-	4	-	-	-	-	-	16	-	-	-	-	-	7	

Leg	Route 1 SB Offramp						Dean Street						Plaza Driveway						Dean Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	88.9%	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	11.1%	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (8 TMC - TMC

Thu Mar 31, 2022
AM Peak (Mar 31 2022 8AM - 9 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936953, Location: 42.178795, -71.191666

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Route 1 SB Offramp						Dean Street						Plaza Driveway						Dean Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-03-31 8:00AM	25	1	16	0	**42**	0	4	51	3	1	**59**	0	3	0	2	0	**5**	0	2	96	2	0	**100**	2	**206**
8:15AM	18	0	21	0	**39**	0	3	56	4	1	**64**	0	5	0	1	0	**6**	0	4	118	1	0	**123**	0	**232**
8:30AM	23	2	17	0	**42**	0	4	69	3	0	**76**	0	4	0	4	0	**8**	0	3	102	2	0	**107**	0	**233**
8:45AM	27	2	31	0	**60**	0	2	66	5	0	**73**	0	1	0	2	0	**3**	0	3	112	3	0	**118**	0	**254**
Total	93	5	85	0	**183**	0	13	242	15	2	**272**	0	13	0	9	0	**22**	0	12	428	8	0	**448**	2	**925**
% Approach	50.8%	2.7%	46.4%	0%	**-**	-	4.8%	89.0%	5.5%	0.7%	**-**	-	59.1%	0%	40.9%	0%	**-**	-	2.7%	95.5%	1.8%	0%	**-**	-	**-**
% Total	10.1%	0.5%	9.2%	0%	**19.8%**	-	1.4%	26.2%	1.6%	0.2%	**29.4%**	-	1.4%	0%	1.0%	0%	**2.4%**	-	1.3%	46.3%	0.9%	0%	**48.4%**	-	**-**
PHF	0.861	0.625	0.685	-	**0.763**	-	0.813	0.877	0.750	0.500	**0.895**	-	0.650	-	0.563	-	**0.688**	-	0.750	0.907	0.667	-	**0.911**	-	0.910
Lights	82	5	81	0	**168**	-	13	232	12	1	**258**	-	13	0	8	0	**21**	-	12	406	8	0	**426**	-	873
% Lights	88.2%	100%	95.3%	0%	**91.8%**	-	100%	95.9%	80.0%	50.0%	**94.9%**	-	100%	0%	88.9%	0%	**95.5%**	-	100%	94.9%	100%	0%	**95.1%**	-	94.4%
Single-Unit Trucks	10	0	3	0	**13**	-	0	5	2	1	**8**	-	0	0	0	0	**0**	-	0	17	0	0	**17**	-	38
% Single-Unit Trucks	10.8%	0%	3.5%	0%	**7.1%**	-	0%	2.1%	13.3%	50.0%	**2.9%**	-	0%	0%	0%	0%	**0%**	-	0%	4.0%	0%	0%	**3.8%**	-	4.1%
Articulated Trucks	1	0	0	0	**1**	-	0	2	0	0	**2**	-	0	0	0	0	**0**	-	0	4	0	0	**4**	-	7
% Articulated Trucks	1.1%	0%	0%	0%	**0.5%**	-	0%	0.8%	0%	0%	**0.7%**	-	0%	0%	0%	0%	**0%**	-	0%	0.9%	0%	0%	**0.9%**	-	0.8%
Buses	0	0	1	0	**1**	-	0	3	1	0	**4**	-	0	0	1	0	**1**	-	0	1	0	0	**1**	-	7
% Buses	0%	0%	1.2%	0%	**0.5%**	-	0%	1.2%	6.7%	0%	**1.5%**	-	0%	0%	11.1%	0%	**4.5%**	-	0%	0.2%	0%	0%	**0.2%**	-	0.8%
Bicycles on Road	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%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (8 TMC - TMC

Thu Mar 31, 2022
PM Peak (Mar 31 2022 3:30PM - 4:30 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936953, Location: 42.178795, -71.191666

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Route 1 SB Offramp						Dean Street						Plaza Driveway						Dean Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-03-31 3:30PM	41	5	36	0	**82**	1	10	88	7	0	**105**	0	11	0	3	0	**14**	1	5	136	3	0	**144**	0	**345**
3:45PM	47	10	40	0	**97**	1	13	85	14	1	**113**	0	13	0	6	0	**19**	0	7	111	4	0	**122**	0	**351**
4:00PM	28	6	45	0	**79**	0	11	60	8	1	**80**	0	12	0	7	0	**19**	0	10	145	3	0	**158**	0	**336**
4:15PM	51	4	26	0	**81**	0	8	76	9	0	**93**	0	5	0	8	0	**13**	1	7	125	2	0	**134**	0	**321**
Total	167	25	147	0	**339**	2	42	309	38	2	**391**	0	41	0	24	0	**65**	2	29	517	12	0	**558**	0	**1353**
% Approach	49.3%	7.4%	43.4%	0%	**-**	-	10.7%	79.0%	9.7%	0.5%	**-**	-	63.1%	0%	36.9%	0%	**-**	-	5.2%	92.7%	2.2%	0%	**-**	-	-
% Total	12.3%	1.8%	10.9%	0%	**25.1%**	-	3.1%	22.8%	2.8%	0.1%	**28.9%**	-	3.0%	0%	1.8%	0%	**4.8%**	-	2.1%	38.2%	0.9%	0%	**41.2%**	-	-
PHF	0.819	0.625	0.817	-	**0.874**	-	0.808	0.875	0.679	0.500	**0.871**	-	0.769	-	0.750	-	**0.842**	-	0.725	0.891	0.750	-	**0.883**	-	0.965
Lights	166	24	144	0	**334**	-	40	301	37	2	**380**	-	39	0	24	0	**63**	-	29	509	12	0	**550**	-	1327
% Lights	99.4%	96.0%	98.0%	0%	**98.5%**	-	95.2%	97.4%	97.4%	100%	**97.2%**	-	95.1%	0%	100%	0%	**96.9%**	-	100%	98.5%	100%	0%	**98.6%**	-	98.1%
Single-Unit Trucks	1	1	3	0	**5**	-	2	5	1	0	**8**	-	1	0	0	0	**1**	-	0	6	0	0	**6**	-	20
% Single-Unit Trucks	0.6%	4.0%	2.0%	0%	**1.5%**	-	4.8%	1.6%	2.6%	0%	**2.0%**	-	2.4%	0%	0%	0%	**1.5%**	-	0%	1.2%	0%	0%	**1.1%**	-	1.5%
Articulated Trucks	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	1	0	0	**1**	-	1
% Articulated Trucks	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0.2%	0%	0%	**0.2%**	-	0.1%
Buses	0	0	0	0	**0**	-	0	2	0	0	**2**	-	0	0	0	0	**0**	-	0	1	0	0	**1**	-	3
% Buses	0%	0%	0%	0%	**0%**	-	0%	0.6%	0%	0%	**0.5%**	-	0%	0%	0%	0%	**0%**	-	0%	0.2%	0%	0%	**0.2%**	-	0.2%
Bicycles on Road	0	0	0	0	**0**	-	0	1	0	0	**1**	-	1	0	0	0	**1**	-	0	0	0	0	**0**	-	2
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0.3%	0%	0%	**0.3%**	-	2.4%	0%	0%	0%	**1.5%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Pedestrians	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	50.0%	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	50.0%	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (8 TMC - TMC

Sat Apr 2, 2022
Midday Peak (WKND) (Apr 02 2022 11:45AM - 12:45 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936953, Location: 42.178795, -71.191666

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Route 1 SB Offramp						Dean Street						Plaza Driveway						Dean Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-04-02 11:45AM	35	7	56	0	**98**	1	12	63	11	0	**86**	0	17	0	6	0	**23**	0	3	126	3	0	**132**	1	**339**
12:00PM	39	7	46	0	**92**	0	10	58	17	0	**85**	0	18	2	6	0	**26**	0	13	129	6	0	**148**	0	**351**
12:15PM	50	11	59	0	**120**	0	7	57	21	0	**85**	2	16	0	7	0	**23**	0	11	101	5	0	**117**	0	**345**
12:30PM	47	12	53	0	**112**	0	11	61	16	0	**88**	2	14	0	11	0	**25**	1	12	107	5	0	**124**	0	**349**
Total	171	37	214	0	**422**	1	40	239	65	0	**344**	4	65	2	30	0	**97**	1	39	463	19	0	**521**	1	**1384**
% Approach	40.5%	8.8%	50.7%	0%	**-**	-	11.6%	69.5%	18.9%	0%	**-**	-	67.0%	2.1%	30.9%	0%	**-**	-	7.5%	88.9%	3.6%	0%	**-**	-	-
% Total	12.4%	2.7%	15.5%	0%	**30.5%**	-	2.9%	17.3%	4.7%	0%	**24.9%**	-	4.7%	0.1%	2.2%	0%	**7.0%**	-	2.8%	33.5%	1.4%	0%	**37.6%**	-	-
PHF	0.855	0.771	0.907	-	**0.879**	-	0.833	0.948	0.774	-	**0.977**	-	0.903	0.250	0.682	-	**0.933**	-	0.750	0.897	0.792	-	**0.880**	-	0.986
Lights	169	37	213	0	**419**	-	40	236	65	0	**341**	-	65	2	30	0	**97**	-	39	460	19	0	**518**	-	1375
% Lights	98.8%	100%	99.5%	0%	**99.3%**	-	100%	98.7%	100%	0%	**99.1%**	-	100%	100%	100%	0%	**100%**	-	100%	99.4%	100%	0%	**99.4%**	-	99.3%
Single-Unit Trucks	1	0	1	0	**2**	-	0	3	0	0	**3**	-	0	0	0	0	**0**	-	0	3	0	0	**3**	-	8
% Single-Unit Trucks	0.6%	0%	0.5%	0%	**0.5%**	-	0%	1.3%	0%	0%	**0.9%**	-	0%	0%	0%	0%	**0%**	-	0%	0.6%	0%	0%	**0.6%**	-	0.6%
Articulated Trucks	1	0	0	0	**1**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1
% Articulated Trucks	0.6%	0%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Buses	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Buses	0%	0%	0%	0%	**0%**	-	0%	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
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	4	-	-	-	-	-	1	-	-	-	-	-	1	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (8 TMC - TMC

Sat Apr 2, 2022
PM Peak (WKND) (Apr 02 2022 1PM - 2 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936953, Location: 42.178795, -71.191666

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Route 1 SB Offramp						Dean Street						Plaza Driveway						Dean Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-04-02 1:00PM	26	6	50	0	**82**	0	13	62	13	1	**89**	0	16	1	14	0	**31**	0	6	94	7	0	**107**	1	**309**
1:15PM	39	5	51	0	**95**	0	15	52	14	0	**81**	0	16	1	9	0	**26**	1	13	99	3	0	**115**	1	**317**
1:30PM	50	16	56	0	**122**	0	14	55	20	2	**91**	0	18	0	7	0	**25**	0	7	97	4	0	**108**	1	**346**
1:45PM	39	7	54	0	**100**	0	15	69	19	0	**103**	0	23	2	12	0	**37**	0	8	93	5	0	**106**	0	**346**
Total	154	34	211	0	**399**	0	57	238	66	3	**364**	0	73	4	42	0	**119**	1	34	383	19	0	**436**	3	**1318**
% Approach	38.6%	8.5%	52.9%	0%	**-**	-	15.7%	65.4%	18.1%	0.8%	**-**	-	61.3%	3.4%	35.3%	0%	**-**	-	7.8%	87.8%	4.4%	0%	**-**	-	-
% Total	11.7%	2.6%	16.0%	0%	**30.3%**	-	4.3%	18.1%	5.0%	0.2%	**27.6%**	-	5.5%	0.3%	3.2%	0%	**9.0%**	-	2.6%	29.1%	1.4%	0%	**33.1%**	-	-
PHF	0.770	0.531	0.942	-	**0.818**	-	0.950	0.862	0.825	0.375	**0.883**	-	0.793	0.500	0.750	-	**0.804**	-	0.654	0.967	0.679	-	**0.948**	-	0.952
Lights	153	34	210	0	**397**	-	57	235	66	3	**361**	-	72	4	42	0	**118**	-	34	382	19	0	**435**	-	1311
% Lights	99.4%	100%	99.5%	0%	**99.5%**	-	100%	98.7%	100%	100%	**99.2%**	-	98.6%	100%	100%	0%	**99.2%**	-	100%	99.7%	100%	0%	**99.8%**	-	99.5%
Single-Unit Trucks	1	0	1	0	**2**	-	0	3	0	0	**3**	-	1	0	0	0	**1**	-	0	1	0	0	**1**	-	7
% Single-Unit Trucks	0.6%	0%	0.5%	0%	**0.5%**	-	0%	1.3%	0%	0%	**0.8%**	-	1.4%	0%	0%	0%	**0.8%**	-	0%	0.3%	0%	0%	**0.2%**	-	0.5%
Articulated Trucks	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Articulated Trucks	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Buses	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Buses	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
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	3	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (9) Route 1 @ Dean Street TMC - TMC

Thu Mar 31, 2022
Full Length (6 AM-9 AM, 3 PM-6 PM, 11 AM-2 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936955, Location: 42.178851, -71.190601

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Providence Hwy (Route 1)						Dean Street						Providence Hwy (Route 1)						Dean Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2022-03-31 6:00AM	1	36	0	0	**37**	0	5	25	21	0	**51**	0	4	195	0	0	**199**	0	4	14	24	0	**42**	0	**329**
6:15AM	0	49	0	0	**49**	0	8	33	14	0	**55**	0	0	202	0	0	**202**	2	2	20	26	0	**48**	0	**354**
6:30AM	0	58	0	0	**58**	0	8	55	27	0	**90**	0	1	256	0	0	**257**	1	6	26	33	0	**65**	0	**470**
6:45AM	1	92	0	0	**93**	0	13	73	48	0	**134**	0	1	291	0	0	**292**	0	10	33	54	0	**97**	0	**616**
Hourly Total	2	235	0	0	**237**	0	34	186	110	0	**330**	0	6	944	0	0	**950**	3	22	93	137	0	**252**	0	**1769**
7:00AM	3	101	0	0	**104**	0	13	67	38	0	**118**	0	4	342	0	0	**346**	0	7	61	47	0	**115**	0	**683**
7:15AM	0	101	0	0	**101**	0	13	67	50	0	**130**	0	0	322	0	0	**322**	1	7	52	29	0	**88**	1	**641**
7:30AM	0	131	0	0	**131**	0	14	68	54	0	**136**	1	0	318	0	0	**318**	1	14	78	43	0	**135**	0	**720**
7:45AM	1	162	0	0	**163**	0	10	64	71	0	**145**	0	3	326	0	0	**329**	0	11	47	45	0	**103**	2	**740**
Hourly Total	4	495	0	0	**499**	0	50	266	213	0	**529**	1	7	1308	0	0	**1315**	2	39	238	164	0	**441**	3	**2784**
8:00AM	2	179	0	0	**181**	0	12	55	64	0	**131**	0	2	301	0	0	**303**	0	17	55	34	0	**106**	0	**721**
8:15AM	3	177	0	0	**180**	0	13	58	82	0	**153**	0	4	318	0	1	**323**	0	25	63	57	0	**145**	0	**801**
8:30AM	2	165	0	0	**167**	0	9	71	73	0	**153**	0	3	276	0	0	**279**	0	19	65	54	0	**138**	0	**737**
8:45AM	3	199	0	0	**202**	0	14	67	82	0	**163**	0	4	255	0	0	**259**	0	22	55	69	0	**146**	0	**770**
Hourly Total	10	720	0	0	**730**	0	48	251	301	0	**600**	0	13	1150	0	1	**1164**	0	83	238	214	0	**535**	0	**3029**
3:00PM	6	274	0	0	**280**	0	10	73	74	0	**157**	0	4	213	0	0	**217**	2	20	66	48	0	**134**	0	**788**
3:15PM	5	285	0	0	**290**	1	14	59	61	0	**134**	0	7	194	0	0	**201**	1	29	76	77	0	**182**	0	**807**
3:30PM	1	287	0	0	**288**	0	11	92	59	0	**162**	0	6	219	0	0	**225**	1	28	88	62	0	**178**	0	**853**
3:45PM	9	263	0	0	**272**	0	9	96	77	0	**182**	0	4	215	0	0	**219**	0	25	72	65	0	**162**	0	**835**
Hourly Total	21	1109	0	0	**1130**	1	44	320	271	0	**635**	0	21	841	0	0	**862**	4	102	302	252	0	**656**	0	**3283**
4:00PM	4	294	0	0	**298**	0	7	83	55	0	**145**	0	9	261	0	0	**270**	0	44	81	78	0	**203**	0	**916**
4:15PM	5	306	0	0	**311**	1	6	79	68	0	**153**	0	3	177	0	0	**180**	3	26	77	66	0	**169**	0	**813**
4:30PM	3	307	0	0	**310**	0	12	86	63	0	**161**	0	7	253	0	0	**260**	0	26	57	68	0	**151**	0	**882**
4:45PM	5	292	0	0	**297**	0	13	80	56	0	**149**	1	6	219	0	0	**225**	1	25	71	77	0	**173**	0	**844**
Hourly Total	17	1199	0	0	**1216**	1	38	328	242	0	**608**	1	25	910	0	0	**935**	4	121	286	289	0	**696**	0	**3455**
5:00PM	5	312	0	0	**317**	0	11	85	62	0	**158**	2	6	249	0	0	**255**	2	35	74	82	0	**191**	0	**921**
5:15PM	3	304	0	1	**308**	0	9	79	65	0	**153**	0	2	206	0	0	**208**	0	26	63	74	0	**163**	0	**832**
5:30PM	3	288	0	0	**291**	0	13	86	63	0	**162**	0	6	226	0	0	**232**	0	27	68	51	0	**146**	0	**831**
5:45PM	2	268	0	0	**270**	0	9	82	70	0	**161**	0	8	192	0	0	**200**	0	31	41	60	0	**132**	0	**763**
Hourly Total	13	1172	0	1	**1186**	0	42	332	260	0	**634**	2	22	873	0	0	**895**	2	119	246	267	0	**632**	0	**3347**
2022-04-02 11:00AM	5	244	0	0	**249**	0	15	81	73	0	**169**	0	6	249	0	0	**255**	1	28	60	79	0	**167**	0	**840**
11:15AM	8	241	0	0	**249**	0	15	90	68	0	**173**	0	5	245	0	0	**250**	0	35	61	79	0	**175**	0	**847**
11:30AM	5	250	0	0	**255**	0	16	71	47	0	**134**	0	7	278	0	0	**285**	1	24	82	85	0	**191**	0	**865**
11:45AM	4	250	0	0	**254**	0	16	75	75	0	**166**	0	8	294	0	0	**302**	1	30	83	82	0	**195**	0	**917**
Hourly Total	22	985	0	0	**1007**	0	62	317	263	0	**642**	0	26	1066	0	0	**1092**	3	117	286	325	0	**728**	0	**3469**
12:00PM	7	291	0	0	**298**	0	12	76	59	0	**147**	0	5	288	0	0	**293**	0	31	74	92	0	**197**	0	**935**
12:15PM	13	281	0	0	**294**	1	15	73	63	0	**151**	0	4	281	0	0	**285**	2	32	72	76	0	**180**	0	**910**
12:30PM	5	267	0	0	**272**	0	9	76	81	0	**166**	0	7	283	0	0	**290**	1	35	72	64	0	**171**	0	**899**
12:45PM	10	274	0	0	**284**	0	12	79	66	0	**157**	0	8	327	0	0	**335**	0	37	41	76	0	**154**	0	**930**
Hourly Total	35	1113	0	0	**1148**	1	48	304	269	0	**621**	0	24	1179	0	0	**1203**	3	135	259	308	0	**702**	0	**3674**
1:00PM	7	278	0	0	**285**	0	13	71	89	0	**173**	0	6	284	0	0	**290**	0	33	56	77	0	**166**	0	**914**
1:15PM	5	291	0	0	**296**	0	10	71	70	0	**151**	0	6	285	0	0	**291**	1	27	56	76	0	**159**	0	**897**
1:30PM	11	283	0	0	**294**	0	11	77	69	0	**157**	0	12	288	0	0	**300**	0	18	65	80	0	**163**	0	**914**
1:45PM	6	274	0	0	**280**	0	15	89	73	0	**177**	0	10	277	0	0	**287**	0	44	63	70	0	**177**	0	**921**
Hourly Total	29	1126	0	0	**1155**	0	49	308	301	0	**658**	0	34	1134	0	0	**1168**	1	122	240	303	0	**665**	0	**3646**
Total	153	8154	0	1	**8308**	3	415	2612	2230	0	**5257**	4	178	9405	0	1	**9584**	22	860	2188	2259	0	**5307**	3	**28456**
% Approach	1.8%	98.1%	0%	0%	**-**	-	7.9%	49.7%	42.4%	0%	**-**	-	1.9%	98.1%	0%	0%	**-**	-	16.2%	41.2%	42.6%	0%	**-**	-	-
% Total	0.5%	28.7%	0%	0%	**29.2%**	-	1.5%	9.2%	7.8%	0%	**18.5%**	-	0.6%	33.1%	0%	0%	**33.7%**	-	3.0%	7.7%	7.9%	0%	**18.6%**	-	-
Lights	150	8008	0	1	**8159**	-	409	2561	2202	0	**5172**	-	172	9235	0	1	**9408**	-	838	2152	2198	0	**5188**	-	27927
% Lights	98.0%	98.2%	0%	100%	**98.2%**	-	98.6%	98.0%	98.7%	0%	**98.4%**	-	96.6%	98.2%	0%	100%	**98.2%**	-	97.4%	98.4%	97.3%	0%	**97.8%**	-	98.1%
Single-Unit Trucks	2	104	0	0	**106**	-	5	31	20	0	**56**	-	3	112	0	0	**115**	-	14	27	46	0	**87**	-	364
% Single-Unit Trucks	1.3%	1.3%	0%	0%	**1.3%**	-	1.2%	1.2%	0.9%	0%	**1.1%**	-	1.7%	1.2%	0%	0%	**1.2%**	-	1.6%	1.2%	2.0%	0%	**1.6%**	-	1.3%
Articulated Trucks	1	36	0	0	**37**	-	1	7	2	0	**10**	-	0	45	0	0	**45**	-	3	2	11	0	**16**	-	108
% Articulated Trucks	0.7%	0.4%	0%	0%	**0.4%**	-	0.2%	0.3%	0.1%	0%	**0.2%**	-	0%	0.5%	0%	0%	**0.5%**	-	0.3%	0.1%	0.5%	0%	**0.3%**	-	0.4%
Buses	0	6	0	0	**6**	-	0	12	6	0	**18**	-	3	13	0	0	**16**	-	4	7	4	0	**15**	-	55
% Buses	0%	0.1%	0%	0%	**0.1%**	-	0%	0.5%	0.3%	0%	**0.3%**	-	1.7%	0.1%	0%	0%	**0.2%**	-	0.5%	0.3%	0.2%	0%	**0.3%**	-	0.2%
Bicycles on Road	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	1	0	0	0	**1**	-	2

Leg	Providence Hwy (Route 1)						Dean Street						Providence Hwy (Route 1)						Dean Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0.1%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	2	-	-	-	-	-	4	-	-	-	-	-	18	-	-	-	-	-	3	
% Pedestrians	-	-	-	-	-	66.7%	-	-	-	-	-	100%	-	-	-	-	-	81.8%	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	4	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	33.3%	-	-	-	-	-	0%	-	-	-	-	-	18.2%	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (9) Route 1 @ Dean Street TMC - TMC

Thu Mar 31, 2022
AM Peak (Mar 31 2022 8AM - 9 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936955, Location: 42.178851, -71.190601

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg Direction	Providence Hwy (Route 1) Southbound						Dean Street Westbound						Providence Hwy (Route 1) Northbound						Dean Street Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-03-31 8:00AM	2	179	0	0	**181**	0	12	55	64	0	**131**	0	2	301	0	0	**303**	0	17	55	34	0	**106**	0	**721**
8:15AM	3	177	0	0	**180**	0	13	58	82	0	**153**	0	4	318	0	1	**323**	0	25	63	57	0	**145**	0	**801**
8:30AM	2	165	0	0	**167**	0	9	71	73	0	**153**	0	3	276	0	0	**279**	0	19	65	54	0	**138**	0	**737**
8:45AM	3	199	0	0	**202**	0	14	67	82	0	**163**	0	4	255	0	0	**259**	0	22	55	69	0	**146**	0	**770**
Total	10	720	0	0	**730**	0	48	251	301	0	**600**	0	13	1150	0	1	**1164**	0	83	238	214	0	**535**	0	**3029**
% Approach	1.4%	98.6%	0%	0%	**-**	-	8.0%	41.8%	50.2%	0%	**-**	-	1.1%	98.8%	0%	0.1%	**-**	-	15.5%	44.5%	40.0%	0%	**-**	-	-
% Total	0.3%	23.8%	0%	0%	**24.1%**	-	1.6%	8.3%	9.9%	0%	**19.8%**	-	0.4%	38.0%	0%	0%	**38.4%**	-	2.7%	7.9%	7.1%	0%	**17.7%**	-	-
PHF	0.833	0.905	-	-	**0.903**	-	0.857	0.884	0.918	-	**0.920**	-	0.813	0.904	-	0.250	**0.901**	-	0.830	0.915	0.775	-	**0.916**	-	0.945
Lights	10	694	0	0	**704**	-	48	240	293	0	**581**	-	11	1119	0	1	**1131**	-	77	227	201	0	**505**	-	2921
% Lights	100%	96.4%	0%	0%	**96.4%**	-	100%	95.6%	97.3%	0%	**96.8%**	-	84.6%	97.3%	0%	100%	**97.2%**	-	92.8%	95.4%	93.9%	0%	**94.4%**	-	96.4%
Single-Unit Trucks	0	18	0	0	**18**	-	0	5	6	0	**11**	-	1	23	0	0	**24**	-	4	9	11	0	**24**	-	77
% Single-Unit Trucks	0%	2.5%	0%	0%	**2.5%**	-	0%	2.0%	2.0%	0%	**1.8%**	-	7.7%	2.0%	0%	0%	**2.1%**	-	4.8%	3.8%	5.1%	0%	**4.5%**	-	2.5%
Articulated Trucks	0	5	0	0	**5**	-	0	3	0	0	**3**	-	0	7	0	0	**7**	-	2	0	2	0	**4**	-	19
% Articulated Trucks	0%	0.7%	0%	0%	**0.7%**	-	0%	1.2%	0%	0%	**0.5%**	-	0%	0.6%	0%	0%	**0.6%**	-	2.4%	0%	0.9%	0%	**0.7%**	-	0.6%
Buses	0	3	0	0	**3**	-	0	3	2	0	**5**	-	1	1	0	0	**2**	-	0	2	0	0	**2**	-	12
% Buses	0%	0.4%	0%	0%	**0.4%**	-	0%	1.2%	0.7%	0%	**0.8%**	-	7.7%	0.1%	0%	0%	**0.2%**	-	0%	0.8%	0%	0%	**0.4%**	-	0.4%
Bicycles on Road	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%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (9) Route 1 @ Dean Street TMC - TMC

Thu Mar 31, 2022
PM Peak (Mar 31 2022 4:30PM - 5:30 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936955, Location: 42.178851, -71.190601

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Providence Hwy (Route 1)						Dean Street						Providence Hwy (Route 1)						Dean Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-03-31 4:30PM	3	307	0	0	**310**	0	12	86	63	0	**161**	0	7	253	0	0	**260**	0	26	57	68	0	**151**	0	**882**
4:45PM	5	292	0	0	**297**	0	13	80	56	0	**149**	1	6	219	0	0	**225**	1	25	71	77	0	**173**	0	**844**
5:00PM	5	312	0	0	**317**	0	11	85	62	0	**158**	2	6	249	0	0	**255**	2	35	74	82	0	**191**	0	**921**
5:15PM	3	304	0	1	**308**	0	9	79	65	0	**153**	0	2	206	0	0	**208**	0	26	63	74	0	**163**	0	**832**
Total	16	1215	0	1	**1232**	0	45	330	246	0	**621**	3	21	927	0	0	**948**	3	112	265	301	0	**678**	0	**3479**
% Approach	1.3%	98.6%	0%	0.1%	**-**	-	7.2%	53.1%	39.6%	0%	**-**	-	2.2%	97.8%	0%	0%	**-**	-	16.5%	39.1%	44.4%	0%	**-**	-	-
% Total	0.5%	34.9%	0%	0%	**35.4%**	-	1.3%	9.5%	7.1%	0%	**17.8%**	-	0.6%	26.6%	0%	0%	**27.2%**	-	3.2%	7.6%	8.7%	0%	**19.5%**	-	-
PHF	0.800	0.974	-	0.250	**0.972**	-	0.865	0.959	0.946	-	**0.964**	-	0.750	0.916	-	-	**0.912**	-	0.800	0.895	0.918	-	**0.887**	-	0.944
Lights	16	1201	0	1	**1218**	-	44	328	244	0	**616**	-	21	907	0	0	**928**	-	111	262	295	0	**668**	-	3430
% Lights	100%	98.8%	0%	100%	**98.9%**	-	97.8%	99.4%	99.2%	0%	**99.2%**	-	100%	97.8%	0%	0%	**97.9%**	-	99.1%	98.9%	98.0%	0%	**98.5%**	-	98.6%
Single-Unit Trucks	0	13	0	0	**13**	-	1	0	2	0	**3**	-	0	12	0	0	**12**	-	1	2	3	0	**6**	-	34
% Single-Unit Trucks	0%	1.1%	0%	0%	**1.1%**	-	2.2%	0%	0.8%	0%	**0.5%**	-	0%	1.3%	0%	0%	**1.3%**	-	0.9%	0.8%	1.0%	0%	**0.9%**	-	1.0%
Articulated Trucks	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	8	0	0	**8**	-	0	0	0	0	**0**	-	9
% Articulated Trucks	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0%	0.9%	0%	0%	**0.8%**	-	0%	0%	0%	0%	**0%**	-	0.3%
Buses	0	0	0	0	**0**	-	0	2	0	0	**2**	-	0	0	0	0	**0**	-	0	1	3	0	**4**	-	6
% Buses	0%	0%	0%	0%	**0%**	-	0%	0.6%	0%	0%	**0.3%**	-	0%	0%	0%	0%	**0%**	-	0%	0.4%	1.0%	0%	**0.6%**	-	0.2%
Bicycles on Road	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%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	3	-	-	-	-	-	3	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (9) Route 1 @ Dean Street TMC - TMC

Sat Apr 2, 2022
Midday Peak (WKND) (Apr 02 2022 12PM - 1 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936955, Location: 42.178851, -71.190601

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg Direction	Providence Hwy (Route 1) Southbound						Dean Street Westbound						Providence Hwy (Route 1) Northbound						Dean Street Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-04-02 12:00PM	7	291	0	0	**298**	0	12	76	59	0	**147**	0	5	288	0	0	**293**	0	31	74	92	0	**197**	0	**935**
12:15PM	13	281	0	0	**294**	1	15	73	63	0	**151**	0	4	281	0	0	**285**	2	32	72	76	0	**180**	0	**910**
12:30PM	5	267	0	0	**272**	0	9	76	81	0	**166**	0	7	283	0	0	**290**	1	35	72	64	0	**171**	0	**899**
12:45PM	10	274	0	0	**284**	0	12	79	66	0	**157**	0	8	327	0	0	**335**	0	37	41	76	0	**154**	0	**930**
Total	35	1113	0	0	**1148**	1	48	304	269	0	**621**	0	24	1179	0	0	**1203**	3	135	259	308	0	**702**	0	**3674**
% Approach	3.0%	97.0%	0%	0%	**-**	-	7.7%	49.0%	43.3%	0%	**-**	-	2.0%	98.0%	0%	0%	**-**	-	19.2%	36.9%	43.9%	0%	**-**	-	**-**
% Total	1.0%	30.3%	0%	0%	**31.2%**	-	1.3%	8.3%	7.3%	0%	**16.9%**	-	0.7%	32.1%	0%	0%	**32.7%**	-	3.7%	7.0%	8.4%	0%	**19.1%**	-	**-**
PHF	0.673	0.956	-	-	**0.963**	-	0.800	0.962	0.830	-	**0.935**	-	0.750	0.901	-	-	**0.898**	-	0.912	0.875	0.837	-	**0.891**	-	0.982
Lights	35	1105	0	0	**1140**	-	47	300	269	0	**616**	-	23	1172	0	0	**1195**	-	132	258	305	0	**695**	-	3646
% Lights	100%	99.3%	0%	0%	**99.3%**	-	97.9%	98.7%	100%	0%	**99.2%**	-	95.8%	99.4%	0%	0%	**99.3%**	-	97.8%	99.6%	99.0%	0%	**99.0%**	-	99.2%
Single-Unit Trucks	0	7	0	0	**7**	-	1	4	0	0	**5**	-	1	5	0	0	**6**	-	2	1	2	0	**5**	-	23
% Single-Unit Trucks	0%	0.6%	0%	0%	**0.6%**	-	2.1%	1.3%	0%	0%	**0.8%**	-	4.2%	0.4%	0%	0%	**0.5%**	-	1.5%	0.4%	0.6%	0%	**0.7%**	-	0.6%
Articulated Trucks	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	1	0	**1**	-	2
% Articulated Trucks	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0.3%	0%	**0.1%**	-	0.1%
Buses	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	2	0	0	**2**	-	1	0	0	0	**1**	-	3
% Buses	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0.2%	0%	0%	**0.2%**	-	0.7%	0%	0%	0%	**0.1%**	-	0.1%
Bicycles on Road	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%
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	3	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (9) Route 1 @ Dean Street TMC - TMC

Sat Apr 2, 2022
PM Peak (WKND) (Apr 02 2022 1PM - 2 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936955, Location: 42.178851, -71.190601

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Providence Hwy (Route 1)						Dean Street						Providence Hwy (Route 1)						Dean Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-04-02 1:00PM	7	278	0	0	**285**	0	13	71	89	0	**173**	0	6	284	0	0	**290**	0	33	56	77	0	**166**	0	**914**
1:15PM	5	291	0	0	**296**	0	10	71	70	0	**151**	0	6	285	0	0	**291**	1	27	56	76	0	**159**	0	**897**
1:30PM	11	283	0	0	**294**	0	11	77	69	0	**157**	0	12	288	0	0	**300**	0	18	65	80	0	**163**	0	**914**
1:45PM	6	274	0	0	**280**	0	15	89	73	0	**177**	0	10	277	0	0	**287**	0	44	63	70	0	**177**	0	**921**
Total	29	1126	0	0	**1155**	0	49	308	301	0	**658**	0	34	1134	0	0	**1168**	1	122	240	303	0	**665**	0	**3646**
% Approach	2.5%	97.5%	0%	0%	**-**	-	7.4%	46.8%	45.7%	0%	**-**	-	2.9%	97.1%	0%	0%	**-**	-	18.3%	36.1%	45.6%	0%	**-**	-	**-**
% Total	0.8%	30.9%	0%	0%	**31.7%**	-	1.3%	8.4%	8.3%	0%	**18.0%**	-	0.9%	31.1%	0%	0%	**32.0%**	-	3.3%	6.6%	8.3%	0%	**18.2%**	-	-
PHF	0.659	0.967	-	-	**0.976**	-	0.817	0.865	0.846	-	**0.929**	-	0.708	0.984	-	-	**0.973**	-	0.693	0.923	0.947	-	**0.939**	-	0.990
Lights	29	1116	0	0	**1145**	-	48	306	301	0	**655**	-	34	1129	0	0	**1163**	-	121	240	301	0	**662**	-	3625
% Lights	100%	99.1%	0%	0%	**99.1%**	-	98.0%	99.4%	100%	0%	**99.5%**	-	100%	99.6%	0%	0%	**99.6%**	-	99.2%	100%	99.3%	0%	**99.5%**	-	99.4%
Single-Unit Trucks	0	9	0	0	**9**	-	1	2	0	0	**3**	-	0	4	0	0	**4**	-	1	0	2	0	**3**	-	19
% Single-Unit Trucks	0%	0.8%	0%	0%	**0.8%**	-	2.0%	0.6%	0%	0%	**0.5%**	-	0%	0.4%	0%	0%	**0.3%**	-	0.8%	0%	0.7%	0%	**0.5%**	-	0.5%
Articulated Trucks	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1
% Articulated Trucks	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Buses	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	1
% Buses	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0.1%	0%	0%	**0.1%**	-	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
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (10) Dean St @ Route 1 NB Offramp TMC - TMC

Thu Mar 31, 2022
Full Length (11 AM-2 PM, 6 AM-9 AM, 3 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936957, Location: 42.17889, -71.189826

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Gulf Driveway						Dean Street						Route 1 NB Offramp						Dean Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2022-03-31 6:00AM	1	0	0	0	**1**	0	0	42	7	0	**49**	0	4	1	4	0	**9**	0	3	12	2	0	**17**	0	**76**
6:15AM	0	0	0	0	**0**	1	0	52	4	0	**56**	0	8	0	7	0	**15**	0	6	14	0	0	**20**	1	**91**
6:30AM	2	0	0	0	**2**	0	0	64	1	0	**65**	0	15	0	24	0	**39**	0	6	21	0	0	**27**	0	**133**
6:45AM	1	0	0	0	**1**	0	0	109	9	0	**118**	0	23	0	20	0	**43**	0	10	23	0	0	**33**	0	**195**
Hourly Total	4	0	0	0	**4**	1	0	267	21	0	**288**	0	50	1	55	0	**106**	0	25	70	2	0	**97**	1	**495**
7:00AM	2	0	0	0	**2**	0	0	97	10	0	**107**	0	21	0	22	0	**43**	0	13	53	0	0	**66**	0	**218**
7:15AM	1	0	0	0	**1**	0	0	111	6	0	**117**	0	31	0	17	0	**48**	0	8	44	0	0	**52**	0	**218**
7:30AM	0	0	0	0	**0**	0	0	120	11	0	**131**	0	30	0	17	0	**47**	0	14	64	0	0	**78**	0	**256**
7:45AM	1	0	0	0	**1**	0	0	113	5	0	**118**	0	30	0	29	0	**59**	0	12	39	0	0	**51**	0	**229**
Hourly Total	4	0	0	0	**4**	0	0	441	32	0	**473**	0	112	0	85	0	**197**	0	47	200	0	0	**247**	0	**921**
8:00AM	3	0	0	0	**3**	0	5	106	9	0	**120**	0	37	0	22	0	**59**	0	5	50	0	0	**55**	0	**237**
8:15AM	2	0	0	0	**2**	0	5	120	5	0	**130**	0	37	0	34	0	**71**	0	10	56	0	0	**66**	0	**269**
8:30AM	0	0	0	0	**0**	0	3	127	9	0	**139**	0	53	0	23	0	**76**	0	18	49	0	0	**67**	0	**282**
8:45AM	0	0	0	0	**0**	0	4	142	11	0	**157**	0	38	0	22	0	**60**	0	10	50	0	0	**60**	0	**277**
Hourly Total	5	0	0	0	**5**	0	17	495	34	0	**546**	0	165	0	101	0	**266**	0	43	205	0	0	**248**	0	**1065**
3:00PM	2	0	0	0	**2**	0	4	128	4	0	**136**	1	48	0	29	0	**77**	1	2	70	0	0	**72**	0	**287**
3:15PM	1	0	0	0	**1**	0	2	100	9	0	**111**	1	53	0	35	0	**88**	2	11	70	0	0	**81**	0	**281**
3:30PM	0	0	0	0	**0**	0	3	132	4	0	**139**	0	51	1	35	0	**87**	0	5	92	0	0	**97**	0	**323**
3:45PM	4	0	0	0	**4**	0	2	142	3	0	**147**	0	63	0	31	0	**94**	0	6	71	0	0	**77**	0	**322**
Hourly Total	7	0	0	0	**7**	0	11	502	20	0	**533**	2	215	1	130	0	**346**	3	24	303	0	0	**327**	0	**1213**
4:00PM	0	0	0	0	**0**	0	0	99	5	0	**104**	0	77	0	34	0	**111**	0	7	81	1	0	**89**	0	**304**
4:15PM	3	0	0	0	**3**	0	0	130	2	0	**132**	0	49	0	30	0	**79**	1	6	73	0	0	**79**	0	**293**
4:30PM	3	0	0	0	**3**	0	0	125	4	0	**129**	0	64	1	29	0	**94**	0	5	59	0	0	**64**	0	**290**
4:45PM	1	0	0	0	**1**	0	0	124	4	0	**128**	0	56	1	30	0	**87**	0	2	69	0	0	**71**	0	**287**
Hourly Total	7	0	0	0	**7**	0	0	478	15	0	**493**	0	246	2	123	0	**371**	1	20	282	1	0	**303**	0	**1174**
5:00PM	1	0	0	0	**1**	0	1	141	4	0	**146**	0	100	1	28	0	**129**	0	3	79	0	1	**83**	0	**359**
5:15PM	2	0	0	0	**2**	0	0	117	4	0	**121**	0	76	0	34	0	**110**	0	5	62	0	0	**67**	0	**300**
5:30PM	1	0	0	0	**1**	0	1	125	4	0	**130**	0	69	0	35	0	**104**	0	7	69	0	0	**76**	0	**311**
5:45PM	0	0	0	0	**0**	0	0	122	0	0	**122**	0	47	0	34	0	**81**	0	3	45	1	0	**49**	0	**252**
Hourly Total	4	0	0	0	**4**	0	2	505	12	0	**519**	0	292	1	131	0	**424**	0	18	255	1	1	**275**	0	**1222**
2022-04-02 11:00AM	3	0	0	0	**3**	0	6	122	1	0	**129**	1	59	0	43	0	**102**	2	6	62	0	0	**68**	0	**302**
11:15AM	2	0	0	0	**2**	0	5	134	4	0	**143**	0	45	0	39	0	**84**	0	10	57	0	1	**68**	0	**297**
11:30AM	0	0	0	0	**0**	0	3	100	8	0	**111**	0	54	0	31	0	**85**	1	10	80	1	0	**91**	0	**287**
11:45AM	0	0	0	0	**0**	0	2	137	6	0	**145**	0	47	0	25	0	**72**	1	15	82	0	0	**97**	0	**314**
Hourly Total	5	0	0	0	**5**	0	16	493	19	0	**528**	1	205	0	138	0	**343**	4	41	281	1	1	**324**	0	**1200**
12:00PM	1	0	0	0	**1**	0	2	111	2	0	**115**	0	58	0	39	0	**97**	0	14	64	0	0	**78**	0	**291**
12:15PM	4	0	1	0	**5**	0	1	113	6	0	**120**	0	49	0	29	0	**78**	0	11	65	0	0	**76**	0	**279**
12:30PM	4	0	0	0	**4**	0	5	132	5	0	**142**	0	55	1	34	0	**90**	1	9	69	1	0	**79**	0	**315**
12:45PM	2	0	0	0	**2**	0	2	118	6	0	**126**	0	55	0	40	0	**95**	0	9	39	1	1	**50**	0	**273**
Hourly Total	11	0	1	0	**12**	0	10	474	19	0	**503**	0	217	1	142	0	**360**	1	43	237	2	1	**283**	0	**1158**
1:00PM	0	0	0	0	**0**	0	5	143	5	0	**153**	0	38	0	48	0	**86**	0	6	56	0	0	**62**	0	**301**
1:15PM	6	0	0	0	**6**	0	5	100	10	0	**115**	0	44	0	39	0	**83**	1	6	53	1	0	**60**	0	**264**
1:30PM	3	0	0	0	**3**	0	10	125	8	0	**143**	1	60	0	32	0	**92**	0	11	68	0	1	**80**	0	**318**
1:45PM	3	0	1	0	**4**	0	5	136	6	0	**147**	2	50	0	38	0	**88**	1	5	68	1	0	**74**	0	**313**
Hourly Total	12	0	1	0	**13**	0	25	504	29	0	**558**	3	192	0	157	0	**349**	2	28	245	2	1	**276**	0	**1196**
Total	59	0	2	0	**61**	1	81	4159	201	0	**4441**	6	1694	6	1062	0	**2762**	11	289	2078	9	4	**2380**	1	**9644**
% Approach	96.7%	0%	3.3%	0%	**-**	-	1.8%	93.7%	4.5%	0%	**-**	-	61.3%	0.2%	38.5%	0%	**-**	-	12.1%	87.3%	0.4%	0.2%	**-**	-	-
% Total	0.6%	0%	0%	0%	**0.6%**	-	0.8%	43.1%	2.1%	0%	**46.0%**	-	17.6%	0.1%	11.0%	0%	**28.6%**	-	3.0%	21.5%	0.1%	0%	**24.7%**	-	-
Lights	57	0	2	0	**59**	-	79	4087	199	0	**4365**	-	1670	6	1044	0	**2720**	-	289	2035	9	4	**2337**	-	9481
% Lights	96.6%	0%	100%	0%	**96.7%**	-	97.5%	98.3%	99.0%	0%	**98.3%**	-	98.6%	100%	98.3%	0%	**98.5%**	-	100%	97.9%	100%	100%	**98.2%**	-	98.3%
Single-Unit Trucks	2	0	0	0	**2**	-	0	48	2	0	**50**	-	19	0	13	0	**32**	-	0	29	0	0	**29**	-	113
% Single-Unit Trucks	3.4%	0%	0%	0%	**3.3%**	-	0%	1.2%	1.0%	0%	**1.1%**	-	1.1%	0%	1.2%	0%	**1.2%**	-	0%	1.4%	0%	0%	**1.2%**	-	1.2%
Articulated Trucks	0	0	0	0	**0**	-	0	5	0	0	**5**	-	1	0	5	0	**6**	-	0	4	0	0	**4**	-	15
% Articulated Trucks	0%	0%	0%	0%	**0%**	-	0%	0.1%	0%	0%	**0.1%**	-	0.1%	0%	0.5%	0%	**0.2%**	-	0%	0.2%	0%	0%	**0.2%**	-	0.2%
Buses	0	0	0	0	**0**	-	1	18	0	0	**19**	-	2	0	0	0	**2**	-	0	10	0	0	**10**	-	31
% Buses	0%	0%	0%	0%	**0%**	-	1.2%	0.4%	0%	0%	**0.4%**	-	0.1%	0%	0%	0%	**0.1%**	-	0%	0.5%	0%	0%	**0.4%**	-	0.3%
Bicycles on Road	0	0	0	0	**0**	-	1	1	0	0	**2**	-	2	0	0	0	**2**	-	0	0	0	0	**0**	-	4

Leg Direction	Gulf Driveway Southbound						Dean Street Westbound						Route 1 NB Offramp Northbound						Dean Street Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	1.2%	0%	0%	0%	**0%**	-	0.1%	0%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	4	-	-	-	-	-	7	-	-	-	-	-	1	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	66.7%	-	-	-	-	-	63.6%	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	4	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	33.3%	-	-	-	-	-	36.4%	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (10) Dean St @ Route 1 NB Offramp TMC - TMC

Thu Mar 31, 2022
AM Peak (Mar 31 2022 8AM - 9 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936957, Location: 42.17889, -71.189826

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg / Direction	Gulf Driveway Southbound						Dean Street Westbound						Route 1 NB Offramp Northbound						Dean Street Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-03-31 8:00AM	3	0	0	0	**3**	0	5	106	9	0	**120**	0	37	0	22	0	**59**	0	5	50	0	0	**55**	0	**237**
8:15AM	2	0	0	0	**2**	0	5	120	5	0	**130**	0	37	0	34	0	**71**	0	10	56	0	0	**66**	0	**269**
8:30AM	0	0	0	0	**0**	0	3	127	9	0	**139**	0	53	0	23	0	**76**	0	18	49	0	0	**67**	0	**282**
8:45AM	0	0	0	0	**0**	0	4	142	11	0	**157**	0	38	0	22	0	**60**	0	10	50	0	0	**60**	0	**277**
Total	5	0	0	0	**5**	0	17	495	34	0	**546**	0	165	0	101	0	**266**	0	43	205	0	0	**248**	0	**1065**
% Approach	100%	0%	0%	0%	**-**	-	3.1%	90.7%	6.2%	0%	**-**	-	62.0%	0%	38.0%	0%	**-**	-	17.3%	82.7%	0%	0%	**-**	-	-
% Total	0.5%	0%	0%	0%	**0.5%**	-	1.6%	46.5%	3.2%	0%	**51.3%**	-	15.5%	0%	9.5%	0%	**25.0%**	-	4.0%	19.2%	0%	0%	**23.3%**	-	-
PHF	0.417	-	-	-	**0.417**	-	0.850	0.871	0.773	-	**0.869**	-	0.778	-	0.743	-	**0.875**	-	0.597	0.915	-	-	**0.925**	-	0.944
Lights	4	0	0	0	**4**	-	16	479	33	0	**528**	-	160	0	98	0	**258**	-	43	191	0	0	**234**	-	1024
% Lights	80.0%	0%	0%	0%	**80.0%**	-	94.1%	96.8%	97.1%	0%	**96.7%**	-	97.0%	0%	97.0%	0%	**97.0%**	-	100%	93.2%	0%	0%	**94.4%**	-	96.2%
Single-Unit Trucks	1	0	0	0	**1**	-	0	10	1	0	**11**	-	4	0	1	0	**5**	-	0	11	0	0	**11**	-	28
% Single-Unit Trucks	20.0%	0%	0%	0%	**20.0%**	-	0%	2.0%	2.9%	0%	**2.0%**	-	2.4%	0%	1.0%	0%	**1.9%**	-	0%	5.4%	0%	0%	**4.4%**	-	2.6%
Articulated Trucks	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	0	2	0	**2**	-	0	0	0	0	**0**	-	3
% Articulated Trucks	0%	0%	0%	0%	**0%**	-	0%	0.2%	0%	0%	**0.2%**	-	0%	0%	2.0%	0%	**0.8%**	-	0%	0%	0%	0%	**0%**	-	0.3%
Buses	0	0	0	0	**0**	-	1	5	0	0	**6**	-	1	0	0	0	**1**	-	0	3	0	0	**3**	-	10
% Buses	0%	0%	0%	0%	**0%**	-	5.9%	1.0%	0%	0%	**1.1%**	-	0.6%	0%	0%	0%	**0.4%**	-	0%	1.5%	0%	0%	**1.2%**	-	0.9%
Bicycles on Road	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%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (10) Dean St @ Route 1 NB Offramp TMC - TMC

Thu Mar 31, 2022
PM Peak (Mar 31 2022 4:45PM - 5:45 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936957, Location: 42.17889, -71.189826

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Gulf Driveway						Dean Street						Route 1 NB Offramp						Dean Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-03-31 4:45PM	1	0	0	0	**1**	0	0	124	4	0	**128**	0	56	1	30	0	**87**	0	2	69	0	0	**71**	0	**287**
5:00PM	1	0	0	0	**1**	0	1	141	4	0	**146**	0	100	1	28	0	**129**	0	3	79	0	1	**83**	0	**359**
5:15PM	2	0	0	0	**2**	0	0	117	4	0	**121**	0	76	0	34	0	**110**	0	5	62	0	0	**67**	0	**300**
5:30PM	1	0	0	0	**1**	0	1	125	4	0	**130**	0	69	0	35	0	**104**	0	7	69	0	0	**76**	0	**311**
Total	5	0	0	0	**5**	0	2	507	16	0	**525**	0	301	2	127	0	**430**	0	17	279	0	1	**297**	0	**1257**
% Approach	100%	0%	0%	0%	**-**	-	0.4%	96.6%	3.0%	0%	**-**	-	70.0%	0.5%	29.5%	0%	**-**	-	5.7%	93.9%	0%	0.3%	**-**	-	-
% Total	0.4%	0%	0%	0%	**0.4%**	-	0.2%	40.3%	1.3%	0%	**41.8%**	-	23.9%	0.2%	10.1%	0%	**34.2%**	-	1.4%	22.2%	0%	0.1%	**23.6%**	-	-
PHF	0.625	-	-	-	**0.625**	-	0.500	0.899	1.000	-	**0.899**	-	0.753	0.500	0.907	-	**0.833**	-	0.607	0.883	-	0.250	**0.895**	-	0.875
Lights	5	0	0	0	**5**	-	2	503	16	0	**521**	-	301	2	127	0	**430**	-	17	276	0	1	**294**	-	1250
% Lights	100%	0%	0%	0%	**100%**	-	100%	99.2%	100%	0%	**99.2%**	-	100%	100%	100%	0%	**100%**	-	100%	98.9%	0%	100%	**99.0%**	-	99.4%
Single-Unit Trucks	0	0	0	0	**0**	-	0	3	0	0	**3**	-	0	0	0	0	**0**	-	0	2	0	0	**2**	-	5
% Single-Unit Trucks	0%	0%	0%	0%	**0%**	-	0%	0.6%	0%	0%	**0.6%**	-	0%	0%	0%	0%	**0%**	-	0%	0.7%	0%	0%	**0.7%**	-	0.4%
Articulated Trucks	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Articulated Trucks	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Buses	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	1	0	0	**1**	-	2
% Buses	0%	0%	0%	0%	**0%**	-	0%	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0%	0.4%	0%	0%	**0.3%**	-	0.2%
Bicycles on Road	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%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (10) Dean St @ Route 1 NB Offramp TMC - TMC

Sat Apr 2, 2022
Midday Peak (WKND) (Apr 02 2022 11AM - 12 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936957, Location: 42.17889, -71.189826

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Gulf Driveway						Dean Street						Route 1 NB Offramp						Dean Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-04-02 11:00AM	3	0	0	0	**3**	0	6	122	1	0	**129**	1	59	0	43	0	**102**	2	6	62	0	0	**68**	0	**302**
11:15AM	2	0	0	0	**2**	0	5	134	4	0	**143**	0	45	0	39	0	**84**	0	10	57	0	1	**68**	0	**297**
11:30AM	0	0	0	0	**0**	0	3	100	8	0	**111**	0	54	0	31	0	**85**	1	10	80	1	0	**91**	0	**287**
11:45AM	0	0	0	0	**0**	0	2	137	6	0	**145**	0	47	0	25	0	**72**	1	15	82	0	0	**97**	0	**314**
Total	5	0	0	0	**5**	0	16	493	19	0	**528**	1	205	0	138	0	**343**	4	41	281	1	1	**324**	0	**1200**
% Approach	100%	0%	0%	0%	**-**	-	3.0%	93.4%	3.6%	0%	**-**	-	59.8%	0%	40.2%	0%	**-**	-	12.7%	86.7%	0.3%	0.3%	**-**	-	-
% Total	0.4%	0%	0%	0%	**0.4%**	-	1.3%	41.1%	1.6%	0%	**44.0%**	-	17.1%	0%	11.5%	0%	**28.6%**	-	3.4%	23.4%	0.1%	0.1%	**27.0%**	-	-
PHF	0.417	-	-	-	**0.417**	-	0.667	0.900	0.594	-	**0.910**	-	0.869	-	0.802	-	**0.841**	-	0.683	0.857	0.250	0.250	**0.835**	-	0.955
Lights	5	0	0	0	**5**	-	16	486	19	0	**521**	-	204	0	136	0	**340**	-	41	279	1	1	**322**	-	1188
% Lights	100%	0%	0%	0%	**100%**	-	100%	98.6%	100%	0%	**98.7%**	-	99.5%	0%	98.6%	0%	**99.1%**	-	100%	99.3%	100%	100%	**99.4%**	-	99.0%
Single-Unit Trucks	0	0	0	0	**0**	-	0	6	0	0	**6**	-	1	0	2	0	**3**	-	0	2	0	0	**2**	-	11
% Single-Unit Trucks	0%	0%	0%	0%	**0%**	-	0%	1.2%	0%	0%	**1.1%**	-	0.5%	0%	1.4%	0%	**0.9%**	-	0%	0.7%	0%	0%	**0.6%**	-	0.9%
Articulated Trucks	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Articulated Trucks	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Buses	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1
% Buses	0%	0%	0%	0%	**0%**	-	0%	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Bicycles on Road	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%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	4	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (10) Dean St @ Route 1 NB Offramp TMC - TMC

Sat Apr 2, 2022
PM Peak (WKND) (Apr 02 2022 1PM - 2 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936957, Location: 42.17889, -71.189826

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Gulf Driveway						Dean Street						Route 1 NB Offramp						Dean Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-04-02 1:00PM	0	0	0	0	**0**	0	5	143	5	0	**153**	0	38	0	48	0	**86**	0	6	56	0	0	**62**	0	**301**
1:15PM	6	0	0	0	**6**	0	5	100	10	0	**115**	0	44	0	39	0	**83**	1	6	53	1	0	**60**	0	**264**
1:30PM	3	0	0	0	**3**	0	10	125	8	0	**143**	1	60	0	32	0	**92**	0	11	68	0	1	**80**	0	**318**
1:45PM	3	0	1	0	**4**	0	5	136	6	0	**147**	2	50	0	38	0	**88**	1	5	68	1	0	**74**	0	**313**
Total	12	0	1	0	**13**	0	25	504	29	0	**558**	3	192	0	157	0	**349**	2	28	245	2	1	**276**	0	**1196**
% Approach	92.3%	0%	7.7%	0%	**-**	-	4.5%	90.3%	5.2%	0%	**-**	-	55.0%	0%	45.0%	0%	**-**	-	10.1%	88.8%	0.7%	0.4%	**-**	-	-
% Total	1.0%	0%	0.1%	0%	**1.1%**	-	2.1%	42.1%	2.4%	0%	**46.7%**	-	16.1%	0%	13.1%	0%	**29.2%**	-	2.3%	20.5%	0.2%	0.1%	**23.1%**	-	-
PHF	0.500	-	0.250	-	**0.542**	-	0.600	0.881	0.725	-	**0.910**	-	0.800	-	0.818	-	**0.948**	-	0.636	0.901	0.500	0.250	**0.863**	-	0.939
Lights	12	0	1	0	**13**	-	24	500	29	0	**553**	-	189	0	157	0	**346**	-	28	245	2	1	**276**	-	1188
% Lights	100%	0%	100%	0%	**100%**	-	96.0%	99.2%	100%	0%	**99.1%**	-	98.4%	0%	100%	0%	**99.1%**	-	100%	100%	100%	100%	**100%**	-	99.3%
Single-Unit Trucks	0	0	0	0	**0**	-	0	4	0	0	**4**	-	3	0	0	0	**3**	-	0	0	0	0	**0**	-	7
% Single-Unit Trucks	0%	0%	0%	0%	**0%**	-	0%	0.8%	0%	0%	**0.7%**	-	1.6%	0%	0%	0%	**0.9%**	-	0%	0%	0%	0%	**0%**	-	0.6%
Articulated Trucks	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Articulated Trucks	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Buses	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Buses	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**	-	1	0	0	0	**1**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	4.0%	0%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	3	-	-	-	-	-	2	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (11) Route 1 @ River Ridge Road TMC - TMC

Thu Mar 31, 2022
Full Length (11 AM-2 PM, 6 AM-9 AM, 3 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936959, Location: 42.175931, -71.192666

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Providence Hwy (Route 1)					River Ridge Road					Providence Hwy (Route 1)					
Direction	Southbound					Westbound					Northbound					
Time	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	**Int**
2022-03-31 6:00AM	59	0	0	**59**	0	1	0	0	**1**	0	2	187	0	**189**	0	**249**
6:15AM	65	0	0	**65**	0	0	0	0	**0**	0	0	228	0	**228**	0	**293**
6:30AM	91	0	0	**91**	0	5	0	0	**5**	0	0	272	0	**272**	0	**368**
6:45AM	141	0	0	**141**	0	3	0	0	**3**	0	3	319	0	**322**	0	**466**
Hourly Total	356	0	0	**356**	0	9	0	0	**9**	0	5	1006	0	**1011**	0	**1376**
7:00AM	151	0	0	**151**	0	2	0	0	**2**	0	2	366	0	**368**	0	**521**
7:15AM	160	0	0	**160**	0	1	0	0	**1**	0	5	327	0	**332**	0	**493**
7:30AM	203	0	0	**203**	0	7	0	0	**7**	0	4	343	0	**347**	0	**557**
7:45AM	249	0	0	**249**	0	8	0	0	**8**	0	20	347	0	**367**	0	**624**
Hourly Total	763	0	0	**763**	0	18	0	0	**18**	0	31	1383	0	**1414**	0	**2195**
8:00AM	256	0	0	**256**	0	7	0	0	**7**	0	26	318	0	**344**	0	**607**
8:15AM	287	0	0	**287**	0	15	0	0	**15**	0	12	382	0	**394**	0	**696**
8:30AM	261	0	0	**261**	0	14	0	0	**14**	0	21	321	0	**342**	0	**617**
8:45AM	295	0	0	**295**	0	14	0	0	**14**	0	18	277	0	**295**	0	**604**
Hourly Total	1099	0	0	**1099**	0	50	0	0	**50**	0	77	1298	0	**1375**	0	**2524**
3:00PM	382	0	0	**382**	0	13	0	0	**13**	0	6	266	0	**272**	0	**667**
3:15PM	383	0	0	**383**	0	5	0	0	**5**	0	7	273	0	**280**	0	**668**
3:30PM	391	0	0	**391**	0	25	0	0	**25**	0	6	293	0	**299**	0	**715**
3:45PM	395	0	0	**395**	0	13	0	0	**13**	0	6	298	0	**304**	0	**712**
Hourly Total	1551	0	0	**1551**	0	56	0	0	**56**	0	25	1130	0	**1155**	0	**2762**
4:00PM	422	0	0	**422**	0	29	0	0	**29**	0	8	322	0	**330**	0	**781**
4:15PM	410	0	0	**410**	0	18	0	0	**18**	0	7	223	0	**230**	0	**658**
4:30PM	406	0	0	**406**	0	26	0	0	**26**	0	14	306	0	**320**	0	**752**
4:45PM	387	0	0	**387**	0	19	0	0	**19**	0	19	285	0	**304**	0	**710**
Hourly Total	1625	0	0	**1625**	0	92	0	0	**92**	0	48	1136	0	**1184**	0	**2901**
5:00PM	427	0	0	**427**	0	49	0	0	**49**	0	9	355	0	**364**	0	**840**
5:15PM	403	0	0	**403**	0	23	0	0	**23**	0	7	287	0	**294**	0	**720**
5:30PM	384	0	0	**384**	0	19	0	0	**19**	0	4	304	0	**308**	0	**711**
5:45PM	370	0	0	**370**	0	7	0	0	**7**	0	0	288	0	**288**	0	**665**
Hourly Total	1584	0	0	**1584**	0	98	0	0	**98**	0	20	1234	0	**1254**	0	**2936**
2022-04-02 11:00AM	350	0	0	**350**	0	8	0	0	**8**	0	5	331	0	**336**	0	**694**
11:15AM	352	0	0	**352**	0	11	0	0	**11**	0	3	328	0	**331**	0	**694**
11:30AM	324	0	0	**324**	0	9	0	0	**9**	0	5	337	0	**342**	0	**675**
11:45AM	378	0	0	**378**	0	7	0	0	**7**	0	4	361	0	**365**	0	**750**
Hourly Total	1404	0	0	**1404**	0	35	0	0	**35**	0	17	1357	0	**1374**	0	**2813**
12:00PM	418	0	0	**418**	0	8	0	0	**8**	0	4	342	0	**346**	0	**772**
12:15PM	427	0	0	**427**	0	10	0	0	**10**	0	2	343	0	**345**	0	**782**
12:30PM	421	0	0	**421**	0	6	0	0	**6**	0	6	367	0	**373**	0	**800**
12:45PM	447	0	0	**447**	0	4	0	0	**4**	2	5	381	0	**386**	2	**837**
Hourly Total	1713	0	0	**1713**	0	28	0	0	**28**	2	17	1433	0	**1450**	2	**3191**
1:00PM	407	0	0	**407**	0	10	0	0	**10**	0	10	344	0	**354**	0	**771**
1:15PM	409	0	0	**409**	0	8	0	0	**8**	0	6	371	0	**377**	0	**794**
1:30PM	378	0	0	**378**	0	15	0	0	**15**	1	9	344	0	**353**	0	**746**
1:45PM	403	0	0	**403**	0	15	0	0	**15**	0	6	340	0	**346**	0	**764**
Hourly Total	1597	0	0	**1597**	0	48	0	0	**48**	1	31	1399	0	**1430**	0	**3075**
Total	11692	0	0	**11692**	0	434	0	0	**434**	3	271	11376	0	**11647**	2	**23773**
% Approach	100%	0%	0%	**-**	-	100%	0%	0%	**-**	-	2.3%	97.7%	0%	**-**	-	-
% Total	49.2%	0%	0%	**49.2%**	-	1.8%	0%	0%	**1.8%**	-	1.1%	47.9%	0%	**49.0%**	-	-
Lights	11501	0	0	**11501**	-	429	0	0	**429**	-	268	11167	0	**11435**	-	23365
% Lights	98.4%	0%	0%	**98.4%**	-	98.8%	0%	0%	**98.8%**	-	98.9%	98.2%	0%	**98.2%**	-	98.3%
Single-Unit Trucks	132	0	0	**132**	-	5	0	0	**5**	-	3	140	0	**143**	-	280
% Single-Unit Trucks	1.1%	0%	0%	**1.1%**	-	1.2%	0%	0%	**1.2%**	-	1.1%	1.2%	0%	**1.2%**	-	1.2%

Leg	Providence Hwy (Route 1)					River Ridge Road					Providence Hwy (Route 1)					
Direction	Southbound					Westbound					Northbound					
Time	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	**Int**
Articulated Trucks	41	0	0	**41**	-	0	0	0	**0**	-	0	52	0	**52**	-	93
% Articulated Trucks	0.4%	0%	0%	**0.4%**	-	0%	0%	0%	**0%**	-	0%	0.5%	0%	**0.4%**	-	0.4%
Buses	17	0	0	**17**	-	0	0	0	**0**	-	0	17	0	**17**	-	34
% Buses	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	**0%**	-	0%	0.1%	0%	**0.1%**	-	0.1%
Bicycles on Road	1	0	0	**1**	-	0	0	0	**0**	-	0	0	0	**0**	-	1
% Bicycles on Road	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	0	-	-	-	-	3	-	-	-	-	2	
% Pedestrians	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (11) Route 1 @ River Ridge Road TMC - TMC

Thu Mar 31, 2022
AM Peak (Mar 31 2022 7:45AM - 8:45 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936959, Location: 42.175931, -71.192666

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg Direction	Providence Hwy (Route 1) Southbound					River Ridge Road Westbound					Providence Hwy (Route 1) Northbound					
Time	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	**Int**
2022-03-31 7:45AM	249	0	0	**249**	0	8	0	0	**8**	0	20	347	0	**367**	0	**624**
8:00AM	256	0	0	**256**	0	7	0	0	**7**	0	26	318	0	**344**	0	**607**
8:15AM	287	0	0	**287**	0	15	0	0	**15**	0	12	382	0	**394**	0	**696**
8:30AM	261	0	0	**261**	0	14	0	0	**14**	0	21	321	0	**342**	0	**617**
Total	1053	0	0	**1053**	0	44	0	0	**44**	0	79	1368	0	**1447**	0	**2544**
% Approach	100%	0%	0%	**-**	-	100%	0%	0%	**-**	-	5.5%	94.5%	0%	**-**	-	**-**
% Total	41.4%	0%	0%	**41.4%**	-	1.7%	0%	0%	**1.7%**	-	3.1%	53.8%	0%	**56.9%**	-	**-**
PHF	0.917	-	-	**0.917**	-	0.733	-	-	**0.733**	-	0.760	0.895	-	**0.918**	-	0.914
Lights	1018	0	0	**1018**	-	43	0	0	**43**	-	78	1328	0	**1406**	-	2467
% Lights	96.7%	0%	0%	**96.7%**	-	97.7%	0%	0%	**97.7%**	-	98.7%	97.1%	0%	**97.2%**	-	97.0%
Single-Unit Trucks	26	0	0	**26**	-	1	0	0	**1**	-	1	27	0	**28**	-	55
% Single-Unit Trucks	2.5%	0%	0%	**2.5%**	-	2.3%	0%	0%	**2.3%**	-	1.3%	2.0%	0%	**1.9%**	-	2.2%
Articulated Trucks	6	0	0	**6**	-	0	0	0	**0**	-	0	10	0	**10**	-	16
% Articulated Trucks	0.6%	0%	0%	**0.6%**	-	0%	0%	0%	**0%**	-	0%	0.7%	0%	**0.7%**	-	0.6%
Buses	3	0	0	**3**	-	0	0	0	**0**	-	0	3	0	**3**	-	6
% Buses	0.3%	0%	0%	**0.3%**	-	0%	0%	0%	**0%**	-	0%	0.2%	0%	**0.2%**	-	0.2%
Bicycles on Road	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%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (11) Route 1 @ River Ridge Road TMC - TMC

Thu Mar 31, 2022
PM Peak (Mar 31 2022 4:30PM - 5:30 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936959, Location: 42.175931, -71.192666

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg Direction	Providence Hwy (Route 1) Southbound					River Ridge Road Westbound					Providence Hwy (Route 1) Northbound					
Time	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	**Int**
2022-03-31 4:30PM	406	0	0	**406**	0	26	0	0	**26**	0	14	306	0	**320**	0	**752**
4:45PM	387	0	0	**387**	0	19	0	0	**19**	0	19	285	0	**304**	0	**710**
5:00PM	427	0	0	**427**	0	49	0	0	**49**	0	9	355	0	**364**	0	**840**
5:15PM	403	0	0	**403**	0	23	0	0	**23**	0	7	287	0	**294**	0	**720**
Total	1623	0	0	**1623**	0	117	0	0	**117**	0	49	1233	0	**1282**	0	**3022**
% Approach	100%	0%	0%	**-**	-	100%	0%	0%	**-**	-	3.8%	96.2%	0%	**-**	-	**-**
% Total	53.7%	0%	0%	**53.7%**	-	3.9%	0%	0%	**3.9%**	-	1.6%	40.8%	0%	**42.4%**	-	**-**
PHF	0.950	-	-	**0.950**	-	0.597	-	-	**0.597**	-	0.645	0.868	-	**0.880**	-	0.899
Lights	1606	0	0	**1606**	-	116	0	0	**116**	-	49	1215	0	**1264**	-	2986
% Lights	99.0%	0%	0%	**99.0%**	-	99.1%	0%	0%	**99.1%**	-	100%	98.5%	0%	**98.6%**	-	98.8%
Single-Unit Trucks	12	0	0	**12**	-	1	0	0	**1**	-	0	13	0	**13**	-	26
% Single-Unit Trucks	0.7%	0%	0%	**0.7%**	-	0.9%	0%	0%	**0.9%**	-	0%	1.1%	0%	**1.0%**	-	0.9%
Articulated Trucks	3	0	0	**3**	-	0	0	0	**0**	-	0	5	0	**5**	-	8
% Articulated Trucks	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	**0%**	-	0%	0.4%	0%	**0.4%**	-	0.3%
Buses	2	0	0	**2**	-	0	0	0	**0**	-	0	0	0	**0**	-	2
% Buses	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0.1%
Bicycles on Road	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%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (11) Route 1 @ River Ridge Road TMC - TMC

Sat Apr 2, 2022
Midday Peak (WKND) (Apr 02 2022 12:30PM - 1:30 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936959, Location: 42.175931, -71.192666

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Providence Hwy (Route 1)					River Ridge Road					Providence Hwy (Route 1)					
Direction	Southbound					Westbound					Northbound					
Time	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	**Int**
2022-04-02 12:30PM	421	0	0	**421**	0	6	0	0	**6**	0	6	367	0	**373**	0	**800**
12:45PM	447	0	0	**447**	0	4	0	0	**4**	2	5	381	0	**386**	2	**837**
1:00PM	407	0	0	**407**	0	10	0	0	**10**	0	10	344	0	**354**	0	**771**
1:15PM	409	0	0	**409**	0	8	0	0	**8**	0	6	371	0	**377**	0	**794**
Total	1684	0	0	**1684**	0	28	0	0	**28**	2	27	1463	0	**1490**	2	**3202**
% Approach	100%	0%	0%	**-**	-	100%	0%	0%	**-**	-	1.8%	98.2%	0%	**-**	-	**-**
% Total	52.6%	0%	0%	**52.6%**	-	0.9%	0%	0%	**0.9%**	-	0.8%	45.7%	0%	**46.5%**	-	**-**
PHF	0.942	-	-	**0.942**	-	0.700	-	-	**0.700**	-	0.675	0.960	-	**0.965**	-	0.956
Lights	1666	0	0	**1666**	-	27	0	0	**27**	-	27	1453	0	**1480**	-	3173
% Lights	98.9%	0%	0%	**98.9%**	-	96.4%	0%	0%	**96.4%**	-	100%	99.3%	0%	**99.3%**	-	99.1%
Single-Unit Trucks	17	0	0	**17**	-	1	0	0	**1**	-	0	8	0	**8**	-	26
% Single-Unit Trucks	1.0%	0%	0%	**1.0%**	-	3.6%	0%	0%	**3.6%**	-	0%	0.5%	0%	**0.5%**	-	0.8%
Articulated Trucks	0	0	0	**0**	-	0	0	0	**0**	-	0	0	0	**0**	-	0
% Articulated Trucks	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%
Buses	1	0	0	**1**	-	0	0	0	**0**	-	0	2	0	**2**	-	3
% Buses	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	**0%**	-	0%	0.1%	0%	**0.1%**	-	0.1%
Bicycles on Road	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%
Pedestrians	-	-	-	-	0	-	-	-	-	2	-	-	-	-	2	
% Pedestrians	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (11) Route 1 @ River Ridge Road TMC - TMC

Sat Apr 2, 2022
PM Peak (WKND) (Apr 02 2022 1PM - 2 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936959, Location: 42.175931, -71.192666

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Providence Hwy (Route 1)					River Ridge Road					Providence Hwy (Route 1)					
Direction	Southbound					Westbound					Northbound					
Time	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	**Int**
2022-04-02 1:00PM	407	0	0	**407**	0	10	0	0	**10**	0	10	344	0	**354**	0	**771**
1:15PM	409	0	0	**409**	0	8	0	0	**8**	0	6	371	0	**377**	0	**794**
1:30PM	378	0	0	**378**	0	15	0	0	**15**	1	9	344	0	**353**	0	**746**
1:45PM	403	0	0	**403**	0	15	0	0	**15**	0	6	340	0	**346**	0	**764**
Total	1597	0	0	**1597**	0	48	0	0	**48**	1	31	1399	0	**1430**	0	**3075**
% Approach	100%	0%	0%	**-**	-	100%	0%	0%	**-**	-	2.2%	97.8%	0%	**-**	-	**-**
% Total	51.9%	0%	0%	**51.9%**	-	1.6%	0%	0%	**1.6%**	-	1.0%	45.5%	0%	**46.5%**	-	**-**
PHF	0.976	-	-	**0.976**	-	0.800	-	-	**0.800**	-	0.775	0.943	-	**0.948**	-	0.968
Lights	1585	0	0	**1585**	-	47	0	0	**47**	-	31	1391	0	**1422**	-	3054
% Lights	99.2%	0%	0%	**99.2%**	-	97.9%	0%	0%	**97.9%**	-	100%	99.4%	0%	**99.4%**	-	99.3%
Single-Unit Trucks	10	0	0	**10**	-	1	0	0	**1**	-	0	7	0	**7**	-	18
% Single-Unit Trucks	0.6%	0%	0%	**0.6%**	-	2.1%	0%	0%	**2.1%**	-	0%	0.5%	0%	**0.5%**	-	0.6%
Articulated Trucks	2	0	0	**2**	-	0	0	0	**0**	-	0	0	0	**0**	-	2
% Articulated Trucks	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0.1%
Buses	0	0	0	**0**	-	0	0	0	**0**	-	0	1	0	**1**	-	1
% Buses	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	0.1%	0%	**0.1%**	-	0%
Bicycles on Road	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%
Pedestrians	-	-	-	-	0	-	-	-	-	1	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (12) Route 1 @ Vanderbilt Avenue TMC - TMC

Thu Mar 31, 2022
Full Length (11 AM-2 PM, 6 AM-9 AM, 3 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936960, Location: 42.172836, -71.194932

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Providence Hwy (Route 1)					Vanderbilt Avenue					Providence Hwy (Route 1)					
Direction	Southbound					Westbound					Northbound					
Time	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	**Int**
2022-03-31 6:00AM	53	0	0	**53**	0	1	0	0	**1**	0	7	192	0	**199**	0	**253**
6:15AM	63	0	0	**63**	0	6	0	0	**6**	0	12	233	0	**245**	0	**314**
6:30AM	88	0	0	**88**	0	11	0	0	**11**	0	18	282	0	**300**	0	**399**
6:45AM	139	0	0	**139**	0	9	0	0	**9**	0	23	336	0	**359**	0	**507**
Hourly Total	343	0	0	**343**	0	27	0	0	**27**	0	60	1043	0	**1103**	0	**1473**
7:00AM	144	0	0	**144**	0	12	0	0	**12**	0	19	351	0	**370**	0	**526**
7:15AM	139	0	0	**139**	0	4	0	0	**4**	0	33	331	0	**364**	0	**507**
7:30AM	180	0	0	**180**	0	10	0	0	**10**	0	22	345	0	**367**	0	**557**
7:45AM	228	0	0	**228**	0	12	0	0	**12**	0	32	360	0	**392**	0	**632**
Hourly Total	691	0	0	**691**	0	38	0	0	**38**	0	106	1387	0	**1493**	0	**2222**
8:00AM	230	0	0	**230**	0	9	0	0	**9**	0	29	347	0	**376**	0	**615**
8:15AM	239	0	0	**239**	0	14	0	0	**14**	0	38	391	0	**429**	0	**682**
8:30AM	242	0	0	**242**	0	8	0	0	**8**	0	41	332	0	**373**	0	**623**
8:45AM	282	0	0	**282**	0	7	0	0	**7**	0	42	287	0	**329**	0	**618**
Hourly Total	993	0	0	**993**	0	38	0	0	**38**	0	150	1357	0	**1507**	0	**2538**
3:00PM	374	0	0	**374**	0	22	0	0	**22**	0	26	245	0	**271**	0	**667**
3:15PM	393	0	0	**393**	0	24	0	1	**25**	0	28	265	0	**293**	0	**711**
3:30PM	414	0	0	**414**	0	26	0	0	**26**	0	34	258	0	**292**	0	**732**
3:45PM	437	0	0	**437**	0	27	0	0	**27**	0	22	283	0	**305**	0	**769**
Hourly Total	1618	0	0	**1618**	0	99	0	1	**100**	0	110	1051	0	**1161**	0	**2879**
4:00PM	433	0	0	**433**	0	30	0	0	**30**	0	29	281	0	**310**	0	**773**
4:15PM	436	0	0	**436**	0	14	0	0	**14**	0	20	209	0	**229**	0	**679**
4:30PM	415	0	0	**415**	0	43	0	0	**43**	0	25	280	0	**305**	0	**763**
4:45PM	390	0	0	**390**	0	44	0	0	**44**	0	31	265	0	**296**	0	**730**
Hourly Total	1674	0	0	**1674**	0	131	0	0	**131**	0	105	1035	0	**1140**	0	**2945**
5:00PM	461	0	0	**461**	0	83	0	0	**83**	0	33	270	0	**303**	0	**847**
5:15PM	417	0	0	**417**	0	54	0	0	**54**	0	31	242	0	**273**	0	**744**
5:30PM	396	0	0	**396**	0	50	0	0	**50**	0	46	250	0	**296**	0	**742**
5:45PM	376	0	0	**376**	0	41	0	0	**41**	0	43	239	0	**282**	0	**699**
Hourly Total	1650	0	0	**1650**	0	228	0	0	**228**	0	153	1001	0	**1154**	0	**3032**
2022-04-02 11:00AM	341	0	0	**341**	0	29	0	0	**29**	0	12	308	0	**320**	0	**690**
11:15AM	352	0	0	**352**	0	17	0	0	**17**	0	29	319	0	**348**	0	**717**
11:30AM	312	0	0	**312**	0	24	0	0	**24**	0	21	315	0	**336**	0	**672**
11:45AM	376	0	0	**376**	0	20	0	0	**20**	0	20	345	0	**365**	0	**761**
Hourly Total	1381	0	0	**1381**	0	90	0	0	**90**	0	82	1287	0	**1369**	0	**2840**
12:00PM	399	0	0	**399**	0	16	0	0	**16**	0	21	340	0	**361**	0	**776**
12:15PM	387	0	0	**387**	0	19	0	0	**19**	0	20	332	0	**352**	0	**758**
12:30PM	366	0	0	**366**	0	15	0	0	**15**	0	17	370	0	**387**	0	**768**
12:45PM	375	0	0	**375**	0	19	0	0	**19**	0	23	366	0	**389**	0	**783**
Hourly Total	1527	0	0	**1527**	0	69	0	0	**69**	0	81	1408	0	**1489**	0	**3085**
1:00PM	403	0	0	**403**	0	19	0	0	**19**	0	15	329	0	**344**	0	**766**
1:15PM	421	0	0	**421**	0	16	0	0	**16**	0	26	364	0	**390**	0	**827**
1:30PM	373	0	0	**373**	0	33	0	0	**33**	1	26	315	0	**341**	0	**747**
1:45PM	369	0	0	**369**	0	21	0	0	**21**	0	26	325	0	**351**	0	**741**
Hourly Total	1566	0	0	**1566**	0	89	0	0	**89**	1	93	1333	0	**1426**	0	**3081**
Total	11443	0	0	**11443**	0	809	0	1	**810**	1	940	10902	0	**11842**	0	**24095**
% Approach	100%	0%	0%	**-**	-	99.9%	0%	0.1%	**-**	-	7.9%	92.1%	0%	**-**	-	-
% Total	47.5%	0%	0%	**47.5%**	-	3.4%	0%	0%	**3.4%**	-	3.9%	45.2%	0%	**49.1%**	-	-
Lights	11262	0	0	**11262**	-	782	0	1	**783**	-	929	10710	0	**11639**	-	23684
% Lights	98.4%	0%	0%	**98.4%**	-	96.7%	0%	100%	**96.7%**	-	98.8%	98.2%	0%	**98.3%**	-	98.3%
Single-Unit Trucks	128	0	0	**128**	-	18	0	0	**18**	-	8	134	0	**142**	-	288
% Single-Unit Trucks	1.1%	0%	0%	**1.1%**	-	2.2%	0%	0%	**2.2%**	-	0.9%	1.2%	0%	**1.2%**	-	1.2%

Leg Direction	Providence Hwy (Route 1) Southbound					Vanderbilt Avenue Westbound					Providence Hwy (Route 1) Northbound					
Time	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	**Int**
Articulated Trucks	38	0	0	**38**	-	8	0	0	**8**	-	1	42	0	**43**	-	89
% Articulated Trucks	0.3%	0%	0%	**0.3%**	-	1.0%	0%	0%	**1.0%**	-	0.1%	0.4%	0%	**0.4%**	-	0.4%
Buses	15	0	0	**15**	-	1	0	0	**1**	-	2	16	0	**18**	-	34
% Buses	0.1%	0%	0%	**0.1%**	-	0.1%	0%	0%	**0.1%**	-	0.2%	0.1%	0%	**0.2%**	-	0.1%
Bicycles on Road	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%
Pedestrians	-	-	-	-	0	-	-	-	-	1	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (12) Route 1 @ Vanderbilt Avenue TMC - TMC

Thu Mar 31, 2022
AM Peak (Mar 31 2022 7:45AM - 8:45 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936960, Location: 42.172836, -71.194932

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Providence Hwy (Route 1)					Vanderbilt Avenue					Providence Hwy (Route 1)					
Direction	Southbound					Westbound					Northbound					
Time	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	**Int**
2022-03-31 7:45AM	228	0	0	**228**	0	12	0	0	**12**	0	32	360	0	**392**	0	**632**
8:00AM	230	0	0	**230**	0	9	0	0	**9**	0	29	347	0	**376**	0	**615**
8:15AM	239	0	0	**239**	0	14	0	0	**14**	0	38	391	0	**429**	0	**682**
8:30AM	242	0	0	**242**	0	8	0	0	**8**	0	41	332	0	**373**	0	**623**
Total	939	0	0	**939**	0	43	0	0	**43**	0	140	1430	0	**1570**	0	**2552**
% Approach	100%	0%	0%	**-**	-	100%	0%	0%	**-**	-	8.9%	91.1%	0%	**-**	-	**-**
% Total	36.8%	0%	0%	**36.8%**	-	1.7%	0%	0%	**1.7%**	-	5.5%	56.0%	0%	**61.5%**	-	**-**
PHF	0.970	-	-	**0.970**	-	0.768	-	-	**0.768**	-	0.854	0.914	-	**0.915**	-	0.935
Lights	906	0	0	**906**	-	41	0	0	**41**	-	137	1392	0	**1529**	-	2476
% Lights	96.5%	0%	0%	**96.5%**	-	95.3%	0%	0%	**95.3%**	-	97.9%	97.3%	0%	**97.4%**	-	97.0%
Single-Unit Trucks	25	0	0	**25**	-	2	0	0	**2**	-	2	27	0	**29**	-	56
% Single-Unit Trucks	2.7%	0%	0%	**2.7%**	-	4.7%	0%	0%	**4.7%**	-	1.4%	1.9%	0%	**1.8%**	-	2.2%
Articulated Trucks	6	0	0	**6**	-	0	0	0	**0**	-	0	8	0	**8**	-	14
% Articulated Trucks	0.6%	0%	0%	**0.6%**	-	0%	0%	0%	**0%**	-	0%	0.6%	0%	**0.5%**	-	0.5%
Buses	2	0	0	**2**	-	0	0	0	**0**	-	1	3	0	**4**	-	6
% Buses	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	**0%**	-	0.7%	0.2%	0%	**0.3%**	-	0.2%
Bicycles on Road	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%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (12) Route 1 @ Vanderbilt Avenue TMC - TMC

Thu Mar 31, 2022
PM Peak (Mar 31 2022 4:30PM - 5:30 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936960, Location: 42.172836, -71.194932

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg Direction	Providence Hwy (Route 1) Southbound					Vanderbilt Avenue Westbound					Providence Hwy (Route 1) Northbound					
Time	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	**Int**
2022-03-31 4:30PM	415	0	0	**415**	0	43	0	0	**43**	0	25	280	0	**305**	0	**763**
4:45PM	390	0	0	**390**	0	44	0	0	**44**	0	31	265	0	**296**	0	**730**
5:00PM	461	0	0	**461**	0	83	0	0	**83**	0	33	270	0	**303**	0	**847**
5:15PM	417	0	0	**417**	0	54	0	0	**54**	0	31	242	0	**273**	0	**744**
Total	1683	0	0	**1683**	0	224	0	0	**224**	0	120	1057	0	**1177**	0	**3084**
% Approach	100%	0%	0%	**-**	-	100%	0%	0%	**-**	-	10.2%	89.8%	0%	**-**	-	**-**
% Total	54.6%	0%	0%	**54.6%**	-	7.3%	0%	0%	**7.3%**	-	3.9%	34.3%	0%	**38.2%**	-	**-**
PHF	0.913	-	-	**0.913**	-	0.675	-	-	**0.675**	-	0.909	0.944	-	**0.965**	-	0.910
Lights	1671	0	0	**1671**	-	223	0	0	**223**	-	118	1041	0	**1159**	-	3053
% Lights	99.3%	0%	0%	**99.3%**	-	99.6%	0%	0%	**99.6%**	-	98.3%	98.5%	0%	**98.5%**	-	99.0%
Single-Unit Trucks	10	0	0	**10**	-	1	0	0	**1**	-	2	11	0	**13**	-	24
% Single-Unit Trucks	0.6%	0%	0%	**0.6%**	-	0.4%	0%	0%	**0.4%**	-	1.7%	1.0%	0%	**1.1%**	-	0.8%
Articulated Trucks	1	0	0	**1**	-	0	0	0	**0**	-	0	5	0	**5**	-	6
% Articulated Trucks	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	**0%**	-	0%	0.5%	0%	**0.4%**	-	0.2%
Buses	1	0	0	**1**	-	0	0	0	**0**	-	0	0	0	**0**	-	1
% Buses	0.1%	0%	0%	**0.1%**	-	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
% Bicycles on Road	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (12) Route 1 @ Vanderbilt Avenue TMC - TMC

Sat Apr 2, 2022
Midday Peak (WKND) (Apr 02 2022 12:30PM - 1:30 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936960, Location: 42.172836, -71.194932

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Providence Hwy (Route 1)					Vanderbilt Avenue					Providence Hwy (Route 1)					
Direction	Southbound					Westbound					Northbound					
Time	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	**Int**
2022-04-02 12:30PM	366	0	0	**366**	0	15	0	0	**15**	0	17	370	0	**387**	0	**768**
12:45PM	375	0	0	**375**	0	19	0	0	**19**	0	23	366	0	**389**	0	**783**
1:00PM	403	0	0	**403**	0	19	0	0	**19**	0	15	329	0	**344**	0	**766**
1:15PM	421	0	0	**421**	0	16	0	0	**16**	0	26	364	0	**390**	0	**827**
Total	1565	0	0	**1565**	0	69	0	0	**69**	0	81	1429	0	**1510**	0	**3144**
% Approach	100%	0%	0%	**-**	-	100%	0%	0%	**-**	-	5.4%	94.6%	0%	**-**	-	**-**
% Total	49.8%	0%	0%	**49.8%**	-	2.2%	0%	0%	**2.2%**	-	2.6%	45.5%	0%	**48.0%**	-	**-**
PHF	0.929	-	-	**0.929**	-	0.908	-	-	**0.908**	-	0.779	0.966	-	**0.968**	-	0.950
Lights	1550	0	0	**1550**	-	69	0	0	**69**	-	81	1417	0	**1498**	-	3117
% Lights	99.0%	0%	0%	**99.0%**	-	100%	0%	0%	**100%**	-	100%	99.2%	0%	**99.2%**	-	99.1%
Single-Unit Trucks	14	0	0	**14**	-	0	0	0	**0**	-	0	10	0	**10**	-	24
% Single-Unit Trucks	0.9%	0%	0%	**0.9%**	-	0%	0%	0%	**0%**	-	0%	0.7%	0%	**0.7%**	-	0.8%
Articulated Trucks	0	0	0	**0**	-	0	0	0	**0**	-	0	0	0	**0**	-	0
% Articulated Trucks	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%
Buses	1	0	0	**1**	-	0	0	0	**0**	-	0	2	0	**2**	-	3
% Buses	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	**0%**	-	0%	0.1%	0%	**0.1%**	-	0.1%
Bicycles on Road	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%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (12) Route 1 @ Vanderbilt Avenue TMC - TMC

Sat Apr 2, 2022
PM Peak (WKND) (Apr 02 2022 1PM - 2 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936960, Location: 42.172836, -71.194932

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg Direction	Providence Hwy (Route 1) Southbound					Vanderbilt Avenue Westbound					Providence Hwy (Route 1) Northbound					
Time	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	**Int**
2022-04-02 1:00PM	403	0	0	**403**	0	19	0	0	**19**	0	15	329	0	**344**	0	**766**
1:15PM	421	0	0	**421**	0	16	0	0	**16**	0	26	364	0	**390**	0	**827**
1:30PM	373	0	0	**373**	0	33	0	0	**33**	1	26	315	0	**341**	0	**747**
1:45PM	369	0	0	**369**	0	21	0	0	**21**	0	26	325	0	**351**	0	**741**
Total	1566	0	0	**1566**	0	89	0	0	**89**	1	93	1333	0	**1426**	0	**3081**
% Approach	100%	0%	0%	**-**	-	100%	0%	0%	**-**	-	6.5%	93.5%	0%	**-**	-	**-**
% Total	50.8%	0%	0%	**50.8%**	-	2.9%	0%	0%	**2.9%**	-	3.0%	43.3%	0%	**46.3%**	-	**-**
PHF	0.930	-	-	**0.930**	-	0.674	-	-	**0.674**	-	0.894	0.916	-	**0.914**	-	0.931
Lights	1555	0	0	**1555**	-	89	0	0	**89**	-	93	1323	0	**1416**	-	3060
% Lights	99.3%	0%	0%	**99.3%**	-	100%	0%	0%	**100%**	-	100%	99.2%	0%	**99.3%**	-	99.3%
Single-Unit Trucks	9	0	0	**9**	-	0	0	0	**0**	-	0	9	0	**9**	-	18
% Single-Unit Trucks	0.6%	0%	0%	**0.6%**	-	0%	0%	0%	**0%**	-	0%	0.7%	0%	**0.6%**	-	0.6%
Articulated Trucks	2	0	0	**2**	-	0	0	0	**0**	-	0	0	0	**0**	-	2
% Articulated Trucks	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0.1%
Buses	0	0	0	**0**	-	0	0	0	**0**	-	0	1	0	**1**	-	1
% Buses	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	0.1%	0%	**0.1%**	-	0%
Bicycles on Road	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%
Pedestrians	-	-	-	-	0	-	-	-	-	1	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (13) Route 1 @ Morse Street TMC - TMC

Thu Mar 31, 2022
Full Length (11 AM-2 PM, 6 AM-9 AM, 3 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936964, Location: 42.171157, -71.1962

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Providence Hwy (Route 1)						Morse Street						Providence Hwy (Route 1)						Morse Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2022-03-31 6:00AM	5	32	10	6	**53**	0	8	2	4	0	**14**	0	13	172	7	0	**192**	0	3	2	11	0	**16**	0	**275**
6:15AM	11	36	6	10	**63**	0	9	5	5	0	**19**	0	11	217	6	0	**234**	0	3	4	18	0	**25**	0	**341**
6:30AM	13	53	13	12	**91**	0	4	5	2	0	**11**	0	17	265	11	3	**296**	0	5	6	15	0	**26**	0	**424**
6:45AM	22	74	20	20	**136**	0	14	3	10	0	**27**	0	29	291	13	1	**334**	0	5	7	38	0	**50**	0	**547**
Hourly Total	51	195	49	48	**343**	0	35	15	21	0	**71**	0	70	945	37	4	**1056**	0	16	19	82	0	**117**	0	**1587**
7:00AM	28	78	23	17	**146**	0	15	9	4	0	**28**	0	22	305	8	0	**335**	0	2	10	27	0	**39**	0	**548**
7:15AM	21	60	18	30	**129**	0	7	8	10	0	**25**	0	26	283	14	2	**325**	0	2	11	50	0	**63**	0	**542**
7:30AM	32	113	23	21	**189**	0	6	4	8	0	**18**	0	39	311	31	5	**386**	0	5	8	24	0	**37**	0	**630**
7:45AM	21	115	30	43	**209**	0	12	9	15	0	**36**	0	33	306	22	3	**364**	0	8	16	29	0	**53**	0	**662**
Hourly Total	102	366	94	111	**673**	0	40	30	37	0	**107**	0	120	1205	75	10	**1410**	0	17	45	130	0	**192**	0	**2382**
8:00AM	23	144	30	47	**244**	0	18	11	18	0	**47**	0	42	282	17	5	**346**	0	11	8	46	0	**65**	0	**702**
8:15AM	28	138	23	38	**227**	0	13	11	14	0	**38**	0	32	341	25	4	**402**	0	4	14	35	0	**53**	0	**720**
8:30AM	28	134	24	59	**245**	0	11	15	18	0	**44**	0	31	258	24	12	**325**	0	8	9	47	0	**64**	0	**678**
8:45AM	32	144	45	59	**280**	0	12	12	24	0	**48**	0	42	215	38	8	**303**	0	5	9	39	0	**53**	0	**684**
Hourly Total	111	560	122	203	**996**	0	54	49	74	0	**177**	0	147	1096	104	29	**1376**	0	28	40	167	0	**235**	0	**2784**
3:00PM	36	266	21	40	**363**	0	18	12	31	0	**61**	0	10	172	17	5	**204**	0	12	7	39	0	**58**	0	**686**
3:15PM	36	294	32	38	**400**	0	14	13	26	0	**53**	0	13	212	11	2	**238**	0	8	10	28	0	**46**	0	**737**
3:30PM	25	318	27	45	**415**	0	17	19	45	0	**81**	0	26	179	12	5	**222**	0	17	11	46	0	**74**	0	**792**
3:45PM	32	294	41	67	**434**	0	12	15	40	0	**67**	0	23	181	20	8	**232**	0	17	17	40	0	**74**	0	**807**
Hourly Total	129	1172	121	190	**1612**	0	61	59	142	0	**262**	0	72	744	60	20	**896**	0	54	45	153	0	**252**	0	**3022**
4:00PM	30	317	32	46	**425**	0	16	23	54	0	**93**	0	20	208	17	9	**254**	0	22	19	47	0	**88**	0	**860**
4:15PM	28	268	52	42	**390**	0	11	29	50	0	**90**	0	18	150	18	2	**188**	0	11	16	33	0	**60**	0	**728**
4:30PM	26	281	48	46	**401**	0	23	26	66	0	**115**	0	20	192	14	4	**230**	0	18	17	49	0	**84**	0	**830**
4:45PM	28	296	41	43	**408**	1	19	21	64	0	**104**	0	17	184	16	4	**221**	0	18	20	53	0	**91**	0	**824**
Hourly Total	112	1162	173	177	**1624**	1	69	99	234	0	**402**	0	75	734	65	19	**893**	0	69	72	182	0	**323**	0	**3242**
5:00PM	27	319	26	51	**423**	2	13	42	84	0	**139**	0	12	173	13	3	**201**	1	25	13	69	0	**107**	1	**870**
5:15PM	29	312	45	50	**436**	1	15	27	80	0	**122**	0	26	187	13	4	**230**	0	18	29	29	0	**76**	0	**864**
5:30PM	28	286	40	52	**406**	1	17	29	54	1	**101**	1	20	186	17	3	**226**	0	13	14	47	0	**74**	1	**807**
5:45PM	31	258	36	46	**371**	0	13	31	41	0	**85**	0	36	186	18	7	**247**	0	16	12	35	0	**63**	0	**766**
Hourly Total	115	1175	147	199	**1636**	4	58	129	259	1	**447**	1	94	732	61	17	**904**	1	72	68	180	0	**320**	2	**3307**
2022-04-02 11:00AM	35	252	19	40	**346**	0	21	17	31	0	**69**	0	11	231	13	4	**259**	0	14	8	35	0	**57**	0	**731**
11:15AM	36	241	34	37	**348**	0	27	13	31	0	**71**	0	26	250	10	2	**288**	0	10	10	41	0	**61**	0	**768**
11:30AM	46	234	20	33	**333**	0	22	21	61	0	**104**	0	20	248	23	7	**298**	0	12	6	31	0	**49**	0	**784**
11:45AM	42	271	22	38	**373**	0	19	10	30	0	**59**	0	20	266	14	4	**304**	0	17	10	38	0	**65**	0	**801**
Hourly Total	159	998	95	148	**1400**	0	89	61	153	0	**303**	0	77	995	60	17	**1149**	0	53	34	145	0	**232**	0	**3084**
12:00PM	44	291	31	39	**405**	0	28	15	43	0	**86**	0	20	245	19	6	**290**	0	16	8	39	0	**63**	0	**844**
12:15PM	34	281	27	30	**372**	0	19	5	22	0	**46**	0	18	254	31	5	**308**	0	12	5	53	0	**70**	0	**796**
12:30PM	32	275	26	45	**378**	0	16	9	24	0	**49**	0	14	285	18	6	**323**	0	14	17	46	0	**77**	0	**827**
12:45PM	37	267	23	31	**358**	0	21	14	29	0	**64**	0	23	298	12	5	**338**	0	11	14	46	0	**71**	0	**831**
Hourly Total	147	1114	107	145	**1513**	0	84	43	118	0	**245**	0	75	1082	80	22	**1259**	0	53	44	184	0	**281**	0	**3298**
1:00PM	41	292	19	44	**396**	0	14	9	25	0	**48**	0	17	251	20	5	**293**	0	9	11	43	0	**63**	0	**800**
1:15PM	47	269	27	32	**375**	0	21	12	31	0	**64**	0	14	288	25	5	**332**	0	8	10	36	0	**54**	0	**825**
1:30PM	43	277	22	46	**388**	0	13	7	30	0	**50**	0	10	260	21	6	**297**	0	11	6	28	0	**45**	0	**780**
1:45PM	36	272	35	45	**388**	1	21	8	28	0	**57**	0	17	260	17	3	**297**	0	10	12	33	0	**55**	0	**797**
Hourly Total	167	1110	103	167	**1547**	1	69	36	114	0	**219**	0	58	1059	83	19	**1219**	0	38	39	140	0	**217**	0	**3202**
Total	1093	7852	1011	1388	**11344**	6	559	521	1152	1	**2233**	1	788	8592	625	157	**10162**	1	400	406	1363	0	**2169**	2	**25908**
% Approach	9.6%	69.2%	8.9%	12.2%	**-**	-	25.0%	23.3%	51.6%	0%	**-**	-	7.8%	84.6%	6.2%	1.5%	**-**	-	18.4%	18.7%	62.8%	0%	**-**	-	-
% Total	4.2%	30.3%	3.9%	5.4%	**43.8%**	-	2.2%	2.0%	4.4%	0%	**8.6%**	-	3.0%	33.2%	2.4%	0.6%	**39.2%**	-	1.5%	1.6%	5.3%	0%	**8.4%**	-	-
Lights	1065	7723	981	1379	**11148**	-	540	514	1126	1	**2181**	-	770	8441	616	154	**9981**	-	383	404	1337	0	**2124**	-	25434
% Lights	97.4%	98.4%	97.0%	99.4%	**98.3%**	-	96.6%	98.7%	97.7%	100%	**97.7%**	-	97.7%	98.2%	98.6%	98.1%	**98.2%**	-	95.8%	99.5%	98.1%	0%	**97.9%**	-	98.2%
Single-Unit Trucks	14	96	22	8	**140**	-	15	7	13	0	**35**	-	12	103	8	3	**126**	-	15	1	16	0	**32**	-	333
% Single-Unit Trucks	1.3%	1.2%	2.2%	0.6%	**1.2%**	-	2.7%	1.3%	1.1%	0%	**1.6%**	-	1.5%	1.2%	1.3%	1.9%	**1.2%**	-	3.8%	0.2%	1.2%	0%	**1.5%**	-	1.3%
Articulated Trucks	7	24	8	1	**40**	-	4	0	12	0	**16**	-	6	37	1	0	**44**	-	2	0	3	0	**5**	-	105
% Articulated Trucks	0.6%	0.3%	0.8%	0.1%	**0.4%**	-	0.7%	0%	1.0%	0%	**0.7%**	-	0.8%	0.4%	0.2%	0%	**0.4%**	-	0.5%	0%	0.2%	0%	**0.2%**	-	0.4%
Buses	7	9	0	0	**16**	-	0	0	1	0	**1**	-	0	11	0	0	**11**	-	0	0	7	0	**7**	-	35
% Buses	0.6%	0.1%	0%	0%	**0.1%**	-	0%	0%	0.1%	0%	**0%**	-	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0.5%	0%	**0.3%**	-	0.1%
Bicycles on Road	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	1	0	0	**1**	-	1
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0.2%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	6	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	2	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	

Leg	Providence Hwy (Route 1)						Morse Street						Providence Hwy (Route 1)						Morse Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (13) Route 1 @ Morse Street TMC - TMC

Thu Mar 31, 2022
AM Peak (Mar 31 2022 8AM - 9 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936964, Location: 42.171157, -71.1962

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Providence Hwy (Route 1)						Morse Street						Providence Hwy (Route 1)						Morse Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-03-31 8:00AM	23	144	30	47	**244**	0	18	11	18	0	**47**	0	42	282	17	5	**346**	0	11	8	46	0	**65**	0	**702**
8:15AM	28	138	23	38	**227**	0	13	11	14	0	**38**	0	32	341	25	4	**402**	0	4	14	35	0	**53**	0	**720**
8:30AM	28	134	24	59	**245**	0	11	15	18	0	**44**	0	31	258	24	12	**325**	0	8	9	47	0	**64**	0	**678**
8:45AM	32	144	45	59	**280**	0	12	12	24	0	**48**	0	42	215	38	8	**303**	0	5	9	39	0	**53**	0	**684**
Total	111	560	122	203	**996**	0	54	49	74	0	**177**	0	147	1096	104	29	**1376**	0	28	40	167	0	**235**	0	**2784**
% Approach	11.1%	56.2%	12.2%	20.4%	**-**	-	30.5%	27.7%	41.8%	0%	**-**	-	10.7%	79.7%	7.6%	2.1%	**-**	-	11.9%	17.0%	71.1%	0%	**-**	-	-
% Total	4.0%	20.1%	4.4%	7.3%	**35.8%**	-	1.9%	1.8%	2.7%	0%	**6.4%**	-	5.3%	39.4%	3.7%	1.0%	**49.4%**	-	1.0%	1.4%	6.0%	0%	**8.4%**	-	-
PHF	0.867	0.972	0.678	0.860	**0.889**	-	0.750	0.817	0.771	-	**0.922**	-	0.875	0.804	0.684	0.604	**0.856**	-	0.636	0.714	0.888	-	**0.904**	-	0.967
Lights	106	536	117	201	**960**	-	52	49	69	0	**170**	-	140	1064	102	28	**1334**	-	27	40	161	0	**228**	-	2692
% Lights	95.5%	95.7%	95.9%	99.0%	**96.4%**	-	96.3%	100%	93.2%	0%	**96.0%**	-	95.2%	97.1%	98.1%	96.6%	**96.9%**	-	96.4%	100%	96.4%	0%	**97.0%**	-	96.7%
Single-Unit Trucks	3	19	4	2	**28**	-	1	0	3	0	**4**	-	5	24	2	1	**32**	-	0	0	2	0	**2**	-	66
% Single-Unit Trucks	2.7%	3.4%	3.3%	1.0%	**2.8%**	-	1.9%	0%	4.1%	0%	**2.3%**	-	3.4%	2.2%	1.9%	3.4%	**2.3%**	-	0%	0%	1.2%	0%	**0.9%**	-	2.4%
Articulated Trucks	1	3	1	0	**5**	-	1	0	1	0	**2**	-	2	8	0	0	**10**	-	1	0	0	0	**1**	-	18
% Articulated Trucks	0.9%	0.5%	0.8%	0%	**0.5%**	-	1.9%	0%	1.4%	0%	**1.1%**	-	1.4%	0.7%	0%	0%	**0.7%**	-	3.6%	0%	0%	0%	**0.4%**	-	0.6%
Buses	1	2	0	0	**3**	-	0	0	1	0	**1**	-	0	0	0	0	**0**	-	0	0	4	0	**4**	-	8
% Buses	0.9%	0.4%	0%	0%	**0.3%**	-	0%	0%	1.4%	0%	**0.6%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	2.4%	0%	**1.7%**	-	0.3%
Bicycles on Road	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%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (13) Route 1 @ Morse Street TMC - TMC

Thu Mar 31, 2022
PM Peak (Mar 31 2022 4:30PM - 5:30 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936964, Location: 42.171157, -71.1962

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg Direction	Providence Hwy (Route 1) Southbound						Morse Street Westbound						Providence Hwy (Route 1) Northbound						Morse Street Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-03-31 4:30PM	26	281	48	46	**401**	0	23	26	66	0	**115**	0	20	192	14	4	**230**	0	18	17	49	0	**84**	0	**830**
4:45PM	28	296	41	43	**408**	1	19	21	64	0	**104**	0	17	184	16	4	**221**	0	18	20	53	0	**91**	0	**824**
5:00PM	27	319	26	51	**423**	2	13	42	84	0	**139**	0	12	173	13	3	**201**	1	25	13	69	0	**107**	1	**870**
5:15PM	29	312	45	50	**436**	1	15	27	80	0	**122**	0	26	187	13	4	**230**	0	18	29	29	0	**76**	0	**864**
Total	110	1208	160	190	**1668**	4	70	116	294	0	**480**	0	75	736	56	15	**882**	1	79	79	200	0	**358**	1	**3388**
% Approach	6.6%	72.4%	9.6%	11.4%	**-**	-	14.6%	24.2%	61.3%	0%	**-**	-	8.5%	83.4%	6.3%	1.7%	**-**	-	22.1%	22.1%	55.9%	0%	**-**	-	**-**
% Total	3.2%	35.7%	4.7%	5.6%	**49.2%**	-	2.1%	3.4%	8.7%	0%	**14.2%**	-	2.2%	21.7%	1.7%	0.4%	**26.0%**	-	2.3%	2.3%	5.9%	0%	**10.6%**	-	**-**
PHF	0.948	0.947	0.833	0.931	**0.956**	-	0.761	0.690	0.875	-	**0.863**	-	0.721	0.958	0.875	0.938	**0.959**	-	0.790	0.681	0.725	-	**0.836**	-	0.974
Lights	107	1199	156	189	**1651**	-	68	114	289	0	**471**	-	75	727	55	15	**872**	-	73	79	194	0	**346**	-	3340
% Lights	97.3%	99.3%	97.5%	99.5%	**99.0%**	-	97.1%	98.3%	98.3%	0%	**98.1%**	-	100%	98.8%	98.2%	100%	**98.9%**	-	92.4%	100%	97.0%	0%	**96.6%**	-	98.6%
Single-Unit Trucks	2	6	4	1	**13**	-	2	2	4	0	**8**	-	0	5	1	0	**6**	-	6	0	4	0	**10**	-	37
% Single-Unit Trucks	1.8%	0.5%	2.5%	0.5%	**0.8%**	-	2.9%	1.7%	1.4%	0%	**1.7%**	-	0%	0.7%	1.8%	0%	**0.7%**	-	7.6%	0%	2.0%	0%	**2.8%**	-	1.1%
Articulated Trucks	1	1	0	0	**2**	-	0	0	1	0	**1**	-	0	4	0	0	**4**	-	0	0	2	0	**2**	-	9
% Articulated Trucks	0.9%	0.1%	0%	0%	**0.1%**	-	0%	0%	0.3%	0%	**0.2%**	-	0%	0.5%	0%	0%	**0.5%**	-	0%	0%	1.0%	0%	**0.6%**	-	0.3%
Buses	0	2	0	0	**2**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	2
% Buses	0%	0.2%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Bicycles on Road	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%
Pedestrians	-	-	-	-	-	4	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	1	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (13) Route 1 @ Morse Street TMC - TMC

Sat Apr 2, 2022
Midday Peak (WKND) (Apr 02 2022 12PM - 1 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936964, Location: 42.171157, -71.1962

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Providence Hwy (Route 1)						Morse Street						Providence Hwy (Route 1)						Morse Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-04-02 12:00PM	44	291	31	39	**405**	0	28	15	43	0	**86**	0	20	245	19	6	**290**	0	16	8	39	0	**63**	0	**844**
12:15PM	34	281	27	30	**372**	0	19	5	22	0	**46**	0	18	254	31	5	**308**	0	12	5	53	0	**70**	0	**796**
12:30PM	32	275	26	45	**378**	0	16	9	24	0	**49**	0	14	285	18	6	**323**	0	14	17	46	0	**77**	0	**827**
12:45PM	37	267	23	31	**358**	0	21	14	29	0	**64**	0	23	298	12	5	**338**	0	11	14	46	0	**71**	0	**831**
Total	147	1114	107	145	**1513**	0	84	43	118	0	**245**	0	75	1082	80	22	**1259**	0	53	44	184	0	**281**	0	**3298**
% Approach	9.7%	73.6%	7.1%	9.6%	**-**	-	34.3%	17.6%	48.2%	0%	**-**	-	6.0%	85.9%	6.4%	1.7%	**-**	-	18.9%	15.7%	65.5%	0%	**-**	-	-
% Total	4.5%	33.8%	3.2%	4.4%	**45.9%**	-	2.5%	1.3%	3.6%	0%	**7.4%**	-	2.3%	32.8%	2.4%	0.7%	**38.2%**	-	1.6%	1.3%	5.6%	0%	**8.5%**	-	-
PHF	0.835	0.957	0.863	0.806	**0.934**	-	0.750	0.717	0.686	-	**0.712**	-	0.815	0.908	0.645	0.917	**0.931**	-	0.828	0.647	0.868	-	**0.912**	-	0.977
Lights	147	1105	106	145	**1503**	-	82	43	117	0	**242**	-	75	1075	80	22	**1252**	-	52	44	184	0	**280**	-	3277
% Lights	100%	99.2%	99.1%	100%	**99.3%**	-	97.6%	100%	99.2%	0%	**98.8%**	-	100%	99.4%	100%	100%	**99.4%**	-	98.1%	100%	100%	0%	**99.6%**	-	99.4%
Single-Unit Trucks	0	7	1	0	**8**	-	2	0	0	0	**2**	-	0	5	0	0	**5**	-	0	0	0	0	**0**	-	15
% Single-Unit Trucks	0%	0.6%	0.9%	0%	**0.5%**	-	2.4%	0%	0%	0%	**0.8%**	-	0%	0.5%	0%	0%	**0.4%**	-	0%	0%	0%	0%	**0%**	-	0.5%
Articulated Trucks	0	1	0	0	**1**	-	0	0	1	0	**1**	-	0	0	0	0	**0**	-	1	0	0	0	**1**	-	3
% Articulated Trucks	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0.8%	0%	**0.4%**	-	0%	0%	0%	0%	**0%**	-	1.9%	0%	0%	0%	**0.4%**	-	0.1%
Buses	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	2	0	0	**2**	-	0	0	0	0	**0**	-	3
% Buses	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0%	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Bicycles on Road	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%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (13) Route 1 @ Morse Street TMC - TMC

Sat Apr 2, 2022
PM Peak (WKND) (Apr 02 2022 1PM - 2 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936964, Location: 42.171157, -71.1962

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg / Direction	Providence Hwy (Route 1) Southbound						Morse Street Westbound						Providence Hwy (Route 1) Northbound						Morse Street Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-04-02 1:00PM	41	292	19	44	**396**	0	14	9	25	0	**48**	0	17	251	20	5	**293**	0	9	11	43	0	**63**	0	**800**
1:15PM	47	269	27	32	**375**	0	21	12	31	0	**64**	0	14	288	25	5	**332**	0	8	10	36	0	**54**	0	**825**
1:30PM	43	277	22	46	**388**	0	13	7	30	0	**50**	0	10	260	21	6	**297**	0	11	6	28	0	**45**	0	**780**
1:45PM	36	272	35	45	**388**	1	21	8	28	0	**57**	0	17	260	17	3	**297**	0	10	12	33	0	**55**	0	**797**
Total	167	1110	103	167	**1547**	1	69	36	114	0	**219**	0	58	1059	83	19	**1219**	0	38	39	140	0	**217**	0	**3202**
% Approach	10.8%	71.8%	6.7%	10.8%	**-**	-	31.5%	16.4%	52.1%	0%	**-**	-	4.8%	86.9%	6.8%	1.6%	**-**	-	17.5%	18.0%	64.5%	0%	**-**	-	-
% Total	5.2%	34.7%	3.2%	5.2%	**48.3%**	-	2.2%	1.1%	3.6%	0%	**6.8%**	-	1.8%	33.1%	2.6%	0.6%	**38.1%**	-	1.2%	1.2%	4.4%	0%	**6.8%**	-	-
PHF	0.888	0.950	0.736	0.908	**0.977**	-	0.821	0.750	0.919	-	**0.855**	-	0.853	0.919	0.830	0.792	**0.918**	-	0.864	0.813	0.814	-	**0.861**	-	0.970
Lights	167	1102	102	166	**1537**	-	69	36	113	0	**218**	-	57	1053	83	18	**1211**	-	38	39	138	0	**215**	-	3181
% Lights	100%	99.3%	99.0%	99.4%	**99.4%**	-	100%	100%	99.1%	0%	**99.5%**	-	98.3%	99.4%	100%	94.7%	**99.3%**	-	100%	100%	98.6%	0%	**99.1%**	-	99.3%
Single-Unit Trucks	0	6	1	1	**8**	-	0	0	1	0	**1**	-	0	5	0	1	**6**	-	0	0	2	0	**2**	-	17
% Single-Unit Trucks	0%	0.5%	1.0%	0.6%	**0.5%**	-	0%	0%	0.9%	0%	**0.5%**	-	0%	0.5%	0%	5.3%	**0.5%**	-	0%	0%	1.4%	0%	**0.9%**	-	0.5%
Articulated Trucks	0	2	0	0	**2**	-	0	0	0	0	**0**	-	1	0	0	0	**1**	-	0	0	0	0	**0**	-	3
% Articulated Trucks	0%	0.2%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	1.7%	0%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Buses	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	1
% Buses	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0.1%	0%	0%	**0.1%**	-	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
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (14) Route 1 @ Summer Street TMC - TMC

Thu Mar 31, 2022
Full Length (6 AM-9 AM, 3 PM-6 PM, 11 AM-2 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936965, Location: 42.164541, -71.198958

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Providence Hwy (Route 1)						Summer Street						Providence Hwy (Route 1)						Summer Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2022-03-31 6:00AM	6	31	0	0	**37**	0	16	3	1	0	**20**	0	1	185	27	4	**217**	0	4	0	6	0	**10**	0	**284**
6:15AM	3	31	4	2	**40**	0	23	3	3	0	**29**	0	1	215	22	5	**243**	0	1	2	6	0	**9**	0	**321**
6:30AM	6	51	5	8	**70**	0	33	9	4	0	**46**	0	4	231	31	5	**271**	0	6	6	13	0	**25**	0	**412**
6:45AM	10	61	2	7	**80**	0	35	17	4	0	**56**	0	6	302	41	16	**365**	0	4	8	9	0	**21**	0	**522**
Hourly Total	25	174	11	17	**227**	0	107	32	12	0	**151**	0	12	933	121	30	**1096**	0	15	16	34	0	**65**	0	**1539**
7:00AM	11	58	14	3	**86**	1	27	24	4	0	**55**	0	3	324	47	11	**385**	0	5	6	11	0	**22**	0	**548**
7:15AM	9	56	7	0	**72**	0	35	39	5	0	**79**	0	1	321	47	17	**386**	0	10	8	14	0	**32**	0	**569**
7:30AM	16	82	18	5	**121**	0	52	15	9	0	**76**	0	2	341	41	14	**398**	0	14	9	13	0	**36**	0	**631**
7:45AM	10	113	14	6	**143**	0	53	27	9	0	**89**	0	3	342	46	27	**418**	0	10	14	20	0	**44**	0	**694**
Hourly Total	46	309	53	14	**422**	1	167	105	27	0	**299**	0	9	1328	181	69	**1587**	0	39	37	58	0	**134**	0	**2442**
8:00AM	23	133	15	6	**177**	1	39	35	10	0	**84**	0	6	340	59	27	**432**	1	6	11	25	0	**42**	0	**735**
8:15AM	17	120	17	7	**161**	0	51	26	5	0	**82**	0	4	304	46	35	**389**	0	11	8	30	0	**49**	0	**681**
8:30AM	21	110	16	12	**159**	0	42	24	7	0	**73**	0	9	296	48	24	**377**	0	14	11	12	0	**37**	0	**646**
8:45AM	18	139	8	14	**179**	0	41	18	3	0	**62**	0	4	272	51	22	**349**	1	12	13	23	1	**49**	0	**639**
Hourly Total	79	502	56	39	**676**	1	173	103	25	0	**301**	0	23	1212	204	108	**1547**	2	43	43	90	1	**177**	0	**2701**
3:00PM	40	226	39	11	**316**	0	24	18	1	0	**43**	0	4	140	30	24	**198**	1	15	28	28	0	**71**	0	**628**
3:15PM	35	241	46	12	**334**	0	19	20	5	0	**44**	0	14	159	42	28	**243**	1	25	17	36	0	**78**	0	**699**
3:30PM	39	249	47	7	**342**	0	23	14	7	0	**44**	0	16	164	41	23	**244**	3	28	24	34	0	**86**	0	**716**
3:45PM	42	284	32	21	**379**	0	23	13	7	0	**43**	0	12	146	42	23	**223**	2	22	23	48	0	**93**	0	**738**
Hourly Total	156	1000	164	51	**1371**	0	89	65	20	0	**174**	0	46	609	155	98	**908**	7	90	92	146	0	**328**	0	**2781**
4:00PM	36	321	60	9	**426**	0	30	21	7	0	**58**	0	6	189	28	41	**264**	1	21	35	30	0	**86**	0	**834**
4:15PM	32	266	58	8	**364**	0	17	7	10	0	**34**	0	12	144	33	38	**227**	0	20	38	26	0	**84**	0	**709**
4:30PM	38	307	45	8	**398**	0	25	16	6	0	**47**	0	9	182	30	34	**255**	0	22	36	33	0	**91**	0	**791**
4:45PM	44	244	48	13	**349**	1	22	11	9	0	**42**	0	10	161	44	23	**238**	0	23	16	23	0	**62**	0	**691**
Hourly Total	150	1138	211	38	**1537**	1	94	55	32	0	**181**	0	37	676	135	136	**984**	1	86	125	112	0	**323**	0	**3025**
5:00PM	45	306	63	13	**427**	0	9	20	2	0	**31**	0	13	148	40	28	**229**	0	23	36	35	0	**94**	0	**781**
5:15PM	44	315	85	14	**458**	0	25	15	9	0	**49**	0	8	170	36	26	**240**	1	10	42	41	0	**93**	0	**840**
5:30PM	37	275	67	14	**393**	0	21	16	3	0	**40**	1	15	153	38	39	**245**	1	16	37	31	0	**84**	0	**762**
5:45PM	25	243	47	17	**332**	0	26	17	7	0	**50**	0	14	193	45	26	**278**	0	9	33	31	0	**73**	0	**733**
Hourly Total	151	1139	262	58	**1610**	0	81	68	21	0	**170**	1	50	664	159	119	**992**	2	58	148	138	0	**344**	0	**3116**
2022-04-02 11:00AM	52	216	28	21	**317**	0	15	20	3	0	**38**	1	5	177	52	34	**268**	1	15	18	53	0	**86**	0	**709**
11:15AM	58	195	24	9	**286**	0	18	18	6	0	**42**	1	10	224	68	27	**329**	0	13	12	49	0	**74**	0	**731**
11:30AM	39	228	36	13	**316**	0	14	24	6	0	**44**	0	6	227	55	29	**317**	2	17	26	53	0	**96**	0	**773**
11:45AM	70	202	31	8	**311**	0	26	25	5	0	**56**	0	10	219	66	37	**332**	0	19	29	59	0	**107**	0	**806**
Hourly Total	219	841	119	51	**1230**	0	73	87	20	0	**180**	2	31	847	241	127	**1246**	3	64	85	214	0	**363**	0	**3019**
12:00PM	70	231	30	13	**344**	0	24	16	2	0	**42**	0	9	218	60	31	**318**	0	27	22	58	0	**107**	0	**811**
12:15PM	52	234	28	10	**324**	0	20	23	6	0	**49**	0	6	229	63	32	**330**	1	27	34	50	0	**111**	1	**814**
12:30PM	66	217	40	16	**339**	0	24	16	8	0	**48**	0	8	244	58	21	**331**	1	26	27	60	0	**113**	0	**831**
12:45PM	57	217	27	19	**320**	0	27	13	6	0	**46**	0	11	220	59	30	**320**	0	20	34	46	0	**100**	0	**786**
Hourly Total	245	899	125	58	**1327**	0	95	68	22	0	**185**	0	34	911	240	114	**1299**	2	100	117	214	0	**431**	1	**3242**
1:00PM	60	211	43	15	**329**	0	26	27	11	0	**64**	0	9	241	51	37	**338**	0	24	23	65	0	**112**	0	**843**
1:15PM	58	211	38	16	**323**	0	37	14	7	0	**58**	1	11	231	49	35	**326**	0	16	20	51	0	**87**	0	**794**
1:30PM	39	214	43	14	**310**	0	18	21	11	0	**50**	0	13	209	49	41	**312**	2	19	25	69	0	**113**	0	**785**
1:45PM	44	228	30	13	**315**	0	21	17	6	0	**44**	0	14	214	56	28	**312**	0	23	26	52	0	**101**	0	**772**
Hourly Total	201	864	154	58	**1277**	0	102	79	35	0	**216**	1	47	895	205	141	**1288**	2	82	94	237	0	**413**	0	**3194**
Total	1272	6866	1155	384	**9677**	3	981	662	214	0	**1857**	4	289	8075	1641	942	**10947**	19	577	757	1243	1	**2578**	1	**25059**
% Approach	13.1%	71.0%	11.9%	4.0%	**-**	-	52.8%	35.6%	11.5%	0%	**-**	-	2.6%	73.8%	15.0%	8.6%	**-**	-	22.4%	29.4%	48.2%	0%	**-**	-	**-**
% Total	5.1%	27.4%	4.6%	1.5%	**38.6%**	-	3.9%	2.6%	0.9%	0%	**7.4%**	-	1.2%	32.2%	6.5%	3.8%	**43.7%**	-	2.3%	3.0%	5.0%	0%	**10.3%**	-	**-**
Lights	1256	6732	1140	377	**9505**	-	972	646	211	0	**1829**	-	285	7909	1611	932	**10737**	-	569	747	1228	1	**2545**	-	24616
% Lights	98.7%	98.0%	98.7%	98.2%	**98.2%**	-	99.1%	97.6%	98.6%	0%	**98.5%**	-	98.6%	97.9%	98.2%	98.9%	**98.1%**	-	98.6%	98.7%	98.8%	100%	**98.7%**	-	98.2%
Single-Unit Trucks	12	87	12	7	**118**	-	4	6	3	0	**13**	-	3	114	19	10	**146**	-	5	4	12	0	**21**	-	298
% Single-Unit Trucks	0.9%	1.3%	1.0%	1.8%	**1.2%**	-	0.4%	0.9%	1.4%	0%	**0.7%**	-	1.0%	1.4%	1.2%	1.1%	**1.3%**	-	0.9%	0.5%	1.0%	0%	**0.8%**	-	1.2%
Articulated Trucks	4	39	0	0	**43**	-	2	0	0	0	**2**	-	1	45	8	0	**54**	-	2	0	2	0	**4**	-	103
% Articulated Trucks	0.3%	0.6%	0%	0%	**0.4%**	-	0.2%	0%	0%	0%	**0.1%**	-	0.3%	0.6%	0.5%	0%	**0.5%**	-	0.3%	0%	0.2%	0%	**0.2%**	-	0.4%
Buses	0	7	3	0	**10**	-	3	10	0	0	**13**	-	0	7	3	0	**10**	-	1	6	1	0	**8**	-	41
% Buses	0%	0.1%	0.3%	0%	**0.1%**	-	0.3%	1.5%	0%	0%	**0.7%**	-	0%	0.1%	0.2%	0%	**0.1%**	-	0.2%	0.8%	0.1%	0%	**0.3%**	-	0.2%
Bicycles on Road	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	3	-	-	-	-	-	4	-	-	-	-	-	19	-	-	-	-	-	1	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	

Leg	Providence Hwy (Route 1)						Summer Street						Providence Hwy (Route 1)						Summer Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (14) Route 1 @ Summer Street TMC - TMC

Thu Mar 31, 2022
AM Peak (Mar 31 2022 7:45AM - 8:45 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936965, Location: 42.164541, -71.198958

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Providence Hwy (Route 1)						Summer Street						Providence Hwy (Route 1)						Summer Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-03-31 7:45AM	10	113	14	6	**143**	0	53	27	9	0	**89**	0	3	342	46	27	**418**	0	10	14	20	0	**44**	0	**694**
8:00AM	23	133	15	6	**177**	1	39	35	10	0	**84**	0	6	340	59	27	**432**	1	6	11	25	0	**42**	0	**735**
8:15AM	17	120	17	7	**161**	0	51	26	5	0	**82**	0	4	304	46	35	**389**	0	11	8	30	0	**49**	0	**681**
8:30AM	21	110	16	12	**159**	0	42	24	7	0	**73**	0	9	296	48	24	**377**	0	14	11	12	0	**37**	0	**646**
Total	71	476	62	31	**640**	1	185	112	31	0	**328**	0	22	1282	199	113	**1616**	1	41	44	87	0	**172**	0	**2756**
% Approach	11.1%	74.4%	9.7%	4.8%	**-**	-	56.4%	34.1%	9.5%	0%	**-**	-	1.4%	79.3%	12.3%	7.0%	**-**	-	23.8%	25.6%	50.6%	0%	**-**	-	-
% Total	2.6%	17.3%	2.2%	1.1%	**23.2%**	-	6.7%	4.1%	1.1%	0%	**11.9%**	-	0.8%	46.5%	7.2%	4.1%	**58.6%**	-	1.5%	1.6%	3.2%	0%	**6.2%**	-	-
PHF	0.772	0.895	0.912	0.646	**0.904**	-	0.873	0.800	0.775	-	**0.921**	-	0.611	0.937	0.843	0.807	**0.935**	-	0.732	0.786	0.725	-	**0.878**	-	0.937
Lights	65	457	59	30	**611**	-	184	108	30	0	**322**	-	22	1246	191	112	**1571**	-	39	42	84	0	**165**	-	2669
% Lights	91.5%	96.0%	95.2%	96.8%	**95.5%**	-	99.5%	96.4%	96.8%	0%	**98.2%**	-	100%	97.2%	96.0%	99.1%	**97.2%**	-	95.1%	95.5%	96.6%	0%	**95.9%**	-	96.8%
Single-Unit Trucks	5	12	2	1	**20**	-	1	1	1	0	**3**	-	0	28	6	1	**35**	-	1	0	3	0	**4**	-	62
% Single-Unit Trucks	7.0%	2.5%	3.2%	3.2%	**3.1%**	-	0.5%	0.9%	3.2%	0%	**0.9%**	-	0%	2.2%	3.0%	0.9%	**2.2%**	-	2.4%	0%	3.4%	0%	**2.3%**	-	2.2%
Articulated Trucks	1	6	0	0	**7**	-	0	0	0	0	**0**	-	0	8	1	0	**9**	-	1	0	0	0	**1**	-	17
% Articulated Trucks	1.4%	1.3%	0%	0%	**1.1%**	-	0%	0%	0%	0%	**0%**	-	0%	0.6%	0.5%	0%	**0.6%**	-	2.4%	0%	0%	0%	**0.6%**	-	0.6%
Buses	0	1	1	0	**2**	-	0	3	0	0	**3**	-	0	0	1	0	**1**	-	0	2	0	0	**2**	-	8
% Buses	0%	0.2%	1.6%	0%	**0.3%**	-	0%	2.7%	0%	0%	**0.9%**	-	0%	0%	0.5%	0%	**0.1%**	-	0%	4.5%	0%	0%	**1.2%**	-	0.3%
Bicycles on Road	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%
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (14) Route 1 @ Summer Street TMC - TMC

Thu Mar 31, 2022
PM Peak (Mar 31 2022 5PM - 6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936965, Location: 42.164541, -71.198958

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Providence Hwy (Route 1)						Summer Street						Providence Hwy (Route 1)						Summer Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-03-31 5:00PM	45	306	63	13	**427**	0	9	20	2	0	**31**	0	13	148	40	28	**229**	0	23	36	35	0	**94**	0	**781**
5:15PM	44	315	85	14	**458**	0	25	15	9	0	**49**	0	8	170	36	26	**240**	1	10	42	41	0	**93**	0	**840**
5:30PM	37	275	67	14	**393**	0	21	16	3	0	**40**	1	15	153	38	39	**245**	1	16	37	31	0	**84**	0	**762**
5:45PM	25	243	47	17	**332**	0	26	17	7	0	**50**	0	14	193	45	26	**278**	0	9	33	31	0	**73**	0	**733**
Total	151	1139	262	58	**1610**	0	81	68	21	0	**170**	1	50	664	159	119	**992**	2	58	148	138	0	**344**	0	**3116**
% Approach	9.4%	70.7%	16.3%	3.6%	**-**	-	47.6%	40.0%	12.4%	0%	**-**	-	5.0%	66.9%	16.0%	12.0%	**-**	-	16.9%	43.0%	40.1%	0%	**-**	-	-
% Total	4.8%	36.6%	8.4%	1.9%	**51.7%**	-	2.6%	2.2%	0.7%	0%	**5.5%**	-	1.6%	21.3%	5.1%	3.8%	**31.8%**	-	1.9%	4.7%	4.4%	0%	**11.0%**	-	-
PHF	0.839	0.904	0.771	0.853	**0.879**	-	0.779	0.850	0.583	-	**0.850**	-	0.833	0.860	0.883	0.763	**0.892**	-	0.630	0.881	0.841	-	**0.915**	-	0.927
Lights	149	1121	258	57	**1585**	-	81	67	20	0	**168**	-	50	660	159	117	**986**	-	58	148	137	0	**343**	-	3082
% Lights	98.7%	98.4%	98.5%	98.3%	**98.4%**	-	100%	98.5%	95.2%	0%	**98.8%**	-	100%	99.4%	100%	98.3%	**99.4%**	-	100%	100%	99.3%	0%	**99.7%**	-	98.9%
Single-Unit Trucks	2	12	4	1	**19**	-	0	1	1	0	**2**	-	0	2	0	2	**4**	-	0	0	0	0	**0**	-	25
% Single-Unit Trucks	1.3%	1.1%	1.5%	1.7%	**1.2%**	-	0%	1.5%	4.8%	0%	**1.2%**	-	0%	0.3%	0%	1.7%	**0.4%**	-	0%	0%	0%	0%	**0%**	-	0.8%
Articulated Trucks	0	4	0	0	**4**	-	0	0	0	0	**0**	-	0	2	0	0	**2**	-	0	0	0	0	**0**	-	6
% Articulated Trucks	0%	0.4%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0%	0.3%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0.2%
Buses	0	2	0	0	**2**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	1	0	**1**	-	3
% Buses	0%	0.2%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0.7%	0%	**0.3%**	-	0.1%
Bicycles on Road	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%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (14) Route 1 @ Summer Street TMC - TMC

Sat Apr 2, 2022
Midday Peak (WKND) (Apr 02 2022 12:15PM - 1:15 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936965, Location: 42.164541, -71.198958

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg / Direction	Providence Hwy (Route 1) Southbound						Summer Street Westbound						Providence Hwy (Route 1) Northbound						Summer Street Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-04-02 12:15PM	52	234	28	10	**324**	0	20	23	6	0	**49**	0	6	229	63	32	**330**	1	27	34	50	0	**111**	1	**814**
12:30PM	66	217	40	16	**339**	0	24	16	8	0	**48**	0	8	244	58	21	**331**	1	26	27	60	0	**113**	0	**831**
12:45PM	57	217	27	19	**320**	0	27	13	6	0	**46**	0	11	220	59	30	**320**	0	20	34	46	0	**100**	0	**786**
1:00PM	60	211	43	15	**329**	0	26	27	11	0	**64**	0	9	241	51	37	**338**	0	24	23	65	0	**112**	0	**843**
Total	235	879	138	60	**1312**	0	97	79	31	0	**207**	0	34	934	231	120	**1319**	2	97	118	221	0	**436**	1	**3274**
% Approach	17.9%	67.0%	10.5%	4.6%	**-**	-	46.9%	38.2%	15.0%	0%	**-**	-	2.6%	70.8%	17.5%	9.1%	**-**	-	22.2%	27.1%	50.7%	0%	**-**	-	-
% Total	7.2%	26.8%	4.2%	1.8%	**40.1%**	-	3.0%	2.4%	0.9%	0%	**6.3%**	-	1.0%	28.5%	7.1%	3.7%	**40.3%**	-	3.0%	3.6%	6.8%	0%	**13.3%**	-	-
PHF	0.890	0.939	0.802	0.789	**0.968**	-	0.898	0.731	0.705	-	**0.809**	-	0.773	0.957	0.917	0.811	**0.976**	-	0.898	0.868	0.850	-	**0.965**	-	0.971
Lights	235	875	136	60	**1306**	-	97	79	31	0	**207**	-	33	925	230	119	**1307**	-	97	117	221	0	**435**	-	3255
% Lights	100%	99.5%	98.6%	100%	**99.5%**	-	100%	100%	100%	0%	**100%**	-	97.1%	99.0%	99.6%	99.2%	**99.1%**	-	100%	99.2%	100%	0%	**99.8%**	-	99.4%
Single-Unit Trucks	0	4	2	0	**6**	-	0	0	0	0	**0**	-	1	5	1	1	**8**	-	0	1	0	0	**1**	-	15
% Single-Unit Trucks	0%	0.5%	1.4%	0%	**0.5%**	-	0%	0%	0%	0%	**0%**	-	2.9%	0.5%	0.4%	0.8%	**0.6%**	-	0%	0.8%	0%	0%	**0.2%**	-	0.5%
Articulated Trucks	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	2	0	0	**2**	-	0	0	0	0	**0**	-	2
% Articulated Trucks	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Buses	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	2	0	0	**2**	-	0	0	0	0	**0**	-	2
% Buses	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Bicycles on Road	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%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	1	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (14) Route 1 @ Summer Street TMC - TMC

Sat Apr 2, 2022
PM Peak (WKND) (Apr 02 2022 1PM - 2 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936965, Location: 42.164541, -71.198958

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg / Direction	Providence Hwy (Route 1) Southbound						Summer Street Westbound						Providence Hwy (Route 1) Northbound						Summer Street Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-04-02 1:00PM	60	211	43	15	**329**	0	26	27	11	0	**64**	0	9	241	51	37	**338**	0	24	23	65	0	**112**	0	**843**
1:15PM	58	211	38	16	**323**	0	37	14	7	0	**58**	1	11	231	49	35	**326**	0	16	20	51	0	**87**	0	**794**
1:30PM	39	214	43	14	**310**	0	18	21	11	0	**50**	0	13	209	49	41	**312**	2	19	25	69	0	**113**	0	**785**
1:45PM	44	228	30	13	**315**	0	21	17	6	0	**44**	0	14	214	56	28	**312**	0	23	26	52	0	**101**	0	**772**
Total	201	864	154	58	**1277**	0	102	79	35	0	**216**	1	47	895	205	141	**1288**	2	82	94	237	0	**413**	0	**3194**
% Approach	15.7%	67.7%	12.1%	4.5%	**-**	-	47.2%	36.6%	16.2%	0%	**-**	-	3.6%	69.5%	15.9%	10.9%	**-**	-	19.9%	22.8%	57.4%	0%	**-**	-	-
% Total	6.3%	27.1%	4.8%	1.8%	**40.0%**	-	3.2%	2.5%	1.1%	0%	**6.8%**	-	1.5%	28.0%	6.4%	4.4%	**40.3%**	-	2.6%	2.9%	7.4%	0%	**12.9%**	-	-
PHF	0.838	0.947	0.895	0.906	**0.970**	-	0.689	0.731	0.795	-	**0.844**	-	0.839	0.928	0.915	0.860	**0.953**	-	0.854	0.904	0.859	-	**0.914**	-	0.947
Lights	200	858	152	56	**1266**	-	101	78	34	0	**213**	-	46	890	204	141	**1281**	-	82	94	237	0	**413**	-	3173
% Lights	99.5%	99.3%	98.7%	96.6%	**99.1%**	-	99.0%	98.7%	97.1%	0%	**98.6%**	-	97.9%	99.4%	99.5%	100%	**99.5%**	-	100%	100%	100%	0%	**100%**	-	99.3%
Single-Unit Trucks	0	6	2	2	**10**	-	0	1	1	0	**2**	-	1	4	1	0	**6**	-	0	0	0	0	**0**	-	18
% Single-Unit Trucks	0%	0.7%	1.3%	3.4%	**0.8%**	-	0%	1.3%	2.9%	0%	**0.9%**	-	2.1%	0.4%	0.5%	0%	**0.5%**	-	0%	0%	0%	0%	**0%**	-	0.6%
Articulated Trucks	1	0	0	0	**1**	-	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	2
% Articulated Trucks	0.5%	0%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Buses	0	0	0	0	**0**	-	1	0	0	0	**1**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1
% Buses	0%	0%	0%	0%	**0%**	-	1.0%	0%	0%	0%	**0.5%**	-	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
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	- 100%	-	-	-	-	-	- 100%	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (15) Route 1 @ Union Street TMC - TMC

Thu Mar 31, 2022
Full Length (6 AM-9 AM, 3 PM-6 PM, 11 AM-2 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936968, Location: 42.159042, -71.200963

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Providence Hwy (Route 1)						Union Street						Providence Hwy (Route 1)						Union Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2022-03-31 6:00AM	9	32	3	0	**44**	0	0	3	2	0	**5**	0	1	204	12	3	**220**	0	0	10	22	0	**32**	1	**301**
6:15AM	9	27	0	1	**37**	0	1	8	4	0	**13**	0	2	226	11	7	**246**	0	3	6	13	0	**22**	0	**318**
6:30AM	8	48	2	2	**60**	0	5	10	3	0	**18**	0	6	267	22	7	**302**	0	8	11	14	0	**33**	0	**413**
6:45AM	9	58	4	0	**71**	0	7	18	3	0	**28**	0	4	326	12	7	**349**	0	11	5	22	0	**38**	0	**486**
Hourly Total	35	165	9	3	**212**	0	13	39	12	0	**64**	0	13	1023	57	24	**1117**	0	22	32	71	0	**125**	1	**1518**
7:00AM	11	62	4	1	**78**	0	6	16	4	0	**26**	0	5	348	12	11	**376**	0	8	4	18	0	**30**	0	**510**
7:15AM	14	65	3	5	**87**	0	12	12	10	0	**34**	0	2	377	13	12	**404**	0	1	1	19	0	**21**	0	**546**
7:30AM	14	78	8	1	**101**	0	11	12	12	0	**35**	0	4	366	20	7	**397**	0	12	12	23	0	**47**	0	**580**
7:45AM	21	119	5	5	**150**	0	6	10	10	0	**26**	0	1	395	20	10	**426**	0	9	6	26	0	**41**	0	**643**
Hourly Total	60	324	20	12	**416**	0	35	50	36	0	**121**	0	12	1486	65	40	**1603**	0	30	23	86	0	**139**	0	**2279**
8:00AM	15	122	2	6	**145**	0	5	20	7	0	**32**	0	6	378	23	13	**420**	0	9	8	25	0	**42**	0	**639**
8:15AM	35	103	6	4	**148**	0	13	10	10	0	**33**	0	4	340	12	7	**363**	0	11	11	22	0	**44**	0	**588**
8:30AM	18	102	7	5	**132**	0	10	15	5	0	**30**	0	7	353	20	7	**387**	0	15	12	23	0	**50**	0	**599**
8:45AM	20	120	3	4	**147**	0	4	14	8	0	**26**	0	4	293	17	14	**328**	0	15	12	26	0	**53**	0	**554**
Hourly Total	88	447	18	19	**572**	0	32	59	30	0	**121**	0	21	1364	72	41	**1498**	0	50	43	96	0	**189**	0	**2380**
3:00PM	26	266	18	14	**324**	0	6	9	6	0	**21**	0	9	166	15	13	**203**	1	23	16	8	0	**47**	0	**595**
3:15PM	33	282	9	16	**340**	0	7	13	10	0	**30**	0	5	192	22	13	**232**	0	16	21	16	0	**53**	0	**655**
3:30PM	27	273	14	15	**329**	0	4	10	9	0	**23**	0	19	176	26	13	**234**	1	14	13	10	0	**37**	0	**623**
3:45PM	28	354	11	15	**408**	0	2	10	7	0	**19**	0	13	201	17	8	**239**	0	20	11	13	0	**44**	0	**710**
Hourly Total	114	1175	52	60	**1401**	0	19	42	32	0	**93**	0	46	735	80	47	**908**	2	73	61	47	0	**181**	0	**2583**
4:00PM	42	358	9	14	**423**	1	4	9	8	0	**21**	1	13	191	19	8	**231**	0	13	10	17	0	**40**	0	**715**
4:15PM	37	342	8	15	**402**	0	4	13	9	0	**26**	0	8	178	19	18	**223**	0	12	13	12	0	**37**	0	**688**
4:30PM	44	361	10	10	**425**	0	2	8	8	0	**18**	0	12	179	15	15	**221**	1	12	13	12	0	**37**	0	**701**
4:45PM	33	339	11	13	**396**	0	6	13	10	0	**29**	0	10	183	22	11	**226**	0	24	14	11	0	**49**	0	**700**
Hourly Total	156	1400	38	52	**1646**	1	16	43	35	0	**94**	1	43	731	75	52	**901**	1	61	50	52	0	**163**	0	**2804**
5:00PM	37	336	14	15	**402**	0	4	8	8	0	**20**	0	16	187	19	15	**237**	0	17	8	12	0	**37**	0	**696**
5:15PM	35	327	18	9	**389**	0	5	11	17	0	**33**	0	6	186	20	9	**221**	0	19	16	14	0	**49**	0	**692**
5:30PM	37	309	15	12	**373**	0	2	10	8	0	**20**	1	9	195	26	17	**247**	0	17	8	15	0	**40**	0	**680**
5:45PM	34	293	7	7	**341**	0	4	9	6	0	**19**	0	11	209	33	12	**265**	2	5	13	16	0	**34**	0	**659**
Hourly Total	143	1265	54	43	**1505**	0	15	38	39	0	**92**	1	42	777	98	53	**970**	2	58	45	57	0	**160**	0	**2727**
2022-04-02 11:00AM	47	238	5	6	**296**	0	7	5	11	0	**23**	0	10	225	19	12	**266**	1	20	27	27	0	**74**	0	**659**
11:15AM	32	233	15	16	**296**	0	9	10	7	0	**26**	0	8	253	16	16	**293**	0	16	15	21	0	**52**	1	**667**
11:30AM	51	262	12	9	**334**	0	5	9	6	0	**20**	0	13	279	23	18	**333**	1	10	9	18	0	**37**	0	**724**
11:45AM	37	249	11	13	**310**	0	7	9	6	0	**22**	0	10	243	27	8	**288**	1	10	10	30	0	**50**	0	**670**
Hourly Total	167	982	43	44	**1236**	0	28	33	30	0	**91**	0	41	1000	85	54	**1180**	3	56	61	96	0	**213**	1	**2720**
12:00PM	50	264	13	16	**343**	0	9	9	7	0	**25**	0	7	261	24	11	**303**	0	18	6	15	0	**39**	0	**710**
12:15PM	50	246	10	20	**326**	0	9	8	17	0	**34**	0	11	243	20	28	**302**	0	11	17	26	0	**54**	0	**716**
12:30PM	45	280	19	12	**356**	0	8	13	8	0	**29**	0	4	299	23	19	**345**	1	19	10	28	0	**57**	0	**787**
12:45PM	48	247	17	14	**326**	0	7	11	13	0	**31**	0	17	251	25	13	**306**	2	12	9	24	0	**45**	0	**708**
Hourly Total	193	1037	59	62	**1351**	0	33	41	45	0	**119**	0	39	1054	92	71	**1256**	3	60	42	93	0	**195**	0	**2921**
1:00PM	39	261	9	15	**324**	0	11	11	19	0	**41**	1	8	291	21	20	**340**	0	16	40	26	0	**82**	0	**787**
1:15PM	64	254	6	13	**337**	0	7	13	14	0	**34**	2	14	258	21	17	**310**	0	19	30	19	0	**68**	0	**749**
1:30PM	46	277	18	17	**358**	0	10	12	9	0	**31**	0	11	244	24	24	**303**	0	15	25	15	0	**55**	0	**747**
1:45PM	29	274	8	17	**328**	0	12	6	12	0	**30**	0	11	283	23	19	**336**	0	17	24	17	0	**58**	0	**752**
Hourly Total	178	1066	41	62	**1347**	0	40	42	54	0	**136**	3	44	1076	89	80	**1289**	0	67	119	77	0	**263**	0	**3035**
Total	1134	7861	334	357	**9686**	1	231	387	313	0	**931**	5	301	9246	713	462	**10722**	11	477	476	675	0	**1628**	2	**22967**
% Approach	11.7%	81.2%	3.4%	3.7%	**-**	-	24.8%	41.6%	33.6%	0%	**-**	-	2.8%	86.2%	6.6%	4.3%	**-**	-	29.3%	29.2%	41.5%	0%	**-**	-	-
% Total	4.9%	34.2%	1.5%	1.6%	**42.2%**	-	1.0%	1.7%	1.4%	0%	**4.1%**	-	1.3%	40.3%	3.1%	2.0%	**46.7%**	-	2.1%	2.1%	2.9%	0%	**7.1%**	-	-
Lights	1123	7717	327	344	**9511**	-	224	382	312	0	**918**	-	298	9073	671	454	**10496**	-	422	465	664	0	**1551**	-	22476
% Lights	99.0%	98.2%	97.9%	96.4%	**98.2%**	-	97.0%	98.7%	99.7%	0%	**98.6%**	-	99.0%	98.1%	94.1%	98.3%	**97.9%**	-	88.5%	97.7%	98.4%	0%	**95.3%**	-	97.9%
Single-Unit Trucks	9	92	3	13	**117**	-	4	2	1	0	**7**	-	3	115	13	8	**139**	-	15	1	9	0	**25**	-	288
% Single-Unit Trucks	0.8%	1.2%	0.9%	3.6%	**1.2%**	-	1.7%	0.5%	0.3%	0%	**0.8%**	-	1.0%	1.2%	1.8%	1.7%	**1.3%**	-	3.1%	0.2%	1.3%	0%	**1.5%**	-	1.3%
Articulated Trucks	2	46	3	0	**51**	-	1	2	0	0	**3**	-	0	50	27	0	**77**	-	38	1	2	0	**41**	-	172
% Articulated Trucks	0.2%	0.6%	0.9%	0%	**0.5%**	-	0.4%	0.5%	0%	0%	**0.3%**	-	0%	0.5%	3.8%	0%	**0.7%**	-	8.0%	0.2%	0.3%	0%	**2.5%**	-	0.7%
Buses	0	6	0	0	**6**	-	2	1	0	0	**3**	-	0	8	1	0	**9**	-	2	5	0	0	**7**	-	25
% Buses	0%	0.1%	0%	0%	**0.1%**	-	0.9%	0.3%	0%	0%	**0.3%**	-	0%	0.1%	0.1%	0%	**0.1%**	-	0.4%	1.1%	0%	0%	**0.4%**	-	0.1%
Bicycles on Road	0	0	1	0	**1**	-	0	0	0	0	**0**	-	0	0	1	0	**1**	-	0	4	0	0	**4**	-	6
% Bicycles on Road	0%	0%	0.3%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0.1%	0%	**0%**	-	0%	0.8%	0%	0%	**0.2%**	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	4	-	-	-	-	-	8	-	-	-	-	-	2	
% Pedestrians	-	-	-	-	-	0%	-	-	-	-	-	80.0%	-	-	-	-	-	72.7%	-	-	-	-	-	100%	-

Leg Direction	Providence Hwy (Route 1) Southbound						Union Street Westbound						Providence Hwy (Route 1) Northbound						Union Street Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
Bicycles on Crosswalk	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	3	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	100%	-	-	-	-	-	20.0%	-	-	-	-	-	27.3%	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (15) Route 1 @ Union Street TMC - TMC

Thu Mar 31, 2022
AM Peak (Mar 31 2022 7:45AM - 8:45 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936968, Location: 42.159042, -71.200963

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg / Direction	Providence Hwy (Route 1) Southbound						Union Street Westbound						Providence Hwy (Route 1) Northbound						Union Street Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-03-31 7:45AM	21	119	5	5	**150**	0	6	10	10	0	**26**	0	1	395	20	10	**426**	0	9	6	26	0	**41**	0	**643**
8:00AM	15	122	2	6	**145**	0	5	20	7	0	**32**	0	6	378	23	13	**420**	0	9	8	25	0	**42**	0	**639**
8:15AM	35	103	6	4	**148**	0	13	10	10	0	**33**	0	4	340	12	7	**363**	0	11	11	22	0	**44**	0	**588**
8:30AM	18	102	7	5	**132**	0	10	15	5	0	**30**	0	7	353	20	7	**387**	0	15	12	23	0	**50**	0	**599**
Total	89	446	20	20	**575**	0	34	55	32	0	**121**	0	18	1466	75	37	**1596**	0	44	37	96	0	**177**	0	**2469**
% Approach	15.5%	77.6%	3.5%	3.5%	**-**	-	28.1%	45.5%	26.4%	0%	**-**	-	1.1%	91.9%	4.7%	2.3%	**-**	-	24.9%	20.9%	54.2%	0%	**-**	-	-
% Total	3.6%	18.1%	0.8%	0.8%	**23.3%**	-	1.4%	2.2%	1.3%	0%	**4.9%**	-	0.7%	59.4%	3.0%	1.5%	**64.6%**	-	1.8%	1.5%	3.9%	0%	**7.2%**	-	-
PHF	0.636	0.914	0.714	0.833	**0.958**	-	0.654	0.688	0.800	-	**0.917**	-	0.643	0.928	0.815	0.712	**0.937**	-	0.733	0.771	0.923	-	**0.885**	-	0.960
Lights	88	421	20	19	**548**	-	32	55	32	0	**119**	-	17	1425	64	34	**1540**	-	31	35	94	0	**160**	-	2367
% Lights	98.9%	94.4%	100%	95.0%	**95.3%**	-	94.1%	100%	100%	0%	**98.3%**	-	94.4%	97.2%	85.3%	91.9%	**96.5%**	-	70.5%	94.6%	97.9%	0%	**90.4%**	-	95.9%
Single-Unit Trucks	1	16	0	1	**18**	-	1	0	0	0	**1**	-	1	31	2	3	**37**	-	3	0	1	0	**4**	-	60
% Single-Unit Trucks	1.1%	3.6%	0%	5.0%	**3.1%**	-	2.9%	0%	0%	0%	**0.8%**	-	5.6%	2.1%	2.7%	8.1%	**2.3%**	-	6.8%	0%	1.0%	0%	**2.3%**	-	2.4%
Articulated Trucks	0	8	0	0	**8**	-	0	0	0	0	**0**	-	0	10	9	0	**19**	-	10	0	1	0	**11**	-	38
% Articulated Trucks	0%	1.8%	0%	0%	**1.4%**	-	0%	0%	0%	0%	**0%**	-	0%	0.7%	12.0%	0%	**1.2%**	-	22.7%	0%	1.0%	0%	**6.2%**	-	1.5%
Buses	0	1	0	0	**1**	-	1	0	0	0	**1**	-	0	0	0	0	**0**	-	0	2	0	0	**2**	-	4
% Buses	0%	0.2%	0%	0%	**0.2%**	-	2.9%	0%	0%	0%	**0.8%**	-	0%	0%	0%	0%	**0%**	-	0%	5.4%	0%	0%	**1.1%**	-	0.2%
Bicycles on Road	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%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (15) Route 1 @ Union Street TMC - TMC

Thu Mar 31, 2022
PM Peak (Mar 31 2022 3:45PM - 4:45 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 936968, Location: 42.159042, -71.200963

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg Direction	Providence Hwy (Route 1) Southbound						Union Street Westbound						Providence Hwy (Route 1) Northbound						Union Street Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-03-31 3:45PM	28	354	11	15	**408**	0	2	10	7	0	**19**	0	13	201	17	8	**239**	0	20	11	13	0	**44**	0	**710**
4:00PM	42	358	9	14	**423**	1	4	9	8	0	**21**	1	13	191	19	8	**231**	0	13	10	17	0	**40**	0	**715**
4:15PM	37	342	8	15	**402**	0	4	13	9	0	**26**	0	8	178	19	18	**223**	0	12	13	12	0	**37**	0	**688**
4:30PM	44	361	10	10	**425**	0	2	8	8	0	**18**	0	12	179	15	15	**221**	1	12	13	12	0	**37**	0	**701**
Total	151	1415	38	54	**1658**	1	12	40	32	0	**84**	1	46	749	70	49	**914**	1	57	47	54	0	**158**	0	**2814**
% Approach	9.1%	85.3%	2.3%	3.3%	**-**	-	14.3%	47.6%	38.1%	0%	**-**	-	5.0%	81.9%	7.7%	5.4%	**-**	-	36.1%	29.7%	34.2%	0%	**-**	-	-
% Total	5.4%	50.3%	1.4%	1.9%	**58.9%**	-	0.4%	1.4%	1.1%	0%	**3.0%**	-	1.6%	26.6%	2.5%	1.7%	**32.5%**	-	2.0%	1.7%	1.9%	0%	**5.6%**	-	-
PHF	0.858	0.980	0.841	0.900	**0.975**	-	0.750	0.769	0.889	-	**0.808**	-	0.885	0.932	0.921	0.681	**0.956**	-	0.713	0.904	0.794	-	**0.898**	-	0.985
Lights	151	1399	36	49	**1635**	-	12	40	32	0	**84**	-	46	739	67	49	**901**	-	50	46	52	0	**148**	-	2768
% Lights	100%	98.9%	94.7%	90.7%	**98.6%**	-	100%	100%	100%	0%	**100%**	-	100%	98.7%	95.7%	100%	**98.6%**	-	87.7%	97.9%	96.3%	0%	**93.7%**	-	98.4%
Single-Unit Trucks	0	13	1	5	**19**	-	0	0	0	0	**0**	-	0	5	2	0	**7**	-	1	0	1	0	**2**	-	28
% Single-Unit Trucks	0%	0.9%	2.6%	9.3%	**1.1%**	-	0%	0%	0%	0%	**0%**	-	0%	0.7%	2.9%	0%	**0.8%**	-	1.8%	0%	1.9%	0%	**1.3%**	-	1.0%
Articulated Trucks	0	3	0	0	**3**	-	0	0	0	0	**0**	-	0	5	1	0	**6**	-	6	1	1	0	**8**	-	17
% Articulated Trucks	0%	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0%	0.7%	1.4%	0%	**0.7%**	-	10.5%	2.1%	1.9%	0%	**5.1%**	-	0.6%
Buses	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Buses	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Bicycles on Road	0	0	1	0	**1**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1
% Bicycles on Road	0%	0%	2.6%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	100%	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	0%	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

228451 (15) Route 1 @ Union Street TMC - TMC

Sat Apr 2, 2022

Midday Peak (WKND), PM Peak (WKND) (Apr 02 2022 1PM - 2 PM) - Overall Peak Hour

All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 936968, Location: 42.159042, -71.200963

Provided by: Precision Data Industries, LLC (PDI)
157 Washington Street, 2,
Hudson, MA, 01749, US

Leg	Providence Hwy (Route 1)						Union Street						Providence Hwy (Route 1)						Union Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2022-04-02 1:00PM	39	261	9	15	**324**	0	11	11	19	0	**41**	1	8	291	21	20	**340**	0	16	40	26	0	**82**	0	**787**
1:15PM	64	254	6	13	**337**	0	7	13	14	0	**34**	2	14	258	21	17	**310**	0	19	30	19	0	**68**	0	**749**
1:30PM	46	277	18	17	**358**	0	10	12	9	0	**31**	0	11	244	24	24	**303**	0	15	25	15	0	**55**	0	**747**
1:45PM	29	274	8	17	**328**	0	12	6	12	0	**30**	0	11	283	23	19	**336**	0	17	24	17	0	**58**	0	**752**
Total	178	1066	41	62	**1347**	0	40	42	54	0	**136**	3	44	1076	89	80	**1289**	0	67	119	77	0	**263**	0	**3035**
% Approach	13.2%	79.1%	3.0%	4.6%	**-**	-	29.4%	30.9%	39.7%	0%	**-**	-	3.4%	83.5%	6.9%	6.2%	**-**	-	25.5%	45.2%	29.3%	0%	**-**	-	**-**
% Total	5.9%	35.1%	1.4%	2.0%	**44.4%**	-	1.3%	1.4%	1.8%	0%	**4.5%**	-	1.4%	35.5%	2.9%	2.6%	**42.5%**	-	2.2%	3.9%	2.5%	0%	**8.7%**	-	**-**
PHF	0.695	0.962	0.569	0.912	**0.941**	-	0.833	0.808	0.711	-	**0.829**	-	0.786	0.924	0.927	0.833	**0.948**	-	0.882	0.744	0.740	-	**0.802**	-	0.964
Lights	178	1059	41	61	**1339**	-	40	42	54	0	**136**	-	44	1070	88	79	**1281**	-	66	119	77	0	**262**	-	3018
% Lights	100%	99.3%	100%	98.4%	**99.4%**	-	100%	100%	100%	0%	**100%**	-	100%	99.4%	98.9%	98.8%	**99.4%**	-	98.5%	100%	100%	0%	**99.6%**	-	99.4%
Single-Unit Trucks	0	7	0	1	**8**	-	0	0	0	0	**0**	-	0	5	1	1	**7**	-	1	0	0	0	**1**	-	16
% Single-Unit Trucks	0%	0.7%	0%	1.6%	**0.6%**	-	0%	0%	0%	0%	**0%**	-	0%	0.5%	1.1%	1.3%	**0.5%**	-	1.5%	0%	0%	0%	**0.4%**	-	0.5%
Articulated Trucks	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	1
% Articulated Trucks	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0.1%	0%	0%	**0.1%**	-	0%	0%	0%	0%	**0%**	-	0%
Buses	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Buses	0%	0%	0%	0%	**0%**	-	0%	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
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Part 2: Signal Timing Data

NORWOOD
RTE. 1 AT UNION STREET

STATE	SIGNAL ID NO.	REVISION NO.	SHEET NO.	TOTAL SHEETS
MASS	0567	01	1	

TITLE SHEET

THE COMMONWEALTH OF MASSACHUSETTS
MASSACHUSETTS HIGHWAY DEPARTMENT

TRAFFIC SIGNAL LAYOUT PLAN AND PERMIT
PROVIDENCE HIGHWAY (ROUTE 1) AT UNION STREET

IN THE TOWN OF

NORWOOD
NORFOLK COUNTY

Under authority of Chapter 89, Sec. 8 General Laws, Tercentenary Edition, the Massachusetts Highway Department hereby approves the following described traffic control signal installation, and auxiliary signs and surface markings, for the above location, provided that a permit for the opening of the road and the placing of structures thereon shall be received from the board or officer in charge of the road.

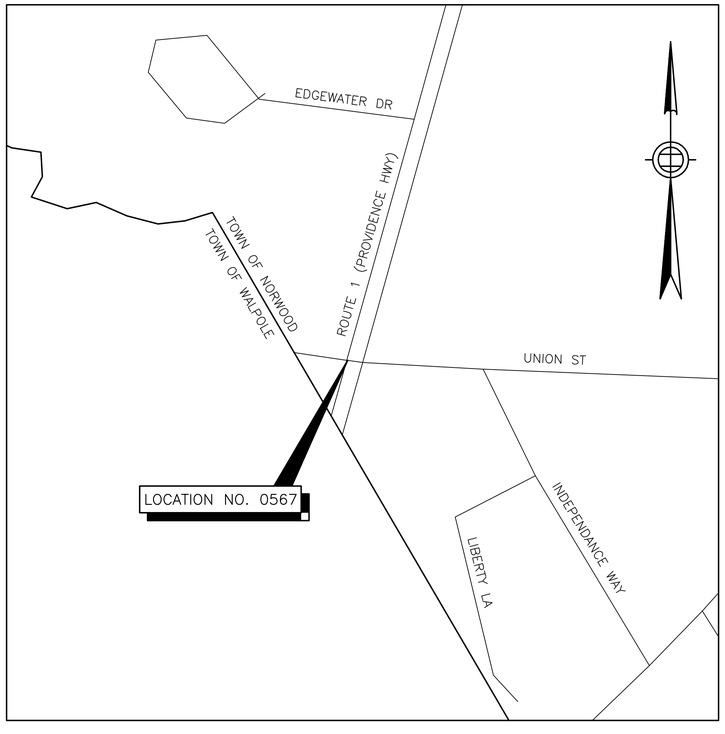
This permit is granted for the specific signal installation described herein and for its operation in accordance with the conditions set forth below and with the requirements of the Massachusetts Highway Department. The details for any material alterations or any continued* or substantial departure from the provisions of this permit must be submitted to the department for approval with data sufficient to justify such modification. Failure to comply with these requirements automatically voids this permit during such time as non–compliance exists.

I. STANDARDS OF INSTALLATION

The traffic control signal installation and all auxiliary signs and surface markings which are used in connection with such installation shall conform with the requirements of the Massachusetts Highway Department and with the sketch which is attached.

II. OPERATION OF SIGNALS

(a) Type of control: AUTOMATIC
(b) Coordination: NONE
(c) Special connection: NONE
(d) Timing for automatic operation: SEE SHEET NO. 3
(e) Hours for Automatic Operation: CONTINUOUS
Signals may be operated automatically for a shorter period of time but not for a greater length of time than is here indicated except when unusual conditions arise which temporarily justify longer operation.
(f) Flashing Operation: Whenever a signal is not operating as a control device (stop and go), it must Flash Yellow or Flash Red as set forth in the signal sequence and at the rate of 50–60 flashes per minute unless otherwise specified in Part II(e) of this Permit.
(g) Manual Operation: Signals may be operated manually at any time irrespective of the hours designated in Part II(3) of this permit
(h) Discontinuance: Signals may be discontinued at any time. When this is done signal faces must be turned away from traffic, taken down or hooded, and the District Highway Engineer notified.



LOCUS MAP
(SCALE AS SHOWN)

HOR. SCALE IN FEET
0 200 400 800

REVISION NO. 01
DATE: 12–31–01
INSERT BY: J.C.CONNOR
DATE:
FILE NAME: 0567T01.DWG

COMMENTS:

MASSHIGHWAY
10 PARK PLAZA
BOSTON, MA 02116

MASSACHUSETTS
HIGHWAY DEPARTMENT

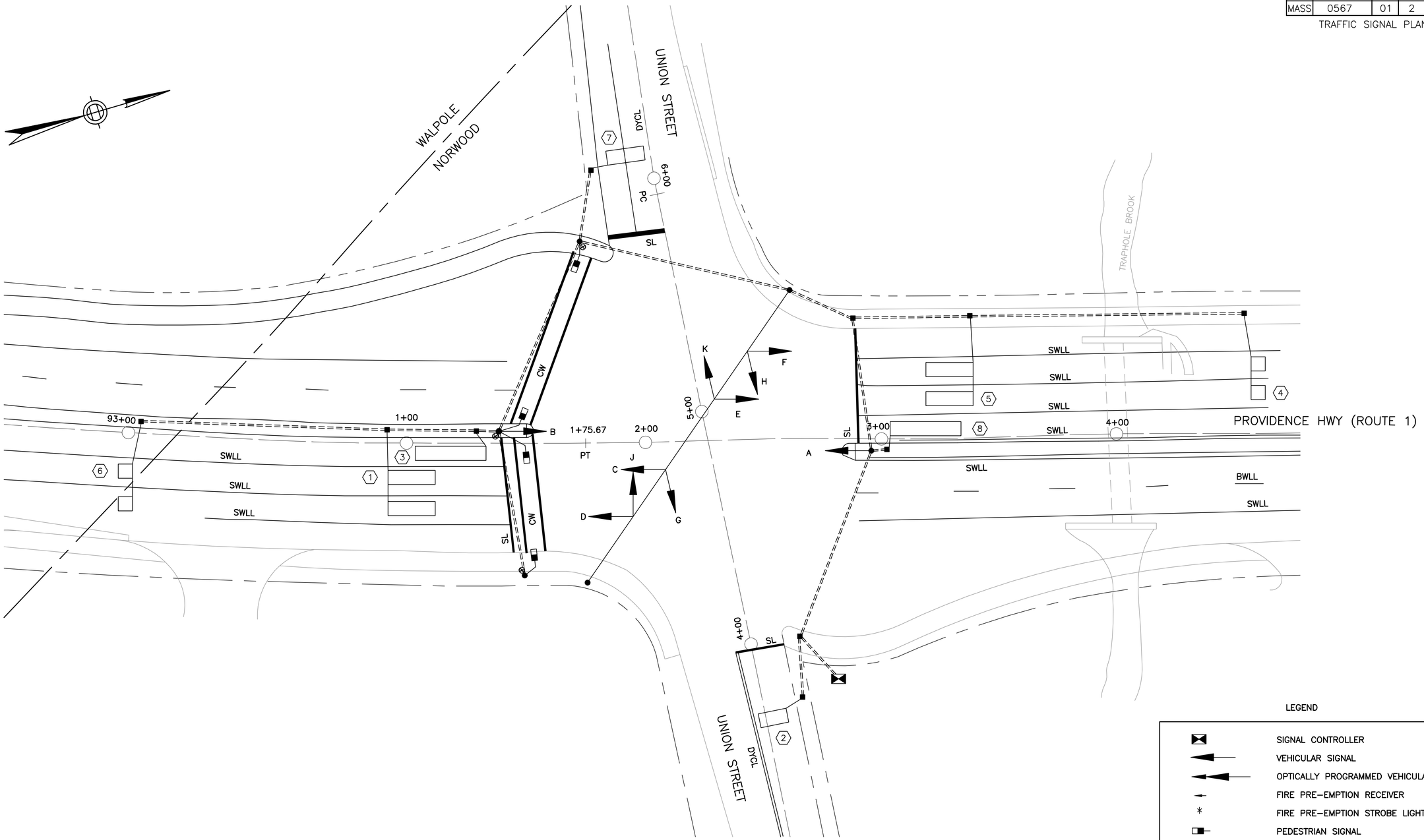
APPROVED BY:

STATE TRAFFIC ENGINEER Date

NORWOOD
RTE. 1 AT UNION STREET

STATE	SIGNAL ID NO.	REVISION NO.	SHEET NO.	TOTAL SHEETS
MASS	0567	01	2	

TRAFFIC SIGNAL PLAN



0 20 50 100 FEET

1" = 20' HORIZONTAL

LEGEND

	SIGNAL CONTROLLER
	VEHICULAR SIGNAL
	OPTICALLY PROGRAMMED VEHICULAR SIGNAL
	FIRE PRE-EMPTION RECEIVER
*	FIRE PRE-EMPTION STROBE LIGHT
	PEDESTRIAN SIGNAL
	PEDESTRIAN PUSH BUTTON
	PULL BOX

APPROVED BY:

STATE TRAFFIC ENGINEER **Date**

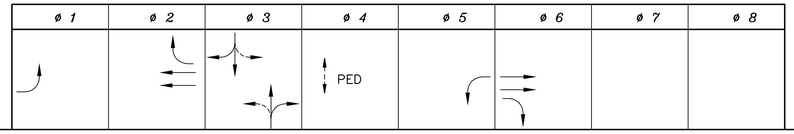
0567P01.DWG

NORWOOD
RTE. 1 AT UNION STREET

STATE	SIGNAL ID NO.	REVISION NO.	SHEET NO.	TOTAL SHEETS
MASS	0567	01	3	

TRAFFIC SIGNAL DATA

APPROX. NORTH



SEQUENCE AND TIMING FOR FULLY-ACTUATED CONTROL (ISOLATED)

STREET	DIRECTION	HOUSINGS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	FLASH OPER.
PROVIDENCE HWY (ROUTE 1)	NB-LT	A	GL	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R							FR
PROVIDENCE HWY (ROUTE 1)	SB-LT	B	R	R	R	R	R	R	R	R	R	GL	Y	R	GL	Y	R	R	R	R							FR
PROVIDENCE HWY (ROUTE 1)	NB	C	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	GV	Y	R							FY
PROVIDENCE HWY (ROUTE 1)	NB	D	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	GV/GR	R	R							FY
PROVIDENCE HWY (ROUTE 1)	SB	E	R	R	R	GV	Y	R	R	R	R	R	R	R	R	R	R	R	R	R							FY
PROVIDENCE HWY (ROUTE 1)	SB	F	R	R	R	GV/GR	Y	R	R	R	R	R	R	R	R	R	R	R	R	R							FY
UNION STREET	EB	J,K	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R							FR
UNION STREET	WB	G,H	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R							FR
PEDESTRIAN		ALL	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	DW	DW	DW	DW	DW							OFF
TIMING IN SECONDS																											
MINIMUM GREEN (INITIAL)			8			14			8						8			14									EMERGENCY ONLY
PASSAGE TIME (VECHICLE)			4			4			4						4			4									
MAXIMUM 1			20			35			30						20			35									
MAXIMUM 2			20			35			30						20			35									
YELLOW CLEARANCE				4			4			4						4			4								
RED CLEARANCE					1			1			1						1			1							
WALK (W)												7															
PEDESTRIAN CLEARANCE													13	2													
RECALL			OFF			MIN			OFF			OFF			OFF			MIN									
MEMORY			LOCKING			LOCKING			LOCKING			NON-LOCKING			LOCKING			LOCKING									

MAJOR ITEMS REQUIRED

QUANTITY	ITEM
1	CONTROLLER TYPE 8DW, CAB. & FDN.
1	SERVICE CONNECTION
1	SPANWIRE ASSEMBLY BASE & FDN.
2	8' SIGNAL POLE, BASE, & FDN.
2	10' SIGNAL POLE, BASE, & FDN.
2	1 WAY, 3 SECTION, SIGNAL HOUSING (12" LENS)
2	2 WAY, 3 & 4 SECTION SIGNAL HOUSING (12" LENS)
2	2 WAY, 3 SECTION SIGNAL HOUSING (12" LENS)
4	PEDESTRIAN HOUSING
3	PEDESTRIAN PUSH BUTTON, SIGN, & SADDLES
4	LOOP DETECTOR AMPLIFIER (DUAL CHANNEL)
12	ROADWAY LOOP DETECTOR
10	12" x 12" PULL BOX
	Necessary duct, cable, labor, miscellaneous
	material and equipment to complete the installation.

NOTES:

SEQUENCE AND TIMING NOTES:

1. ø7 AND ø8 NOT USED.

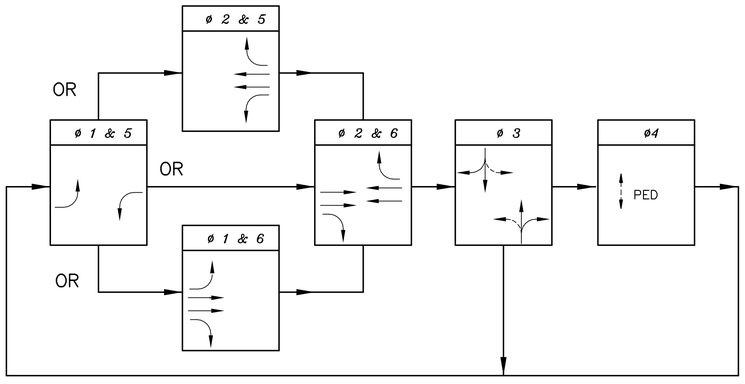
NEMA DUAL RING PHASING NOTES:

1. PHASES ASSOCIATED BY A SOLID LINE SHALL NOT OPERATE CONCURRENTLY.
2. PHASES ASSOCIATED BY A DASHED LINE MAY OPERATE CONCURRENTLY.
3. THROUGH MOVEMENTS MAY INCLUDE RIGHT TURNS.
4. IF THE ASSIGNED RIGHT OF WAY FOR ANY TRAFFIC MOVEMENT IS TO REMAIN IN EFFECT DURING THE NEXT CALLED PHASE, THE SIGNAL INDICATIONS FOR THAT TRAFFIC MOVEMENT SHALL NOT CHANGE DURING THE CHANGE INTERVAL(S) UNLESS OTHERWISE NOTED.

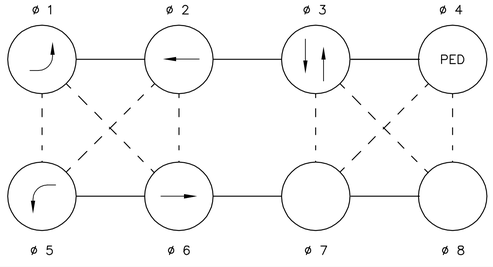
LOOP DETECTOR NOTES:

1. SEE LOOP DETECTOR DETAIL SHEET FROM DESIGN DOCUMENT FOR SPLICE PATTERN AND OTHER INFORMATION.
2. DELAY AND EXTENSION TIMES ARE IN SECONDS.
3. DELAY TIME SHALL BE EFFECTIVE ONLY DURING THE RED PORTION OF THE PHASE THAT IS CALLED BY THE DETECTOR.

PREFERENTIAL PHASING SEQUENCE



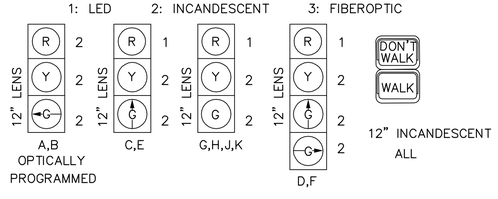
NEMA DUAL RING PHASING NOTES:



LOOP DETECTOR DATA

DETECTOR NUMBER	NUMBER OF SEGMENTS	LOOP SIZE	NUM. OF TURNS	ø CALLED	ø EXT.	MODE PULSE PRESENCE	DELAY TIME	EXT. TIME
1	2	6'X20'		ø6	ø6			
2	1	6'X12'		ø3	ø3			
3	1	6'X30'		ø1	ø1			
4	2	6'X6'		ø2	ø2			
5	2	6'X20'		ø2	ø2			
6	2	6'X20'		ø6	ø6			
7	1	6'X15'		ø3	ø3			
8	1	6'X30'		ø5	ø5			

SIGNAL IDENTIFICATION



CONTROLLER MAKE & MODEL: EPAC 300
UTILITY POLE No. NONE
METER No. 49 542 833
EMERGENCY PRE-EMPTION (TYPE): NONE

APPROVED BY:

STATE TRAFFIC ENGINEER **Date**

0567D01.DWG

massDOT
Massachusetts Department of Transportation

TRAFFIC CONTROL SIGNAL REGULATION

City or Town: Norwood, MA
Location: Boston-Providence Turnpike at Sumner Street
Regulation No.: AB-202-2474(A) **Date:** 7-26-2018

DRAFT

Pursuant to MASS. GEN. LAWS c. 85, § 2 the Massachusetts Department of Transportation ("MassDOT") hereby approves the following described traffic control signal installation and auxiliary signs and surface markings for the above captioned location, provided that a permit for the opening of the road and the placing of structures thereon shall be received from the board or officer in charge of the road.

This Regulation is granted for the specific signal installation described herein and for its operation in accordance with the conditions set forth below and with the requirements of the MassDOT. The details for any materials, alterations, or any continued* or substantial departure from the provisions of this Regulation must be submitted to the MassDOT for approval with data sufficient to justify such modification. Failure to comply with the requirements and standards set forth by the MassDOT shall automatically void this Regulation during such time as non-compliance exists.

I. STANDARDS OF INSTALLATION

The traffic control signal installation and all auxiliary sign and surface markings which are used in conjunction with such installation shall conform with the requirements of the MassDOT and with the attached sketch.

II. OPERATION OF SIGNALS

1.	Traffic Control.....	Fully Actuated
2.	Coordination.....	None
3.	Special Connections.....	N/A
4.	Timing for Automatic Operations....	*See Attached*
5.	Hours for Automatic Operation.....	Signals shall be operated in stop and go mode continuously unless unusual or emergency conditions arise which temporarily justify flashing operations or manual override.
6.	Flashing Operation.....	Whenever a signal is not operating as traffic control device (stop and go), it must Flash Yellow or Flash Red as set forth in the accompanying timing and sequence chart for emergency operation. The flashing rate must conform to the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD).
7.	Manual Operation.....	Signals may be operated manually at any time irrespective of the hours designated in Part II (5) of this Regulation.
8.	Discontinuance.....	Upon proper justification signals can be discontinued. If required and justified, appropriate alternate traffic controls must be installed prior to discontinuance of signals. Discontinued signal faces must be turned away from traffic, taken down or covered and the District Highway Director notified.

Issuance of this Regulation Supersedes and Terminates:

State Permit No.: AB-220-2474

State Layout No.: ———

Dated: September 26, 1997

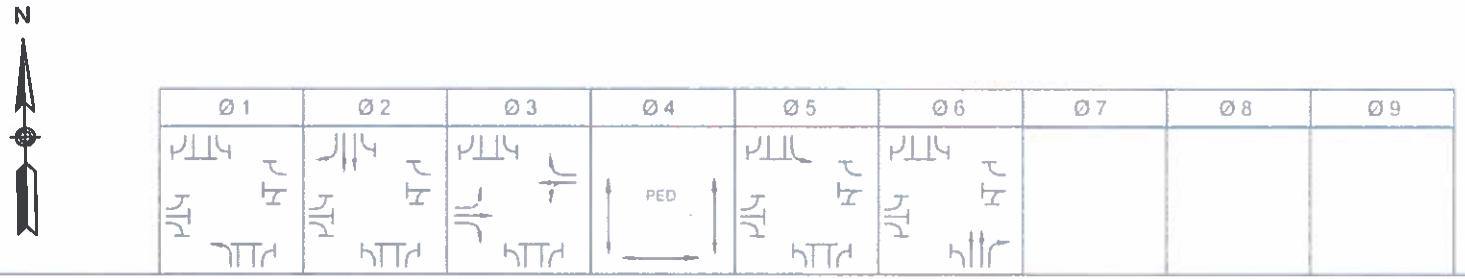
MASSACHUSETTS DEPARTMENT OF TRANSPORTATION

BY Neil E. Boudreau

Neil E. Boudreau
State Traffic Engineer

MassDOT HD TOP TCSP-120
REV 11-15-12

* A period of seven consecutive days or more in any given month.



SEQUENCE AND TIMING

STREET	DIRECTION	HOUSINGS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	FLASHING OPERATION
ROUTE 1	NB	E	GLA	YLA	RLA	RLA	RLA	RLA	RLA	RLA	RLA	RLA	RLA	RLA	RLA	RLA	RLA	RLA	RLA	RLA										FRLA
ROUTE 1	NB	F G	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R										FY
ROUTE 1	NB	H	RRA	RRA	RRA	RRA	RRA	RRA	RRA	RRA	RRA	RRA	RRA	RRA	RRA	RRA	RRA	GRA	YRA	RRA										FYRA
ROUTE 1	SB	A	RLA	RLA	RLA	RLA	RLA	RLA	RLA	RLA	RLA	RLA	RLA	RLA	GLA	YLA	RLA	RLA	RLA	RLA										FRLA
ROUTE 1	SB	B C	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R										FY
ROUTE 1	SB	D	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R										FY
SUMNER STREET	EB	J K L	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R										FR
SUMNER STREET	WB	M N	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R										FR
PEDESTRIANS	ALL	P1-P8	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	DW	DW	DW	DW	DW										OFF
TIMING IN SECONDS																														
MINIMUM GREEN (INITIAL)			6			15			6						6			15												EMERGENCY ONLY
PASSAGE TIME (VEHICLE)			3			3			3						3			3												
MAXIMUM 1			**18**			**38**			**18**						**31**			**23**												
MAXIMUM 2			**24**			**24**			**22**						**10**			**38**												
MAXIMUM 3			**22**			**25**			**22**						**22**			**25**												
YELLOW CLEARANCE				4			**4.5**			**3.5**						4			**4.5**											
RED CLEARANCE					**4.5**			**2**			**4.5**						**4**			**2**										
WALK (W)																														
PEDESTRIAN CLEARANCE													**22**	**4**																
RECALL			NONE			MIN			NONE			NONE			NONE			MIN												
MEMORY			NON-LOCKING			LOCKING			NON-LOCKING			LOCKING			NON-LOCKING			LOCKING												

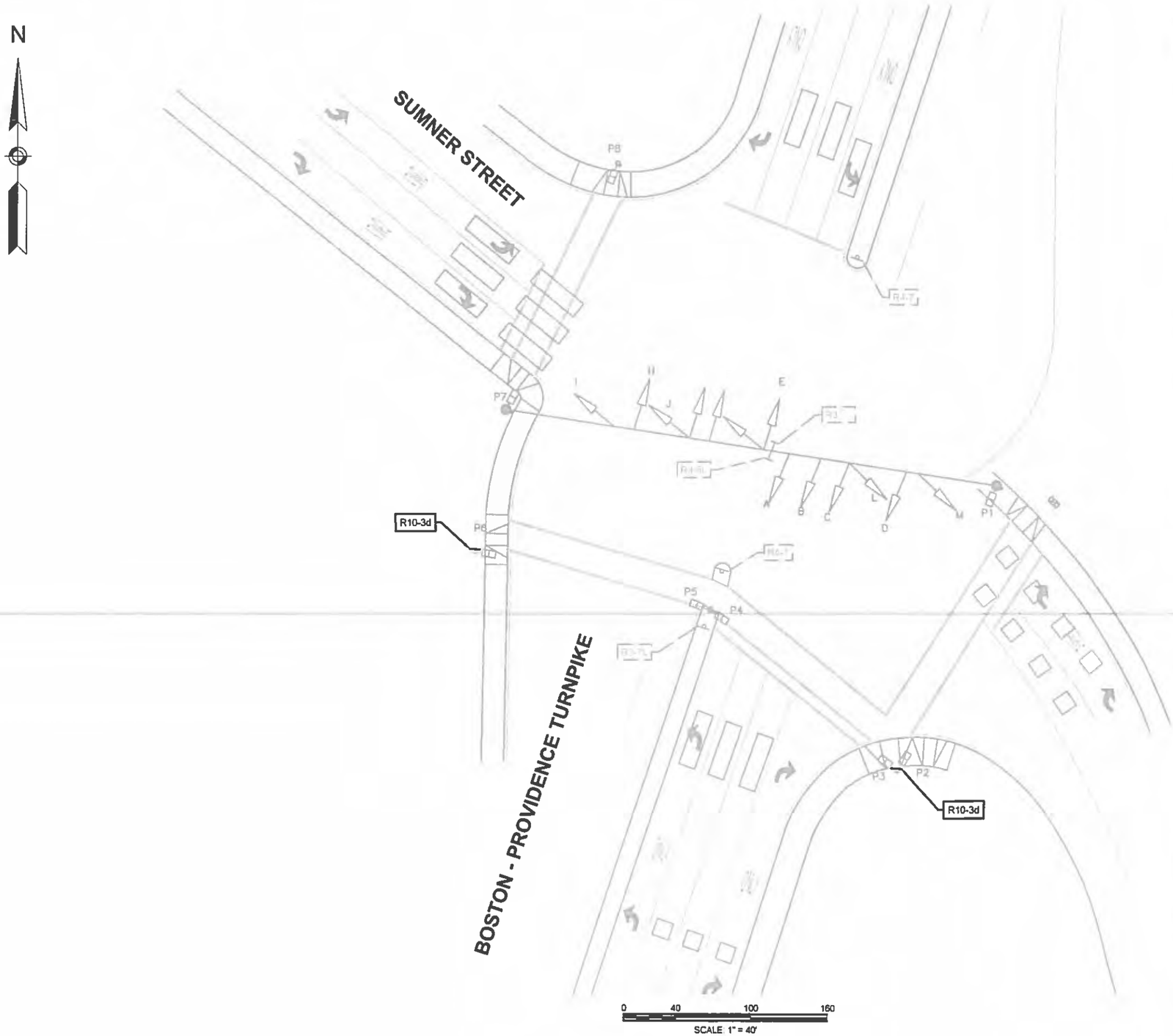
NOTES
1. AUTOMATIC FLASHING OPERATION PER [illegible] MUTCD, AS AMENDED.
2. MAXIMUM 2 TO OPERATE FROM 6:00 AM TO 10:00 AM WEEKDAYS.
3. MAXIMUM 3 TO OPERATE FROM 10:00 AM TO 2:00 PM SATURDAY AND SUNDAY.
4. MAXIMUM 1 TO OPERATE ALL OTHER TIMES.

DRAFT

DRAFT

NORWOOD
ROUTE 1 (PROVIDENCE HWY) AT SUMNER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	1	2
TRAFFIC SIGNAL PLANS			



SIGNAL DATA.DWG Plotted on 28-Jun-2018 3:21 PM

NORWOOD
ROUTE 1 (PROVIDENCE HWY) AT SUMNER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	2	2

TRAFFIC SIGNAL DATA

N

SEQUENCE AND TIMING

STREET	DIRECTION	HOUSINGS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	FLASHING OPERATION
ROUTE 1	NB	E	GLA	YLA	RLA	RLA	RLA	RLA	RLA	RLA	RLA	RLA	RLA	RLA	RLA	RLA	RLA	RLA	RLA	RLA										FRLA
ROUTE 1	NB	F G	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R										FY
ROUTE 1	NB	H	RRA	RRA	RRA	RRA	RRA	RRA	RRA	RRA	RRA	RRA	RRA	RRA	RRA	RRA	RRA	GRA	YRA	RRA										FYRA
ROUTE 1	SB	A	RLA	RLA	RLA	RLA	RLA	RLA	RLA	RLA	RLA	RLA	RLA	RLA	GLA	YLA	RLA	RLA	RLA	RLA										FRLA
ROUTE 1	SB	B C	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R										FY
ROUTE 1	SB	D	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R										FY
SUMNER STREET	EB	J K L	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R										FR
SUMNER STREET	WB	M N	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R										FR
PEDESTRIANS	ALL	P1-P8	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	DW	DW	DW	DW	DW										OFF

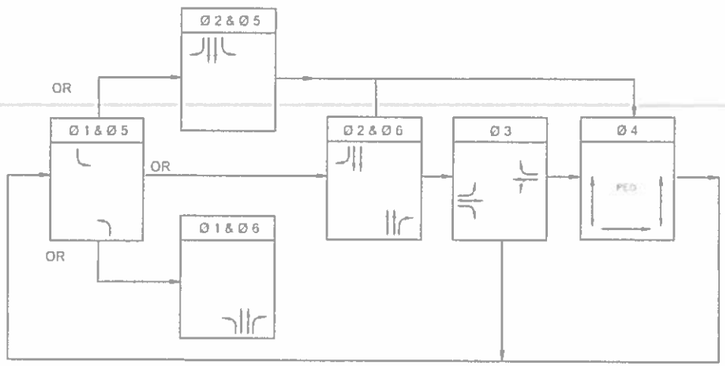
TIMING IN SECONDS

MINIMUM GREEN (INITIAL)	8			15			6						8			15												
PASSAGE TIME (VEHICLE)	3			3			3						3			3												
MAXIMUM 1	**18**			**36**			**18**						**31**			**23**												
MAXIMUM 2	**24**			**24**			**22**						**10**			**38**												
MAXIMUM 3	**22**			**25**			**22**						**22**			**25**												
YELLOW CLEARANCE		4			**4.5**			**3.5**							4			**4.5**											
RED CLEARANCE			**4.5**			**2**			**4.5**								**4**			**2**									
WALK (W)																													
PEDESTRIAN CLEARANCE												**22**	**4**																
RECALL			NONE			MIN			NONE			NONE			NONE			MIN											
MEMORY			NON-LOCKING			LOCKING			NON-LOCKING			LOCKING			NON-LOCKING			LOCKING											

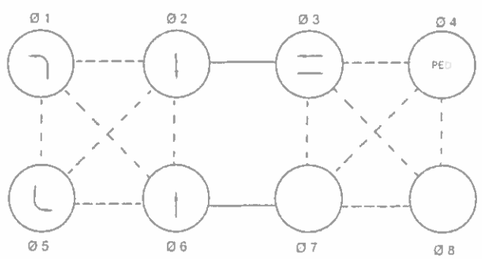
EMERGENCY ONLY

NOTES
1. AUTOMATIC FLASHING OPERATION PER 2009 MUTCD AS AMENDED
2. **MAXIMUM 2 TO OPERATE FROM 6:00 AM TO 10:00 AM WEEKDAYS.**
3. **MAXIMUM 3 TO OPERATE FROM 10:00 AM TO 2:00 PM SATURDAY AND SUNDAY.**
4. **MAXIMUM 1 TO OPERATE ALL OTHER TIMES.**

PREFERENTIAL PHASING SEQUENCE



NEMA DUAL RING PHASING NOTES:



1. PHASES ASSOCIATED BY A SOLID LINE SHALL NOT OPERATE CONCURRENTLY.
2. PHASES ASSOCIATED BY A DASHED LINE MAY OPERATE CONCURRENTLY.
3. THROUGH MOVEMENTS MAY INCLUDE RIGHT TURNS.
4. IF THE ASSIGNED RIGHT OF WAY FOR ANY TRAFFIC MOVEMENT IS TO REMAIN IN EFFECT DURING THE NEXT CALLED PHASE, THE SIGNAL INDICATIONS FOR THAT TRAFFIC MOVEMENT SHALL NOT CHANGE DURING THE CHANGE INTERVAL(S) UNLESS OTHERWISE NOTED.

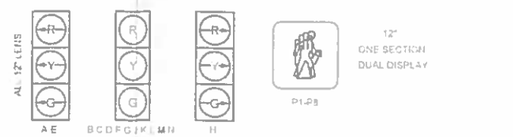
MAJOR ITEMS REQUIRED

PAY ITEM	QUANTITY	ITEM
	1	REPROGRAM EXISTING TRAFFIC SIGNAL CONTROLLER
	1	DIAGNOSE AND REPAIR LOOP DETECTORS AS NEEDED
	13	R&D EXISTING BACKPLATES, REPLACE WITH 5" LOUVERED BACKPLATES WITH 3" RETROREFLECTIVE BORDERS

LOOP DETECTOR DATA

DETECTOR NUMBER	NUMBER OF SEGMENTS	LOOP SIZE	NUM OF TURNS	CALLED	EXT	DELAY TIME	DELAY TIME	EXT. TIME
1	2	6' X 6'		Ø2	Ø2		-	-
2	3	6' X 6'		Ø2	Ø2		-	-
3	1	6' X 30'		Ø5	Ø5		-	-
4	2	6' X 20'		Ø2	Ø2		-	-
5	4	6' X 6'		Ø3	Ø3		-	-
6	2 2	6' X 6' 6' X 10'		Ø3	Ø3		-	-
7	1	6' X 20'		Ø1	Ø1		-	-
8	2	6' X 20'		Ø8	Ø8		-	-
9	3	6' X 6'		Ø5	Ø8		-	-
10	2	6' X 6'		Ø6	Ø6		-	-
11	1	6' X 18'		Ø3	Ø3		-	-

SIGNAL IDENTIFICATION



NOTES
1. SIGNALS E F G H J K L M N HAVE CUT AWAY VISORS. SIGNALS A B C D HAVE TUNNEL VISORS.
2. ALL SIGNALS HAVE 12" LED WITH 5" LOUVERED BACK PLATES **WITH 3" RETROREFLECTIVE BORDERS.**

WORLDTECH ENGINEERING

JOB: Charles River Realty Development
SHEET NO: 1 OF: 1
CALCULATED BY: AP DATE: 22-Feb-18
CHECKED BY: MP DATE:
PROJECT#: 17-009.01
LOCATION: Boston Providence Highway at Sumner Street, Norwood, MA

CLEARANCE INTERVAL CALCULATIONS:

The general formula for determining the yellow warning interval is the following:

I. YELLOW CLEARANCE

$$y = t + \frac{1.47v}{2a + 2Gg}$$

Where: y= Length of Yellow warning interval, to the nearest 0.1 Seconds
t= Driver perception and reaction time recommended 1.0 Seconds
v= Velocity of approaching vehicle in mph
a= Deceleration rate, recommended 10 ft./sec^2
g= Acceleration due to gravity, 32 ft/sec^2
G= Grade of approach, in percent divided by 100 (negative for downhill grade)

II. ALL RED CLEARANCE

$$r = \frac{W + L}{1.47v} - 1$$

Where: r= Length of red clearance interval
W= Width of intersection, in feet measured from the near side stop line to the far edge of the conflicting traffic lane along the actual vehicle path.
L= Length of vehicle = 20 feet

II. PEDESTRIAN CLEARANCE

The pedestrian clearance time (pedestrian change interval/"Flashing Don't Walk" + pedestrian buffer interval/"Don't Walk/All Red") should be sufficient to allow a pedestrian to cross from the curb to the far side of the traveled way at 3.5 fps.
Concurrent phasing - The buffer interval should be at least 3 seconds and consist of all or part of the yellow clearance interval.
Exclusive phasing - The pedestrian change interval should be 4 seconds less than the minimum pedestrian clearance time. The remaining 4 seconds should be applied to an all-red clearance interval during which a steady upraised hand indication should be displayed.
The total of the WALK interval and pedestrian clearance time should be sufficient to allow a pedestrian crossing in the crosswalk who left the pedestrian detector at the beginning of the WALK interval to travel to the far side of the traveled way at 3.0 fps.

	Street name: Route 1 NB	Street name: Route 1 SB	Street name: Sumner St WB	Street name: Sumner St EB
INPUT DATA				
t=	1.0 Sec.	1.0 Sec.	1.0 Sec.	1.0 Sec.
v=	45 mph	45 mph	30 mph	30 mph
a=	10 ft/sec^2.	10 ft/sec^2.	10 ft/sec^2.	10 ft/sec^2.
g=	32 ft/sec^2.	32 ft/sec^2.	32 ft/sec^2.	32 ft/sec^2.
G=	0.017 ft/ft.	0.005 ft/ft.	0.014 ft/ft.	-0.01 ft/ft.
W=	115 ft.	100 ft.	170 ft.	170 ft.
L=	20 ft.	20 ft.	20 ft.	20 ft.
OUTPUT DATA				
y=	4.1 sec.	4.3 sec.	3.1 sec.	3.3 sec.
r=	2.0 sec.	1.8 sec.	4.3 sec.	4.3 sec.
Say y=	4.5 sec.	4.5 sec.	3.5 sec.	3.5 sec.
Say r=	2 sec.	2 sec.	4.5 sec.	4.5 sec.

	Street name: Route 1 NB-Left Yellow	Street name: Route 1 NB-Left Red	Street name: Route 1 SB-Left Yellow	Street name: Route 1 SB-Left Red
INPUT DATA				
t=	1.0 Sec.	1.0 Sec.	1.0 Sec.	1.0 Sec.
v=	40 mph	20 mph	40 mph	20 mph
a=	10 ft/sec^2.	10 ft/sec^2.	10 ft/sec^2.	10 ft/sec^2.
g=	32 ft/sec^2.	32 ft/sec^2.	32 ft/sec^2.	32 ft/sec^2.
G=	0.017 ft/ft.	0.017 ft/ft.	0.005 ft/ft.	0.005 ft/ft.
W=	115 ft.	115 ft.	100 ft.	100 ft.
L=	20 ft.	20 ft.	20 ft.	20 ft.
OUTPUT DATA				
y=	3.8 sec.		3.9 sec.	
r=		4.6 sec.		4.1 sec.
Say y=		4 sec.		4 sec.
Say r=		4.5 sec.		4 sec.

Street name: Exclusive Pedestrian

INPUT DATA
Walk Speed= 3.5 ft/sec
Crosswalk= 78 ft.
Ped button to curb= 8 ft.

OUTPUT DATA
Minimum W= 6.4 sec.
FDW= 18.3 sec.
DW/All-Red= 4 sec.

NORWOOD
PROVIDENCE HWY (RT 1) AT MORSE STREET

STATE	SIGNAL ID NO.	REVISION NO.	SHEET NO.	TOTAL SHEETS
MASS	1322	01	1	

TITLE SHEET

THE COMMONWEALTH OF MASSACHUSETTS
MASSACHUSETTS HIGHWAY DEPARTMENT

TRAFFIC SIGNAL LAYOUT PLAN AND PERMIT
PROVIDENCE HIGHWAY (ROUTE 1) AT MORSE STREET

IN THE TOWN OF

NORWOOD
NORFOLK COUNTY

Under authority of Chapter 89, Sec. 8 General Laws, Tercentenary Edition, the Massachusetts Highway Department hereby approves the following described traffic control signal installation, and auxiliary signs and surface markings, for the above location, provided that a permit for the opening of the road and the placing of structures thereon shall be received from the board or officer in charge of the road.

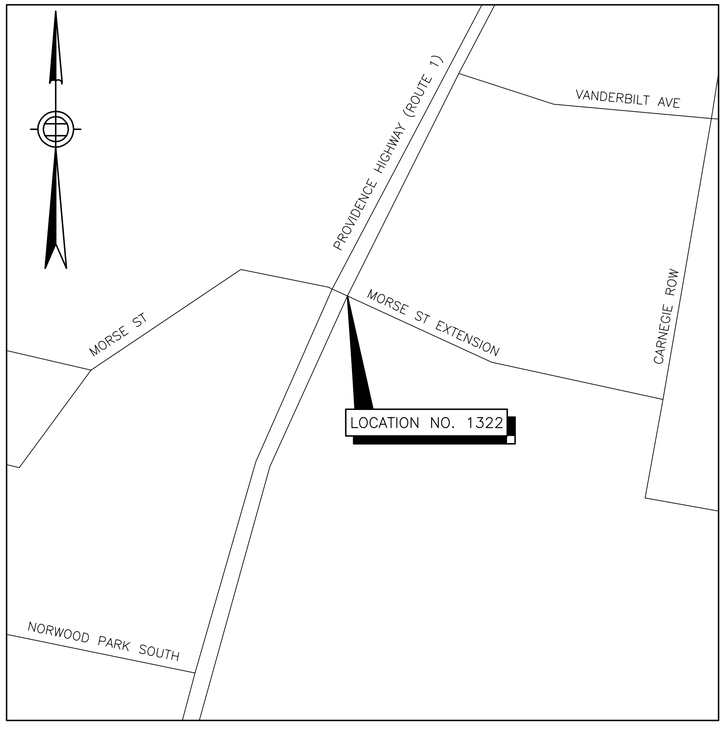
This permit is granted for the specific signal installation described herein and for its operation in accordance with the conditions set forth below and with the requirements of the Massachusetts Highway Department. The details for any material alterations or any continued* or substantial departure from the provisions of this permit must be submitted to the department for approval with data sufficient to justify such modification. Failure to comply with these requirements automatically voids this permit during such time as non–compliance exists.

I. STANDARDS OF INSTALLATION

The traffic control signal installation and all auxiliary signs and surface markings which are used in connection with such installation shall conform with the requirements of the Massachusetts Highway Department and with the sketch which is attached.

II. OPERATION OF SIGNALS

(a) Type of control: AUTOMATIC
(b) Coordination: COORDINATED
(c) Special connection: NONE
(d) Timing for automatic operation: SEE SHEET NO. 3
(e) Hours for Automatic Operation: CONTINUOUS
Signals may be operated automatically for a shorter period of time but not for a greater length of time than is here indicated except when unusual conditions arise which temporarily justify longer operation.
(f) Flashing Operation: Whenever a signal is not operating as a control device (stop and go), it must Flash Yellow or Flash Red as set forth in the signal sequence and at the rate of 50–60 flashes per minute unless otherwise specified in Part II(e) of this Permit.
(g) Manual Operation: Signals may be operated manually at any time irrespective of the hours designated in Part II(3) of this permit
(h) Discontinuance: Signals may be discontinued at any time. When this is done signal faces must be turned away from traffic, taken down or hooded, and the District Highway Engineer notified.



LOCUS MAP
(SCALE AS SHOWN)

HOR. SCALE IN FEET
0 200 400 800

REVISION NO. 01
DATE: 07–09/01
INSERT BY: J.C.CONNOR
DATE:
FILE NAME: 1322T0101.DWG

COMMENTS:

MASSHIGHWAY
10 PARK PLAZA
BOSTON, MA 02116

MASSACHUSETTS
HIGHWAY DEPARTMENT

APPROVED BY:

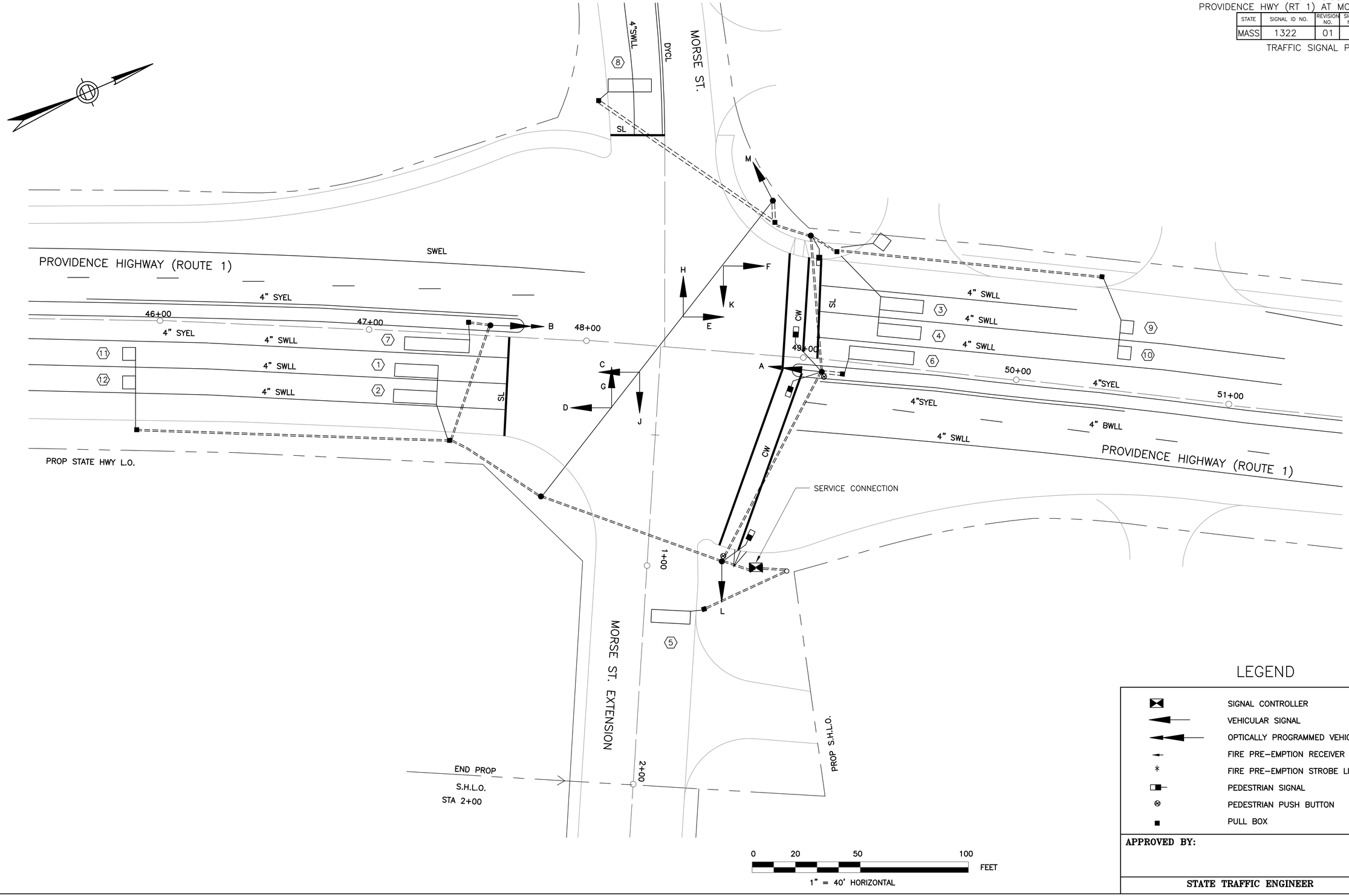
STATE TRAFFIC ENGINEER Date

NORWOOD

PROVIDENCE HWY (RT 1) AT MORSE STREET

STATE	SIGNAL ID NO.	REVISION NO.	SHEET NO.	TOTAL SHEETS
MASS	1322	01	2	

TRAFFIC SIGNAL PLAN



LEGEND

	SIGNAL CONTROLLER
	VEHICULAR SIGNAL
	OPTICALLY PROGRAMMED VEHICULAR SIGNAL
	FIRE PRE-EMPTION RECEIVER
*	FIRE PRE-EMPTION STROBE LIGHT
	PEDESTRIAN SIGNAL
⊗	PEDESTRIAN PUSH BUTTON
■	PULL BOX

APPROVED BY:

STATE TRAFFIC ENGINEER **Date**

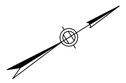
1322P0101.DWG

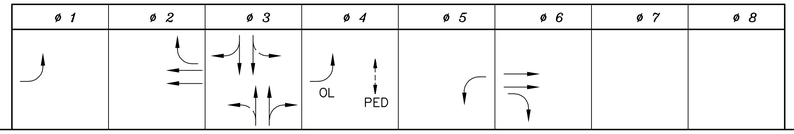
NORWOOD
PROVIDENCE HWY (RT 1) AT MORSE STREET

STATE	SIGNAL ID NO.	REVISION NO.	SHEET NO.	TOTAL SHEETS
MASS	1322	01	3	

TRAFFIC SIGNAL PLAN

APPROX. NORTH





SEQUENCE AND TIMING FOR FULLY-ACTUATED CONTROL (COORDINATED)

STREET	DIRECTION	HOUSINGS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	FLASH OPER
PROVIDENCE HWY (ROUTE 1)	NB-LT	A	GL	YL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL							FRL
PROVIDENCE HWY (ROUTE 1)	NB	C	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	GV	Y	R							FY
PROVIDENCE HWY (ROUTE 1)	NB	D	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	GV/GR	Y	R							FY
PROVIDENCE HWY (ROUTE 1)	SB-LT	B	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	GL	YL	RL	RL	RL	RL							FRL
PROVIDENCE HWY (ROUTE 1)	SB	E	R	R	R	GV	Y	R	R	R	R	R	R	R	R	R	R	R	R	R							FY
PROVIDENCE HWY (ROUTE 1)	SB	F	R	R	R	GV/GR	Y	R	R	R	R	R	R	R	R	R	R	R	R	R							FY
MORSE STREET	WB	G,H	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R							FR
MORSE STREET	EB	J,K,L	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R							FR
PEDESTRIAN	E-W	ALL	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	DW	DW	DW	DW	DW							OFF
TIMING IN SECONDS																											
MINIMUM GREEN (INITIAL)			8			16			10						8			16									EMERGENCY ONLY
PASSAGE TIME (VECHICLE)			4			4			4						4			4									
MAXIMUM 1			25			35			30						35			35									
MAXIMUM 2			25			35			30						30			35									
YELLOW CLEARANCE				4			4			4						4			4								
RED CLEARANCE					1			1			1						1			1							
WALK (W)												12															
PEDESTRIAN CLEARANCE													8														
RECALL			OFF			ON			OFF			OFF			OFF			MIN									
MEMORY			LOCKING			LOCKING			LOCKING			LOCKING			LOCKING			LOCKING									

MAJOR ITEMS REQUIRED

QUANTITY	ITEM
1	CONTROLLER TYPE 8DW, CAB. & FDN.
1	SERVICE CONNECTION (OVERHEAD)
2	SPANWIRE ASSEMBLY BASE & FDN.
3	10' SIGNAL POLE, BASE, & FDN.
4	1 WAY, 3 SECTION, SIGNAL HOUSING (12" LENS)
2	2 WAY, 3 & 4 SECTION SIGNAL HOUSING (12" LENS)
2	2 WAY, 3 SECTION SIGNAL HOUSING (12" LENS)
4	PEDESTRIAN HOUSING
3	PEDESTRIAN PUSH BUTTON, SIGN, & SADDLES
6	LOOP DETECTOR AMPLIFIER (DUAL CHANNEL)
12	ROADWAY LOOP DETECTOR
9	12" x 12" PULL BOX
	Necessary duct, cable, labor, miscellaneous
	material and equipment to complete the installation.

NOTES:

SEQUENCE AND TIMING NOTES:

1. ø7 AND ø8 NOT USED.

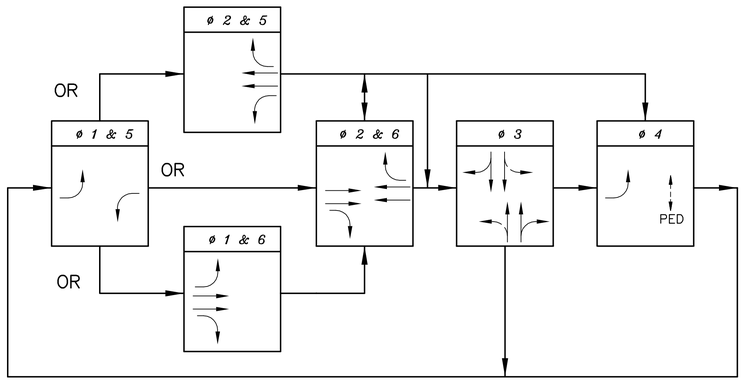
NEMA DUAL RING PHASING NOTES:

1. PHASES ASSOCIATED BY A SOLID LINE SHALL NOT OPERATE CONCURRENTLY.
2. PHASES ASSOCIATED BY A DASHED LINE MAY OPERATE CONCURRENTLY.
3. THROUGH MOVEMENTS MAY INCLUDE RIGHT TURNS.
4. IF THE ASSIGNED RIGHT OF WAY FOR ANY TRAFFIC MOVEMENT IS TO REMAIN IN EFFECT DURING THE NEXT CALLED PHASE, THE SIGNAL INDICATIONS FOR THAT TRAFFIC MOVEMENT SHALL NOT CHANGE DURING THE CHANGE INTERVAL(S) UNLESS OTHERWISE NOTED.

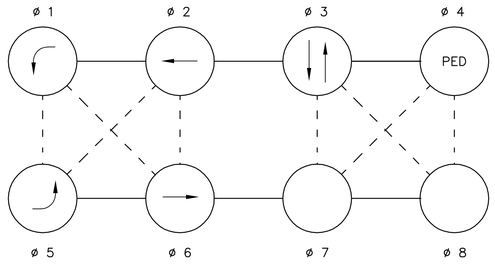
LOOP DETECTOR NOTES:

1. SEE LOOP DETECTOR DETAIL SHEET FROM DESIGN DOCUMENT FOR SPLICE PATTERN AND OTHER INFORMATION.
2. DELAY AND EXTENSION TIMES ARE IN SECONDS.
3. DELAY TIME SHALL BE EFFECTIVE ONLY DURING THE RED PORTION OF THE PHASE THAT IS CALLED BY THE DETECTOR.

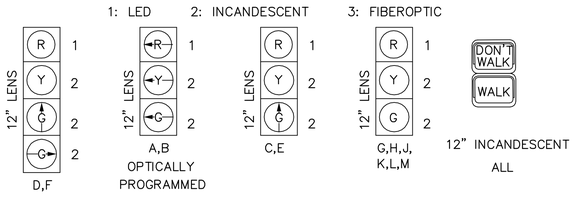
PREFERENTIAL PHASING SEQUENCE



NEMA DUAL RING PHASING NOTES:



SIGNAL IDENTIFICATION



LOOP DETECTOR DATA

DETECTOR NUMBER	NUMBER OF SEGMENTS	LOOP SIZE	NUM. OF TURNS	ø CALLED	ø EXT.	MODE PULSE PRESENCE	DELAY TIME	EXT. TIME
1	1	6'X20'		ø6	ø6			
2	1	6'X20'		ø6	ø6			
3	1	6'X20'		ø2	ø2			
4	1	6'X20'		ø2	ø2			
5	1	6'X18'		ø3	ø3			
6	1	6'X30'		ø5	ø5			
7	1	6'X30'		ø1	ø1			
8	1	6'X18'		ø3	ø3			
9	1	6'X6'		ø2	ø2			
10	1	6'X6'		ø2	ø2			
11	1	6'X6'		ø6	ø6			
12	1	6'X6'		ø6	ø6			

CONTROLLER MAKE & MODEL: EPAC 300
UTILITY POLE No. NET&T CO. 171A-1
METER No. 49 542 860
EMERGENCY PRE-EMPTION (TYPE): NONE

APPROVED BY:

STATE TRAFFIC ENGINEER **Date**

1322D0101.DWG

THE COMMONWEALTH OF MASSACHUSETTS

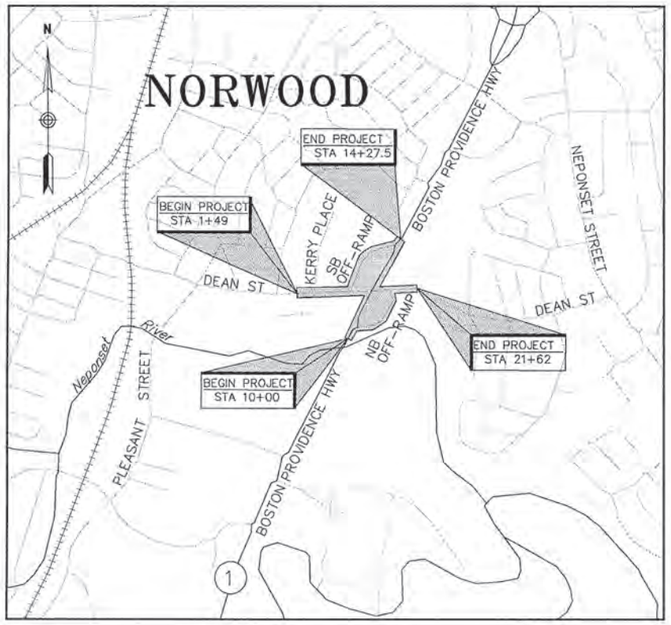
ROADWAY IMPROVEMENT PROJECT
DEAN STREET/ROUTE 1

IN THE TOWN OF

NORWOOD
NORFOLK COUNTY

THE 1995 METRIC EDITION MASSACHUSETTS HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES; THE SUPPLEMENTAL SPECIFICATIONS DATED JUNE 6, 2006; THE 1996 METRIC EDITION CONSTRUCTION AND TRAFFIC STANDARD DETAILS; THE APRIL 2003 METRIC/ENGLISH SUPPLEMENTAL DRAWINGS; THE 2003 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS; THE 1968 STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING; AND THE AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z-60.1-2004) WILL GOVERN.

INDEX



0 500 1000

SCALE IN METERS

LENGTH OF PROJECT - 860 METERS

DESIGN DESIGNATION (ROUTE 1)

DESIGN SPEED	= 72 KM/H
ADT (2000)	= 44,070 VPD
ADT (2010)	= 46,325 VPD
K	= 7.7%
D	= 56% (SB)
T (PEAK HOUR)	= 2%
T (AVERAGE DAY)	= 2%
DHV	= 3,567 VPH
DDHV	= 1998 VPH (SB)

LEGEND

SEE SHEET 2

PERMIT SET

MARCH 2008

PROJECT ENGINEER
STRUCTURAL REVIEW
TRAFFIC SIGNAL REVIEW
HIGHWAY DEPT. AUTHORIZATION
HIGHWAY TECH. REVIEW
CONSTRUCTION REVIEW

NO.	REVISIONS	DATE

VHB Vanasse Hangen Brustlin, Inc.
Transportation
Land Development
Environmental Services
101 Walnut St., P.O. Box 9151
Watertown, MA 02471
617 924 1770•FAX 617 924 2286

DESIGNED BY M HAYES	APPROVED BY J MAGNI	SHEET OF 1 47
DRAWN BY M HAYES	DFTG CHECKED BY	VHB CAD FILE NAME 0705BCOV
CHECKED BY D SHEDD	DATE: MARCH 2008	JOB NO. 0705802

MAWALD\LD\0705801\CAD\TE\PLANSET\0705801COV.DWG

TOWN OF NORWOOD
DEAN STREET/ROUTE 1
TRAFFIC PLAN
SHEET 25 OF 47

N

DEAN STREET

KERRY PLACE

INDUSTRIAL WAY

LIMIT OF WORK
STA: 1+49±
(MEET EXIST)

LIMIT OF WORK
STA: 2+40±
MEET PROPOSED
(BY OTHERS)

MEET EXIST MARKINGS

LIMIT OF PAVING
(MEET EXIST)

CONT. ON SHEET 26

+93.692

R3-7L

R1-1

D3-1
D3-2

D3-3

R4-3a

3.30m 3.35m 4.30m

SWL-25m

DYCL-26m

ONLY

SL

6.00m

2.5m CW

EXIST ROW

SWEL

310mm

DYCL

+56.209 PT

+4.5

+16.6

+47.250 PC

+77.713 PT

3.35m

3.65m

3.0m

9.0m (TYP)

BWLL

ONE-WAY WHITE RPM (TYP)

TWO-WAY YELLOW RPM (TYP)

PROP LAYOUT ALTERATION

CONSTRUCTION NOTES:

1. ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC.
2. WHERE EXISTING PAVEMENT MARKINGS ARE DIFFERENT THAN PROPOSED MARKINGS SHOWN, REMOVE BY APPROVED METHOD.
3. ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL BE R&S UNLESS OTHERWISE INDICATED.

5 0 5 10 15 20
SCALE IN METERS

MAWALD\LD\0705802\CAD\TE\PLANSET\0705802TSIG.DWG

TOWN OF NORWOOD
DEAN STREET/ROUTE 1
TRAFFIC PLAN
SHEET 26 OF 47

CONSTRUCTION NOTES:

1. REMOVE ALL EXISTING TS EQUIPMENT, AND ABANDON ALL TS CONDUIT UNLESS OTHERWISE NOTED.
2. ALL TS CONDUIT SHALL BE 75mm UNLESS OTHERWISE NOTED.
3. EACH LOOP GROUP SHALL BE SPLICED IN SINGLE PULL BOX AND WIRED TO SEPARATE CONTROLLER INPUT.
4. PULL BOXES SHALL BE ADJACENT TO CURB UNLESS OTHERWISE NOTED AND SHALL NOT BE LOCATED IN WHEELCHAIR RAMPS.
5. ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC.
6. WHERE EXISTING PAVEMENT MARKINGS ARE DIFFERENT THAN PROPOSED MARKINGS SHOWN, REMOVE BY APPROVED METHOD.
7. TRAFFIC SIGNAL FOUNDATIONS TO BE LOCATED BY STATION AND OFFSET.
8. THE TOP OF ALL MAST ARM & STRAIN POLE FOUNDATIONS IN SIDEWALK AREAS SHALL BE LOCATED 75mm± BELOW FINISH GRADE. THE TOP OF THE FOUNDATION SHALL NOT BE EXPOSED TO THE SIDEWALK. THE TOP OF ALL MAST ARM & STRAIN POLE FOUNDATIONS IN GRASSY AREAS SHALL BE LOCATED 50mm± ABOVE FINISHED GRADE.
9. ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL BE R&S UNLESS OTHERWISE INDICATED.
10. THE PRE-EMPTION STROBES SHALL BE WIRED SEPERATELY AND NOT UTILIZE SPARE TRAFFIC SIGNAL CONDUCTORS.
11. SEE SHEETS 31 & 32 FOR TRAFFIC SIGNAL DATA.

CONT. ON SHEET 29

U.S. RTE 1 SOUTHBOUND OFF RAMP

U.S. RTE 1 SOUTHBOUND - BOSTON PROVIDENCE HIGHWAY

DEAN STREET

STAPLES DRIVE

PROP TS POLE
W/9.0m MAST ARM
W/PED SIGNAL HEAD
W/PED PUSH BUTTON
W/R10-3f & SIGN SADDLE
W/W11-20
W/D3-1
STA 3+18.1, 11.4mLT

PROP 2.5m TS POST
W/PED SIGNAL HEAD
W/PED PUSH BUTTON
W/R10-3f & SIGN SADDLE
STA 3+14.4, 9.6mLT

PROP PRE-EMPTION STROBE (SEE NOTE 10)

PROP TS POLE
W/7.5m MAST ARM
W/PED SIGNAL HEAD
W/PED PUSH BUTTON
W/R10-3f & SIGN SADDLE
W/W11-20
STA 3+17.0, 11.6mRT

PROP SIGNAL EASEMENT

PROP TS POLE
W/10.5m MAST ARM
STA 3+38.5, 15.5mRT

PROP 3.0m TS POST
W/RED SIGNAL HEAD
W/RED PUSH BUTTON
W/R10-3f & SIGN SADDLE
STA 3+41.0, 8.9mLT

PROP 2.5m TS POST
W/PED SIGNAL HEAD
W/PED PUSH BUTTON
W/R10-3f & SIGN SADDLE
STA 11+48.8, 14.9mLT

PROP POWER SOURCE

PROP SERVICE CONNECTION

PROP TS 2 TYPE 1 CONTROLLER
W/TYPE 6 CABINET & FOUNDATION
W/CONCRETE PAD
STA 11+78.6, 17.4mLT

PROP 100mm CONDUIT

PROP TS STRAIN POLE
H=9.0m, M=700kNm
W/D3-1 & D3-4
STA 11+73.9, 19.9mLT

PROP 100mm CONDUIT

PROP PRE-EMPTION DETECTOR (TYP)

PROP PRE-EMPTION STROBE (SEE NOTE 10)

TWO PROP 100mm CONDUIT

PROP TS STRAIN POLE
H=9.0m, M=700kNm
W/SPAN WIRE ASSEMBLY
W/TETHER WIRE
W/D3-1 & D3-4
W/PED SIGNAL HEAD
W/PED PUSH BUTTON
W/R10-3f & SIGN SADDLE
W/W11-20
STA 11+72.7, 18.2mRT

PROP 2.5m TS POST
W/PED SIGNAL HEAD
W/PED PUSH BUTTON
W/R10-3f & SIGN SADDLE
STA 11+68.2, 15.9mRT

PROP TAKING

PROP LAYOUT ALTERATION

PROP SHLD ALTERATION

ONE-WAY WHITE RPM (TYP)

TWO-WAY YELLOW RPM (TYP)

200mm SYCHL@ 3:1, 3.0m O.C.

0.6m BWL W/1.2m GAPS

CONT. ON SHEET 25

CONT. ON SHEET 28

CONT. ON SHEET 27

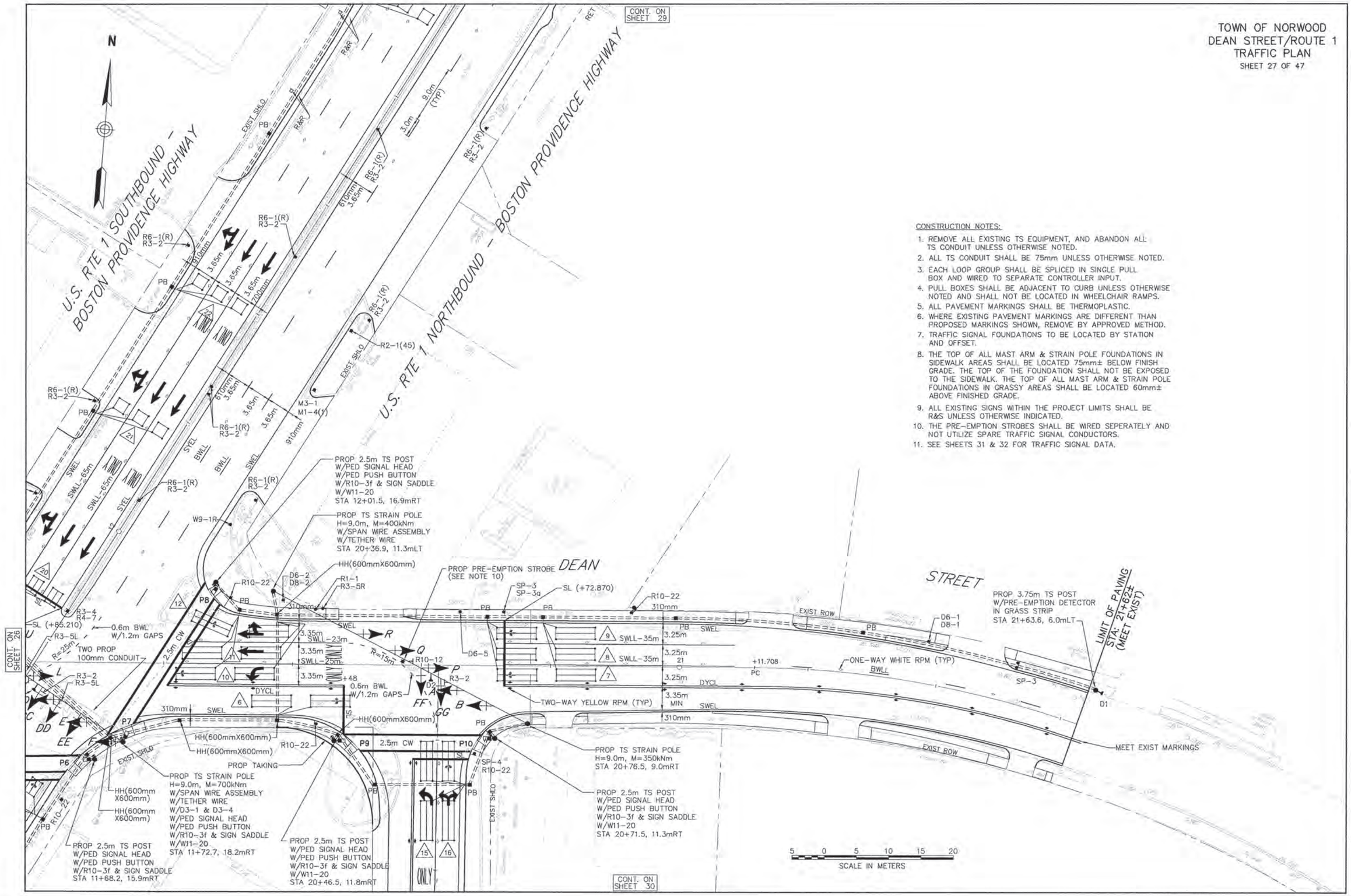
SCALE IN METERS 5 0 5 10 15 20

MAWALD\LD\0705802\CAD\TE\PLANSET\0705802TSIG.DWG

TOWN OF NORWOOD
DEAN STREET/ROUTE 1
TRAFFIC PLAN
SHEET 27 OF 47

CONSTRUCTION NOTES:

1. REMOVE ALL EXISTING TS EQUIPMENT, AND ABANDON ALL TS CONDUIT UNLESS OTHERWISE NOTED.
2. ALL TS CONDUIT SHALL BE 75mm UNLESS OTHERWISE NOTED.
3. EACH LOOP GROUP SHALL BE SPLICED IN SINGLE PULL BOX AND WIRED TO SEPARATE CONTROLLER INPUT.
4. PULL BOXES SHALL BE ADJACENT TO CURB UNLESS OTHERWISE NOTED AND SHALL NOT BE LOCATED IN WHEELCHAIR RAMPS.
5. ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC.
6. WHERE EXISTING PAVEMENT MARKINGS ARE DIFFERENT THAN PROPOSED MARKINGS SHOWN, REMOVE BY APPROVED METHOD.
7. TRAFFIC SIGNAL FOUNDATIONS TO BE LOCATED BY STATION AND OFFSET.
8. THE TOP OF ALL MAST ARM & STRAIN POLE FOUNDATIONS IN SIDEWALK AREAS SHALL BE LOCATED 75mm± BELOW FINISH GRADE. THE TOP OF THE FOUNDATION SHALL NOT BE EXPOSED TO THE SIDEWALK. THE TOP OF ALL MAST ARM & STRAIN POLE FOUNDATIONS IN GRASSY AREAS SHALL BE LOCATED 60mm± ABOVE FINISHED GRADE.
9. ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL BE R&S UNLESS OTHERWISE INDICATED.
10. THE PRE-EMPTION STROBES SHALL BE WIRED SEPERATELY AND NOT UTILIZE SPARE TRAFFIC SIGNAL CONDUCTORS.
11. SEE SHEETS 31 & 32 FOR TRAFFIC SIGNAL DATA.



TOWN OF NORWOOD
DEAN STREET/ROUTE 1
TRAFFIC PLAN
SHEET 28 OF 47

U.S. RTE 1 SOUTHBOUND–BOSTON PROVIDENCE HIGHWAY

U.S. RTE 1 NORTHBOUND–BOSTON PROVIDENCE HIGHWAY

U.S. RTE 1 NORTHBOUND OFF RAMP

STAPLES DRIVE

DEAN ST RIGHT LANE FOR ALL TURNS

DEAN ST ENTER FOR ALL TURNS

SOUTHBOUND LIMIT OF PAVING STA: 9+49 (MEET EXIST)

NORTHBOUND LIMIT OF PAVING STA: 10+00 (MEET EXIST)

LIMIT OF WORK STA: 4+93± (MEET EXIST)

CONSTRUCTION NOTES:

1. REMOVE ALL EXISTING TS EQUIPMENT, AND ABANDON ALL TS CONDUIT UNLESS OTHERWISE NOTED.
2. ALL TS CONDUIT SHALL BE 75mm UNLESS OTHERWISE NOTED.
3. EACH LOOP GROUP SHALL BE SPLICED IN SINGLE PULL BOX AND WIRED TO SEPARATE CONTROLLER INPUT.
4. PULL BOXES SHALL BE ADJACENT TO CURB UNLESS OTHERWISE NOTED AND SHALL NOT BE LOCATED IN WHEELCHAIR RAMPS.
5. ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC.
6. WHERE EXISTING PAVEMENT MARKINGS ARE DIFFERENT THAN PROPOSED MARKINGS SHOWN, REMOVE BY APPROVED METHOD.
7. ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL BE R&S UNLESS OTHERWISE INDICATED.
8. SEE SHEETS 31 & 32 FOR TRAFFIC SIGNAL DATA.

SCALE IN METERS 5 0 5 10 15 20

CONT. ON SHEET 26

CONT. ON SHEET 30

TOWN OF NORWOOD
DEAN STREET/ROUTE 1
TRAFFIC PLAN
SHEET 29 OF 47

RET

R&R

CONSTRUCTION NOTES:

1. REMOVE ALL EXISTING TS EQUIPMENT, AND ABANDON ALL TS CONDUIT UNLESS OTHERWISE NOTED.
2. ALL TS CONDUIT SHALL BE 75mm UNLESS OTHERWISE NOTED.
3. EACH LOOP GROUP SHALL BE SPLICED IN SINGLE PULL BOX AND WIRED TO SEPARATE CONTROLLER INPUT.
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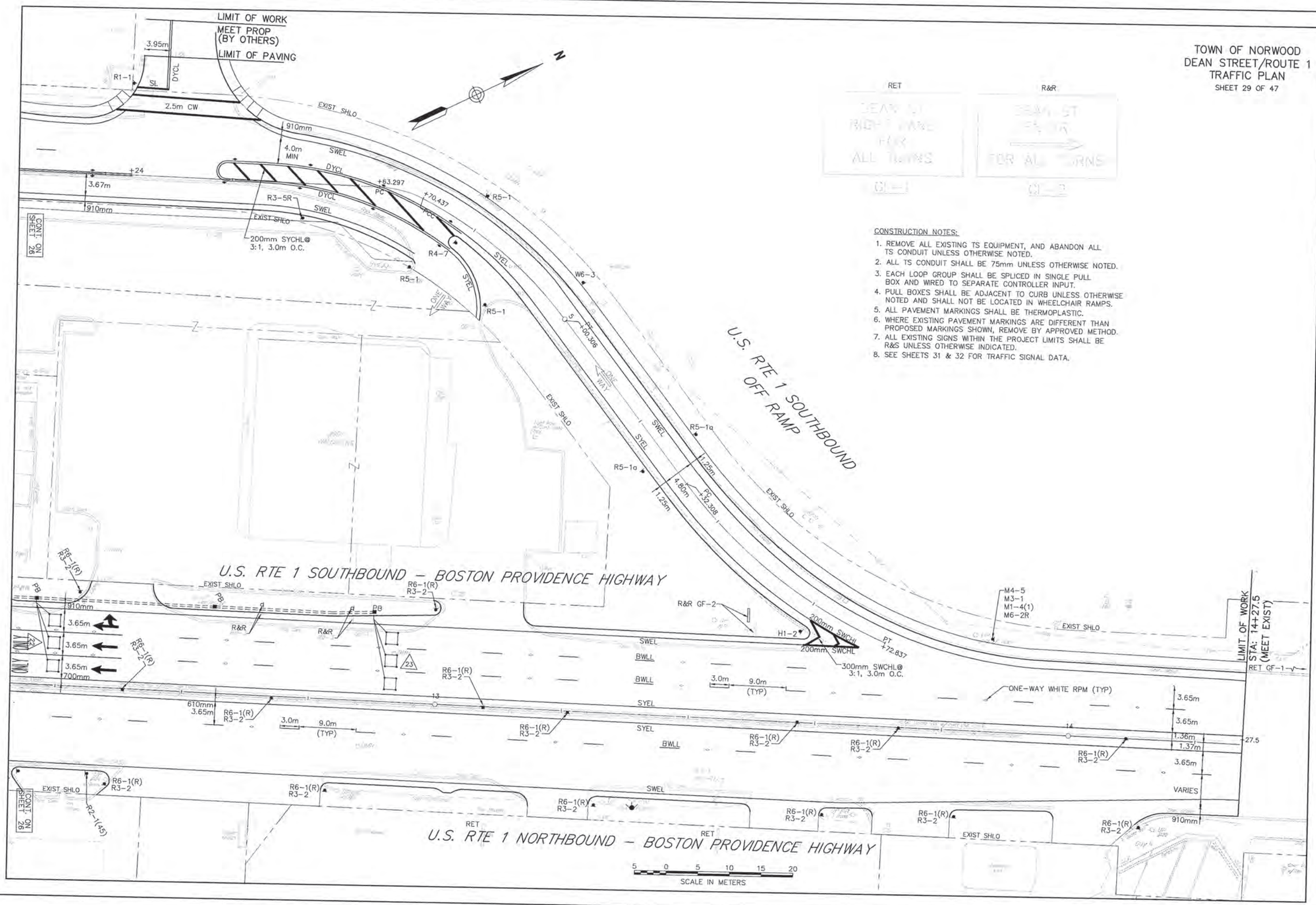
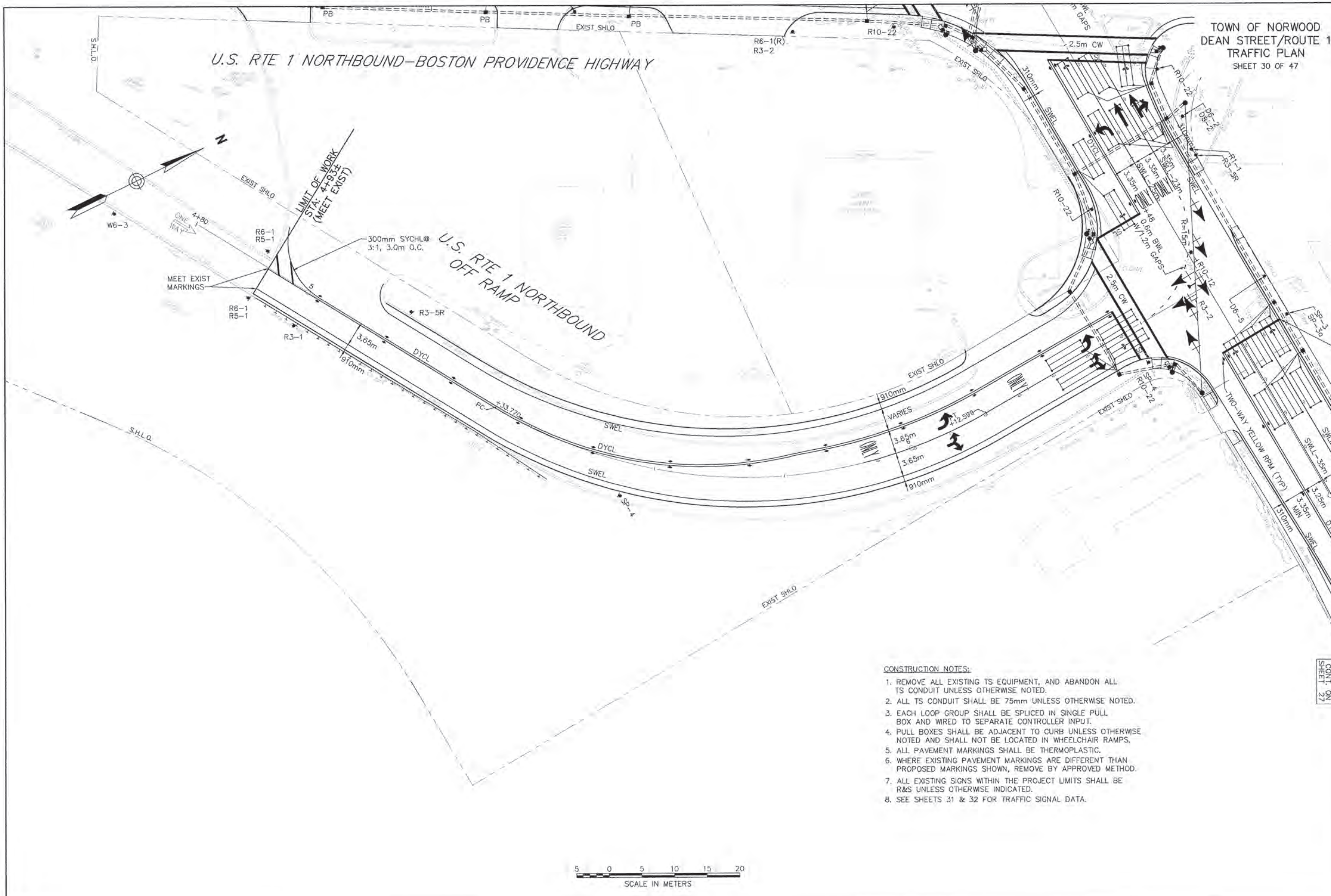


TOWN OF NORWOOD
DEAN STREET/ROUTE 1
TRAFFIC PLAN
SHEET 30 OF 47



CONSTRUCTION NOTES:

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6. WHERE EXISTING PAVEMENT MARKINGS ARE DIFFERENT THAN PROPOSED MARKINGS SHOWN, REMOVE BY APPROVED METHOD.
7. ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL BE R&S UNLESS OTHERWISE INDICATED.
8. SEE SHEETS 31 & 32 FOR TRAFFIC SIGNAL DATA.

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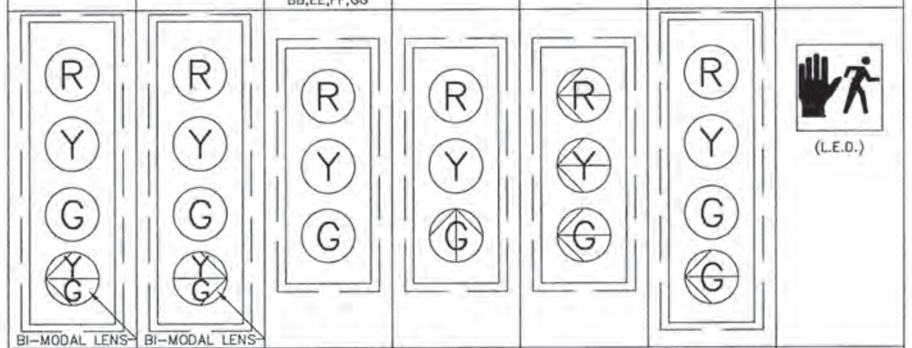
TOWN OF NORWOOD
DEAN STREET/ROUTE 1
SIGNAL TIMING & PHASING
SHEET 31 OF 47

SIGNAL HEAD DATA

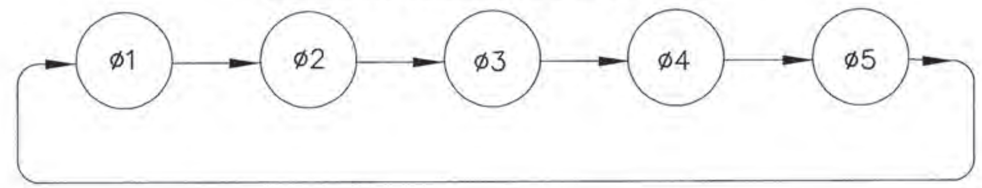
P	Z	A,B,E,F,H,K, M,N,Q,R,W, BB,EE,FF,GG	U,V,CC,DD	C,D,L,X	G,J,Y,AA	P1–P10



ALL 300mm LENS

NOTES: 1. ALL SIGNAL HEADS SHALL BE EQUIPPED WITH 125mm ± LOUVERED BACKPLATES.
2. ALL SIGNAL DISPLAYS SHALL BE EQUIPPED W/L.E.D. MODULES.

PREFERENTIAL PHASE SEQUENCE



SEQUENCE & TIMING NOTES:

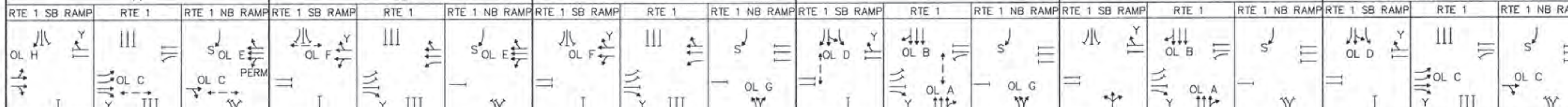
1. IF THE ASSIGNED RIGHT OF WAY FOR ANY TRAFFIC MOVEMENT IS TO REMAIN IN EFFECT DURING THE NEXT CALLED PHASE, THE SIGNAL INDICATIONS FOR THAT TRAFFIC MOVEMENT WILL NOT CHANGE DURING THE CLEARANCE INTERVAL.
2. THE RIGHT OF WAY MAY BE ASSIGNED TO ANY PHASE, OR ANY COMBINATION OF NON-CONFLICTING PHASES.
3. IF CALLS EXIST ON ALL PHASES, THE ASSIGNMENT OF RIGHT OF WAY SHALL BE IN ACCORDANCE WITH THE PREFERENTIAL PHASE SEQUENCE.
4. IF THE ASSIGNED RIGHT-OF-WAY FOR ANY TRAFFIC MOVEMENT IS TO CHANGE DURING THE NEXT CALLED PHASE, THE SIGNAL INDICATION FOR THAT MOVEMENT WILL DISPLAY THE APPROPRIATE CLEARANCE INTERVALS.

SEQUENCE AND TIMING

APPROACH	DIRECTION	HOUSING	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
MINIMUM INTERVAL			6			6			6			6			6			6			–			–			6		
VEHICLE EXTENSION			2			2			2			2			2			2			–			–			2		
MAXIMUM 1			25			25			25			20			20			20			–			–			10		
MAXIMUM 2			–			–			–			–			–			–			–			–			–		
YELLOW CLEARANCE				4			4			4			4			4			4			4			4			4	
RED CLEARANCE					1			1			1			1			1			1			1			1			1
PEDESTRIAN INTERVAL						5/24			5/24			5/14																	
DEAN STREET	EB	A,B							G	Y	R							R	R	R							R	R	R
DEAN STREET	EB	C,D				←G	←Y	←R							←R	←R	←R							←R	←R	←R			
DEAN STREET	EB	E,F				G	Y	R							R	R	R							R	R	R			
DEAN STREET	EB	G	←G G	Y	R							R	R	R							R	R	R						
DEAN STREET	EB	H	G	Y	R							R	R	R							R	R	R						
DEAN STREET	WB	J	R	R	R							←G G	Y	R							←G G	Y	R						
DEAN STREET	WB	K	R	R	R							G	Y	R							G	Y	R						
DEAN STREET	WB	L				←R	←R	←R							←G	←Y	←R							←G	←Y	←R			
DEAN STREET	WB	M,N				R	R	R							G	Y	R							G	Y	R			
DEAN STREET	WB	P							G	Y	R							←G G	←Y Y	R							R	R	R
DEAN STREET	WB	Q,R							G	Y	R							G	Y	R							R	R	R
RTE 1	SB	U,V				R	R	R							R	R	R							R	R	R			
RTE 1	SB	W				R	R	R							R	R	R							R	R	R			
RTE 1 SB OFF-RAMP	SB	X	←R	←R	←R							←R	←R	←R							←R	←R	←R						
RTE 1 SB OFF-RAMP	SB	Y	R	R	R							R	R	R							R	R	R						
RTE 1 SB OFF-RAMP	SB	Z	R–G→	R–Y→	R							R	R	R							R	R	R						
STAPLES DRIVEWAY	NB	AA	R	R	R							R	R	R							R	R	R						
STAPLES DRIVEWAY	NB	BB	R	R	R							R	R	R							R	R	R						
RTE 1	NB	CC,DD				R	R	R							R	R	R							R	R	R			
RTE 1	NB	EE				R	R	R							R	R	R							R	R	R			
RTE 1 NB OFF-RAMP	NB	FF,GG							R	R	R							R	R	R							G	Y	R
PEDESTRIAN X-ING	NB-SB	P1–P2	DW	DW	DW							DW	DW	DW							DW	DW	DW						
PEDESTRIAN X-ING	EB-WB	P3–P4	DW	DW	DW							**	DW	DW							DW	DW	DW						
PEDESTRIAN X-ING	EB-WB	P5–P6				**	DW	DW							DW	DW	DW							DW	DW	DW			
PEDESTRIAN X-ING	NB-SB	P7–P8				DW	DW	DW							DW	DW	DW							DW	DW	DW			
PEDESTRIAN X-ING	EB-WB	P9–P10							**	DW	DW							DW	DW	DW							DW	DW	DW

APPROACH	DIRECTION	HOUSING	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	FLASHING OPERATION
MINIMUM INTERVAL			6			6			–			6			–			6			FOR EMERGENCY VEHICLE PRE-EMPTION ONLY												
VEHICLE EXTENSION			2			2			–			2			–			2															
MAXIMUM 1			50			50			–			10			–			10															
MAXIMUM 2			–			–			–			–			–			–															
YELLOW CLEARANCE				4			4			4			4			4			4														
RED CLEARANCE					1			1			1			1			1			1													
PEDESTRIAN INTERVAL			5/13			5/20																											
DEAN STREET	EB	A,B							R	R	R							R	R	R							G	Y	R				FY
DEAN STREET	EB	C,D				←R	←R	←R							←R	←R	←R							←G	←Y	←R							←FR
DEAN STREET	EB	E,F				R	R	R							R	R	R							G	Y	R							FR
DEAN STREET	EB	G	R	R	R							R	R	R							R	R	R										FR
DEAN STREET	EB	H	R	R	R							R	R	R							R	R	R										FR
DEAN STREET	WB	J	R	R	R							R	R	R							R	R	R										FY
DEAN STREET	WB	K	R	R	R							R	R	R							R	R	R										FY
DEAN STREET	WB	L				←R	←R	←R								←R	←R	←R						←R	←R	←R							←FR
DEAN STREET	WB	M,N				R	R	R								R	R	R						R	R	R							FR
DEAN STREET	WB	P							R	R	R							R	R	R							R	R	R				FR
DEAN STREET	WB	Q,R							R	R	R							R	R	R							R	R	R				FR
RTE 1	SB	U,V				↑G	Y	R							↑G	Y	R							R	R	R							FY
RTE 1	SB	W				G	Y	R							G	Y	R							R	R	R							FY
RTE 1 SB OFF-RAMP	SB	X	←G	←Y	←R							←R	←R	←R							←G	←Y	←R										←FR
RTE 1 SB OFF-RAMP	SB	Y	←G G	Y	R							R	R	R							←G G	Y	R										FR
RTE 1 SB OFF-RAMP	SB	Z	G	Y	R							R	R	R							G	Y	R										FR
STAPLES DRIVEWAY	NB	AA	R	R	R							←G G	Y	R							R	R	R										FR
STAPLES DRIVEWAY	NB	BB	R	R	R							G	Y	R							R	R	R										FR
RTE 1	NB	CC,DD				↑G	Y	R							↑G	Y	R							R	R	R							FY
RTE 1	NB	EE				G	Y	R							G	Y	R							R	R	R							FY
RTE 1 NB OFF-RAMP	NB	FF,GG							G	Y	R							R	R	R							R	R	R				FR
PEDESTRIAN X-ING	NB-SB	P1–P2	**	DW	DW							DW	DW	DW							DW	DW	DW										OUT
PEDESTRIAN X-ING	EB-WB	P3–P4	DW	DW	DW							DW	DW	DW							DW	DW	DW										OUT
PEDESTRIAN X-ING	EB-WB	P5–P6				DW	DW	DW							DW	DW	DW							DW	DW	DW							OUT
PEDESTRIAN X-ING	NB-SB	P7–P8				**	DW	DW							DW	DW	DW							DW	DW	DW							OUT
PEDESTRIAN X-ING	EB-WB	P9–P10							DW	DW	DW							DW	DW	DW							DW	DW	DW				OUT

	Cols 1–9	Cols 10–18	Cols 19–27	Cols 28–36	Cols 37–45	Cols 46–54	Cols 55–57
DETECTOR	NON-LOCK	NON-LOCK	NON-LOCK	NON-LOCK	NON-LOCK	–	
RECALL	OFF	OFF	OFF	SOFT	OFF	OFF	
	ø1	ø2	ø3	ø4	ø5	ø6 (EMERGENCY PRE-EMPT)	ø7&ø8
	RTE 1 SB RAMP / RTE 1 / RTE 1 NB RAMP	RTE 1 SB RAMP / RTE 1 / RTE 1 NB RAMP	RTE 1 SB RAMP / RTE 1 / RTE 1 NB RAMP	RTE 1 SB RAMP / RTE 1 / RTE 1 NB RAMP	RTE 1 SB RAMP / RTE 1 / RTE 1 NB RAMP	RTE 1 SB RAMP / RTE 1 / RTE 1 NB RAMP	NOT USED



NOTES:
1. AUTOMATIC FLASHING OPERATION PER M.U.T.C.D. SECTION 4D.12.
2. ** NORMALLY DW, UPON PED PUSH BUTTON ACTUATION W/FDW
3. PERM = PERMISSIVE
4. OL = OVERLAP
5. Y = YIELD CONTROL
6. S = STOP CONTROL
7. MAXIMUM 1 = NORMAL OPERATION
8. MAXIMUM 2 = NOT USED
9. STOP AND GO OPERATION FOR 24 HOURS PER DAY. FLASHING OPERATION FOR EMERGENCY ONLY.
10. DURING PEDESTRIAN INTERVAL, FDW THROUGH YELLOW OPERATION SHALL BE IN EFFECT.

OVERLAPS

OL A = ø4+ø5 ROUTE 1 NORTHBOUND
OL B = ø4+ø5 ROUTE 1 SOUTHBOUND
OL C = ø1 + ø6
OL D = ø4 + ø6
OL E = ø1 + ø2
OL F = ø2 + ø3
OL G = ø3 + ø4
OL H = ø1

MAWALD\LD\0705802\CAD\TE\PLANSET\0705802TSIG.DWG

PRE-EMPTION PHASING & PRIORITY						
DETECTOR & PRIORITY	PRE-EMPT PHASE ASSIGNMENT	MOVEMENT			VEHICLE PHASE ASSIGNMENT	HOLD
D1	1				ø2	30 SEC
D2	2				ø3	25 SEC
D3	3				OL A	0
D4	4				OL B	0
D5	5				ø1 (OL E & OL H NOT ACTIVE)	25 SEC
D6	6				ø6	25 SEC

EMERGENCY VEHICLE PRE-EMPTION OPERATION.

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE OPTICALLY TRANSMITTED BY OPTICAL EMITTERS MOUNTED IN EMERGENCY VEHICLES AND RECEIVED BY OPTICAL DETECTORS LOCATED AT EACH INTERSECTION.
2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH DETECTORS D1, D2, D3, D4, D5, OR D6 ASSIGNED DESCENDING PRIORITIES AS FOLLOWS: (D1 HIGHEST AND D6 LOWEST)
3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY OPTICAL DETECTOR D1 (OR D2, D3, D4, D5, D6) THE CONTROLLER SHALL HOLD OR ADVANCE TO AND HOLD IN EMERGENCY VEHICLE PRE-EMPTION PHASE #1 (OR #2, #3, #4, #5, #6) GREEN FOR A MINIMUM OF TEN (10) SECONDS OR UNTIL PRE-EMPTION SIGNAL CEASES. THE CONTROLLER SHALL THEN TIME PRE-EMPTION PHASE CLEARANCE (4 SECONDS: YELLOW AND 1 SECOND: ALL RED) AND SERVICE PRE-EMPTION PHASE #2 (OR #1) IF NECESSARY, THEN TIME PRE-EMPTION EMERGENCY VEHICLE PHASE CLEARANCE AND RESUME NORMAL SIGNAL OPERATION. EMERGENCY VEHICLE PRE-EMPTION PHASE #3, #4, #5, AND #6 SHALL BE SIMILARLY SERVED.
4. MINIMUM GREEN, NORMAL VEHICLE CLEARANCE, SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.
5. PRE-EMPTION STROBE SHALL BE ILLUMINATED WHENEVER ANY EMERGENCY VEHICLE PRE-EMPTION GREEN IS ON.
6. DURING PRE-EMPTION, PEDESTRIAN MOVEMENTS SHALL NOT BE ACTIVE.

ITEM 816.01
TRAFFIC SIGNAL RECONSTRUCTION
BOSTON PROVIDENCE HIGHWAY (U.S. RTE 1) AT DEAN STREET/U.S. RTE 1 RAMPS
LIST OF MAJOR ITEMS REQUIRED

QUANTITY	DESCRIPTION
1	8ø TS 2 TYPE 1 CONTROLLER IN A TYPE 6 BASE MOUNTED CABINET INCL. FOUNDATION AND CONCRETE PAD
1	8ø TS 2 TYPE 1 CONTROLLER W/TYPE 6 BASE MOUNTED CABINET-SPARE (SEE NOTE 1)
2	TS 9.0m STRAIN POLE, (H=9.0m M=700kNm) STEEL, INCL. FOUNDATION
1	TS 9.0m STRAIN POLE, (H=9.0m M=400kNm) STEEL, INCL. FOUNDATION
1	TS 9.0m STRAIN POLE, (H=9.0m M=350kNm) STEEL, INCL. FOUNDATION
2	SPAN WIRE ASSEMBLY (INCLUDING TETHER WIRE)
1	TS 7.5m MAST ARM TYPE 2, STEEL, INCL. FOUNDATION
1	TS 9.0m MAST ARM TYPE 2, STEEL, INCL. FOUNDATION
1	TS 10.5m MAST ARM TYPE 2, STEEL, INCL. FOUNDATION
6	TS POST 2.5m STANDARD INCL. FOUNDATION
1	TS POST 3.0m STANDARD INCL. FOUNDATION
1	TS POST 3.75m STANDARD INCL. FOUNDATION
23	SIGNAL HEAD, 3-SECTION, 300mm LENSES
4	SIGNAL HEAD, 4-SECTION, 300mm LENSES
2	SIGNAL HEAD, 4-SECTION (BI-MODAL), 300mm LENSES
10	PEDESTRIAN SIGNAL HEAD (L.E.D.)
10	PEDESTRIAN PUSH BUTTON W/R10-3f AND SIGN SADDLE
30	PULL BOXES-300mmx300mm
9	HAND HOLES-600mmx600mm, SD2-023
15	TYPE C, 2-CHANNEL CARD RACK LOOP DETECTOR AMPLIFIER
63	WIRE LOOP DETECTOR
6	EMERGENCY PRE-EMPTION OPTICAL DETECTORS & DETECTOR CABLE
2	EMERGENCY PRE-EMPTION 4 CHANNEL PHASE SELECTOR
2	EMERGENCY PRE-EMPTION SYSTEM CHASSIS
3	EMERGENCY PRE-EMPTION STROBE (WHITE LENS)
1	SERVICE CONNECTION (OVERHEAD)

PLUS NECESSARY DUCT, CABLE, LABOR, MISCELLANEOUS MATERIAL AND EQUIPMENT TO COMPLETE THE INSTALLATION AND PROVIDE AN OPERATING TRAFFIC CONTROL SIGNAL.

NOTE 1: CONTRACTOR SHALL PROVIDE ONE SPARE CONTROLLER & CABINET ASSEMBLY, WITH ASSOCIATED EQUIPMENT, READY FOR FUTURE INSTALLATION (BY OTHERS). THE SPARE CONTROLLER & CABINET ASSEMBLY SHALL BE OF THE SAME MAKE/MODEL AS THE CONTROLLER & CABINET ASSEMBLY TO BE INSTALLED UNDER THIS CONTRACT, AND SHALL REFLECT THE SAME PHASING/TIMING/SETTINGS SHOWN ON THESE PLANS. ANY ADJUSTMENTS (i.e., TIMING CHANGES) AND/OR MODIFICATIONS MADE TO THE CONTROLLER AND/OR CABINET ASSEMBLY INSTALLED IN THE FIELD DURING THE INSTALLATION AND INSPECTION SHALL ALSO BE REFLECTED IN THE SPARE CONTROLLER & CABINET ASSEMBLY, BY THE CONTRACTOR. UPON FINAL ACCEPTANCE OF THE TRAFFIC SIGNAL SYSTEM BY MASSHIGHWAY, THE CONTRACTOR SHALL DELIVER THIS SPARE CONTROLLER & CABINET ASSEMBLY TO THE NEAREST MASSHIGHWAY DISTRICT 5 MAINTENANCE YARD. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND MASSHIGHWAY 24 HOURS IN ADVANCE OF ANY DELIVERIES. THE CONTRACTOR SHALL UNLOAD AND STACK MATERIAL IN A CAREFUL MANNER TO PREVENT DAMAGE.

DETECTOR DATA						
DETECTOR NO.	NO. SECTION / SIZE	NO. OF TURNS	OPERATIONS	DELAY /EXT	CALL PHASE	LOOP CONNECTION
1	2-1.8mX6.0m QUADRUPOLE	2-4-2	PRESENCE	0	ø1	SERIES
2	2-1.8mX6.0m QUADRUPOLE	2-4-2	PRESENCE	0	ø1	SERIES
3	2-1.8mX6.0m QUADRUPOLE	2-4-2	PRESENCE	0	ø1	SERIES
4	2-1.8mX6.0m QUADRUPOLE	2-4-2	PRESENCE	0	ø1	SERIES
5	2-1.8mX6.0m QUADRUPOLE	2-4-2	PRESENCE	0	ø1	SERIES
6	2-1.8mX6.0m QUADRUPOLE	2-4-2	PRESENCE	0	ø1	SERIES
7	2-1.8mX6.0m QUADRUPOLE	2-4-2	PRESENCE	0	ø2	SERIES
8	2-1.8mX6.0m QUADRUPOLE	2-4-2	PRESENCE	0	ø2	SERIES
9	2-1.8mX6.0m QUADRUPOLE	2-4-2	PRESENCE	0	ø2	SERIES
10	2-1.8mX6.0m QUADRUPOLE	2-4-2	PRESENCE	0	ø2	SERIES
11	2-1.8mX6.0m QUADRUPOLE	2-4-2	PRESENCE	0	ø2	SERIES
12	2-1.8mX6.0m QUADRUPOLE	2-4-2	PRESENCE	0	ø2	SERIES
13	2-1.8mX6.0m QUADRUPOLE	2-4-2	PRESENCE	0	ø2	SERIES
14	2-1.8mX6.0m QUADRUPOLE	2-4-2	PRESENCE	0	ø2	SERIES
15	2-1.8mX6.0m QUADRUPOLE	2-4-2	PRESENCE	0	ø3	SERIES
16	2-1.8mX6.0m QUADRUPOLE	2-4-2	PRESENCE	0	ø3	SERIES
17	2-1.8mX6.0m QUADRUPOLE	2-4-2	PRESENCE	DELAY 5 SEC	ø4	SERIES
18	2-1.8mX6.0m QUADRUPOLE	2-4-2	PRESENCE	0	ø4	SERIES
19	2-1.8mX6.0m QUADRUPOLE	2-4-2	PRESENCE	0	ø4	SERIES
20*	3-1.8mX2.4m QUADRUPOLE	2-4-2	PRESENCE	0	ø4	SERIES
21	3-1.8mX1.8m	3	PRESENCE	0	ø4	SERIES
22	3-1.8mX1.8m	3	PRESENCE	1 SEC EXTENSION	ø4	SERIES
23	3-1.8mX1.8m	3	PRESENCE	2 SEC EXTENSION	ø4	SERIES
24*	3-1.8mX2.4m QUADRUPOLE	2-4-2	PRESENCE	0	ø4	SERIES
25	3-1.8mX1.8m	3	PRESENCE	0	ø4	SERIES
26	3-1.8mX1.8m	3	PRESENCE	1 SEC EXTENSION	ø4	SERIES
27	3-1.8mX1.8m	3	PRESENCE	2 SEC EXTENSION	ø4	SERIES
28	1-1.8mX6.0m QUADRUPOLE	3	PRESENCE	0	ø5	SINGLE

NOTES: 1. DELAY AND EXTENSION TIMINGS SHALL BE PROGRAMMED IN THE CONTROLLER
2. * CALLING DETECTORS ONLY

TRAFFIC SIGN SUMMARY

TOWN OF NORWOOD
DEAN STREET/ROUTE 1
SIGN SUMMARY

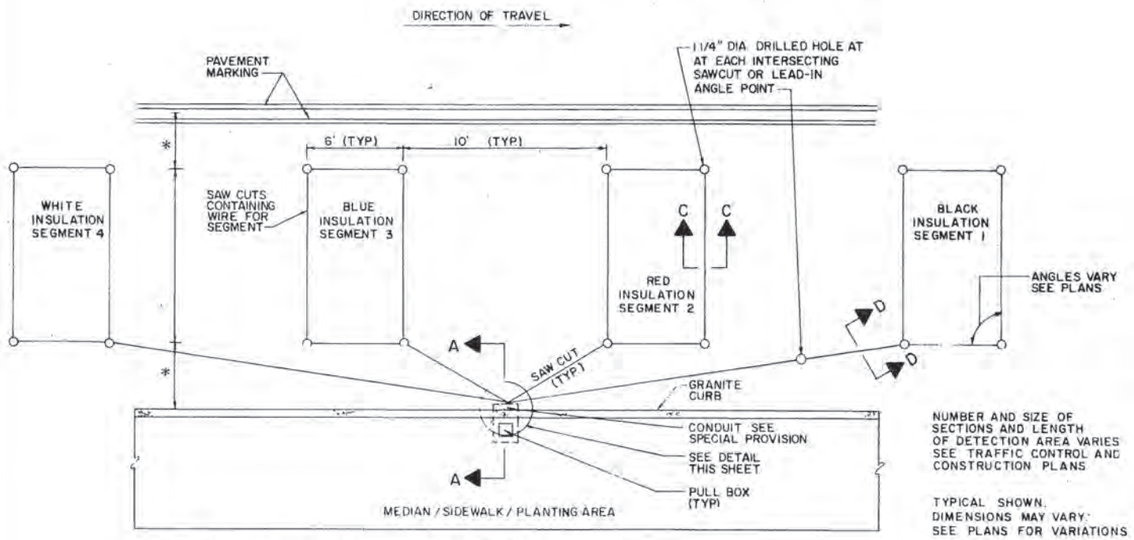
IDENTIFICATION NUMBER	SIZE OF SIGN (mm) WIDTH	HEIGHT	TEXT	TEXT DIMENSIONS (mm) LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.	NUMBER OF SIGNS REQUIRED	COLOR BACKGROUND	LEGEND	BORDER	POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.M.)	AREA IN SQUARE METERS
R1-1	750	750	STOP	SEE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS			4	RED	WHITE	WHITE	P5-4	0.810	3.240
R1-2	900 x 900 x 900		YIELD				2	RED	WHITE	WHITE	P5-2	0.405	0.810
R2-1(45)	600	750	SPEED LIMIT 45				1	WHITE	BLACK	BLACK	P5-1	0.450	0.450
R3-1	600	600					1	WHITE	RED/ BLACK	BLACK	P5-1	0.360	0.360
R3-2	600	600					30	WHITE	RED/ BLACK	BLACK	P5-29 1 MTD W/ OTHERS	0.360	10.800
R3-2	900	900					3	WHITE	RED/ BLACK	BLACK	3 MTD ON TS SPAN WIRE	0.810	2.430
R3-3	600	600	NO TURNS				1	WHITE	BLACK	BLACK	P5-1	0.360	0.360
R3-4	600	600		AS PER MASSACHUSETTS DEPARTMENT HIGHWAY STANDARD			2	WHITE	RED/ BLACK	BLACK	2 MTD W/ OTHERS	0.360	0.720
R3-5L	750	900	ONLY	SEE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS			4	WHITE	BLACK	BLACK	3 MTD ON TS SPAN WIRE 1 MTD ON TS MAST ARM	0.675	2.700
R3-5R	750	900	ONLY				3	WHITE	BLACK	BLACK	P5-3	0.675	2.025
R3-7L	750	750	LEFT LANE MUST TURN LEFT				2	WHITE	BLACK	BLACK	P5-2	0.540	1.080
R3-7DL	750	750	ONLY ONLY				2	WHITE	BLACK	BLACK	P5-2	0.540	1.080
R4-3a	600	750	THRU TRAFFIC KEEP RIGHT				1	WHITE	BLACK	BLACK	P5-1	0.450	0.450
R4-7	600	750					4	WHITE	BLACK	BLACK	P5-4	0.450	1.800
R5-1	750	750	DO NOT ENTER				7	WHITE	RED/ WHITE	WHITE	P5-7	0.563	3.938
R5-1a	900	600	WRONG WAY				2	RED	WHITE	WHITE	P5-1 1 MTD W/ OTHERS	0.540	1.080
R6-1(R) (POS)	900	300	ONE WAY				27	WHITE	BLACK	WHITE	27 MTD W/ OTHERS	0.270	7.290
R6-1 (PBS)	900	300	ONE WAY				4	WHITE	BLACK	WHITE	4 MTD W/ OTHERS	0.270	1.080
R10-3f	125	200		AS PER MASSACHUSETTS DEPARTMENT HIGHWAY STANDARD			10	WHITE	BLACK	BLACK	7 MTD ON TS POST 3 MTD ON TS POLE	INCLUDED UNDER ITEM 816.01	
R10-11b	600	600	NO TURN ON RED	SEE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS			1	WHITE	BLACK	BLACK	1 MTD ON TS POST	0.360	0.360
R10-11b	750	750	NO TURN ON RED				1	WHITE	BLACK	BLACK	1 MTD ON TS SPAN WIRE	0.563	0.563
R10-12	750	900	LOT TURN YIELD ON GREEN	SEE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS			1	WHITE	BLACK/ GREEN	BLACK	1 MTD ON TS SPAN WIRE	0.675	0.675
W6-3	900	900					2	YELLOW	BLACK	BLACK	P5-2	0.810	1.620
W9-1R	900	900	RIGHT LANE ENDS				2	YELLOW	BLACK	BLACK	P5-2	0.810	1.620
W11-2	750	750					1	YELLOW	BLACK	BLACK	P5-1	0.563	0.563
W11-20	225	300	WATCH FOR TURNING VEHICLES ON WALK SIGNAL				6	YELLOW	BLACK	BLACK	3 MTD ON TS POST 3 MTD ON TS POLE	0.068	0.405
W16-7P	750	450					1	YELLOW	BLACK	BLACK	1 MTD W/OTHER	0.338	0.338
SP-1	1125	750	ONLY ONLY				2	WHITE	BLACK	BLACK	P5-4	0.844	1.688
SP-2	750	300	LEFT 2 LANES	88B	106 106	N/A	2	WHITE	BLACK	BLACK	2 MTD W/R3-7DL	0.225	0.450
SP-3	900	750	ROUTE 1 SOUTH LOCAL ACCESS	87.5C 87.5C 87.5C 87.5C	87.5 50 125 50 87.5		1	WHITE	BLACK	BLACK	P5-1	0.675	0.675
SP-3a	750	450	LEFT LANE ONLY	87.5C 87.5C	100 75 100	N/A	1	WHITE	BLACK	BLACK	1 MTD W/SP-3	0.338	0.338
SP-4	750	750	ONLY	SEE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS			2	WHITE	BLACK	BLACK	P5-2	0.563	1.126
M1-4(1)	900	900	1				4	WHITE	BLACK	BLACK	4 MTD W/ OTHERS	0.810	3.240
M3-1	600	300	NORTH				2	WHITE	BLACK	BLACK	P5-2	0.180	0.360
M3-3	600	300	SOUTH				2	WHITE	BLACK	BLACK	P5-2	0.180	0.360
M4-5	600	300	TO				2	WHITE	BLACK	BLACK	2 MTD W/ OTHERS	0.180	0.360
M6-2R	525	375					2	WHITE	BLACK	BLACK	2 MTD W/ OTHERS	0.197	0.394
R10-22	600	450	TO BICYCLE WAY ON	AS PER MASSACHUSETTS DEPARTMENT HIGHWAY STANDARD			10	WHITE	BLACK	BLACK	P5-8 2 MTD W/ OTHERS	0.270	2.700
H1-2	600	600					5	YELLOW	YELLOW CLUSTER	- - -	P5-5	INCLUDED UNDER ITEM 827.21	

NOTE: HIGH INTENSITY REFLECTIVE SHEETING SHALL BE USED FOR ALL SIGNS. SEE FHWA "STANDARD HIGHWAY SIGNS, 2004 EDITION" FOR TEXT DIMENSIONS, AS AMENDED; THE 1996 MASSHIGHWAY DEPARTMENT CONSTRUCTION AND TRAFFIC STANDARD DETAILS, AS AMENDED, FOR SIGNS AND SUPPORTS; AND THE MASSHIGHWAY DEPARTMENT SIGN LISTINGS MILLENIUM EDITION, AS AMENDED.

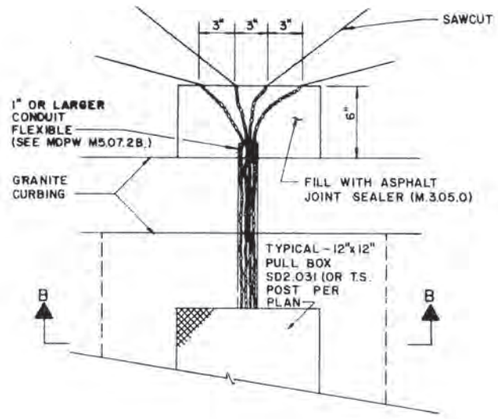
TRAFFIC SIGN SUMMARY

IDENTIFICATION NUMBER	SIZE OF SIGN (mm) WIDTH	HEIGHT	TEXT	TEXT DIMENSIONS (mm) LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.	NUMBER OF SIGNS REQUIRED	COLOR BACKGROUND	LEGEND	BORDER	POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.M.)	AREA IN SQUARE METERS
D3-1	VARIES	300	DEAN ST	150B/100B	75 75	N/A	5	GREEN	WHITE	WHITE	P5-2 3 MTD ON TS STRAIN POLE	INCLUDED UNDER ITEM 874	
D3-2	VARIES	300	KERRY PL	150B/100B	75 75	N/A	1	GREEN	WHITE	WHITE	1 MTD W/D3-1	INCLUDED UNDER ITEM 874	
D3-3	VARIES	300	INDUSTRIAL WAY	150B/100B	75 75	N/A	1	GREEN	WHITE	WHITE	1 MTD W/D3-1	INCLUDED UNDER ITEM 874	
D3-4	VARIES	300	PROVIDENCE HWY	150B/100B	75 75	N/A	2	GREEN	WHITE	WHITE	2 MTD ON TS STRAIN POLE	INCLUDED UNDER ITEM 874	
D6-1	1500	1500	1 NORTH DEDHAM BOSTON NEXT RIGHT	450/225/175/150 150 150 150	125 100 100 100 175	N/A	1	REFL. GREEN H/I M9.30.0	REFL. SILVER WHITE H/I M9.30.0	19mm REFL. SILVER WHITE H/I M9.30.0	1-125mm O.D. STEEL PIPE POST	2.25	2.25
D8-1	1200	1050	1 SOUTH PROVIDENCE RI SECOND LEFT	450/225/175/150 125 125	75 75 75 100	N/A	1	REFL. GREEN H/I M9.30.0	REFL. SILVER WHITE H/I M9.30.0	19mm REFL. SILVER WHITE H/I M9.30.0	1 MTD W/ D6-1	1.26	1.26
D6-2	1500	1500	1 NORTH DEDHAM BOSTON →	450/225/175/150 150 150	100 100 100 100 150	200mm	1	REFL. GREEN H/I M9.30.0	REFL. SILVER WHITE H/I M9.30.0	19mm REFL. SILVER WHITE H/I M9.30.0	1-125mm O.D. STEEL PIPE POST	2.25	2.25
D8-2	1200	1050	1 SOUTH PROVIDENCE RI ←	450/225/175/150 125	50 75 75 75	200mm	1	REFL. GREEN H/I M9.30.0	REFL. SILVER WHITE H/I M9.30.0	19mm REFL. SILVER WHITE H/I M9.30.0	1 MTD W/ D6-2	1.26	1.26
D6-3	1500	1500	1 NORTH DEDHAM BOSTON SECOND LEFT	450/225/175/150 150 150 150	125 100 100 100 175	N/A	1	REFL. GREEN H/I M9.30.0	REFL. SILVER WHITE H/I M9.30.0	19mm REFL. SILVER WHITE H/I M9.30.0	1-125mm O.D. STEEL PIPE POST	2.25	2.25
D8-3	1200	1050	1 SOUTH PROVIDENCE RI SECOND RIGHT	450/225/175/150 125 125	75 75 75 150		1	REFL. GREEN H/I M9.30.0	REFL. SILVER WHITE H/I M9.30.0	19mm REFL. SILVER WHITE H/I M9.30.0	1 MTD W/ D6-3	1.26	1.26
D6-4	1500	1500	1 NORTH DEDHAM BOSTON ←	450/225/175/150 150 150	100 100 100 100 150	200mm	1	REFL. GREEN H/I M9.30.0	REFL. SILVER WHITE H/I M9.30.0	19mm REFL. SILVER WHITE H/I M9.30.0	1-125mm O.D. STEEL PIPE POST	2.25	2.25
D8-4	1200	1050	1 SOUTH PROVIDENCE RI →	450/225/175/150 125	50 75 75 75	200mm	1	REFL. GREEN H/I M9.30.0	REFL. SILVER WHITE H/I M9.30.0	19mm REFL. SILVER WHITE H/I M9.30.0	1 MTD W/ D6-4	1.26	1.26
D6-5	1500	1200	S. NORWOOD CENTER ←	150 150	200 150 150 200	200mm	1	REFL. GREEN H/I M9.30.0	REFL. SILVER WHITE H/I M9.30.0	19mm REFL. SILVER WHITE H/I M9.30.0	1-125mm O.D. STEEL PIPE POST	1.80	1.80

NOTE: HIGH INTENSITY REFLECTIVE SHEETING SHALL BE USED FOR ALL SIGNS. SEE FHWA "STANDARD HIGHWAY SIGNS, 2004 EDITION" FOR TEXT DIMENSIONS, AS AMENDED; THE 1996 MASSHIGHWAY DEPARTMENT CONSTRUCTION AND TRAFFIC STANDARD DETAILS, AS AMENDED, FOR SIGNS AND SUPPORTS; AND THE MASSHIGHWAY DEPARTMENT SIGN LISTINGS MILLENIUM EDITION, AS AMENDED.



PLAN OF SEGMENTED DETECTOR DETAIL
NOT TO SCALE

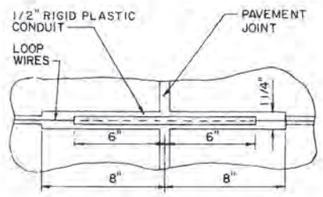


DETAIL - PLAN VIEW
NOT TO SCALE

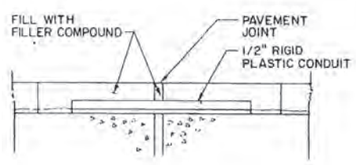
DETECTOR NOTES

1. IN BASE OR HANDHOLE, SPLICE ALL SEGMENTS TO TYPE II-SHIELDED LOOP DETECTOR LEAD-IN CABLE. SEGMENTS SHALL BE SPLICED IN IN PARALLEL, IN SERIES, OR IN A COMBINATION OF PARALLEL & SERIES AS SHOWN ON THE PLAN SHEET FOR EACH DETECTOR. NUMBER OF TURNS OF WIRE SHALL ALSO BE AS SHOWN ON THE PLAN SHEET FOR EACH DETECTOR. SEE NOTE 12.
2. SEE SPECIAL PROVISIONS FOR REQUIREMENTS OF DETECTOR AMPLIFIER.
3. LEAD-IN WIRES SHALL BE TWISTED FROM SEGMENT TO SPLICE WITH SHIELDED CABLE. FIVE TURNS PER FOOT. LEAD-IN SHALL BE TYPE II (M8.16.11).
4. BEFOPE STARTING ANY SPLICING THE ELECTRICAL CONTRACTOR SHALL FURNISH DATA SHEETS ON THE MATERIALS AND/OR METHODS TO BE USED IN ACCORDANCE WITH THE DEPARTMENTS STANDARD OPERATING PROCEDURES FOR APPROVAL OF SHOP DRAWINGS. SEE SECTION 815.64, ESPECIALLY PARAGRAPH 1.
5. THE METALLIC SHIELD WHICH SHALL ENCASE THE DETECTOR LEADS FROM A SPLICE (TYPICALLY LOCATED IN A PULL BOX NEAR THE ROAD WAY COMPONENT OF THE DETECTOR) TO THE CONTROLLER, AND THE DRAIN WIRE UNDER THE METALLIC SHIELD, SHALL BE FIRMLY BONDED TO THE EARTH GROUNDING BUS IN THE CONTROLLER. HOWEVER, THE SHIELD AND DRAIN WIRE SHALL BE CAREFULLY INSULATED FROM THE TRANSFORMER NEUTRAL OR FROM EARTH GROUND AT ALL OTHER POINTS ALONG ITS LENGTH. SPECIFICALLY, THIS INCLUDES CAREFUL INSULATION OF THE EXPOSED PORTION OF THE SHIELD AND THE DRAIN WIRE AT THE END AWAY FROM THE CONTROLLER WHERE IT IS SPLICED TO WIRES LEADING TO THE ROADWAY COMPONENT OF THE DETECTOR. THIS IS IMPORTANT TO AVOID A GROUND RETURN LOOP.
6. FILL ALL CONDUIT OPENINGS WITH DUCT SEAL.
7. AFTER SAW CUTS ARE COMPLETE, BLOW OUT OIL AND WATER WITH FREE COMPRESSED AIR UNTIL CUTS ARE CLEAN AND DRY. INSERT WIRE INTO CLEAN SLOT WITH A BLUNT, SMOOTH, ROUND EDGED TOOL OF WOOD OR PLASTIC SUCH AS A PAINT STIRRER, DO NOT USE A SCREWDRIVER. THEN INSERT FOAM PLASTIC HOLD DOWN STRIPS, SIMILAR TO ETHA FOAM 5B. STRIPS SHALL BE ABOUT 2" LONG, PLACED IN THE SLOT ABOUT EVERY 2 FEET. THEN POUR SEALER, TAKING CARE TO ELIMINATE BUBBLES.
8. THE COMBINED ROADWAY LOOP, TWISTED LEAD-IN WIRES, SPLICE AND SHIELDED LEAD-IN CABLE SHALL HAVE A RESISTANCE TO GROUND OF AT LEAST 100 MEGOHMS. SEE SPECIAL PROVISIONS FOR ADDITIONAL REQUIREMENTS.
9. FOR INSTALLATION OF SINGLE (ONE SEGMENT) SMALL WIRE LOOP DETECTOR. DETAIL IS THE SAME.
10. CUT LOOPS IN BINDER AND FILL WITH APPROVED FLEXIBLE SEALER.
11. DETECTOR WIRE SHALL BE A DIFFERENT COLOR FOR EACH SEGMENT OF A DETECTOR GROUP. SEE DETAIL.
12. SPLICING PATTERN P= SERIES/PARALLEL: SPLICE SEGMENTS 1 AND 3 OF AN INDIVIDUAL DETECTOR IN SERIES. SPLICE SEGMENTS 2 AND 4 IN SERIES. SPLICE THE RESULTANT TWO GROUPS IN PARALLEL. SPLICE THE RESULTANT COMBINATION TO ONE LEAD-IN CABLE. CONNECT THIS CABLE TO AN OTHERWISE UNUSED AMPLIFIER CHANNEL.

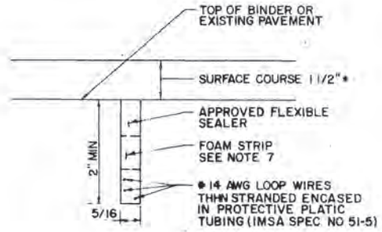
   SPLICING PATTERN S=SERIES: SPLICE ALL SEGMENTS (TYPICALLY FOUR, BUT MAY BE LESS) OF AN INDIVIDUAL DETECTOR IN SERIES. SPLICE THE RESULTANT COMBINATION TO ONE LEAD-IN CABLE TO AN OTHERWISE UNUSED AMPLIFIER CHANNEL.



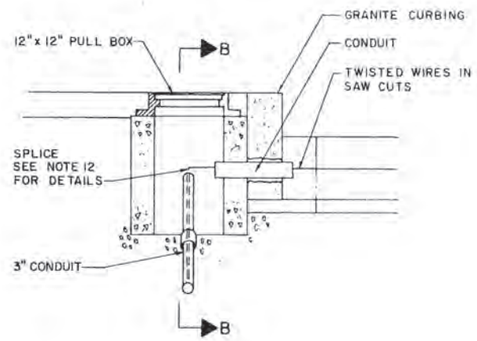
PLAN
TREATMENT AT PAVEMENT JOINTS
NOT TO SCALE



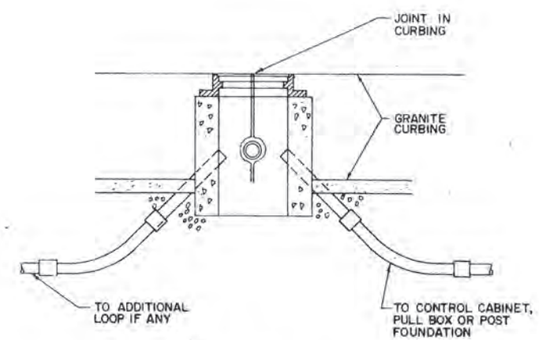
VERTICAL SECTION
TREATMENT AT PAVEMENT JOINTS
NOT TO SCALE



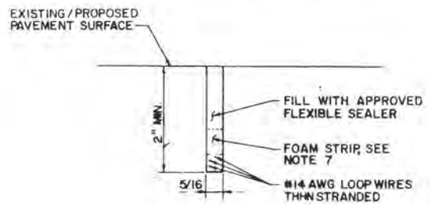
SECTION C-C & D-D
LOOPS IN BINDER COURSE OR EXISTING PAVEMENT TO BE RESURFACE.
NOT TO SCALE



SECTION A-A
NOT TO SCALE



SECTION B-B
NOT TO SCALE



SECTION C-C & D-D
LOOPS IN SURFACE COURSE
NOT TO SCALE

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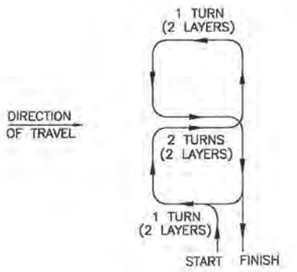
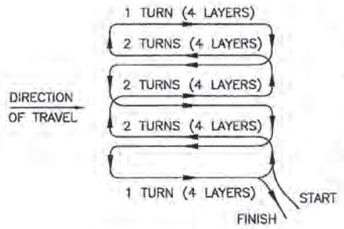
TOWN OF NORWOOD
DEAN STREET/ROUTE 1
BICYCLE LOOP DETECTOR DETAIL
SHEET 36 OF 47

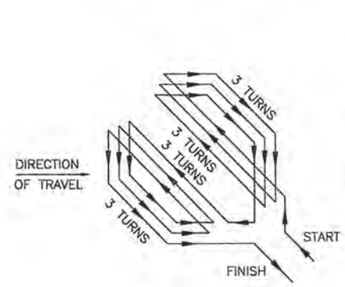
WINDING DETAILS



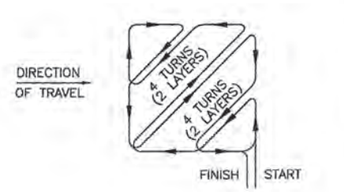
TYPE Q DETECTOR



TYPE D-Q DETECTOR

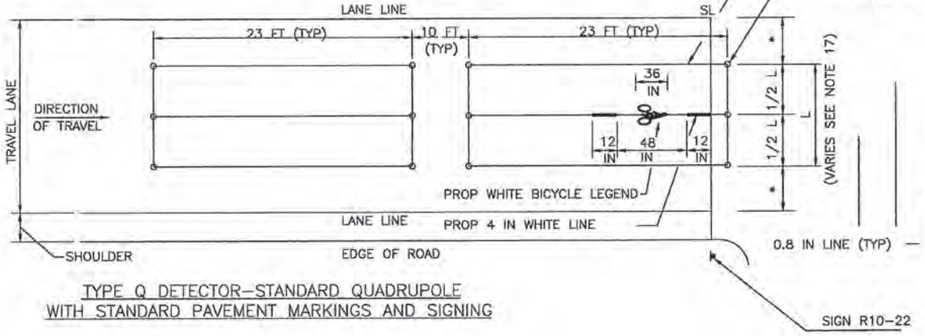


TYPE D-1 DETECTOR

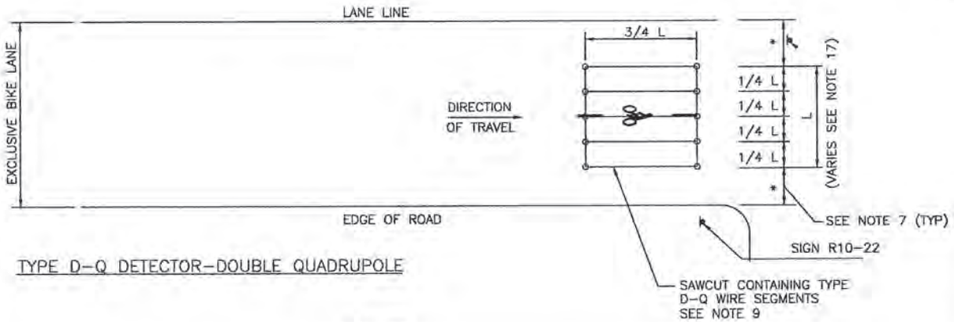


TYPE D-2 DETECTOR

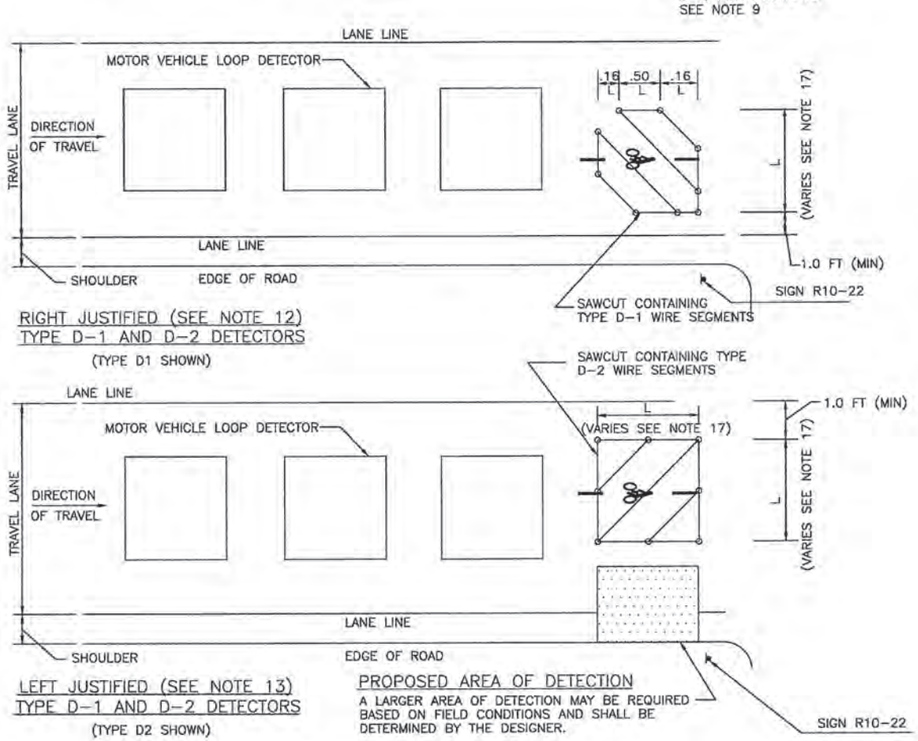
INSTALLATION DETAILS



TYPE Q DETECTOR-STANDARD QUADRUPOLE
WITH STANDARD PAVEMENT MARKINGS AND SIGNING



TYPE D-Q DETECTOR-DOUBLE QUADRUPOLE



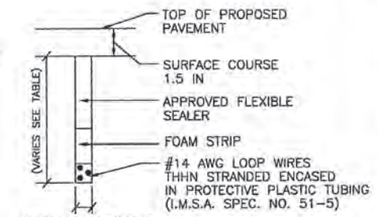
RIGHT JUSTIFIED (SEE NOTE 12)
TYPE D-1 AND D-2 DETECTORS
(TYPE D1 SHOWN)

LEFT JUSTIFIED (SEE NOTE 13)
TYPE D-1 AND D-2 DETECTORS
(TYPE D2 SHOWN)

PROPOSED AREA OF DETECTION
A LARGER AREA OF DETECTION MAY BE REQUIRED BASED ON FIELD CONDITIONS AND SHALL BE DETERMINED BY THE DESIGNER.

SIGN R10-22

NOTE: ALL SIGN DIMENSIONS IN INCHES
NOTE: SIGN PANEL NOT SHOWN TO SCALE



SECTION THRU LOOP DETECTOR

SAWCUT SLOT DEPTH GUIDE		
TURNS OF WIRE	SLOT SIZE	
	DEPTH (IN)	WIDTH (IN)
1	1.5	0.5
2	1.5	0.5
3	1.5	0.5
4	2.0	0.5
5	2.0	0.5
6	2.0	0.5
7	2.0	0.5
8	2.0	0.5

NOTES:

1. REFER TO VEHICLE LOOP DETECTOR DETAIL SHEET FOR ADDITIONAL NOTES AND CONSTRUCTION DETAILS.
2. ALL DETAILS ARE GRAPHICAL WITH NO SCALE.
3. THE NUMBER, SIZE, LOCATION AND LENGTH OF DETECTION AREA VARIES AND SHALL BE DETERMINED BY THE DESIGNER REFER TO TRAFFIC SIGNAL PLAN.
4. BICYCLE LOOPS SHALL BE CONNECTED TO SEPARATE LOOP DETECTOR AMPLIFIERS CAPABLE OF HIGHER LEVELS OF SENSITIVITY.
5. BICYCLE LOOPS SHALL BE INSTALLED IN THE BASE COURSE OF EXISTING PAVEMENT. THE EXISTING PAVEMENT SHALL BE COLD PLANED TO THE BASE COURSE AND SAWCUT FOR LOOP INSTALLATION.
6. SIGNS AND PAVEMENT MARKINGS SHALL BE INSTALLED FOR ALL BICYCLE DETECTORS TO INFORM CYCLISTS OF THE DETECTION AREA.
7. * OFFSETS FROM LANE LINE EQUAL UNLESS OTHERWISE NOTED. SEE PLANS.
8. TYPE Q DETECTORS SHALL BE WIRED IN A FIGURE EIGHT PATTERN WITH A DOUBLE LAYER DESIGN ("2-4-2") WITH 2 TURNS IN THE PERIMETER SLOTS AND 4 TURNS IN THE CENTER SLOT AS SHOWN IN THE WINDING DETAIL.
9. BICYCLES WILL BE DETECTED WITHIN 4 IN. OF THE INTERIOR LONGITUDINAL LOOP WIRES FOR TYPE Q AND D-Q DETECTORS.
10. PROVIDE 3 TURNS FOR TYPE D-1 DETECTORS.
11. INSTALL 2 LAYERS OF WIRE WOUND IN THE SAME DIRECTION IN BOTH LAYERS FOR TYPE D-2 DETECTORS. THE RESULT IS 4 TURNS IN EACH DIAGONAL.
12. RIGHT JUSTIFIED LOOP DETECTORS SHALL BE CONSIDERED FOR THE FOLLOWING CONDITIONS:
    a) BICYCLE STOPPING ON THE RIGHT SIDE OF A THRU TRAVEL LANE.
    b) BICYCLE STOPPING ON THE RIGHT SIDE OF AN EXCLUSIVE LEFT TURN LANE.
13. LEFT JUSTIFIED LOOP DETECTORS SHALL BE CONSIDERED FOR THE FOLLOWING CONDITIONS:
    a) BICYCLE STOPPING ON THE LEFT SIDE OF A SHARED LEFT/THRU LANE.
    b) BICYCLE STOPPING JUST TO THE RIGHT OF THE CENTERLINE WHEN TURNING LEFT ON A TWO-LANE ROADWAY.
14. RECTANGULAR LOOP DETECTORS SHALL BE CONSIDERED FOR BICYCLES STOPPING ON EITHER THE LEFT OR RIGHT SIDE OF A TWO-LANE ROADWAY. THE MINIMUM OFFSET FROM LANE LINE OR CURB LINE SHALL BE 1.0 FT.
15. PAVEMENT CORES OR TEST PITS MAY BE REQUIRED TO DETERMINE THE DEPTH OF EXISTING PAVEMENT AND CONFIRM THAT THE DETECTION OPTION CHOSEN AND CORRESPONDING WINDING PATTERN CAN BE ACCOMMODATED.
16. THESE DETAILS APPLY TO BICYCLE LOOPS INSTALLED IN ROADWAYS. PUSH BUTTON ACTUATION SHALL BE CONSIDERED FOR RECREATIONAL BIKE PATHS.
17. THE MINIMUM DIMENSION FOR L SHALL BE 6 FT MIN. FOR DETECTORS TYPE D-Q, D-1 & D-2. FINAL DIMENSIONS SHALL BE DETERMINED BY THE DESIGN ENGINEER.

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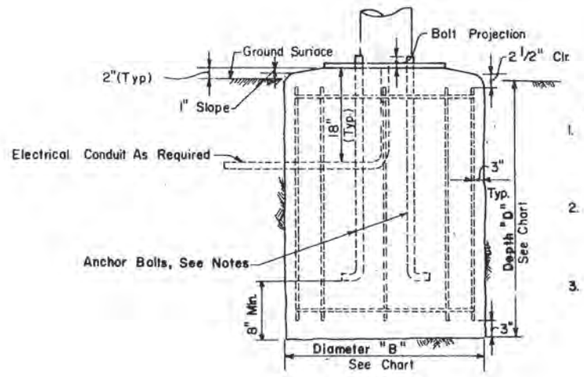
NOTE: REVISED FEBRUARY 22, 2006

MASSHIGHWAY

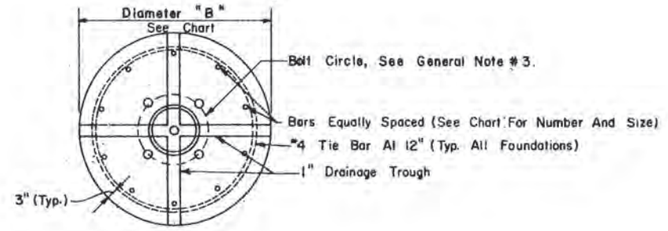
MASSACHUSETTS HIGHWAY DEPARTMENT
TRAFFIC ENGINEERING
REVISED FEBRUARY 22, 2006



ELEVATION
NOT TO SCALE

NOTES:

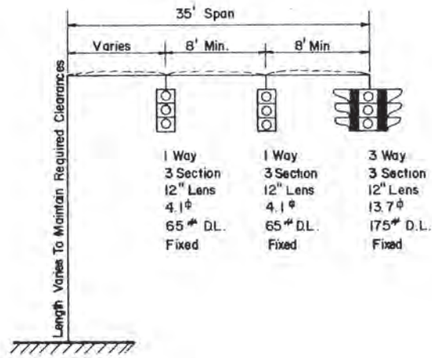
1. Pole, Base Plate And Anchor Bolts Shall Be Designed By The Pole Manufacturer
2. Minimum Foundation Depth Shall Be Checked To Insure Adequate Anchor Bolt Embedment, Clearance, And Projection
3. Optional End Anchorage For Anchor Bolts Can Be A Steel Plate With Threaded Holes Designed By The Pole Manufacturer



PLAN
NOT TO SCALE

SOIL TYPE (SEE GENERAL NOTE NO. 7)	DIA. (B) = 2'-6"		DIA. (B) = 3'-0"		DIA. (B) = 3'-6"	
	DEPTH (D)	VERTICAL BARS	DEPTH (D)	VERTICAL BARS	DEPTH (D)	VERTICAL BARS
DRY SANDY SOIL	5'-9"	10 #5	5'-0"	10 #6	4'-9"	10 #7
WET SANDY SOIL	6'-9"	10 #5	6'-0"	10 #6	5'-6"	10 #7
CLAYEY SOIL (MEDIUM STIFF)	9'-9"	10 #5	8'-9"	10 #6	8'-0"	10 #7
ALLUVIAL SOIL	14'-3"	10 #5	12'-9"	10 #6	11'-9"	10 #7

FOUNDATION DESIGN CHART



NORWOOD
DEAN STREET/ROUTE 1
MAST ARM DETAILS
SHEET 37 OF 47

GENERAL NOTES:

1. Foundations Shall Be Class "A" Cement Concrete Masonry.
2. Reinforcement Shall Be A.S.T.M. A615-Gr. 60.
3. Bolt Circle And Anchor Bolts To Be Provided By The Contractor The Anchor Bolts Shall Be Supplied With A Template For Setting The Bolts And Necessary Bolt Projections
4. Provide For Electrical Conduit As Required.
5. Excavation Shall Be By The Auger Method To The Neat Lines Of The Outside Dimension Of The Foundation Without Disturbing The Soil Around And Below The Proposed Foundation Bottom. Alternate Methods Of Excavation May Be Submitted For Approval If They Meet The Requirements Listed In The General Notes Of Sheets 3 & 4 Of The Span Wire Assembly Foundation Details & Design Charts.
6. If The Soil Is Disturbed Or Removed Beyond The Neat Lines Of The Outside Dimension Of The Foundation As Specified, It Shall Be Replaced With Concrete. Any Additional Cost For The Concrete Shall Be Paid For By The Contractor
7. Determination Of Existing Soil Conditions Shall Be Made By The Design Engineer
8. Vertical Reinforcement Bars Are To Be Evenly Spaced In The Foundation As Shown
9. The Smallest Diameter Foundation Shall Be Used That Will Meet The Moment Requirement And Be At Least 16" Greater In Diameter Than The Bolt Circle Diameter
10. If A Poor Soil Or Ledge Is Encountered, (i.e., One Which Does Not Apply To The Design Charts Shown On This Sheet), An Alternative Design Shall Be Developed By The Design Engineer. Decisions Made In Notes #7 & #10, Shall Be Submitted To The M.D.P.W. For Approval. If Utilities Or Other Underground Obstructions Are Encountered, The Contractor Shall Backfill The Area To Its Original Condition Until An Alternate Design Has Been Provided By The Design Engineer.
11. The Foundations Shown On This Drawing Are For A 35-Foot Cantilevered Type II Mast Arm Carrying A Three Way, Three Section, Twelve Inch (12") Lens Traffic Signal Housing Fixed At The End Of The Arm, And A One-Way, Three-Section, Twelve Inch (12") Lens Traffic Signal Fixed Twelve Feet (12') Away, And Another One-Way, Three-Section Twelve Inch (12") Lens Traffic Signal Fixed Twelve Feet (12') Away From That.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF PUBLIC WORKS

STANDARD DRAWINGS
35' FOOT-TYPE II MAST ARM
CORED PIER FOUNDATIONS

Revised Date January 2, 1985

TRAFFIC ENGINEER — BRIDGE ENGINEER
DIRECTOR B.T.P.&D. — CHIEF ENGINEER

BY: J. BELCASTRO—B.T.P.&D. & G.N. TSAKOS—BRIDGE SECTION

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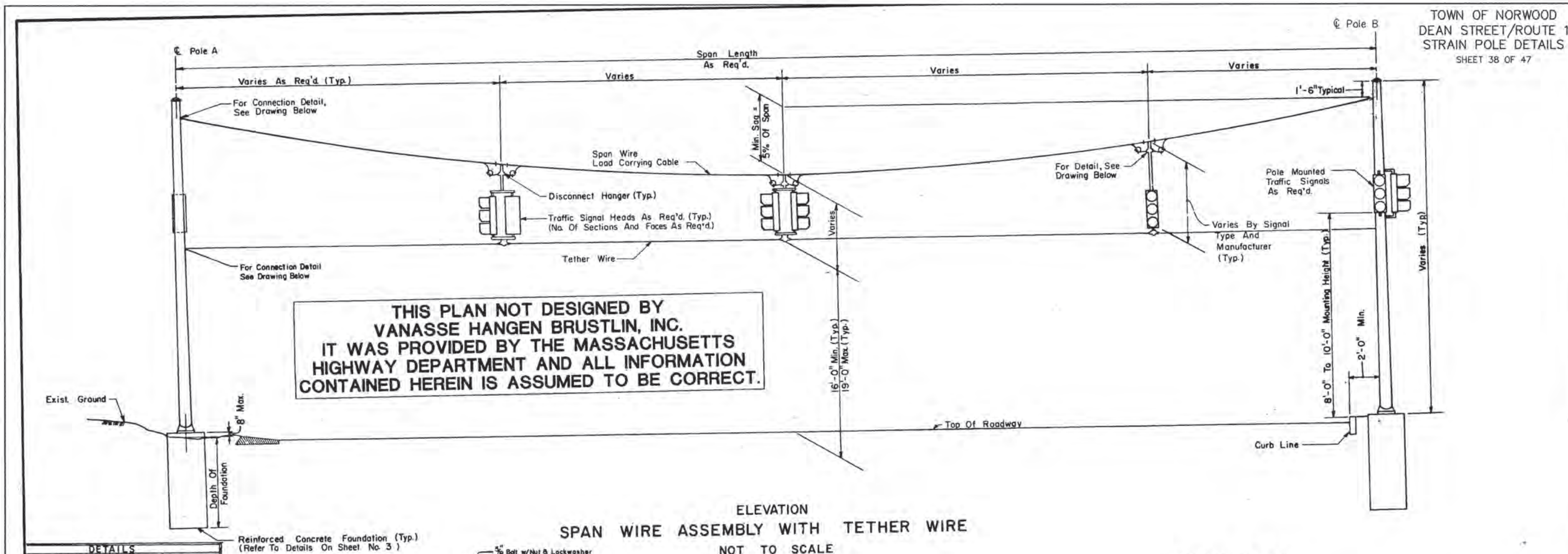

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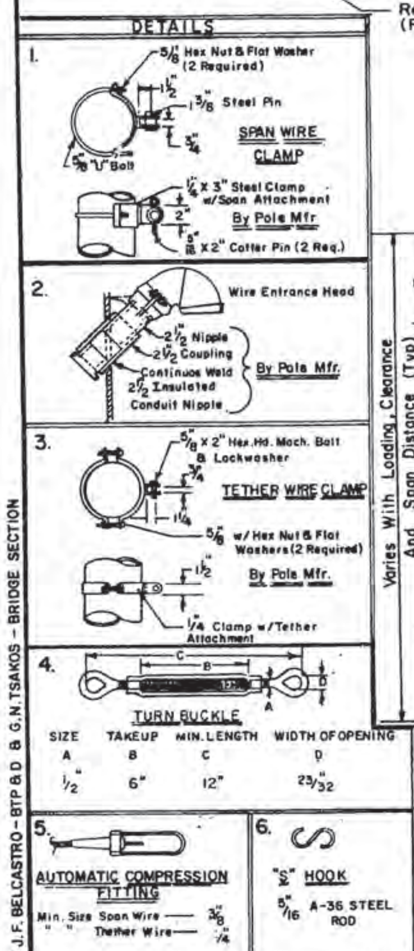
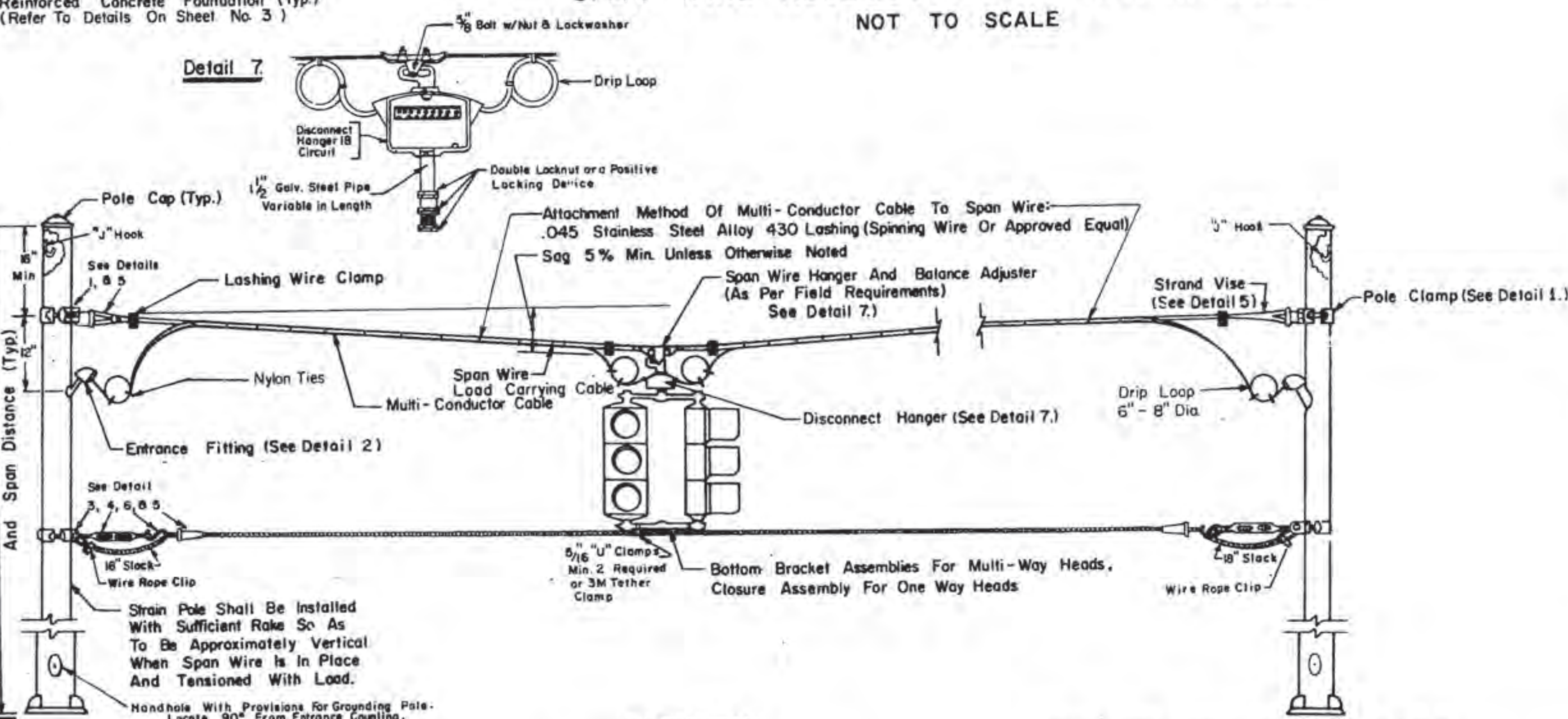
ELEVATION
SPAN WIRE ASSEMBLY WITH TETHER WIRE
NOT TO SCALE





ELEVATION
SPAN WIRE DETAIL
WITH TETHER WIRE
NOT TO SCALE

TETHER WIRE

The Tether Wire Cable Shall Be Not Less Than 1/4" Dia., Seven Wire, Steel Strand Cable Conforming To A.S.T.M. A475, Class A, Zinc Coated Steel Wire Strand.

SPAN WIRE LOAD CARRYING CABLE

The Span Wire Load Carrying Cable Shall Be Not Less Than 3/8" Dia., Seven Wire, Steel Strand Cable Conforming To A.S.T.M. A475, Class A, Extra High Strength (Min. Breaking Strength 15,400 lbs) Zinc Coated Steel Wire Strand. The Span Wire Must Be Designed And Checked For Load Capacity For Each Application.

GENERAL NOTES:

1. Poles Shall Not Be Installed And Signal Heads Shall Not Be Hung Until 28 Days After Concrete Foundation Has Been Placed Unless Otherwise Specified By The Engineer In Charge.
2. The Roadside Face Of All New Signal Poles Shall Be Installed A Minimum Of 2 Feet From The Face Of Curb.
3. All Exposed Corners And Edges Of Foundations Which Protrude Above The Adjacent Ground Shall Be Chamfered Or Rounded To Prevent Sharp Corners Or Edges.
4. Poles Shall Be Hot Dip Galvanized To A.S.T.M. Designation A123. Accessories Shall Be Hot Dip Galvanized To A.S.T.M. Designation A153.
5. Signal Head Weight Shall Include Cable Clamps, Universal Joint, Balance Adjuster, Disconnect Hanger And Signal Brackets.
6. All Appurtenances To Be Mounted On Poles Shall Be Fastened In The Manner Recommended By The Manufacturer.
7. MA (For Massachusetts), The Height Of Pole, The Rake Of Pole, The Manufacturer And The Pole I.D. Number Shall Be Etched On The Outside Wall Approximately 2 Feet Above The Foundation. The Letters Shall Be 1/4" In Size.
8. The Bottom Of All Signal Heads Shall Be Mounted At The Same Elevation With Hangers Varying In Length As Required.
9. Attachment Pole Clamps To Be Designed By The Manufacturer.
10. Strain Poles Shall Be Installed With Sufficient Rake So As To Be Approximately Vertical When Span Wire Is In Place And Tensioned With Load.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF PUBLIC WORKS

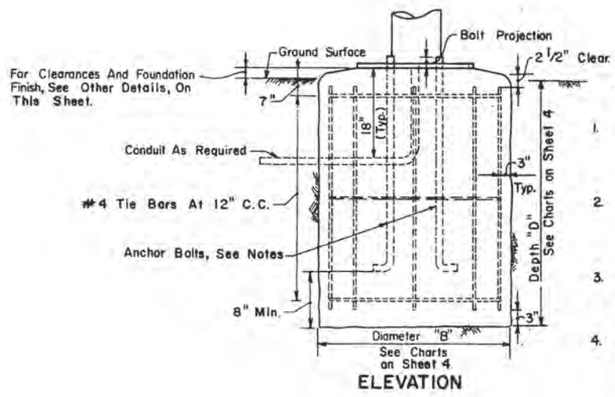
STANDARD DRAWINGS

SPAN WIRE ASSEMBLY WITH TETHER WIRE

Revised Date JANUARY 2, 1985

TRAFFIC ENGINEER — BRIDGE ENGINEER
DIRECTOR BTP&D — CHIEF ENGINEER

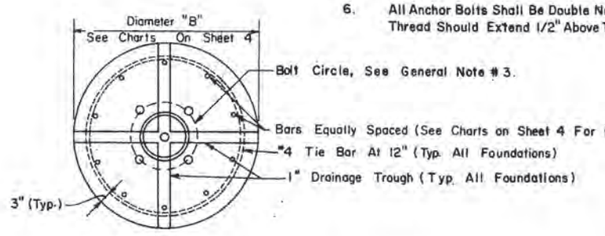
BY: J.F. BELCASTRO - BTP&D & G.N. TSAKOS - BRIDGE SECTION



ELEVATION

NOTES:

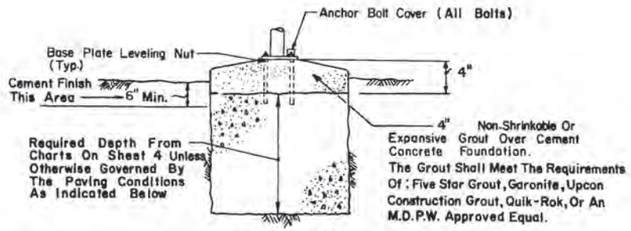
1. Pole, Base Plate And Anchor Bolts Shall Be Designed By The Pole Manufacturer And Shall Be Consistent With Span Wire Assembly Design.
2. Minimum Foundation Depth Shall Be Checked To Insure Adequate Anchor Bolt Embedment And Clearance Consistent With The Span Wire Assembly Design.
3. Optional End Anchorage For Anchor Bolts Can Be A Steel Plate With Threaded Holes Designed By The Pole Manufacturer
4. Reinforcement, Anchor Bolt And Other Indicated Details Shall Apply To All Foundation Elevations Shown On This Sheet.
5. Anchor Bolts, Nuts And Washers Shall Be Galvanized For Full Length Conforming To The M.D.P.W. Specifications ASTM A-123.
6. All Anchor Bolts Shall Be Double Nutted & The Anchor Bolt Thread Should Extend 1/2" Above The Top Nut.



PLAN

SPAN WIRE ASSEMBLY FOUNDATION DETAIL

NOT TO SCALE

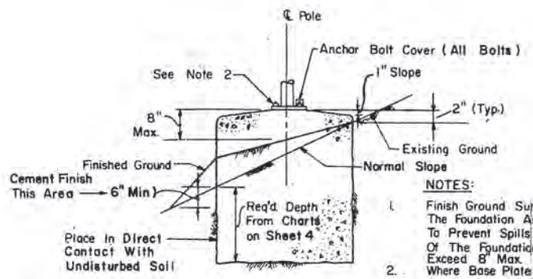


ELEVATION

FOUNDATIONS WITH BASE PLATE LEVELING NUTS

NOT TO SCALE

THIS PLAN NOT DESIGNED BY
VANASSE HANGEN BRUSTLIN, INC.
IT WAS PROVIDED BY THE MASSACHUSETTS
HIGHWAY DEPARTMENT AND ALL INFORMATION
CONTAINED HEREIN IS ASSUMED TO BE CORRECT.



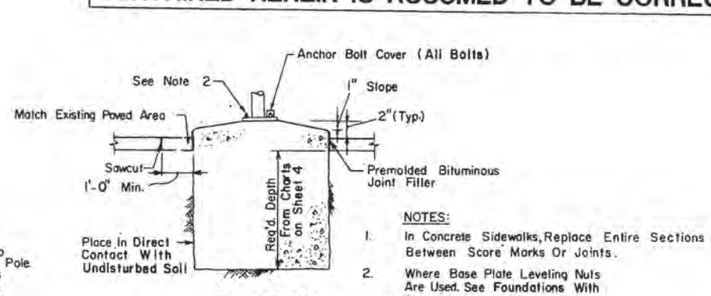
ELEVATION

NOTES:

1. Finish Ground Surface Near The Foundation As Necessary To Prevent Spills On Top Of The Foundation And Not To Exceed 8" Max. Reveal At ℄ Pole.
2. Where Base Plate Leveling Nuts Are Used, See Foundations With Base Plate Leveling Nuts, This Drawing.

FOUNDATIONS IN UNPAVED AREAS

NOT TO SCALE



ELEVATION

NOTES:

1. In Concrete Sidewalks, Replace Entire Sections Between Score Marks Or Joints.
2. Where Base Plate Leveling Nuts Are Used. See Foundations With Base Plate Leveling Nuts, This Drawing.

FOUNDATIONS IN PAVED AREAS

NOT TO SCALE

GENERAL NOTES:

1. Foundations Shall Be Class "A" Cement Concrete Masonry.
2. Reinforcement Shall Be A.S.T.M. A615-Gr. 60.
3. Bolt Circle And Anchor Bolts To Be Provided By The Contractor Shall Be Consistent With Span Wire Assembly Design. The Anchor Bolts Shall Be Supplied With A Template For Setting The Bolts And Necessary Bolt Projections.
4. Provide For Electrical Conduit As Required.
5. Excavation Shall Be By The Auger Method To The Neat Lines Of The Outside Dimension Of The Foundations Without Disturbing The Soil Around And Below The Proposed Foundation Bottom. Alternate Methods Of Excavation May Be Submitted For Approval If They Meet The Requirements Listed In The General Notes Of Sheet 3 & 4.
6. The Earth Walls Of The Foundation Shall Be Adequately And Securely Protected At All Times Against Cave-Ins, Displacement Of The Surrounding Earth And For The Exclusion Of Ground Water. This May Be Done By The Use Of Steel Cylinder Liners Or Casings That Are Approved By The M.D.P.W.. If Liners Are Used They Must Be Reclaimed Provided That They Are Withdrawn As The Concrete Is Being Placed, Maintaining Sufficient Head Of Concrete Within The Liner To Prevent Reduction In The Foundation Diameter And To Prevent Extraneous Material From Falling In From The Sides And Mixing With The Concrete.
7. If The Soil Is Disturbed Or Removed Beyond The Neat Lines Of The Outside Dimension Of The Foundation As Specified, It Shall Be Replaced With Concrete. Any Additional Cost For The Concrete Shall Be Paid For By The Contractor.
8. Special Care Should Be Given To Areas Where Wet Soil Is Encountered, To Insure That The Preaugered Hole Does Not Collapse. This May Require The Use Of Steel Cylinder Liners Or Casings To Hold The Soil In Place Until Ready For Pouring. The Steel Cylinders Or Casings Shall Be Withdrawn As The Foundation Is Poured.
9. Vertical Reinforcement Bars Are To Be Evenly Spaced In The Foundation As Shown.
10. For Foundation Widths, Depths And Steel Reinforcing, See Foundation Design Charts On Sheet 4.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF PUBLIC WORKS

STANDARD DRAWINGS

SPAN WIRE ASSEMBLY
FOUNDATION DETAILS

Revised Date JANUARY 2, 1985

TRAFFIC ENGINEER — BRIDGE ENGINEER

DIRECTOR / BTP&D — CHIEF ENGINEER

3r F.N.BELCASTRO – BTP&D & G.N.TSAKOS – BRIDGE SECTION

FOUNDATION DESIGN CHART I (SI VERSION)

SOIL TYPE = ALLUVIAL

Moment at Existing Ground (kN · m)	Dia. (B) = 1.0m		Dia. (B) = 1.1m		Dia. (B) = 1.2m	
	Depth (D) (m)	Vertical Steel	Depth (D) (m)	Vertical Steel	Depth (D) (m)	Vertical Steel
70 OR LESS	3.8	10 ø 20M	3.5	8 ø 25M	3.3	12 ø 25M
135	5.5	10 ø 20M	5.2	8 ø 25M	4.9	12 ø 25M
200	6.4	10 ø 25M	6.0	8 ø 25M	5.7	12 ø 25M
270	7.3	16 ø 25M	6.7	12 ø 25M	6.4	12 ø 25M
335			7.6	12 ø 25M	7.2	14 ø 25M
400			8.5	16 ø 25M	7.9	14 ø 25M
475					8.5	12 ø 35M
540					9.2	12 ø 35M
610						
680						
750						

FOUNDATION DESIGN CHART II (SI VERSION)

SOIL TYPE = CLAYEY (MEDIUM STIFF)

Moment at Existing Ground (kN · m)	Dia. (B) = 1.0m		Dia. (B) = 1.1m		Dia. (B) = 1.2m	
	Depth (D) (m)	Vertical Steel	Depth (D) (m)	Vertical Steel	Depth (D) (m)	Vertical Steel
70 OR LESS	2.7	10 ø 20M	2.5	8 ø 25M	2.3	12 ø 25M
135	4.0	10 ø 20M	3.7	8 ø 25M	3.4	12 ø 25M
200	4.3	10 ø 25M	4.0	8 ø 25M	3.7	12 ø 25M
270	4.7	16 ø 25M	4.4	12 ø 25M	4.1	12 ø 25M
335	5.2	16 ø 25M	4.9	12 ø 25M	4.6	14 ø 25M
400	5.7	16 ø 35M	5.3	16 ø 25M	5.0	14 ø 25M
475	6.1	16 ø 35M	5.8	16 ø 25M	5.5	12 ø 35M
540	6.7	16 ø 35M	6.2	18 ø 30M	5.8	12 ø 35M
610			6.6	18 ø 30M	6.1	12 ø 35M
680			6.9	16 ø 35M	6.4	14 ø 35M
750			7.3	16 ø 35M	6.7	14 ø 35M

FOUNDATION DESIGN CHART III (SI VERSION)

SOIL TYPE = WET SANDY

Moment at Existing Ground (kN · m)	Dia. (B) = 1.0m		Dia. (B) = 1.1M		Dia. (B) = 1.2m	
	Depth (D) (m)	Vertical Steel	Depth (D) (m)	Vertical Steel	Depth (D) (m)	Vertical Steel
70 OR LESS	2.4	10 ø 20M	2.3	8 ø 25M	2.1	12 ø 25M
135	3.0	10 ø 20M	2.9	8 ø 25M	2.8	12 ø 25M
200	3.7	10 ø 25M	3.4	8 ø 25M	3.2	12 ø 25M
270	4.1	16 ø 55M	3.7	12 ø 25M	3.4	12 ø 25M
335	4.7	16 ø 25M	4.2	12 ø 25M	3.9	14 ø 25M
400	5.2	16 ø 35M	4.7	16 ø 25M	4.4	14 ø 25M
475	5.7	16 ø 35M	5.2	16 ø 25M	4.7	12 ø 35M
540	6.2	16 ø 35M	5.6	18 ø 30M	5.2	12 ø 35M
610	6.6	18 ø 35M	6.0	18 ø 30M	5.6	12 ø 35M
680	7.1	18 ø 35M	6.4	16 ø 35M	5.9	14 ø 35M
750	7.6	24 ø 35M	7.0	16 ø 35M	6.3	14ø 35M

FOUNDATION DESIGN CHART IV (SI VERSION)

SOIL TYPE = DRY SANDY

Moment at Existing Ground (kN · M)	Dia. (B) = 1.0m		Dia. (B) = 1.1m		Dia. (B) = 1.2m	
	Depth (D) (m)	Vertical Steel	Depth (D) (m)	Vertical Steel	Depth (D) (m)	Vertical Steel
70 OR LESS	2.0	10 ø 20M	1.8	8 ø 25M	1.7	12 ø 25M
135	2.4	10 ø 20M	2.3	8 ø 25M	2.1	12 ø 25M
200	2.9	10 ø 25M	2.7	8 ø 25M	2.5	12 ø 25M
270	3.4	16 ø 25M	3.1	12 ø 25M	2.9	12 ø 25M
335	3.8	16 ø 25M	3.5	12 ø 25M	3.3	14 ø 25M
400	4.3	16 ø 35M	3.9	16 ø 25M	3.6	14 ø 25M
475	4.7	16 ø 35M	4.3	16 ø 25M	4.0	12 ø 35M
540	5.1	16 ø 35M	4.7	18 ø 30M	4.3	12 ø 35M
610	5.5	18 ø 35M	5.0	18 ø 30M	4.6	12 ø 35M
680	5.8	18 ø 35M	5.3	16 ø 35M	4.9	14 ø 35M
750	6.2	24 ø 35M	5.7	16 ø 35M	5.2	14 ø 35M

GENERAL NOTES (SI VERSION):

1. DETERMINATION OF EXISTING SOIL CONDITIONS SHALL BE MADE BY THE DESIGN ENGINEER.
2. IF A POOR SOIL OR LEDGE IS ENCOUNTERED, (i.e., ONE WHICH DOES NOT APPLY TO THE DESIGN CHARTS SHOWN ON THIS SHEET), AN ALTERNATE DESIGN SHALL BE DEVELOPED BY THE DESIGN ENGINEER AND SUBMITTED TO THE M.H.D. FOR APPROVAL. IF UTILITIES OR OTHER UNDERGROUND OBSTRUCTIONS ARE ENCOUNTERED IN THE PROPOSED FOUNDATION AREA DURING EXCAVATION, THE CONTRACTOR SHALL BACKFILL THE AREA TO ITS ORIGINAL CONDITION UNTIL AN ALTERNATE DESIGN HAS BEEN PROVIDED BY THE DESIGN ENGINEER.
3. FOR MOMENT DETERMINATION SEE "AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS AND TRAFFIC SIGNALS" LATEST EDITION.
4. FOR DETAIL OF FOUNDATIONS SEE SHEET 3 - "SPAN WIRE ASSEMBLY-FOUNDATION DETAILS.
5. SHAFT DEPTHS (D) IN METERS.

THIS PLAN NOT DESIGNED BY
VANASSE HANGEN BRUSTLIN, INC.
IT WAS PROVIDED BY THE MASSACHUSETTS
HIGHWAY DEPARTMENT AND ALL INFORMATION
CONTAINED HEREIN IS ASSUMED TO BE CORRECT.

MASSACHUSETTS HIGHWAY DEPARTMENT

STANDARD DRAWINGS

SPAN WIRE ASSEMBLY

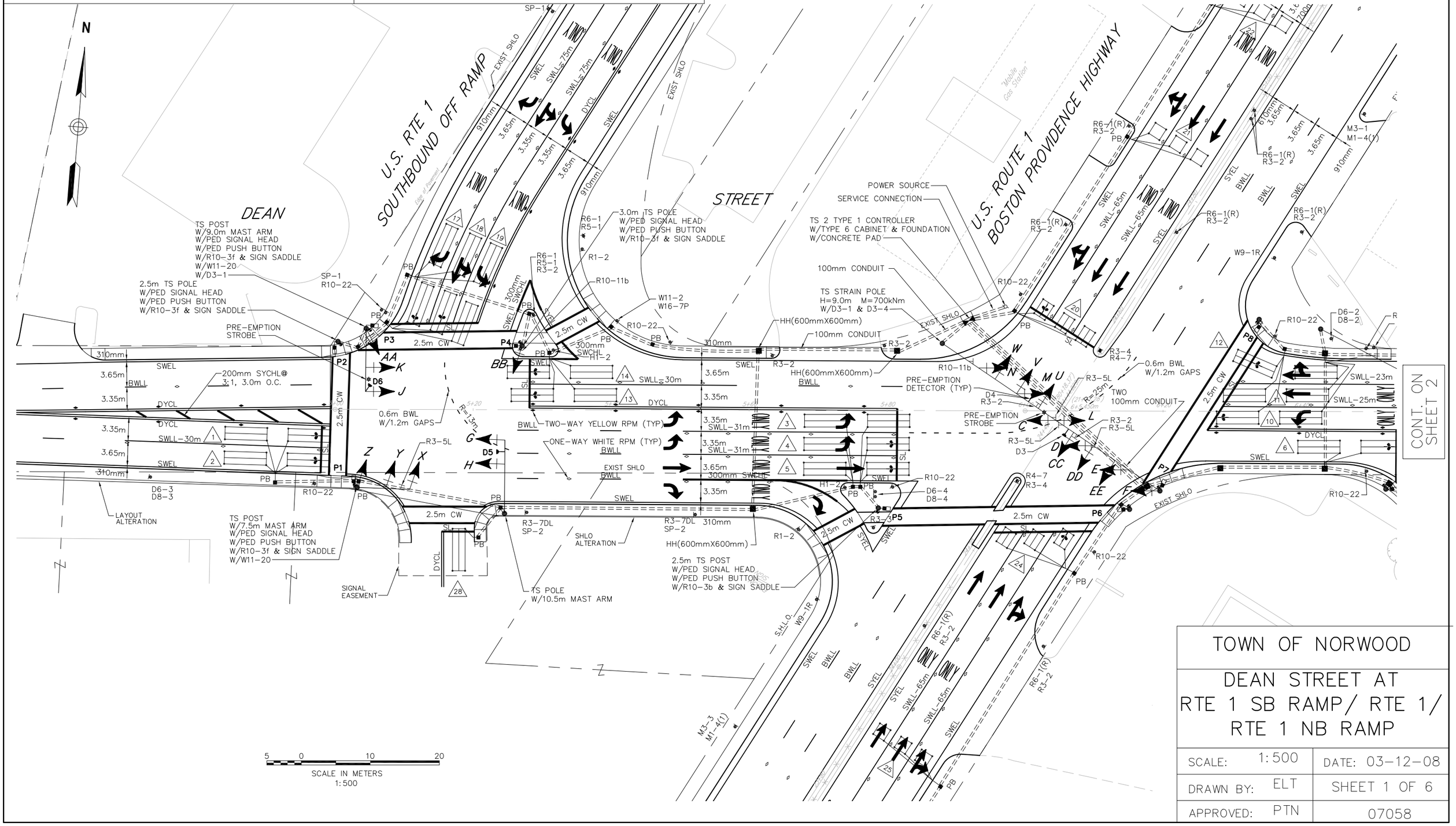
FOUNDATION DESIGN CHARTS

SI VERSION

Revised Date: Nov. 1994

COMMONWEALTH OF MASSACHUSETTS
MASSACHUSETTS HIGHWAY DEPARTMENT
10 PARK PLAZA BOSTON MASS.

TOWN: NORWOOD
LOCATION: DEAN STREET AT
RTE 1 SB RAMP/ RTE 1 /RTE 1 NB RAMP
Date: Permit No.:



TOWN OF NORWOOD	
DEAN STREET AT RTE 1 SB RAMP/ RTE 1/ RTE 1 NB RAMP	
SCALE: 1:500	DATE: 03-12-08
DRAWN BY: ELT	SHEET 1 OF 6
APPROVED: PTN	07058

CONT. ON SHEET 3

N

U.S. ROUTE 1
BOSTON PROVIDENCE HIGHWAY

"Mobile Gas Station"

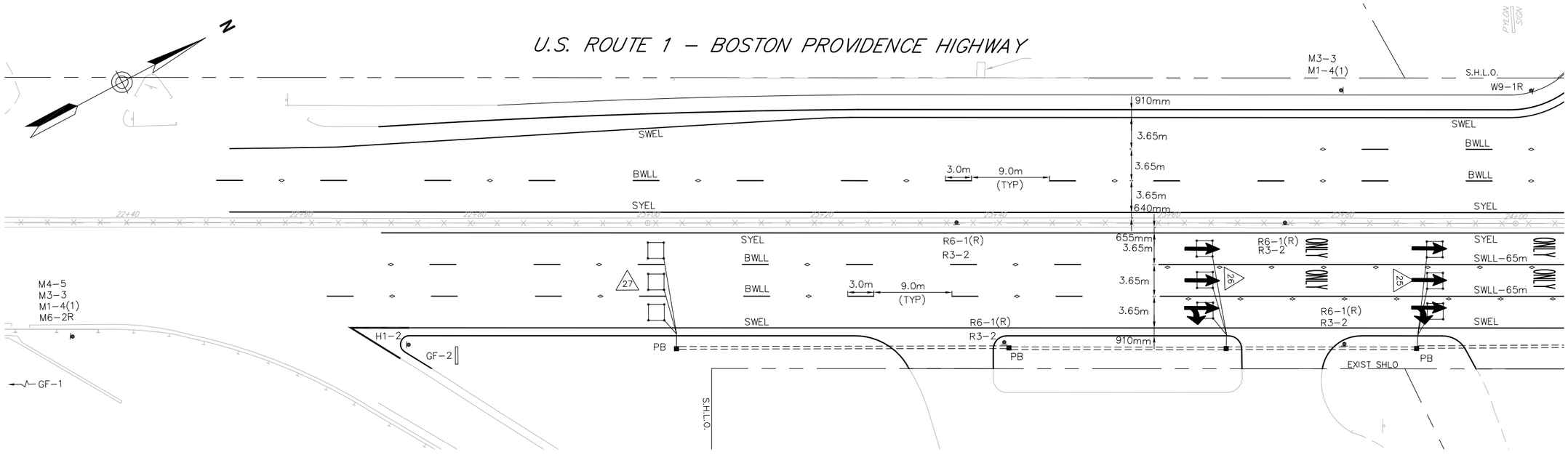
R6-1(R) R3-2
PB
910mm
3.65m
3.65m
3.65m
700mm
R6-1(R) R3-2
R2-1(45)
EXIST SHLO
610mm
3.65m
3.65m
3.65m
3.65m
M3-1 M1-4(1)
910mm
R6-1(R) R3-2
SYEL
BWLL
BWLL
SWEL
2.5m TS POST
W/PED SIGNAL HEAD
W/PED PUSH BUTTON
W/R10-3f & SIGN SADDLE
W/W11-20
R6-1(R) R3-2
SWEL
SWLL-65m
SWLL-65m
SYEL
R6-1(R) R3-2
W9-1R
TS STRAIN POLE
H=9.0m, M=400kNm
W/SPAN WIRE ASSEMBLY
W/TETHER WIRE
R10-22
HH(600mmX600mm)
R10-22
D6-2
D8-2
R1-1
R3-5R
PRE-EMPTION
STROBE
D6-5
SP-3
SP-3a
R10-22
310mm
EXIST ROW
D6-1
D8-1
3.75m TS POST
W/PRE-EMPTION DETECTOR
IN GRASS STRIP
SP-3
D1
ONE-WAY WHITE RPM (TYP)
BWLL
EXIST SHLO
R3-2
R10-11b
PRE-EMPTION DETECTOR (TYP)
D4
R3-2
R3-4
R4-7
0.6m BWL
W/1.2m GAPS
R3-5L
R=25m
TWO
100mm CONDUIT
PRE-EMPTION
STROBE
R3-2
R3-5L
R3-5L
D3
SWLL-23m
SWLL-25m
ONLY
ONLY
R=15m
R10-12
R3-2
D2
0.6m BWL
W/1.2m GAPS
DYCL
SWEL
HH(600mmX600mm)
PB
SWLL-35m
SWLL-35m
3.25m
3.25m
3.25m
DYCL
VARIES
310mm
SWEL
TWO-WAY YELLOW RPM (TYP)
R10-22
D6-4
D8-4
R4-7
R3-4
P5
2.5m CW
P6
P7
P8
2.5m CW
P9
2.5m CW
P10
EXIST SHLO
HH(600mmX600mm)
HH(600mmX600mm)
R10-22
TS STRAIN POLE
H=9.0m M=700kNm
W/SPAN WIRE ASSEMBLY
W/TETHER WIRE
W/D3-1 & D3-4
W/PED SIGNAL HEAD
W/PED PUSH BUTTON
W/R10-3b & SIGN SADDLE
W/W11-20
2.5m TS POST
W/PED SIGNAL HEAD
W/PED PUSH BUTTON
W/R10-3b & SIGN SADDLE
W/W11-20
HH(600mmX600mm)
2.5m TS POST
W/PED SIGNAL HEAD
W/PED PUSH BUTTON
W/R10-3b & SIGN SADDLE
W/W11-20
TS STRAIN POLE
H=9.0m, M=350kNm
SP-4
R10-22
2.5m TS POST
W/PED SIGNAL HEAD
W/PED PUSH BUTTON
W/R10-3f & SIGN SADDLE
W/W11-20
EXIST SHLO
U.S. RTE 1
NORTHBOUND OFF RAMP
BWLL
SYEL
SYEL
SWLL-65m
SWLL-65m
SWEL
R6-1(R) R3-2
ONLY
ONLY
R6-1(R) R3-2
EXIST SHLO
910mm
VARIES
3.65m
3.65m
910mm
ONLY
DEAN STREET
EXIST ROW

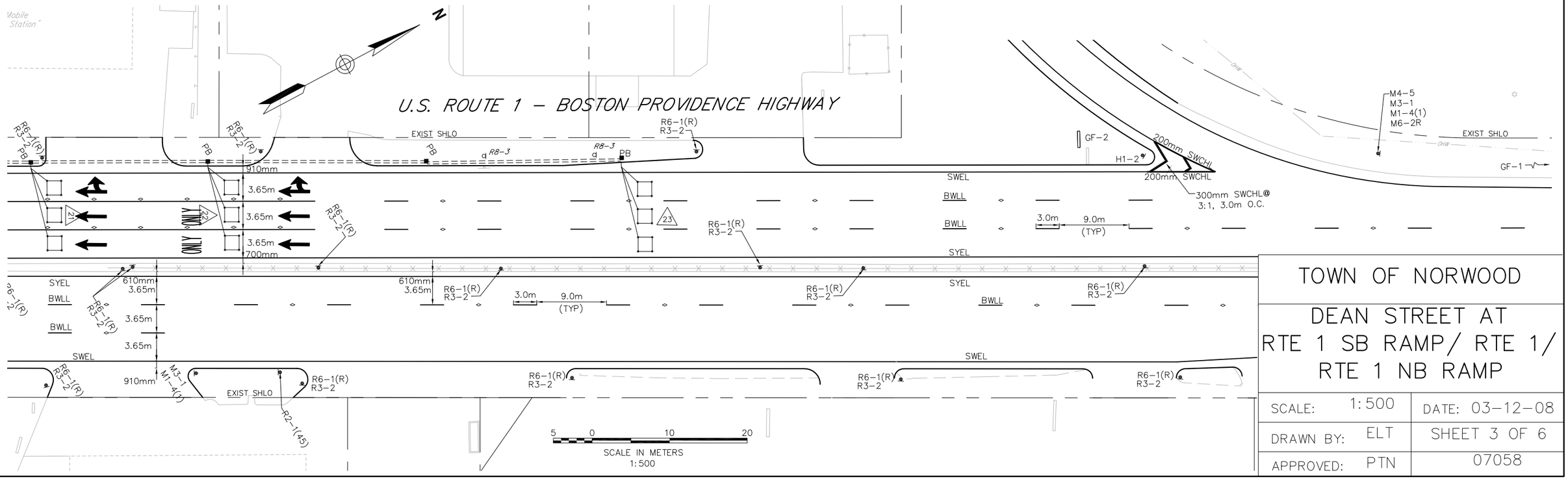
CONT. ON SHEET 1

CONT. ON SHEET 3

SCALE IN METERS
1:500

TOWN OF NORWOOD	
DEAN STREET AT RTE 1 SB RAMP/ RTE 1/ RTE 1 NB RAMP	
SCALE: 1:500	DATE: 03-12-08
DRAWN BY: ELT	SHEET 2 OF 6
APPROVED: PTN	07058





TOWN OF NORWOOD

DEAN STREET AT RTE 1 SB RAMP/ RTE 1/ RTE 1 NB RAMP

SCALE:	1:500	DATE:	03-12-08
DRAWN BY:	ELT		SHEET 3 OF 6
APPROVED:	PTN		07058

SEQUENCE AND TIMING

APPROACH	DIRECTION	HOUSING	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	FLASHING OPERATION
MINIMUM INTERVAL			6			6			6			6			6			6			–			–			6			6			6			–			6			–			6			FOR EMERGENCY VEHICLE PRE-EMPTION ONLY												
VEHICLE EXTENSION			2			2			2			2			2			2			–			–			2			2			2			–			2			–			2															
MAXIMUM 1			25			25			25			20			20			20			–			–			10			50			50			–			10			–			10															
MAXIMUM 2			–			–			–			–			–			–			–			–			–			–			–			–			–			–			–															
YELLOW CLEARANCE				4			4			4			4			4			4			4			4			4			4			4			4			4			4			4													
RED CLEARANCE					1			1			1			1			1			1			1			1			1			1			1			1			1			1			1												
PEDESTRIAN INTERVAL						5/24			5/24			5/14																		5/13			5/20																											
DEAN STREET	EB	A,B							G	Y	R							R	R	R							R	R	R							R	R	R							R	R	R							G	Y	R				FY
DEAN STREET	EB	C,D				←G−	←Y−	←R−							←R−	←R−	←R−							←R−	←R−	←R−							←R−	←R−	←R−							←R−	←R−	←R−							←G−	←Y−	←R−							←FR−
DEAN STREET	EB	E,F				G	Y	R							R	R	R							R	R	R							R	R	R							R	R	R							G	Y	R							FR
DEAN STREET	EB	G	←G−G	Y	R							R	R	R							R	R	R							R	R	R							R	R	R							R	R	R										FR
DEAN STREET	EB	H	G	Y	R							R	R	R							R	R	R							R	R	R							R	R	R							R	R	R										FR
DEAN STREET	WB	J	R	R	R							←G−G	Y	R							←G−G	Y	R							R	R	R							R	R	R							R	R	R										FY
DEAN STREET	WB	K	R	R	R							G	Y	R							G	Y	R							R	R	R							R	R	R							R	R	R										FY
DEAN STREET	WB	L				←R−	←R−	←R−							←G−	←Y−	←R−							←G−	←Y−	←R−							←R−	←R−	←R−								←R−	←R−	←R−							←R−	←R−	←R−							←FR−
DEAN STREET	WB	M,N				R	R	R							G	Y	R							G	Y	R							R	R	R								R	R	R							R	R	R							FR
DEAN STREET	WB	P							G	Y	R							←G−G	←Y−Y	R							R	R	R							R	R	R							R	R	R							R	R	R				FR
DEAN STREET	WB	Q,R							G	Y	R							G	Y	R							R	R	R							R	R	R							R	R	R							R	R	R				FR
RTE 1	SB	U,V				R	R	R							R	R	R							R	R	R							↑G	Y	R							↑G	Y	R							R	R	R							FY
RTE 1	SB	W				R	R	R							R	R	R							R	R	R							G	Y	R							G	Y	R							R	R	R							FY
RTE 1 SB OFF-RAMP	SB	X	←R−	←R−	←R−							←R−	←R−	←R−							←R−	←R−	←R−							←G−	←Y−	←R−							←R−	←R−	←R−							←G−	←Y−	←R−										←FR−
RTE 1 SB OFF-RAMP	SB	Y	R	R	R							R	R	R							R	R	R							←G−G	Y	R							R	R	R							←G−G	Y	R										FR
RTE 1 SB OFF-RAMP	SB	Z	R−G→	R−Y→	R							R	R	R							R	R	R							G	Y	R							R	R	R							G	Y	R										FR
STAPLES DRIVEWAY	NB	AA	R	R	R							R	R	R							R	R	R							R	R	R							←G−G	Y	R							R	R	R										FR
STAPLES DRIVEWAY	NB	BB	R	R	R							R	R	R							R	R	R							R	R	R							G	Y	R							R	R	R										FR
RTE 1	NB	CC,DD				R	R	R							R	R	R							R	R	R							↑G	Y	R							↑G	Y	R							R	R	R							FY
RTE 1	NB	EE				R	R	R							R	R	R							R	R	R							G	Y	R							G	Y	R							R	R	R							FY
RTE 1 NB OFF-RAMP	NB	FF,GG							R	R	R							R	R	R							G	Y	R							G	Y	R							R	R	R							R	R	R				FR
PEDESTRIAN X-ING	NB-SB	P1-P2	DW	DW	DW							DW	DW	DW							DW	DW	DW							**	DW	DW							DW	DW	DW							DW	DW	DW										OUT
PEDESTRIAN X-ING	EB-WB	P3-P4	DW	DW	DW							**	DW	DW							DW	DW	DW							DW	DW	DW							DW	DW	DW							DW	DW	DW										OUT
PEDESTRIAN X-ING	EB-WB	P5-P6				**	DW	DW							DW	DW	DW							DW	DW	DW							DW	DW	DW							DW	DW	DW							DW	DW	DW							OUT
PEDESTRIAN X-ING	NB-SB	P7-P8				DW	DW	DW							DW	DW	DW							DW	DW	DW							**	DW	DW							DW	DW	DW							DW	DW	DW							OUT
PEDESTRIAN X-ING	EB-WB	P9-P10							**	DW	DW							DW	DW	DW							DW	DW	DW							DW	DW	DW							DW	DW	DW							DW	DW	DW				OUT
DETECTOR			NON-LOCK									NON-LOCK									NON-LOCK									NON-LOCK									NON-LOCK									–												
RECALL			OFF									OFF									OFF									SOFT									OFF									OFF												
			ø1									ø2									ø3									ø4									ø5									ø6 (EMERGENCY PRE-EMPT)									ø7&ø8			
			RTE 1 SB RAMP			RTE 1			RTE 1 NB RAMP			RTE 1 SB RAMP			RTE 1			RTE 1 NB RAMP			RTE 1 SB RAMP			RTE 1			RTE 1 NB RAMP			RTE 1 SB RAMP			RTE 1			RTE 1 NB RAMP			RTE 1 SB RAMP			RTE 1			RTE 1 NB RAMP			RTE 1 SB RAMP			RTE 1			RTE 1 NB RAMP						
																																																								NOT USED			

NOTES:

1. AUTOMATIC FLASHING OPERATION PER M.U.T.C.D. SECTION 4D.12.
2. ** NORMALLY DW, UPON PED PUSH BUTTON ACTUATION W/FDW
3. PERM = PERMISSIVE
4. OL = OVERLAP
5. Y = YIELD CONTROL
6. S = STOP CONTROL
7. MAXIMUM 1 = NORMAL OPERATION
8. MAXIMUM 2 = NOT USED
9. STOP AND GO OPERATION FOR 24 HOURS PER DAY. FLASHING OPERATION FOR EMERGENCY ONLY.
10. DURING PEDESTRAIN INTERVAL, FDW THROUGH YELLOW OPERATION SHALL BE IN EFFECT.

OVERLAPS

OL A = ø4+ø5 ROUTE 1 NORTHBOUND
OL B = ø4+ø5 ROUTE 1 SOUTHBOUND
OL C = ø1 + ø6
OL D = ø4 + ø6
OL E = ø1 + ø2
OL F = ø2 + ø3
OL G = ø3 + ø4
OL H = ø1

PREFERENTIAL PHASE SEQUENCE

SEQUENCE & TIMING NOTES:

1. IF THE ASSIGNED RIGHT OF WAY FOR ANY TRAFFIC MOVEMENT IS TO REMAIN IN EFFECT DURING THE NEXT CALLED PHASE, THE SIGNAL INDICATIONS FOR THAT TRAFFIC MOVEMENT WILL NOT CHANGE DURING THE CLEARANCE INTERVAL.
2. THE RIGHT OF WAY MAY BE ASSIGNED TO ANY PHASE, OR ANY COMBINATION OF NON-CONFLICTING PHASES.
3. IF CALLS EXIST ON ALL PHASES, THE ASSIGNMENT OF RIGHT OF WAY SHALL BE IN ACCORDANCE WITH THE PREFERENTIAL PHASE SEQUENCE.
4. IF THE ASSIGNED RIGHT-OF-WAY FOR ANY TRAFFIC MOVEMENT IS TO CHANGE DURING THE NEXT CALLED PHASE, THE SIGNAL INDICATION FOR THAT MOVEMENT WILL DISPLAY THE APPROPRIATE CLEARANCE INTERVALS.

TOWN OF NORWOOD

DEAN STREET AT
ROUTE 1
SOUTHBOUND OFF-RAMP

SCALE: N/A
DATE: 03-12-08
DRAWN BY: ELT
SHEET 4 OF 6
APPROVED: PTN
07058

DETECTOR DATA						
DETECTOR NO.	NO. SECTION/ SIZE	NO. OF TURNS	OPERATIONS	DELAY /EXT	CALL PHASE	LOOP CONNECTION
1	2–1.8mX6.0m QUADRUPOLE	2–4–2	PRESENCE	0	ø1	SERIES
2	2–1.8mX6.0m QUADRUPOLE	2–4–2	PRESENCE	0	ø1	SERIES
3	2–1.8mX6.0m QUADRUPOLE	2–4–2	PRESENCE	0	ø1	SERIES
4	2–1.8mX6.0m QUADRUPOLE	2–4–2	PRESENCE	0	ø1	SERIES
5	2–1.8mX6.0m QUADRUPOLE	2–4–2	PRESENCE	0	ø1	SERIES
6	2–1.8mX6.0m QUADRUPOLE	2–4–2	PRESENCE	0	ø1	SERIES
7	2–1.8mX6.0m QUADRUPOLE	2–4–2	PRESENCE	0	ø2	SERIES
8	2–1.8mX6.0m QUADRUPOLE	2–4–2	PRESENCE	0	ø2	SERIES
9	2–1.8mX6.0m QUADRUPOLE	2–4–2	PRESENCE	0	ø2	SERIES
10	2–1.8mX6.0m QUADRUPOLE	2–4–2	PRESENCE	0	ø2	SERIES
11	2–1.8mX6.0m QUADRUPOLE	2–4–2	PRESENCE	0	ø2	SERIES
12	2–1.8mX6.0m QUADRUPOLE	2–4–2	PRESENCE	0	ø2	SERIES
13	2–1.8mX6.0m QUADRUPOLE	2–4–2	PRESENCE	0	ø2	SERIES
14	2–1.8mX6.0m QUADRUPOLE	2–4–2	PRESENCE	0	ø2	SERIES
15	2–1.8mX6.0m QUADRUPOLE	2–4–2	PRESENCE	0	ø3	SERIES
16	2–1.8mX6.0m QUADRUPOLE	2–4–2	PRESENCE	0	ø3	SERIES
17	2–1.8mX6.0m QUADRUPOLE	2–4–2	PRESENCE	DELAY 5 SEC	ø4	SERIES
18	2–1.8mX6.0m QUADRUPOLE	2–4–2	PRESENCE	0	ø4	SERIES
19	2–1.8mX6.0m QUADRUPOLE	2–4–2	PRESENCE	0	ø4	SERIES
20 *	3–1.8mX2.4m QUADRUPOLE	2–4–2	PRESENCE	0	ø4	SERIES
21	3–1.8mX1.8m	3	PRESENCE	0	ø4	SERIES
22	3–1.8mX1.8m	3	PRESENCE	1 SEC EXTENSION	ø4	SERIES
23	3–1.8mX1.8m	3	PRESENCE	2 SEC EXTENSION	ø4	SERIES
24 *	3–1.8mX2.4m QUADRUPOLE	2–4–2	PRESENCE	0	ø4	SERIES
25	3–1.8mX1.8m	3	PRESENCE	0	ø4	SERIES
26	3–1.8mX1.8m	3	PRESENCE	1 SEC EXTENSION	ø4	SERIES
27	3–1.8mX1.8m	3	PRESENCE	2 SEC EXTENSION	ø4	SERIES
28	1–1.8mX6.0m QUADRUPOLE	3	PRESENCE	0	ø5	SINGLE

NOTES: 1. DELAY AND EXTENSION TIMINGS SHALL BE PROGRAMMED IN THE CONTROLLER
2. * CALLING DETECTORS ONLY

PRE–EMPTION PHASING & PRIORITY

DETECTOR & PRIORITY	PRE–EMPT PHASE ASSIGNMENT	MOVEMENT			VEHICLE PHASE ASSIGNMENT	HOLD
D1	1				ø2	30 SEC
D2	2				ø3	25 SEC
D3	3				OL A	0
D4	4				OL B	0
D5	5				ø1 (OL E & OL H NOT ACTIVE)	25 SEC
D6	6				ø6	25 SEC

EMERGENCY VEHICLE PRE–EMPTION OPERATION.

1. EMERGENCY VEHICLE PRE–EMPTION SIGNALS SHALL BE OPTICALLY TRANSMITTED BY OPTICAL EMITTERS MOUNTED IN EMERGENCY VEHICLES AND RECEIVED BY OPTICAL DETECTORS LOCATED AT EACH INTERSECTION.
2. PRE–EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH DETECTORS D1, D2, D3, D4, D5, OR D6 ASSIGNED DESCENDING PRIORITIES AS FOLLOWS: (D1 HIGHEST AND D6 LOWEST)
3. IN RESPONSE TO A PRE–EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY OPTICAL DETECTOR D1 (OR D2, D3, D4, D5, D6) THE CONTROLLER SHALL HOLD OR ADVANCE TO AND HOLD IN EMERGENCY VEHICLE PRE–EMPTION PHASE #1 (OR #2, #3, #4, #5, #6) GREEN FOR A MINIMUM OF TEN (10) SECONDS OR UNTIL PRE–EMPTION SIGNAL CEASES. THE CONTROLLER SHALL THEN TIME PRE–EMPTION PHASE CLEARANCE (4 SECONDS: YELLOW AND 1 SECOND: ALL RED) AND SERVICE PRE–EMPTION PHASE #2 (OR #1) IF NECESSARY, THEN TIME PRE–EMPTION EMERGENCY VEHICLE PHASE CLEARANCE AND RESUME NORMAL SIGNAL OPERATION. EMERGENCY VEHICLE PRE–EMPTION PHASE #3, #4, #5, AND #6 SHALL BE SIMILARLY SERVED.
4. MINIMUM GREEN, NORMAL VEHICLE CLEARANCE, SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE–EMPTION DEMAND.
5. PRE–EMPTION STROBE SHALL BE ILLUMINATED WHENEVER ANY EMERGENCY VEHICLE PRE–EMPTION GREEN IS ON.
6. DURING PRE–EMPTION, PEDESTRIAN MOVEMENTS SHALL NOT BE ACTIVE.

SIGNAL HEAD DATA

P	Z	A,B,E,F,H,K, M,N,Q,R,W, BB,EE,FF,GG	U,V,CC,DD	C,D,L,X	G,J,Y,AA	P1–P10
R Y G Y G	R Y G Y G	R Y G	R Y G	R Y G	R Y G G	(L.E.D.)
BI–MODAL LENS	BI–MODAL LENS					
ALL 300mm LENS						

NOTES: 1. ALL SIGNAL HEADS SHALL BE EQUIPPED WITH 125mm ± LOUVERED BACKPLATES.
2. ALL SIGNAL DISPLAYS SHALL BE EQUIPPED W/L.E.D. MODULES.

TOWN OF NORWOOD

DEAN STREET AT
ROUTE 1
SOUTHBOUND OFF–RAMP

SCALE: N/A	DATE: 03–12–08
DRAWN BY: ELT	SHEET 5 OF 6
APPROVED: PTN	07058

DEAN STREET AT ROUTE 1 SOUTHBOUND OFF-RAMP

	SPEED	v (ft/sec)	g	w (ft)	YELLOW TIME
DEAN ST (EB)	25 mph	36.7 ft/sec	+0.500%	69 ft	2.8 sec
DEAN ST (WB)	25 mph	36.7 ft/sec	−0.500%	94 ft	2.9 sec
SB OFF-RAMP	20 mph	29.3 ft/sec	−0.965%	64 ft	2.5 sec

	SPEED	v (ft/sec)	g	w (ft)	RED TIME
DEAN ST (EB)	30 mph	43.7 ft/sec	+0.500%	69 ft	2.0 sec
DEAN ST (WB)	30 mph	43.7 ft/sec	−0.500%	94 ft	2.6 sec
SB OFF-RAMP	25 mph	36.7 ft/sec	−0.965%	64 ft	2.3 sec

DEAN STREET AT ROUTE 1

	SPEED	v (ft/sec)	g	w (ft)	YELLOW TIME
DEAN ST (EB)	25 mph	36.7 ft/sec	+1.461%	102 ft	2.8 sec
DEAN ST (WB)	25 mph	36.7 ft/sec	+2.000%	127 ft	2.7 sec
ROUTE 1 (NB)	40 mph	58.7 ft/sec	−0.713%	89 ft	4.0 sec
ROUTE 1 (SB)	40 mph	58.7 ft/sec	+0.713%	109 ft	3.9 sec

	SPEED	v (ft/sec)	g	w (ft)	RED TIME
DEAN ST (EB)	30 mph	43.7 ft/sec	+1.461%	102 ft	2.8 sec
DEAN ST (WB)	30 mph	43.7 ft/sec	+2.000%	127 ft	3.4 sec
ROUTE 1 (NB)	45 mph	66.0 ft/sec	−0.713%	89 ft	1.7 sec
ROUTE 1 (SB)	45 mph	66.0 ft/sec	+0.713%	109 ft	2.0 sec

DEAN STREET AT ROUTE 1 NORTHBOUND OFF-RAMP

	SPEED	v (ft/sec)	g	w	YELLOW TIME
DEAN ST (EB)	25 mph	36.7 ft/sec	−1.035%	64 ft	2.9 sec
DEAN ST (WB)	25 mph	36.7 ft/sec	+1.035%	69 ft	2.8 sec
NB OFF-RAMP	20 mph	29.3 ft/sec	+1.500%	59 ft	2.4 sec

	SPEED	v (ft/sec)	g	w	RED TIME
DEAN ST (EB)	30 mph	43.7 ft/sec	−1.035%	64 ft	1.9 sec
DEAN ST (WB)	30 mph	43.7 ft/sec	+1.035%	69 ft	2.0 sec
NB OFF-RAMP	25 mph	36.7 ft/sec	+1.500%	59 ft	2.2 sec

YELLOW TIMES

$Y = t + v/(2a + 2Gg)$

Y = LENGTH OF YELLOW INTERVAL (sec)
t = DRIVER PERCEPTION REACTION TIME (1.0 sec)
v = SPEED OF VEHICLE THROUGH INTERSECTION (fps) (85TH PERCENTILE)
a = DRIVER ACCELERATION (10 ft/sec)
G = ACCELERATION DUE TO GRAVITY (32.2 ft/sec^2)
g = GRADE OF APPROACH (percent/100)

ALL RED TIMES

$R = (L + w)/v$

R = LENGTH OF RED CLEARANCE INTERVAL (sec)
L = LENGTH OF VEHICLE (20 ft)
w = WIDTH OF INTERSECTION (ft)
v = SPEED OF VEHICLE THROUGH INTERSECTION (fps)

TOWN OF NORWOOD

DEAN STREET AT ROUTE 1 SOUTHBOUND OFF-RAMP

SCALE: N/A	DATE: 03-12-08
DRAWN BY: ELT	SHEET 6 OF 6
APPROVED: PTN	07058

DRAFT

massDOT
Massachusetts Department of Transportation

TRAFFIC CONTROL SIGNAL REGULATION

City or Town: NORWOOD
Location: PROVIDENCE HWY (RTE 1) AT UNIVERSITY AVE/EVERETT ST
Regulation No.: AB-220-2950(E) **Date:** 6/26/2018

Pursuant to MASS. GEN. LAWS c. 85, § 2 the Massachusetts Department of Transportation ("MassDOT") hereby approves the following described traffic control signal installation and auxiliary signs and surface markings for the above captioned location, provided that a permit for the opening of the road and the placing of structures thereon shall be received from the board or officer in charge of the road.

This Regulation is granted for the specific signal installation described herein and for its operation in accordance with the conditions set forth below and with the requirements of the MassDOT. The details for any materials, alterations, or any continued* or substantial departure from the provisions of this Regulation must be submitted to the MassDOT for approval with data sufficient to justify such modification. Failure to comply with the requirements and standards set forth by the MassDOT shall automatically void this Regulation during such time as non-compliance exists.

I. STANDARDS OF INSTALLATION

The traffic control signal installation and all auxiliary sign and surface markings which are used in conjunction with such installation shall conform with the requirements of the MassDOT and with the attached sketch.

II. OPERATION OF SIGNALS

1.	Traffic Control.....	Actuated
2.	Coordination.....	None
3.	Special Connections.....	Emergency Pre-Emption
4.	Timing for Automatic Operations....	*See Attached*
5.	Hours for Automatic Operation.....	Signals shall be operated in stop and go mode continuously unless unusual or emergency conditions arise which temporarily justify flashing operations or manual override.
6.	Flashing Operation.....	Whenever a signal is not operating as traffic control device (stop and go), it must Flash Yellow or Flash Red as set forth in the accompanying timing and sequence chart for emergency operation. The flashing rate must conform to the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD).
7.	Manual Operation.....	Signals may be operated manually at any time irrespective of the hours designated in Part II (5) of this Regulation.
8.	Discontinuance.....	Upon proper justification signals can be discontinued. If required and justified, appropriate alternate traffic controls must be installed prior to discontinuance of signals. Discontinued signal faces must be turned away from traffic, taken down or covered and the District Highway Director notified.

Issuance of this Regulation Supersedes and Terminates:

State Permit No.: AB-220-2950(B) issued to this intersection

State Layout No.: _____

Dated: 8/31/2015

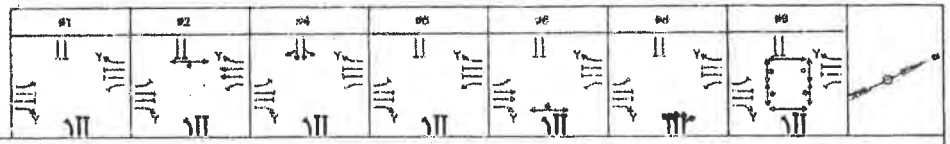
MASSACHUSETTS DEPARTMENT OF TRANSPORTATION

BY _____

Neil E. Boudreau
State Traffic Engineer

MassDOT HD TOP TCSP-120
REV 11-15-12

* A period of seven consecutive days or more in any given month.



SEQUENCE AND TIMING FOR FULLY ACTUATED CONTROL (ISOLATED)

APPROACH	DIRECTION	HOUSING	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	FLASH
PROVIDENCE HWY	NB	A,H	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R	FY
PROVIDENCE HWY	NB	C	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	FR
PROVIDENCE HWY	SB	B,E	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	FY
PROVIDENCE HWY	SB	F	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	FR
EVERETT ST	EB	G	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	FR
EVERETT ST	EB	H,M	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	FR
UNIVERSITY AVE	WB	J	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	FR
UNIVERSITY AVE	WB	K	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	FR
UNIVERSITY AVE	WB	L	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	FR
PEDESTRIAN X-ING	EB	P1–P4	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W/FDW	FDW	DW	OUT
PEDESTRIAN X-ING	EB	P5–P8	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W/FDW	FDW	DW	DW	DW	DW	W/FDW	FDW	DW	OUT
PEDESTRIAN X-ING	EB	P7–P10	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W/FDW	FDW	DW	OUT
PEDESTRIAN X-ING	EB	P11–P12	DW	DW	DW	W/FDW	FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W/FDW	FDW	DW	OUT

TIMING IN SECONDS

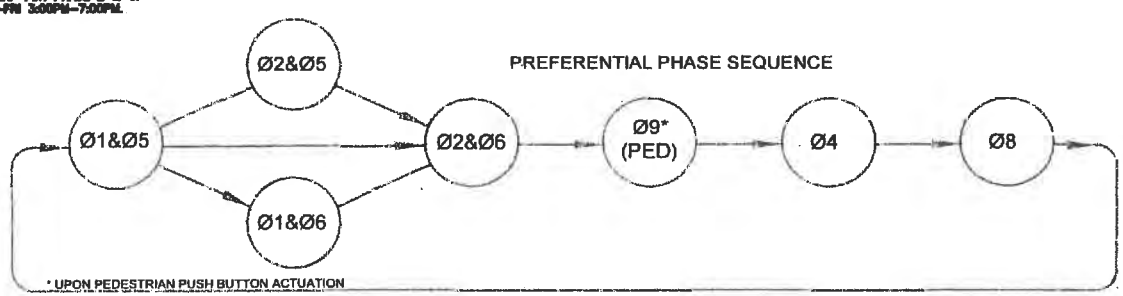
MINIMUM GREEN (INITIAL)	8			15			6			8			15			6			7			
PASSAGE TIME (VEHICLE)	2			2			3			2			2			3						
MAXIMUM 1	15			50			20			17			45			13						
MAXIMUM 2	12			45			27			15			40			15						
MAXIMUM 3	15			55			15			15			55			20						
YELLOW CLEARANCE		4			5			4			4			5			4.5			3		
RED CLEARANCE			4			1			2.5			4			1			2				3
PEDESTRIAN WALK				7									7						7			
PEDESTRIAN CLEARANCE				14									21						21			
TIME BEFORE REDUCTION (TBR)				20									20									
TIME TO REDUCE (TTR)				10									10									
MIN GAP				1.5									1.5									

CONFLICT FLASH OPERATION ONLY

DETECTOR MEMORY	NON–LOCK			NON–LOCK			NON–LOCK			NON–LOCK			NON–LOCK			NON–LOCK			LOCK		
RECALL	OFF			SOFT			OFF			OFF			SOFT			OFF			OFF		

COORDINATION DATA			COORDINATION PHASE SPLIT TIMES								

NOTES:
1. AUTOMATIC FLASHING OPERATION PER 2009 M.U.T.C.D., AS AMENDED.
2. * UPON PEDESTRIAN PUSH BUTTON ACTUATION
3. Y = YIELD CONTROL
4. MAXIMUM 1 = NORMAL OPERATION
5. MAXIMUM 2 = MON–FRI 6:00AM – 10:00AM
6. STOP AND GO OPERATION FOR 24 HOURS PER DAY. FLASHING OPERATION FOR EMERGENCY ONLY.
7. DURING PEDESTRIAN INTERVAL, FDW THROUGH YELLOW OPERATION SHALL BE IN EFFECT.
8. INHIBIT MAX TERMINATION SHALL BE IN EFFECT DURING COORDINATION.
9. NO SIMULTANEOUS GAP FOR PHASE 2 & 6.
10. MAXIMUM 3 = MON–FRI 3:00PM–7:00PM.

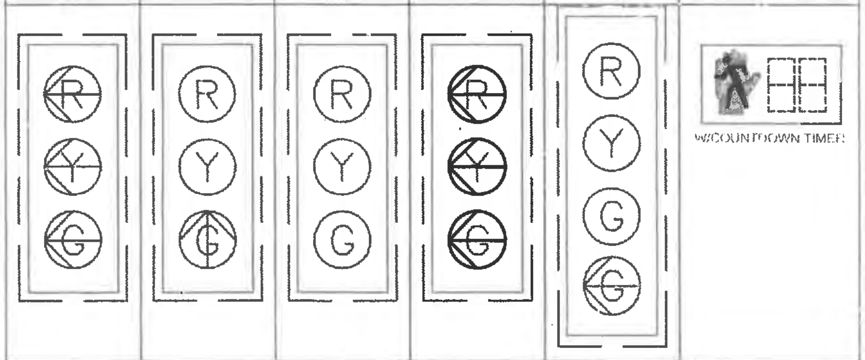


SEQUENCE & TIMING NOTES

1. IF THE ASSIGNED RIGHT OF WAY FOR ANY TRAFFIC MOVEMENT IS TO REMAIN CALLED DURING THE NEXT CALLED PHASE, A SIGNAL INDICATION FOR THAT TRAFFIC MOVEMENT WILL NOT CHANGE DURING THE CLEARANCE INTERVAL.
2. THE RIGHT OF WAY MAY BE ASSIGNED TO ANY PHASE OR ANY COMBINATION OF NON-OPPOSING MOVEMENTS.
3. IF CALLS EXIST ON ALL PHASES, THE ASSIGNMENT OF RIGHT OF WAY SHALL BE IN ACCORDANCE WITH THE FOLLOWING PHASE SEQUENCE:
4. IF THE ASSIGNED RIGHT OF WAY FOR ANY TRAFFIC MOVEMENT IS TO CHANGE DURING THE NEXT CALLED PHASE, A SIGNAL INDICATION FOR THAT MOVEMENT WILL DISPLAY ITS ASSIGNED RATE DURING THE CLEARANCE INTERVAL.

SIGNAL HEAD DATA

[illegible]	A,B,D,E	[illegible]	[illegible]	[illegible]	P1-P12



ALL 12" LENS

NOTES:
1. ALL SIGNAL HEADS ARE RIGID MOUNTED.
2. ALL SIGNAL HEADS ARE EQUIPPED WITH 5"± NON-LOUVERED BACKPLATES AND 3" REFLECTIVE BORDERS.
3. ALL SIGNAL HEADS ARE EQUIPPED WITH TUNNEL VISORS.
4. ALL SIGNAL DISPLAYS ARE EQUIPPED WITH L.E.D. MODULES.

EMERGENCY VEHICLE PRE-EMPTION OPERATION

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE OPTICALLY TRANSMITTED BY OPTICAL EMITTERS MOUNTED IN EMERGENCY VEHICLES AND RECEIVED BY OPTICAL DETECTORS LOCATED AT EACH INTERSECTION.

2. [illegible] SERVICED ON A PRIORITY BASIS WITH [illegible] SIGNED DESCENDING PRIORITIES AS FOLLOWS: [illegible]

3. [illegible] PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY [illegible] D2, D4 [illegible] CONTROLLER SHALL HOLD OR [illegible] EMERGENCY VEHICLE PRE-EMPTION PHASE [illegible] #1 (OR [illegible]) A MINIMUM OF TEN (10) SECONDS OR UNTIL PRE-EMPTION [illegible] CONTROLLER SHALL THEN TIME PRE-EMPTION PHASE [illegible] PHASING AS SHOWN IN THE SEQUENCE AND [illegible] EMERGENCY VEHICLE PRE-EMPTION [illegible]

4. [illegible]

5. [illegible]

PRE-EMPTION PHASING & PRIORITY			
[illegible]	[illegible] PHASE ASSIGNMENT	MOVEMENTS	VEHICLE PHASE ASSIGNMENT
[illegible]	[illegible]	[illegible]	[illegible]
D2		[illegible]	Ø2&5
D3		[illegible]	Ø4
[illegible]	4	[illegible]	Ø8

LOOP DETECTOR DATA

DETECTOR NO.	NO. SECTIONS/ SIZE	[illegible]	OPERATIONS	DELAY /EXT	[illegible]	LOOP CONNECTION
1	1-6'X20' QUADRUPOLE	2-4-2	PRESENCE	[illegible]	Ø1	SINGLE
2	[illegible]	2-4-2	PRESENCE	[illegible]	[illegible]	[illegible]
3	2-6'X20' QUADRUPOLE	2-4-2	PRESENCE	0	Ø6	[illegible]
4	[illegible]	2-4-2	PRESENCE	[illegible]	Ø6	[illegible]
5	[illegible]	2-4-2	PRESENCE	[illegible]	[illegible]	[illegible]
6	[illegible] QUADRUPOLE	2-4-2	[illegible]	[illegible]	Ø5	SINGLE
7	[illegible]	2-4-2	[illegible]	[illegible]	[illegible]	[illegible]
8	2-6'X20' QUADRUPOLE	2-4-2	[illegible]	[illegible]	Ø2	SERIES
9	1-6'X20' QUADRUPOLE	2-4-2	PRESENCE	0	Ø2	[illegible]
10	[illegible]	[illegible]	PRESENCE	[illegible]	Ø2	[illegible]
11	[illegible]	2-4-2	[illegible]	[illegible]	[illegible]	SINGLE
12	[illegible]	2-4-2	[illegible]	0	Ø4	SINGLE
13	[illegible]	2-4-2	PRESENCE	[illegible]	Ø4	SINGLE
14	1-6'X20' QUADRUPOLE	2-4-2	PRESENCE	[illegible]	Ø4	[illegible]

[illegible]

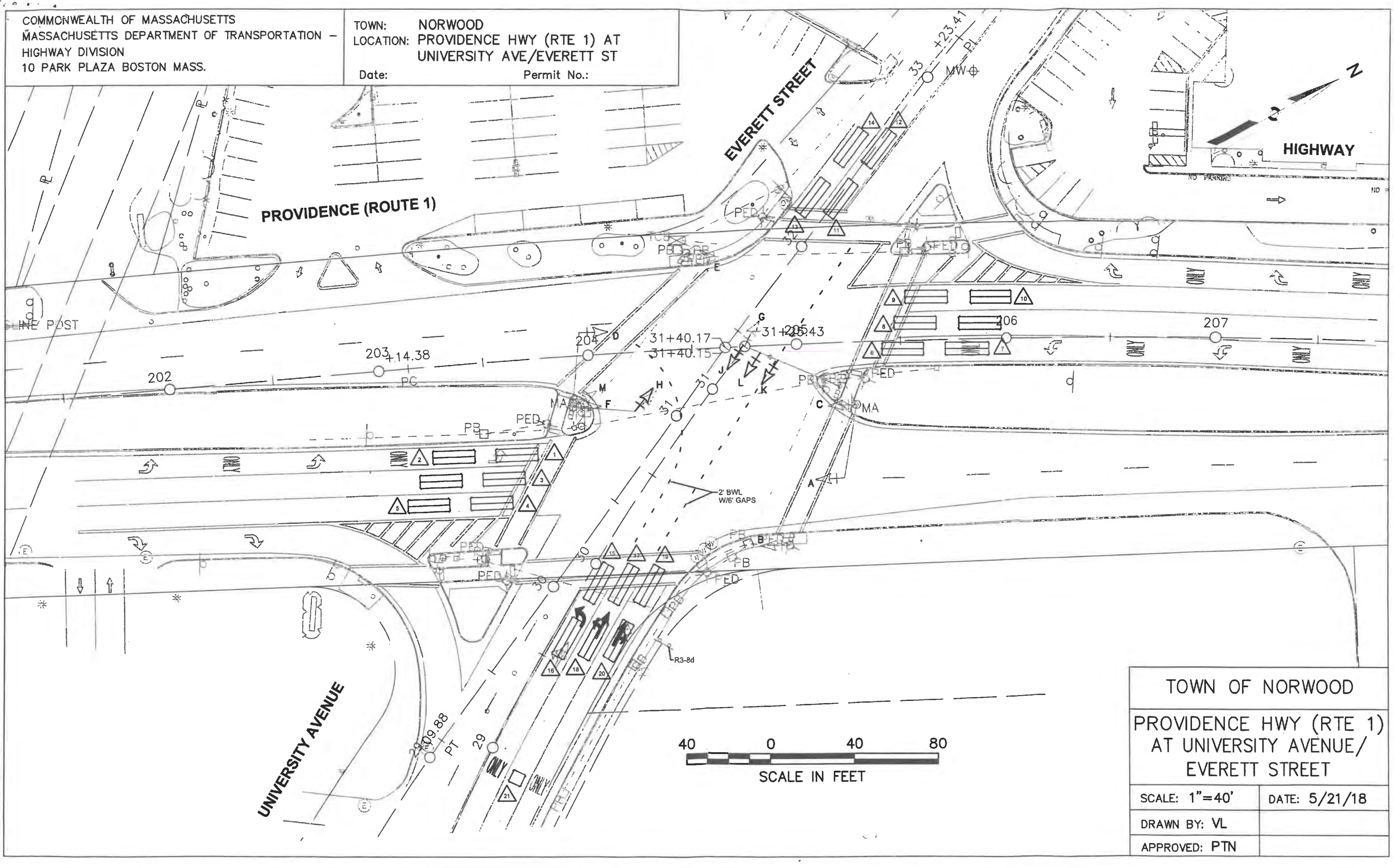
LOOP DETECTOR DATA (CONT.)

DETECTOR NO.	[illegible]	[illegible]	OPERATION	DELAY /EXT	[illegible]	LOOP CONNECTION
15	[illegible]	2-4-2	[illegible]	[illegible]	Ø8	[illegible]
16	[illegible]	2-4-2	PRESENCE	[illegible]	[illegible]	[illegible]
17	[illegible] QUADRUPOLE	2-4-2	PRESENCE	[illegible]	Ø8	[illegible]
18	1-6'X20' QUADRUPOLE	2-4-2	PRESENCE	[illegible]	Ø8	SINGLE
19	[illegible]	2-4-2	PRESENCE	[illegible]	[illegible]	SINGLE
20	[illegible] QUADRUPOLE	2-4-2	[illegible]	0	[illegible]	SINGLE
21	1-6'X20' QUADRUPOLE	2-4-2	PRESENCE	[illegible]	Ø8	[illegible]

NOTE: DELAY AND EXTENSION TIMINGS SHALL BE PROGRAMMED IN THE CONTROLLER ONLY

COMMONWEALTH OF MASSACHUSETTS
MASSACHUSETTS DEPARTMENT OF TRANSPORTATION – HIGHWAY DIVISION
10 PARK PLAZA BOSTON MASS.

TOWN: NORWOOD
LOCATION: PROVIDENCE HWY (RTE 1) AT UNIVERSITY AVE/EVERETT ST
Date: Permit No.:



TOWN OF NORWOOD	
PROVIDENCE HWY (RTE 1) AT UNIVERSITY AVENUE/ EVERETT STREET	
SCALE: 1"=40'	DATE: 5/21/18
DRAWN BY: VL	
APPROVED: PTN	

Appendix D

Intersection Level of Service Analysis

1: Existing Conditions: Weekday AM Peak-Hour LOS and Delays

2: Existing Conditions: Weekday PM Peak-Hour LOS and Delays

3: Existing Conditions: Weekend Saturday PM Peak-Hour LOS and Delays

4: 2040 Conditions: Weekday AM Peak-Hour LOS and Delays

5: 2040 Conditions: Weekday PM Peak-Hour LOS and Delays

6: 2040 Conditions: Weekend Saturday PM Peak-Hour LOS and Delays

Part 1: Existing Conditions: Weekday AM Peak-Hour LOS and Delays

Lane Group	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations														
Traffic Volume (vph)	30	110	1080	280	70	150	900	250	300	270	100	110	150	230
Future Volume (vph)	30	110	1080	280	70	150	900	250	300	270	100	110	150	230
Satd. Flow (prot)	0	1678	3355	1501	0	1678	3355	1501	0	3209	0	1527	2928	0
Flt Permitted		0.950				0.950				0.978		0.950	0.999	
Satd. Flow (perm)	0	1678	3355	1501	0	1678	3355	1501	0	3209	0	1527	2928	0
Satd. Flow (RTOR)														
Lane Group Flow (vph)	0	160	1239	321	0	252	1033	287	0	769	0	113	449	0
Turn Type	Prot	Prot	NA	pt+ov	Prot	Prot	NA	pt+ov	Split	NA		Split	NA	
Protected Phases	1	1	6	6 8	5	5	2	2 4	4	4		8	8	
Permitted Phases														
Total Split (s)	13.0	13.0	40.0		18.0	18.0	45.0		27.0	27.0		15.0	15.0	
Total Lost Time (s)		8.0	6.0			6.5	6.0			6.5		6.5	6.5	
Act Effct Green (s)		5.0	34.0	43.0		11.5	39.0	66.0		20.5		8.5	8.5	
Actuated g/C Ratio		0.05	0.34	0.43		0.12	0.39	0.66		0.20		0.08	0.08	
v/c Ratio		1.93	1.09	0.50		1.31	0.79	0.29		1.17		0.88	2.18dr	
Control Delay		486.4	86.2	15.3		209.7	32.2	8.1		129.1		98.7	409.0	
Queue Delay		0.0	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay		486.4	86.2	15.3		209.7	32.2	8.1		129.1		98.7	409.0	
LOS		F	F	B		F	C	A		F		F	F	
Approach Delay			110.2				56.3			129.1			346.6	
Approach LOS			F				E			F			F	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.93	
Intersection Signal Delay: 123.7	Intersection LOS: F
Intersection Capacity Utilization 98.9%	ICU Level of Service F
Analysis Period (min) 15	

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 1: Boston-Providence Hwy & University Ave/Everett St

Intersection	
Intersection Delay, s/veh	95.8
Intersection LOS	F

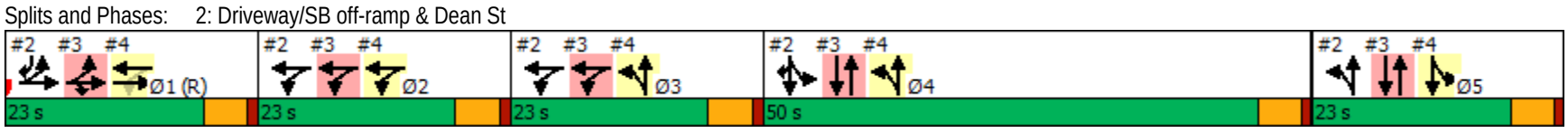
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	585	1136	435	332
Demand Flow Rate, veh/h	609	1182	452	345
Vehicles Circulating, veh/h	334	452	740	1075
Vehicles Exiting, veh/h	1086	740	203	559
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	12.9	185.5	21.4	32.3
Approach LOS	B	F	C	D

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	609	1182	452	345
Cap Entry Lane, veh/h	982	870	649	461
Entry HV Adj Factor	0.961	0.961	0.961	0.961
Flow Entry, veh/h	585	1136	435	332
Cap Entry, veh/h	944	836	624	443
V/C Ratio	0.620	1.358	0.697	0.748
Control Delay, s/veh	12.9	185.5	21.4	32.3
LOS	B	F	C	D
95th %tile Queue, veh	4	47	6	6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2	Ø3
Lane Configurations														
Traffic Volume (vph)	10	450	20	20	250	20	10	0	20	110	10	100		
Future Volume (vph)	10	450	20	20	250	20	10	0	20	110	10	100		
Satd. Flow (prot)	0	3332	0	0	3312	0	0	1580	0	1594	1611	1501		
Flt Permitted		0.999			0.997			0.984		0.950	0.960			
Satd. Flow (perm)	0	3332	0	0	3312	0	0	1580	0	1594	1611	1501		
Satd. Flow (RTOR)														
Lane Group Flow (vph)	0	550	0	0	333	0	0	34	0	68	69	115		
Turn Type	Split	NA		Split	NA		Split	NA		Split	NA	pt+ov		
Protected Phases	1	1		2 3	2 3		5	5		4	4	4 1	2	3
Permitted Phases														
Total Split (s)	23.0	23.0					23.0	23.0		50.0	50.0		23.0	23.0
Total Lost Time (s)		5.0						5.0		5.0	5.0			
Act Effct Green (s)		18.0			40.2			18.0		45.8	45.8	63.9		
Actuated g/C Ratio		0.13			0.28			0.13		0.32	0.32	0.45		
v/c Ratio		1.30			0.36			0.17		0.13	0.13	0.17		
Control Delay		199.5			4.1			57.8		35.5	35.5	13.5		
Queue Delay		1.0			0.2			0.0		0.0	0.0	0.0		
Total Delay		200.5			4.3			57.8		35.5	35.5	13.5		
LOS		F			A			E		D	D	B		
Approach Delay		200.5			4.3			57.8			25.5			
Approach LOS		F			A			E			C			

Intersection Summary	
Cycle Length: 142	
Actuated Cycle Length: 142	
Offset: 0 (0%), Referenced to phase 1:EBTL, Start of Green, Master Intersection	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.30	
Intersection Signal Delay: 102.7	Intersection LOS: F
Intersection Capacity Utilization 41.9%	ICU Level of Service A
Analysis Period (min) 15	

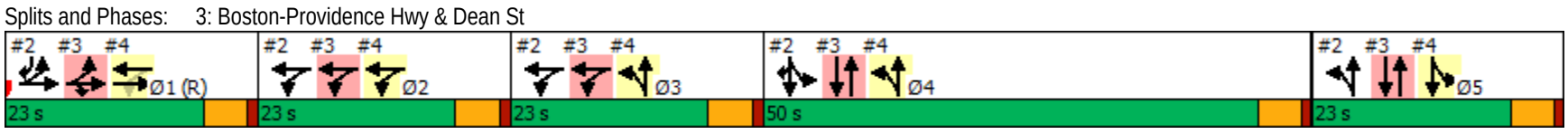
Splits and Phases: 2: Driveway/SB off-ramp & Dean St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2	Ø3	Ø4
Lane Configurations															
Traffic Volume (vph)	300	250	50	220	280	90	0	1150	20	0	720	10			
Future Volume (vph)	300	250	50	220	280	90	0	1150	20	0	720	10			
Satd. Flow (prot)	3255	1766	1501	1678	3235	0	0	4807	0	0	4812	0			
Flt Permitted	0.950			0.950											
Satd. Flow (perm)	3255	1766	1501	1678	3235	0	0	4807	0	0	4812	0			
Satd. Flow (RTOR)															
Lane Group Flow (vph)	344	287	57	252	424	0	0	1342	0	0	837	0			
Turn Type	Split	NA	Prot	Split	NA			NA			NA				
Protected Phases	1	1	1	2 3	2 3			4 5			4 5		2	3	4
Permitted Phases															
Total Split (s)	23.0	23.0	23.0										23.0	23.0	50.0
Total Lost Time (s)	5.0	5.0	5.0												
Act Effct Green (s)	18.0	18.0	18.0	40.2	40.2			68.8			68.8				
Actuated g/C Ratio	0.13	0.13	0.13	0.28	0.28			0.48			0.48				
v/c Ratio	0.83	1.29	0.30	0.53	0.46			0.58			0.36				
Control Delay	39.4	164.8	36.7	17.7	14.7			27.5			23.5				
Queue Delay	0.3	0.3	0.0	62.5	34.7			0.0			0.0				
Total Delay	39.7	165.2	36.7	80.2	49.5			27.5			23.5				
LOS	D	F	D	F	D			C			C				
Approach Delay		91.8			60.9			27.5			23.5				
Approach LOS		F			E			C			C				

Intersection Summary	
Cycle Length: 142	
Actuated Cycle Length: 142	
Offset: 0 (0%), Referenced to phase 1:EBTL, Start of Green, Master Intersection	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.30	
Intersection Signal Delay: 45.4	Intersection LOS: D
Intersection Capacity Utilization 64.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 3: Boston-Providence Hwy & Dean St



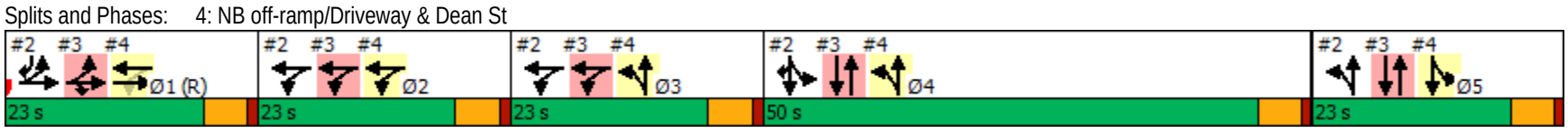
Lane Group	Ø5
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	5
Permitted Phases	
Total Split (s)	23.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø3	Ø4
Lane Configurations														
Traffic Volume (vph)	0	220	50	40	500	40	100	5	165	0	0	5		
Future Volume (vph)	0	220	50	40	500	40	100	5	165	0	0	5		
Satd. Flow (prot)	0	3261	0	0	3312	0	1594	1444	0	0	1528	0		
Flt Permitted					0.834		0.950	0.997						
Satd. Flow (perm)	0	3261	0	0	2770	0	1594	1444	0	0	1528	0		
Satd. Flow (RTOR)														
Lane Group Flow (vph)	0	309	0	0	666	0	103	207	0	0	6	0		
Turn Type		NA		pm+pt	NA		Split	NA			NA			
Protected Phases		1		2	1 2		3 4	3 4		5	5		3	4
Permitted Phases				1 2										
Total Split (s)		23.0		23.0						23.0	23.0		23.0	50.0
Total Lost Time (s)		5.0									5.0			
Act Effct Green (s)		18.0			36.0		68.0	68.0			18.0			
Actuated g/C Ratio		0.13			0.25		0.48	0.48			0.13			
v/c Ratio		0.75			0.86		0.13	0.30			0.03			
Control Delay		24.9			61.5		21.3	24.0			55.0			
Queue Delay		8.7			9.9		0.0	0.0			0.0			
Total Delay		33.6			71.4		21.3	24.0			55.0			
LOS		C			E		C	C			D			
Approach Delay		33.6			71.4			23.1			55.0			
Approach LOS		C			E			C			D			

Intersection Summary	
Cycle Length: 142	
Actuated Cycle Length: 142	
Offset: 0 (0%), Referenced to phase 1:EBTL, Start of Green, Master Intersection	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.30	
Intersection Signal Delay: 50.7	Intersection LOS: D
Intersection Capacity Utilization 53.9%	ICU Level of Service A
Analysis Period (min) 15	

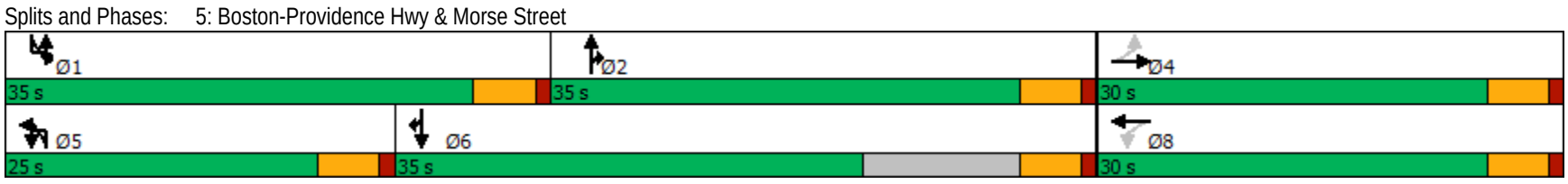
Splits and Phases: 4: NB off-ramp/Driveway & Dean St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Volume (vph)	170	40	30	80	50	60	30	110	1090	150	210	120	560	120
Future Volume (vph)	170	40	30	80	50	60	30	110	1090	150	210	120	560	120
Satd. Flow (prot)	1678	1653	0	1678	1621	0	0	1678	3355	1501	0	1678	3355	1501
Flt Permitted	0.668			0.705				0.950				0.950		
Satd. Flow (perm)	1180	1653	0	1245	1621	0	0	1678	3355	1501	0	1678	3355	1501
Satd. Flow (RTOR)														
Lane Group Flow (vph)	195	80	0	92	126	0	0	160	1251	172	0	379	643	138
Turn Type	Perm	NA		Perm	NA		Prot	Prot	NA	Prot	Prot	Prot	NA	Prot
Protected Phases		4			8		5	5	2	2	1	1	6	6
Permitted Phases	4			8										
Total Split (s)	30.0	30.0		30.0	30.0		25.0	25.0	35.0	35.0	35.0	35.0	35.0	35.0
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0	5.0	5.0		5.0	5.0	5.0
Act Effct Green (s)	19.2	19.2		19.2	19.2			13.8	30.5	30.5		24.1	40.8	40.8
Actuated g/C Ratio	0.22	0.22		0.22	0.22			0.15	0.34	0.34		0.27	0.46	0.46
v/c Ratio	0.77	0.22		0.34	0.36			0.62	1.09	0.33		0.83	0.42	0.20
Control Delay	54.0	31.3		34.3	33.5			47.0	85.4	27.1		48.1	18.8	17.9
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	54.0	31.3		34.3	33.5			47.0	85.4	27.1		48.1	18.8	17.9
LOS	D	C		C	C			D	F	C		D	B	B
Approach Delay		47.4			33.8				75.2				28.3	
Approach LOS		D			C				E				C	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 89.1	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.09	
Intersection Signal Delay: 53.2	Intersection LOS: D
Intersection Capacity Utilization 82.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 5: Boston-Providence Hwy & Morse Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Volume (vph)	90	50	40	30	120	190	120	200	1290	30	30	70	480	70
Future Volume (vph)	90	50	40	30	120	190	120	200	1290	30	30	70	480	70
Satd. Flow (prot)	1678	1766	1501	0	1748	1501	0	1678	3355	1501	0	1678	3355	1501
Flt Permitted	0.649				0.916			0.950				0.950		
Satd. Flow (perm)	1146	1766	1501	0	1618	1501	0	1678	3355	1501	0	1678	3355	1501
Satd. Flow (RTOR)														
Lane Group Flow (vph)	103	57	46	0	172	218	0	367	1480	34	0	114	551	80
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	Prot	NA	Prot	Prot	Prot	NA	Prot
Protected Phases		4			8		1	1	6	6	5	5	2	2
Permitted Phases	4		4	8		8								
Total Split (s)	22.0	22.0	22.0	22.0	22.0	22.0	24.0	24.0	38.0	38.0	15.0	15.0	29.0	29.0
Total Lost Time (s)	8.0	8.0	8.0		8.0	8.0		8.5	6.5	6.5		8.0	6.5	6.5
Act Effct Green (s)	13.2	13.2	13.2		13.2	13.2		15.6	33.3	33.3		7.0	20.9	20.9
Actuated g/C Ratio	0.18	0.18	0.18		0.18	0.18		0.21	0.46	0.46		0.10	0.29	0.29
v/c Ratio	0.50	0.18	0.17		0.59	0.80		1.03	0.96	0.05		0.71	0.57	0.19
Control Delay	36.6	27.4	27.5		36.7	52.4		86.8	38.7	13.3		58.7	24.8	20.9
Queue Delay	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	36.6	27.4	27.5		36.7	52.4		86.8	38.7	13.3		58.7	24.8	20.9
LOS	D	C	C		D	D		F	D	B		E	C	C
Approach Delay		32.0			45.4				47.7				29.6	
Approach LOS		C			D				D				C	

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 72.8	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.03	
Intersection Signal Delay: 42.2	Intersection LOS: D
Intersection Capacity Utilization 89.8%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 6: Boston-Providence Hwy & Sumner Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Volume (vph)	100	40	50	40	60	40	40	80	1470	20	20	20	450	90
Future Volume (vph)	100	40	50	40	60	40	40	80	1470	20	20	20	450	90
Satd. Flow (prot)	0	1660	0	0	1673	0	0	1678	3355	1501	0	1678	3355	1501
Flt Permitted		0.755			0.870			0.950				0.950		
Satd. Flow (perm)	0	1287	0	0	1477	0	0	1678	3355	1501	0	1678	3355	1501
Satd. Flow (RTOR)														
Lane Group Flow (vph)	0	218	0	0	161	0	0	138	1687	23	0	46	516	103
Turn Type	Perm	NA		Perm	NA		Prot	Prot	NA	Prot	Prot	Prot	NA	Prot
Protected Phases		4			8		1	1	6	6	5	5	2	2
Permitted Phases	4			8										
Total Split (s)	30.0	30.0		30.0	30.0		20.0	20.0	35.0	35.0	20.0	20.0	35.0	35.0
Total Lost Time (s)		5.0			5.0			5.0	5.0	5.0		5.0	5.0	5.0
Act Effct Green (s)		16.2			16.2			10.6	31.2	31.2		7.5	25.6	25.6
Actuated g/C Ratio		0.25			0.25			0.16	0.48	0.48		0.12	0.39	0.39
v/c Ratio		0.68			0.44			0.50	1.05	0.03		0.24	0.39	0.17
Control Delay		34.4			25.4			33.9	58.6	14.5		33.1	18.2	18.5
Queue Delay		0.0			0.0			0.0	0.0	0.0		0.0	0.0	0.0
Total Delay		34.4			25.4			33.9	58.6	14.5		33.1	18.2	18.5
LOS		C			C			C	E	B		C	B	B
Approach Delay		34.4			25.4				56.2				19.3	
Approach LOS		C			C				E				B	

Intersection Summary	
Cycle Length: 85	
Actuated Cycle Length: 64.9	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.05	
Intersection Signal Delay: 44.3	Intersection LOS: D
Intersection Capacity Utilization 79.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 7: Boston-Providence Hwy & Union Street

Part 2: Existing Conditions: Weekday PM Peak-Hour LOS and Delays

Lane Group	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations														
Traffic Volume (vph)	40	160	1080	220	50	160	1380	130	190	200	90	290	210	170
Future Volume (vph)	40	160	1080	220	50	160	1380	130	190	200	90	290	210	170
Satd. Flow (prot)	0	1711	3421	1531	0	1711	3421	1531	0	3262	0	1557	3069	0
Flt Permitted		0.950				0.950				0.981		0.950	0.993	
Satd. Flow (perm)	0	1711	3421	1531	0	1711	3421	1531	0	3262	0	1557	3069	0
Satd. Flow (RTOR)														
Lane Group Flow (vph)	0	230	1239	252	0	241	1583	149	0	550	0	260	509	0
Turn Type	Prot	Prot	NA	Perm	Prot	Prot	NA	Perm	Split	NA		Split	NA	
Protected Phases	1	1	6		5	5	2		4	4		8	8	
Permitted Phases				6				2						
Total Split (s)	20.0	20.0	55.0	55.0	20.0	20.0	55.0	55.0	20.0	20.0		20.0	20.0	
Total Lost Time (s)		8.0	6.0	6.0		8.0	6.0	6.0		6.5		6.5	6.5	
Act Effct Green (s)		12.0	49.0	49.0		12.0	49.0	49.0		13.5		13.5	13.5	
Actuated g/C Ratio		0.10	0.43	0.43		0.10	0.43	0.43		0.12		0.12	0.12	
v/c Ratio		1.29	0.85	0.39		1.35	1.09	0.23		1.44		1.43	1.41	
Control Delay		208.2	36.6	24.9		231.2	83.3	22.2		249.5		259.1	239.8	
Queue Delay		0.0	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay		208.2	36.6	24.9		231.2	83.3	22.2		249.5		259.1	239.8	
LOS		F	D	C		F	F	C		F		F	F	
Approach Delay			57.8				96.7			249.5			246.3	
Approach LOS			E				F			F			F	

Intersection Summary	
Cycle Length: 115	
Actuated Cycle Length: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.44	
Intersection Signal Delay: 123.1	Intersection LOS: F
Intersection Capacity Utilization 105.6%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 1: Boston-Providence Hwy & University Ave/Everett St

Intersection	
Intersection Delay, s/veh	133.4
Intersection LOS	F

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	975	780	401	752
Demand Flow Rate, veh/h	994	795	409	767
Vehicles Circulating, veh/h	650	479	1251	808
Vehicles Exiting, veh/h	925	1181	393	466
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	205.8	40.3	97.3	155.3
Approach LOS	F	E	F	F

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	994	795	409	767
Cap Entry Lane, veh/h	711	847	385	605
Entry HV Adj Factor	0.980	0.981	0.980	0.980
Flow Entry, veh/h	975	780	401	752
Cap Entry, veh/h	697	830	378	593
V/C Ratio	1.398	0.939	1.062	1.267
Control Delay, s/veh	205.8	40.3	97.3	155.3
LOS	F	E	F	F
95th %tile Queue, veh	43	14	14	29

Intersection	
Intersection Delay, s/veh	0.0
Intersection LOS	-

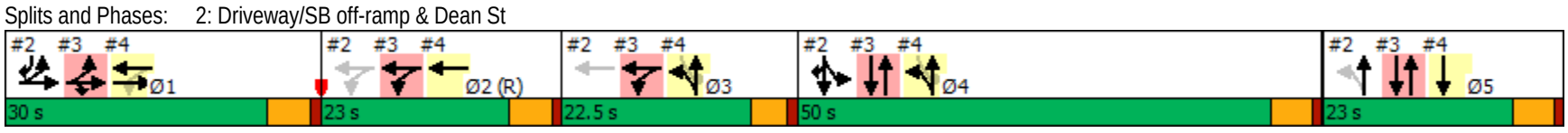
Approach	EB	WB	NB	SB
Entry Lanes	2	2	2	2
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	0	0	0	0
Demand Flow Rate, veh/h	0	0	0	0
Vehicles Circulating, veh/h	0	0	0	0
Vehicles Exiting, veh/h	0	0	0	0
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	0.0	0.0	0.0
Approach LOS	-	-	-	-

Lane	Left	Right	Left	Right	Left	Right	Left	Right
Designated Moves	LT	R	LT	R	LT	R	LT	R
Assumed Moves	LT	R	LT	R	LT	R	LT	R
RT Channelized								
Lane Util	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500
Follow-Up Headway, s	2.535	2.535	2.535	2.535	2.535	2.535	2.535	2.535
Critical Headway, s	4.544	4.544	4.544	4.544	4.544	4.544	4.544	4.544
Entry Flow, veh/h	0	0	0	0	0	0	0	0
Cap Entry Lane, veh/h	1420	1420	1420	1420	1420	1420	1420	1420
Entry HV Adj Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Flow Entry, veh/h	0	0	0	0	0	0	0	0
Cap Entry, veh/h	1420	1420	1420	1420	1420	1420	1420	1420
V/C Ratio	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Control Delay, s/veh	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
LOS	A	A	A	A	A	A	A	A
95th %tile Queue, veh	0	0	0	0	0	0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø3
Lane Configurations													
Traffic Volume (vph)	20	520	30	40	310	50	30	0	40	150	30	170	
Future Volume (vph)	20	520	30	40	310	50	30	0	40	150	30	170	
Satd. Flow (prot)	0	3387	0	0	3339	0	0	1625	0	1625	1654	1531	
Flt Permitted		0.998			0.809			0.824		0.950	0.967		
Satd. Flow (perm)	0	3387	0	0	2715	0	0	1368	0	1625	1654	1531	
Satd. Flow (RTOR)													
Lane Group Flow (vph)	0	654	0	0	459	0	0	80	0	101	105	195	
Turn Type	Split	NA		custom	NA		Perm	NA		Split	NA	pt+ov	
Protected Phases	1	1						5		4	4	4 1	3
Permitted Phases				2	2 3		5						
Total Split (s)	30.0	30.0		23.0			23.0	23.0		50.0	50.0		22.5
Total Lost Time (s)		5.0						5.0		5.0	5.0		
Act Effct Green (s)		25.0			40.5			18.0		45.0	45.0	70.0	
Actuated g/C Ratio		0.17			0.27			0.12		0.30	0.30	0.47	
v/c Ratio		1.15			0.62			0.48		0.21	0.21	0.27	
Control Delay		138.8			19.7			71.7		39.9	40.0	14.0	
Queue Delay		0.9			0.3			0.8		0.0	0.0	0.0	
Total Delay		139.6			19.9			72.5		39.9	40.0	14.0	
LOS		F			B			E		D	D	B	
Approach Delay		139.6			19.9			72.5			27.3		
Approach LOS		F			B			E			C		

Intersection Summary	
Cycle Length: 148.5	
Actuated Cycle Length: 148.5	
Offset: 0 (0%), Referenced to phase 2:WBTL, Start of Green, Master Intersection	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.44	
Intersection Signal Delay: 73.5	Intersection LOS: E
Intersection Capacity Utilization 53.3%	ICU Level of Service A
Analysis Period (min) 15	

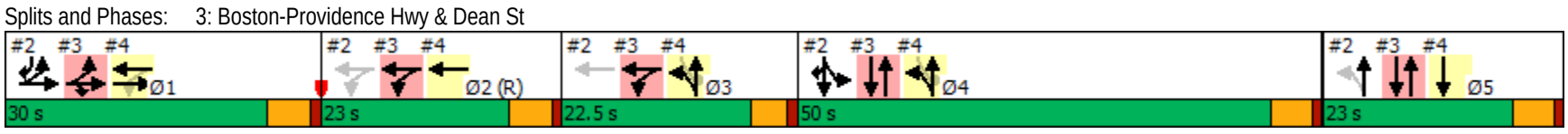
Splits and Phases: 2: Driveway/SB off-ramp & Dean St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2	Ø3	Ø4
Lane Configurations															
Traffic Volume (vph)	250	380	80	300	310	120	0	930	20	0	1220	50			
Future Volume (vph)	250	380	80	300	310	120	0	930	20	0	1220	50			
Satd. Flow (prot)	3319	1801	1531	1711	3278	0	0	4901	0	0	4886	0			
Flt Permitted	0.950			0.950											
Satd. Flow (perm)	3319	1801	1531	1711	3278	0	0	4901	0	0	4886	0			
Satd. Flow (RTOR)															
Lane Group Flow (vph)	287	436	92	344	494	0	0	1090	0	0	1457	0			
Turn Type	Split	NA	Prot	Split	NA			NA			NA				
Protected Phases	1	1	1	2 3	2 3			4 5			4 5		2	3	4
Permitted Phases															
Total Split (s)	30.0	30.0	30.0										23.0	22.5	50.0
Total Lost Time (s)	5.0	5.0	5.0												
Act Effct Green (s)	25.0	25.0	25.0	40.5	40.5			68.0			68.0				
Actuated g/C Ratio	0.17	0.17	0.17	0.27	0.27			0.46			0.46				
v/c Ratio	0.51	1.44	0.36	0.74	0.55			0.49			0.65				
Control Delay	29.7	232.1	30.2	35.9	26.3			29.0			32.8				
Queue Delay	1.1	0.3	0.0	59.2	55.7			0.0			0.5				
Total Delay	30.9	232.4	30.2	95.1	81.9			29.0			33.3				
LOS	C	F	C	F	F			C			C				
Approach Delay		138.6			87.3			29.0			33.3				
Approach LOS		F			F			C			C				

Intersection Summary	
Cycle Length: 148.5	
Actuated Cycle Length: 148.5	
Offset: 0 (0%), Referenced to phase 2:WBTL, Start of Green, Master Intersection	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.44	
Intersection Signal Delay: 63.4	Intersection LOS: E
Intersection Capacity Utilization 79.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 3: Boston-Providence Hwy & Dean St



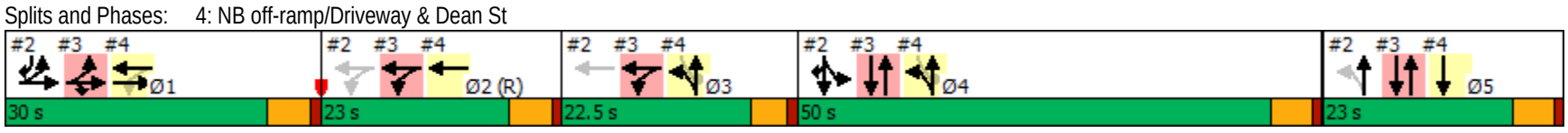
Lane Group	Ø5
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	5
Permitted Phases	
Total Split (s)	23.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2	Ø3	Ø4
Lane Configurations															
Traffic Volume (vph)	0	350	40	20	550	5	180	5	300	0	0	5			
Future Volume (vph)	0	350	40	20	550	5	180	5	300	0	0	5			
Satd. Flow (prot)	0	3370	0	0	3411	0	1625	1468	0	0	1558	0			
Flt Permitted					0.923		0.950	0.997							
Satd. Flow (perm)	0	3370	0	0	3155	0	1625	1468	0	0	1558	0			
Satd. Flow (RTOR)															
Lane Group Flow (vph)	0	448	0	0	660	0	186	371	0	0	6	0			
Turn Type		NA		D.Pm	NA		Split	NA			NA				
Protected Phases		1			1 2		3 4	3 4			5		2	3	4
Permitted Phases				1						3 4					
Total Split (s)		30.0		30.0							23.0		23.0	22.5	50.0
Total Lost Time (s)		5.0									5.0				
Act Effct Green (s)		25.0			48.0		68.0	68.0			18.0				
Actuated g/C Ratio		0.17			0.32		0.46	0.46			0.12				
v/c Ratio		0.79			0.65		0.25	0.55			0.03				
Control Delay		18.9			46.6		25.8	33.1			58.2				
Queue Delay		48.3			7.9		0.0	3.3			0.0				
Total Delay		67.2			54.5		25.8	36.4			58.2				
LOS		E			D		C	D			E				
Approach Delay		67.2			54.5			32.9			58.2				
Approach LOS		E			D			C			E				

Intersection Summary	
Cycle Length: 148.5	
Actuated Cycle Length: 148.5	
Offset: 0 (0%), Referenced to phase 2:WBTL, Start of Green, Master Intersection	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.44	
Intersection Signal Delay: 50.7	Intersection LOS: D
Intersection Capacity Utilization 62.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 4: NB off-ramp/Driveway & Dean St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Volume (vph)	200	80	80	300	120	70	20	60	740	80	190	160	1210	110
Future Volume (vph)	200	80	80	300	120	70	20	60	740	80	190	160	1210	110
Satd. Flow (prot)	1711	1666	0	1711	1702	0	0	1711	3421	1531	0	1711	3421	1531
Flt Permitted	0.506			0.565				0.950				0.950		
Satd. Flow (perm)	911	1666	0	1017	1702	0	0	1711	3421	1531	0	1711	3421	1531
Satd. Flow (RTOR)														
Lane Group Flow (vph)	229	184	0	344	218	0	0	92	849	92	0	402	1388	126
Turn Type	Perm	NA		Perm	NA		Prot	Prot	NA	Perm	Prot	Prot	NA	Perm
Protected Phases		4			8		1	1	6		5	5	2	
Permitted Phases	4			8						6				2
Total Split (s)	30.0	30.0		30.0	30.0		25.0	25.0	35.0	35.0	30.0	30.0	35.0	35.0
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0	5.0	5.0		5.0	5.0	5.0
Act Effct Green (s)	25.0	25.0		25.0	25.0			10.8	30.8	30.8		24.2	46.8	46.8
Actuated g/C Ratio	0.26	0.26		0.26	0.26			0.11	0.32	0.32		0.25	0.49	0.49
v/c Ratio	0.96	0.42		1.29	0.49			0.48	0.77	0.19		0.92	0.82	0.17
Control Delay	85.4	32.6		187.0	34.0			47.1	34.6	24.9		63.2	27.5	16.0
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	85.4	32.6		187.0	34.0			47.1	34.6	24.9		63.2	27.5	16.0
LOS	F	C		F	C			D	C	C		E	C	B
Approach Delay		61.9			127.6				34.9				34.3	
Approach LOS		E			F				C				C	

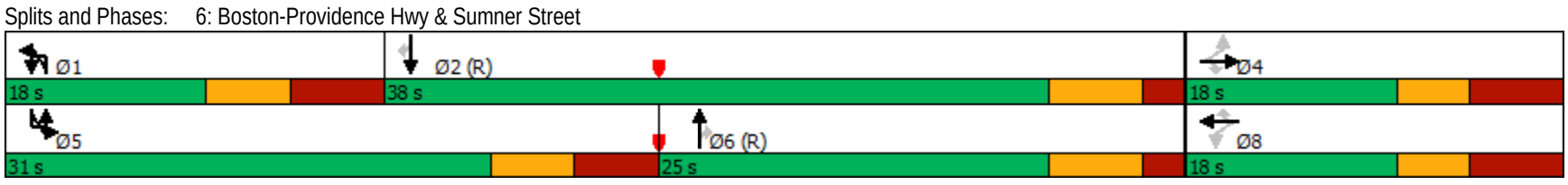
Intersection Summary	
Cycle Length: 95	
Actuated Cycle Length: 95	
Offset: 25 (26%), Referenced to phase 2:SBT and 6:NBT, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.29	
Intersection Signal Delay: 50.7	Intersection LOS: D
Intersection Capacity Utilization 88.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 5: Boston-Providence Hwy & Morse Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Volume (vph)	140	150	60	20	70	80	120	160	670	50	60	270	1140	150
Future Volume (vph)	140	150	60	20	70	80	120	160	670	50	60	270	1140	150
Satd. Flow (prot)	1711	1801	1531	0	1781	1531	0	1711	3421	1531	0	1711	3421	1531
Flt Permitted	0.690				0.873			0.950				0.950		
Satd. Flow (perm)	1242	1801	1531	0	1572	1531	0	1711	3421	1531	0	1711	3421	1531
Satd. Flow (RTOR)														
Lane Group Flow (vph)	161	172	69	0	103	92	0	322	769	57	0	379	1308	172
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	Prot	NA	Perm	Prot	Prot	NA	Perm
Protected Phases		4			8		1	1	6		5	5	2	
Permitted Phases	4		4	8		8				6				2
Total Split (s)	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	25.0	25.0	31.0	31.0	38.0	38.0
Total Lost Time (s)	8.0	8.0	8.0		8.0	8.0		8.5	6.5	6.5		8.0	6.5	6.5
Act Effct Green (s)	10.0	10.0	10.0		10.0	10.0		9.5	21.4	21.4		20.1	31.5	31.5
Actuated g/C Ratio	0.14	0.14	0.14		0.14	0.14		0.13	0.29	0.29		0.27	0.43	0.43
v/c Ratio	0.96	0.71	0.33		0.49	0.45		1.47	0.78	0.13		0.82	0.90	0.26
Control Delay	97.4	48.5	34.0		38.2	37.1		263.3	32.4	22.2		39.9	29.9	15.1
Queue Delay	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	97.4	48.5	34.0		38.2	37.1		263.3	32.4	22.2		39.9	29.9	15.1
LOS	F	D	C		D	D		F	C	C		D	C	B
Approach Delay		65.6			37.7				96.7				30.6	
Approach LOS		E			D				F				C	

Intersection Summary	
Cycle Length: 74	
Actuated Cycle Length: 74	
Offset: 47 (64%), Referenced to phase 2:SBT and 6:NBT, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.47	
Intersection Signal Delay: 55.9	Intersection LOS: E
Intersection Capacity Utilization 92.4%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 6: Boston-Providence Hwy & Sumner Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Volume (vph)	60	50	60	30	40	20	50	70	750	50	60	40	1420	160
Future Volume (vph)	60	50	60	30	40	20	50	70	750	50	60	40	1420	160
Satd. Flow (prot)	0	1685	0	0	1719	0	0	1711	3421	1531	0	1711	3421	1531
Flt Permitted		0.868			0.863			0.950				0.950		
Satd. Flow (perm)	0	1488	0	0	1507	0	0	1711	3421	1531	0	1711	3421	1531
Satd. Flow (RTOR)														
Lane Group Flow (vph)	0	195	0	0	103	0	0	137	861	57	0	115	1629	184
Turn Type	Perm	NA		Perm	NA		Prot	Prot	NA	Perm	Prot	Prot	NA	Perm
Protected Phases		4			8		1	1	6		5	5	2	
Permitted Phases	4			8						6				2
Total Split (s)	30.0	30.0		30.0	30.0		20.0	20.0	35.0	35.0	20.0	20.0	35.0	35.0
Total Lost Time (s)		5.0			5.0			5.0	5.0	5.0		5.0	5.0	5.0
Act Effct Green (s)		14.6			14.6			11.1	27.8	27.8		10.6	31.0	31.0
Actuated g/C Ratio		0.21			0.21			0.16	0.41	0.41		0.15	0.45	0.45
v/c Ratio		0.62			0.32			0.49	0.62	0.09		0.44	1.05	0.27
Control Delay		34.7			27.0			35.3	19.4	15.0		34.5	62.4	16.7
Queue Delay		0.0			0.0			0.0	0.0	0.0		0.0	0.0	0.0
Total Delay		34.7			27.0			35.3	19.4	15.0		34.5	62.4	16.7
LOS		C			C			D	B	B		C	E	B
Approach Delay		34.7			27.0				21.2				56.4	
Approach LOS		C			C				C				E	

Intersection Summary	
Cycle Length: 85	
Actuated Cycle Length: 68.5	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.05	
Intersection Signal Delay: 42.9	Intersection LOS: D
Intersection Capacity Utilization 76.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 7: Boston-Providence Hwy & Union Street

Part 3: Existing Conditions: Weekend Saturday PM Peak-Hour LOS and Delays

Lane Group	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations														
Traffic Volume (vph)	60	150	1240	250	80	160	1290	130	220	200	130	220	200	130
Future Volume (vph)	60	150	1240	250	80	160	1290	130	220	200	130	220	200	130
Satd. Flow (prot)	0	1728	3455	1546	0	1728	3455	1546	0	3268	0	1572	3119	0
Flt Permitted		0.950				0.950				0.980		0.950	0.995	
Satd. Flow (perm)	0	1728	3455	1546	0	1728	3455	1546	0	3268	0	1572	3119	0
Satd. Flow (RTOR)														
Lane Group Flow (vph)	0	236	1393	281	0	270	1450	146	0	618	0	207	411	0
Turn Type	Prot	Prot	NA	Perm	Prot	Prot	NA	Perm	Split	NA		Split	NA	
Protected Phases	1	1	6		5	5	2		4	4		8	8	
Permitted Phases				6				2						
Total Split (s)	25.0	25.0	56.0	56.0	25.0	25.0	56.0	56.0	27.0	27.0		22.0	22.0	
Total Lost Time (s)		8.0	6.0	6.0		8.0	6.0	6.0		6.5		6.5	6.5	
Act Effct Green (s)		17.0	50.0	50.0		17.0	50.0	50.0		20.5		15.5	15.5	
Actuated g/C Ratio		0.13	0.38	0.38		0.13	0.38	0.38		0.16		0.12	0.12	
v/c Ratio		1.05	1.05	0.47		1.20	1.09	0.25		1.20		1.11	1.11	
Control Delay		127.2	77.6	33.4		172.1	91.9	28.6		153.8		149.1	130.8	
Queue Delay		0.0	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay		127.2	77.6	33.4		172.1	91.9	28.6		153.8		149.1	130.8	
LOS		F	E	C		F	F	C		F		F	F	
Approach Delay			77.2				98.5			153.8			137.0	
Approach LOS			E				F			F			F	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.20	
Intersection Signal Delay: 102.0	Intersection LOS: F
Intersection Capacity Utilization 103.6%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 1: Boston-Providence Hwy & University Ave/Everett St

Intersection	
Intersection Delay, s/veh	77.6
Intersection LOS	F

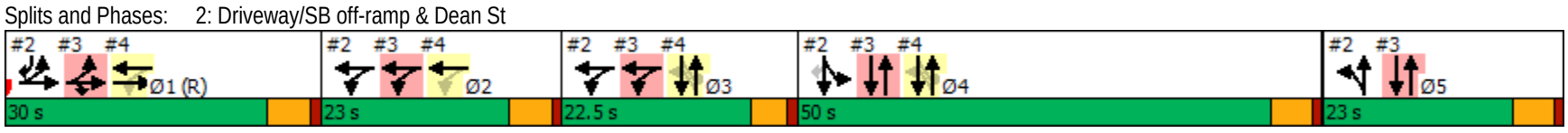
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	866	854	438	663
Demand Flow Rate, veh/h	875	862	442	670
Vehicles Circulating, veh/h	544	522	1034	794
Vehicles Exiting, veh/h	920	954	385	590
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	86.3	72.4	52.8	89.2
Approach LOS	F	F	F	F

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	875	862	442	670
Cap Entry Lane, veh/h	792	810	481	614
Entry HV Adj Factor	0.990	0.991	0.991	0.989
Flow Entry, veh/h	866	854	438	663
Cap Entry, veh/h	784	803	476	607
V/C Ratio	1.104	1.064	0.920	1.091
Control Delay, s/veh	86.3	72.4	52.8	89.2
LOS	F	F	F	F
95th %tile Queue, veh	24	21	11	20

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2	Ø3
Lane Configurations														
Traffic Volume (vph)	20	470	40	70	240	40	30	0	40	250	40	170		
Future Volume (vph)	20	470	40	70	240	40	30	0	40	250	40	170		
Satd. Flow (prot)	0	3410	0	0	3362	0	0	1643	0	1641	1667	1546		
Flt Permitted		0.998			0.990			0.979		0.950	0.965			
Satd. Flow (perm)	0	3410	0	0	3362	0	0	1643	0	1641	1667	1546		
Satd. Flow (RTOR)														
Lane Group Flow (vph)	0	595	0	0	394	0	0	79	0	163	163	191		
Turn Type	Split	NA		Split	NA		Split	NA		Split	NA	pm+ov		
Protected Phases	1	1		2 3	2 3		5	5		4	4	1	2	3
Permitted Phases												4		
Total Split (s)	30.0	30.0					23.0	23.0		50.0	50.0	30.0	23.0	22.5
Total Lost Time (s)		5.0						5.0		5.0	5.0	5.0		
Act Effct Green (s)		25.0			40.5			18.0		45.0	45.0	70.0		
Actuated g/C Ratio		0.17			0.27			0.12		0.30	0.30	0.47		
v/c Ratio		1.04			0.43			0.40		0.33	0.32	0.26		
Control Delay		106.2			17.4			66.8		42.4	42.2	13.9		
Queue Delay		23.9			0.4			0.4		0.1	0.1	0.0		
Total Delay		130.0			17.8			67.2		42.4	42.3	13.9		
LOS		F			B			E		D	D	B		
Approach Delay		130.0			17.8			67.2			31.8			
Approach LOS		F			B			E			C			

Intersection Summary	
Cycle Length: 148.5	
Actuated Cycle Length: 148.5	
Offset: 0 (0%), Referenced to phase 1:EBTL, Start of Green, Master Intersection	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.28	
Intersection Signal Delay: 67.0	Intersection LOS: E
Intersection Capacity Utilization 54.9%	ICU Level of Service A
Analysis Period (min) 15	

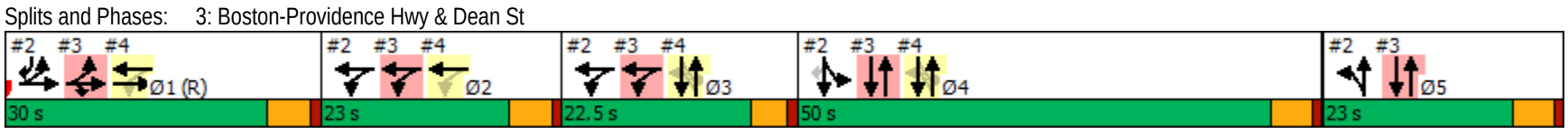
Splits and Phases: 2: Driveway/SB off-ramp & Dean St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2	Ø3	Ø4
Lane Configurations															
Traffic Volume (vph)	300	350	100	310	290	140	0	1180	30	0	1120	60			
Future Volume (vph)	300	350	100	310	290	140	0	1180	30	0	1120	60			
Satd. Flow (prot)	3351	1818	1546	1728	3286	0	0	4945	0	0	4925	0			
Flt Permitted	0.950			0.950											
Satd. Flow (perm)	3351	1818	1546	1728	3286	0	0	4945	0	0	4925	0			
Satd. Flow (RTOR)															
Lane Group Flow (vph)	337	393	112	348	483	0	0	1360	0	0	1326	0			
Turn Type	Split	NA	Prot	Split	NA			NA			NA				
Protected Phases	1	1	1	2 3	2 3			4 5			4 5		2	3	4
Permitted Phases															
Total Split (s)	30.0	30.0	30.0										23.0	22.5	50.0
Total Lost Time (s)	5.0	5.0	5.0												
Act Effct Green (s)	25.0	25.0	25.0	40.5	40.5			68.0			68.0				
Actuated g/C Ratio	0.17	0.17	0.17	0.27	0.27			0.46			0.46				
v/c Ratio	0.60	1.28	0.43	0.74	0.54			0.60			0.59				
Control Delay	35.5	174.2	35.8	37.4	27.4			31.5			31.2				
Queue Delay	2.0	1.0	1.2	59.0	55.7			0.0			0.0				
Total Delay	37.5	175.2	37.1	96.3	83.1			31.5			31.2				
LOS	D	F	D	F	F			C			C				
Approach Delay		101.7			88.7			31.5			31.2				
Approach LOS		F			F			C			C				

Intersection Summary		
Cycle Length: 148.5		
Actuated Cycle Length: 148.5		
Offset: 0 (0%), Referenced to phase 1:EBTL, Start of Green, Master Intersection		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.28		
Intersection Signal Delay: 55.9	Intersection LOS: E	
Intersection Capacity Utilization 76.9%	ICU Level of Service D	
Analysis Period (min) 15		

Splits and Phases: 3: Boston-Providence Hwy & Dean St



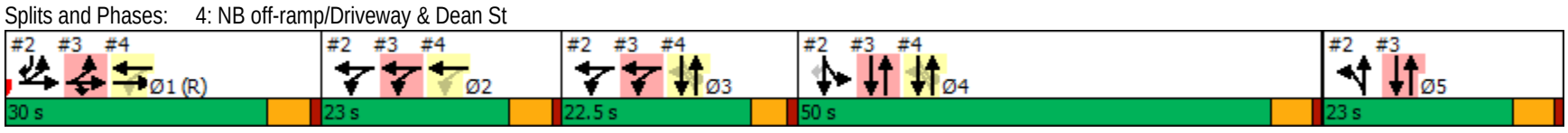
Lane Group	Ø5
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	5
Permitted Phases	
Total Split (s)	23.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2	Ø3	Ø4
Lane Configurations															
Traffic Volume (vph)	0	320	60	20	545	20	190	0	210	0	0	5			
Future Volume (vph)	0	320	60	20	545	20	190	0	210	0	0	5			
Satd. Flow (prot)	0	3372	0	0	3431	0	1641	1483	0	0	1573	0			
Flt Permitted					0.926		0.754	0.981							
Satd. Flow (perm)	0	3372	0	0	3183	0	1303	1461	0	0	1573	0			
Satd. Flow (RTOR)															
Lane Group Flow (vph)	0	427	0	0	656	0	193	257	0	0	6	0			
Turn Type		NA		Perm	NA		Perm	NA			NA				
Protected Phases		1			1 2			3 4			3 4		2	3	4
Permitted Phases				1 2			3 4			3 4					
Total Split (s)		30.0											23.0	22.5	50.0
Total Lost Time (s)		5.0													
Act Effct Green (s)		25.0			48.0		68.0	68.0			68.0				
Actuated g/C Ratio		0.17			0.32		0.46	0.46			0.46				
v/c Ratio		0.75			0.64		0.32	0.38			0.01				
Control Delay		18.0			46.2		27.5	28.6			22.0				
Queue Delay		26.9			6.9		0.0	0.0			0.0				
Total Delay		44.8			53.1		27.5	28.6			22.0				
LOS		D			D		C	C			C				
Approach Delay		44.8			53.1			28.2			22.0				
Approach LOS		D			D			C			C				

Intersection Summary	
Cycle Length: 148.5	
Actuated Cycle Length: 148.5	
Offset: 0 (0%), Referenced to phase 1:EBTL, Start of Green, Master Intersection	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.28	
Intersection Signal Delay: 43.4	Intersection LOS: D
Intersection Capacity Utilization 60.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 4: NB off-ramp/Driveway & Dean St



Lane Group	Ø5
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	5
Permitted Phases	
Total Split (s)	23.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Volume (vph)	190	50	60	120	50	90	20	80	1090	80	150	110	1120	150
Future Volume (vph)	190	50	60	120	50	90	20	80	1090	80	150	110	1120	150
Satd. Flow (prot)	1728	1669	0	1728	1644	0	0	1728	3455	1546	0	1728	3455	1546
Flt Permitted	0.606			0.676				0.950				0.950		
Satd. Flow (perm)	1102	1669	0	1129	1644	0	0	1728	3455	1546	0	1728	3455	1546
Satd. Flow (RTOR)														
Lane Group Flow (vph)	214	123	0	135	157	0	0	112	1225	90	0	293	1259	169
Turn Type	Perm	NA		Perm	NA		Prot	Prot	NA	Perm	Prot	Prot	NA	Perm
Protected Phases		4			8		1	1	6		5	5	2	
Permitted Phases	4			8						6				2
Total Split (s)	30.0	30.0		30.0	30.0		25.0	25.0	35.0	35.0	25.0	25.0	35.0	35.0
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0	5.0	5.0		5.0	5.0	5.0
Act Effct Green (s)	20.8	20.8		20.8	20.8			11.4	35.7	35.7		18.5	45.4	45.4
Actuated g/C Ratio	0.23	0.23		0.23	0.23			0.13	0.40	0.40		0.21	0.50	0.50
v/c Ratio	0.84	0.32		0.52	0.41			0.51	0.90	0.15		0.82	0.72	0.22
Control Delay	60.2	29.7		36.6	31.7			44.5	37.8	20.9		53.9	23.7	16.7
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	60.2	29.7		36.6	31.7			44.5	37.8	20.9		53.9	23.7	16.7
LOS	E	C		D	C			D	D	C		D	C	B
Approach Delay		49.0			34.0				37.3				28.2	
Approach LOS		D			C				D				C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 25 (28%), Referenced to phase 2:SBT and 6:NBT, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 33.9	Intersection LOS: C
Intersection Capacity Utilization 85.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 5: Boston-Providence Hwy & Morse Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Volume (vph)	220	120	100	30	80	100	120	230	940	40	60	140	880	240
Future Volume (vph)	220	120	100	30	80	100	120	230	940	40	60	140	880	240
Satd. Flow (prot)	1728	1818	1546	0	1793	1546	0	1728	3455	1546	0	1728	3455	1546
Flt Permitted	0.677				0.861			0.950				0.950		
Satd. Flow (perm)	1231	1818	1546	0	1566	1546	0	1728	3455	1546	0	1728	3455	1546
Satd. Flow (RTOR)														
Lane Group Flow (vph)	247	135	112	0	124	112	0	393	1056	45	0	224	989	270
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	Prot	NA	Prot	Prot	Prot	NA	Prot
Protected Phases		4			8		1	1	6	6	5	5	2	2
Permitted Phases	4		4	8		8								
Total Split (s)	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	25.0	25.0	22.0	22.0	25.0	25.0
Total Lost Time (s)	8.0	8.0	8.0		8.0	8.0		8.5	6.5	6.5		8.0	6.5	6.5
Act Effct Green (s)	14.0	14.0	14.0		14.0	14.0		13.5	19.9	19.9		12.6	18.5	18.5
Actuated g/C Ratio	0.20	0.20	0.20		0.20	0.20		0.20	0.29	0.29		0.18	0.27	0.27
v/c Ratio	0.99	0.37	0.36		0.39	0.36		1.16	1.06	0.10		0.71	1.07	0.65
Control Delay	87.3	27.1	27.5		28.1	27.5		130.4	72.9	19.8		39.8	76.7	31.1
Queue Delay	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	87.3	27.1	27.5		28.1	27.5		130.4	72.9	19.8		39.8	76.7	31.1
LOS	F	C	C		C	C		F	E	B		D	E	C
Approach Delay		57.3			27.8				86.4				62.8	
Approach LOS		E			C				F				E	

Intersection Summary	
Cycle Length: 69	
Actuated Cycle Length: 69	
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.16	
Intersection Signal Delay: 69.4	Intersection LOS: E
Intersection Capacity Utilization 93.4%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 6: Boston-Providence Hwy & Sumner Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Volume (vph)	70	120	80	60	40	40	80	90	1080	50	60	40	1070	180
Future Volume (vph)	70	120	80	60	40	40	80	90	1080	50	60	40	1070	180
Satd. Flow (prot)	0	1723	0	0	1711	0	0	1728	3455	1546	0	1728	3455	1546
Flt Permitted		0.872			0.671			0.950				0.950		
Satd. Flow (perm)	0	1522	0	0	1173	0	0	1728	3455	1546	0	1728	3455	1546
Satd. Flow (RTOR)														
Lane Group Flow (vph)	0	304	0	0	157	0	0	191	1214	56	0	112	1202	202
Turn Type	Perm	NA		Perm	NA		Prot	Prot	NA	Prot	Prot	Prot	NA	Prot
Protected Phases		4			8		1	1	6	6	5	5	2	2
Permitted Phases	4			8										
Total Split (s)	30.0	30.0		30.0	30.0		20.0	20.0	35.0	35.0	20.0	20.0	35.0	35.0
Total Lost Time (s)		5.0			5.0			5.0	5.0	5.0		5.0	5.0	5.0
Act Effct Green (s)		19.5			19.5			12.6	35.2	35.2		10.8	30.3	30.3
Actuated g/C Ratio		0.25			0.25			0.16	0.45	0.45		0.14	0.39	0.39
v/c Ratio		0.79			0.53			0.68	0.77	0.08		0.47	0.89	0.33
Control Delay		43.3			32.4			44.8	25.9	17.0		38.6	34.1	20.6
Queue Delay		0.0			0.0			0.0	0.0	0.0		0.0	0.0	0.0
Total Delay		43.3			32.4			44.8	25.9	17.0		38.6	34.1	20.6
LOS		D			C			D	C	B		D	C	C
Approach Delay		43.3			32.4				28.0				32.7	
Approach LOS		D			C				C				C	

Intersection Summary	
Cycle Length: 85	
Actuated Cycle Length: 77.5	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 31.6	Intersection LOS: C
Intersection Capacity Utilization 73.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 7: Boston-Providence Hwy & Union Street

Part 4: 2040 Conditions: Weekday AM Peak-Hour LOS and Delays

Intersection	
Intersection Delay, s/veh	13.9
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	2	2	2	2
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	595	1178	452	345
Demand Flow Rate, veh/h	619	1226	469	358
Vehicles Circulating, veh/h	346	458	755	1114
Vehicles Exiting, veh/h	1126	766	210	570
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	8.3	16.2	13.7	15.8
Approach LOS	A	C	B	C

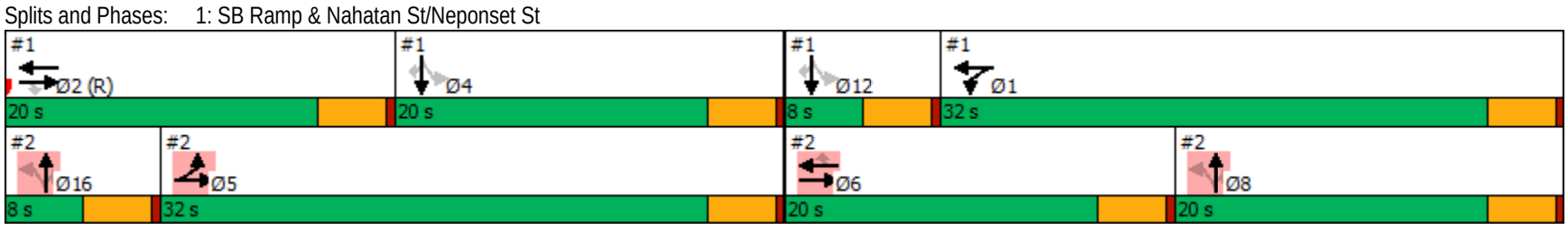
Lane	Left	Right	Left	Right	Left	Right	Left	Right
Designated Moves	LT	R	LT	R	LT	R	LT	R
Assumed Moves	LT	R	LT	R	LT	R	LT	R
RT Channelized								
Lane Util	0.800	0.200	0.586	0.414	0.870	0.130	0.760	0.240
Follow-Up Headway, s	2.535	2.535	2.535	2.535	2.535	2.535	2.535	2.535
Critical Headway, s	4.544	4.544	4.544	4.544	4.544	4.544	4.544	4.544
Entry Flow, veh/h	495	124	718	508	408	61	272	86
Cap Entry Lane, veh/h	1036	1036	936	936	714	714	515	515
Entry HV Adj Factor	0.961	0.960	0.961	0.961	0.962	0.967	0.962	0.965
Flow Entry, veh/h	476	119	690	488	393	59	262	83
Cap Entry, veh/h	996	995	900	899	687	691	495	497
V/C Ratio	0.478	0.120	0.767	0.543	0.571	0.085	0.528	0.167
Control Delay, s/veh	9.3	4.7	19.7	11.4	14.8	6.1	17.7	9.5
LOS	A	A	C	B	B	A	C	A
95th %tile Queue, veh	3	0	8	3	4	0	3	1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø4	Ø5	Ø6
Lane Configurations															
Traffic Volume (vph)	0	400	100	120	780	0	0	0	0	210	10	70			
Future Volume (vph)	0	400	100	120	780	0	0	0	0	210	10	70			
Satd. Flow (prot)	0	3471	1553	1736	3471	0	0	0	0	1649	1661	1553			
Flt Permitted				0.950						0.950	0.957				
Satd. Flow (perm)	0	3471	1446	1736	3471	0	0	0	0	1649	1661	1489			
Satd. Flow (RTOR)			177									177			
Lane Group Flow (vph)	0	466	116	140	909	0	0	0	0	127	130	82			
Turn Type		NA	Perm	Prot	NA					Perm	NA	Perm			
Protected Phases		2		1	2 1						4 12		4	5	6
Permitted Phases			2							4 12		4 12			
Total Split (s)		20.0	20.0	32.0									20.0	32.0	20.0
Total Lost Time (s)		4.0	4.0	4.0											
Act Effct Green (s)		20.1	20.1	27.2	51.3					20.7	20.7	20.7			
Actuated g/C Ratio		0.25	0.25	0.34	0.64					0.26	0.26	0.26			
v/c Ratio		0.53	0.23	0.24	0.41					0.30	0.30	0.16			
Control Delay		29.8	2.6	0.7	1.0					25.0	25.0	0.7			
Queue Delay		0.0	0.0	0.0	0.2					0.0	0.0	0.0			
Total Delay		29.8	2.6	0.7	1.2					25.0	25.0	0.7			
LOS		C	A	A	A					C	C	A			
Approach Delay		24.4			1.1						19.1				
Approach LOS		C			A						B				
Queue Length 50th (ft)		107	0	0	0					53	55	0			
Queue Length 95th (ft)		164	14	m0	0					95	97	0			
Internal Link Dist (ft)		510			334			298			479				
Turn Bay Length (ft)			150	150								150			
Base Capacity (vph)	872	495	610	2227						425	429	515			
Starvation Cap Reductn	0	0	0	474						0	0	0			
Spillback Cap Reductn	0	0	0	0						0	0	0			
Storage Cap Reductn	0	0	0	0						0	0	0			
Reduced v/c Ratio	0.53	0.23	0.23	0.52						0.30	0.30	0.16			

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 0 (0%), Referenced to phase 2:EBWB, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 11.1	Intersection LOS: B
Intersection Capacity Utilization 59.9%	ICU Level of Service B
Analysis Period (min) 15	

m Volume for 95th percentile queue is metered by upstream signal.

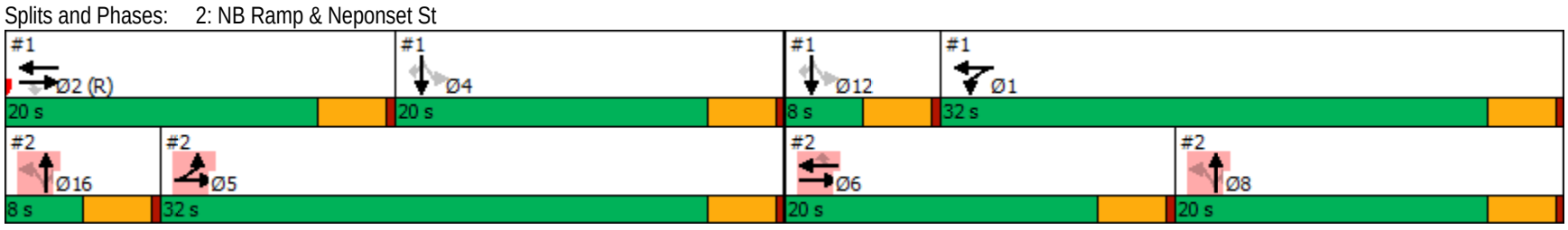
Splits and Phases: 1: SB Ramp & Nahatan St/Neponset St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø1	Ø2	Ø4
Lane Configurations															
Traffic Volume (vph)	120	490	0	0	580	410	320	10	50	0	0	0			
Future Volume (vph)	120	490	0	0	580	410	320	10	50	0	0	0			
Satd. Flow (prot)	1736	3471	0	0	3471	1553	1649	1657	1553	0	0	0			
Flt Permitted	0.950						0.950	0.955							
Satd. Flow (perm)	1736	3471	0	0	3471	1446	1649	1657	1489	0	0	0			
Satd. Flow (RTOR)						478			177						
Lane Group Flow (vph)	140	571	0	0	676	478	194	191	58	0	0	0			
Turn Type	Prot	NA			NA	Perm	Perm	NA	Perm						
Protected Phases	5	5 6			6			8 16					1	2	4
Permitted Phases						6	8 16		8 16						
Total Split (s)	32.0				20.0	20.0							32.0	20.0	20.0
Total Lost Time (s)	4.0				4.0	4.0									
Act Effct Green (s)	23.7	47.2			19.5	19.5	24.8	24.8	24.8						
Actuated g/C Ratio	0.30	0.59			0.24	0.24	0.31	0.31	0.31						
v/c Ratio	0.27	0.28			0.80	0.67	0.38	0.37	0.10						
Control Delay	2.5	1.8			38.8	8.4	24.7	24.6	0.3						
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0	0.0						
Total Delay	2.5	1.8			38.8	8.4	24.7	24.6	0.3						
LOS	A	A			D	A	C	C	A						
Approach Delay		1.9			26.2			21.4							
Approach LOS		A			C			C							
Queue Length 50th (ft)	0	0			161	0	80	78	0						
Queue Length 95th (ft)	0	0			#288	88	141	138	0						
Internal Link Dist (ft)		334			440			310			487				
Turn Bay Length (ft)	150					150			150						
Base Capacity (vph)	607	2046			846	713	508	511	581						
Starvation Cap Reductn	0	0			0	0	0	0	0						
Spillback Cap Reductn	0	0			0	0	0	0	0						
Storage Cap Reductn	0	0			0	0	0	0	0						
Reduced v/c Ratio	0.23	0.28			0.80	0.67	0.38	0.37	0.10						

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 0 (0%), Referenced to phase 2:EBWB, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 17.8	Intersection LOS: B
Intersection Capacity Utilization 59.9%	ICU Level of Service B
Analysis Period (min) 15	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

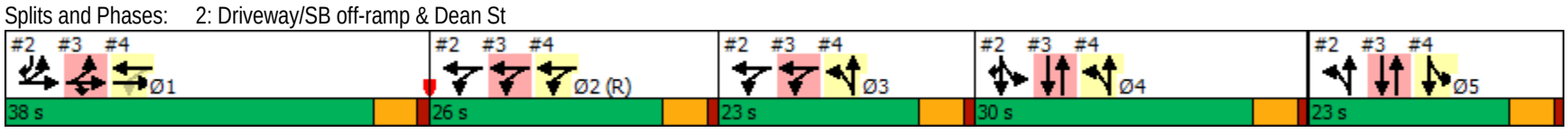
Splits and Phases: 2: NB Ramp & Neponset St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2	Ø3
Lane Configurations														
Traffic Volume (vph)	10	450	20	20	250	20	10	0	20	110	10	100		
Future Volume (vph)	10	450	20	20	250	20	10	0	20	110	10	100		
Satd. Flow (prot)	0	3332	0	0	3312	0	0	1581	0	1594	1611	1501		
Flt Permitted		0.999			0.997			0.984		0.950	0.960			
Satd. Flow (perm)	0	3332	0	0	3312	0	0	1581	0	1594	1611	1501		
Satd. Flow (RTOR)														
Lane Group Flow (vph)	0	571	0	0	345	0	0	36	0	71	72	119		
Turn Type	Split	NA		Split	NA		Split	NA		Split	NA	pt+ov		
Protected Phases	1	1		2 3	2 3		5	5		4	4	4 1	2	3
Permitted Phases														
Total Split (s)	38.0	38.0					23.0	23.0		30.0	30.0		26.0	23.0
Total Lost Time (s)		5.0						5.0		5.0	5.0			
Act Effct Green (s)		32.7			43.9			18.0		25.5	25.5	58.1		
Actuated g/C Ratio		0.23			0.31			0.13		0.18	0.18	0.42		
v/c Ratio		0.73			0.33			0.18		0.25	0.25	0.19		
Control Delay		56.1			4.2			56.9		52.0	52.0	15.2		
Queue Delay		0.1			0.2			0.0		0.0	0.0	0.0		
Total Delay		56.1			4.4			56.9		52.0	52.0	15.2		
LOS		E			A			E		D	D	B		
Approach Delay		56.1			4.4			56.9			35.3			
Approach LOS		E			A			E			D			

Intersection Summary	
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 0 (0%), Referenced to phase 2:WBTL, Start of Green, Master Intersection	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 36.9	Intersection LOS: D
Intersection Capacity Utilization 43.0%	ICU Level of Service A
Analysis Period (min) 15	

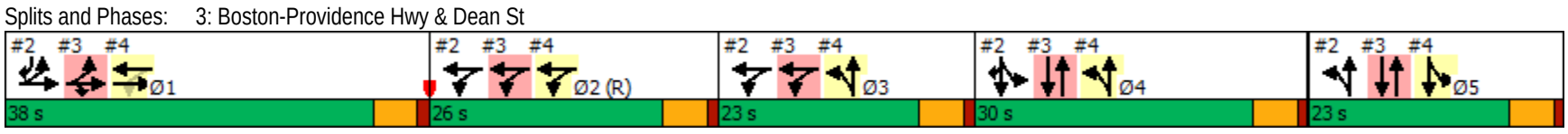
Splits and Phases: 2: Driveway/SB off-ramp & Dean St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2	Ø3	Ø4
Lane Configurations															
Traffic Volume (vph)	300	250	50	220	280	90	0	1150	20	0	720	10			
Future Volume (vph)	300	250	50	220	280	90	0	1150	20	0	720	10			
Satd. Flow (prot)	3255	1766	1501	1678	3235	0	0	4807	0	0	4812	0			
Flt Permitted	0.950			0.950											
Satd. Flow (perm)	3255	1766	1501	1678	3235	0	0	4807	0	0	4812	0			
Satd. Flow (RTOR)															
Lane Group Flow (vph)	357	297	59	262	440	0	0	1392	0	0	868	0			
Turn Type	Split	NA	Prot	Split	NA			NA			NA				
Protected Phases	1	1	1	2 3	2 3			4 5			4 5		2	3	4
Permitted Phases															
Total Split (s)	38.0	38.0	38.0										26.0	23.0	30.0
Total Lost Time (s)	5.0	5.0	5.0												
Act Effct Green (s)	32.7	32.7	32.7	43.9	43.9			48.5			48.5				
Actuated g/C Ratio	0.23	0.23	0.23	0.31	0.31			0.35			0.35				
v/c Ratio	0.47	0.72	0.17	0.50	0.43			0.84			0.52				
Control Delay	15.6	23.4	14.5	27.8	24.8			47.7			38.0				
Queue Delay	0.8	2.7	0.0	29.5	11.3			0.0			0.0				
Total Delay	16.4	26.1	14.5	57.3	36.0			47.7			38.0				
LOS	B	C	B	E	D			D			D				
Approach Delay		20.3			44.0			47.7			38.0				
Approach LOS		C			D			D			D				

Intersection Summary	
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 0 (0%), Referenced to phase 2:WBTL, Start of Green, Master Intersection	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 39.4	Intersection LOS: D
Intersection Capacity Utilization 66.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 3: Boston-Providence Hwy & Dean St



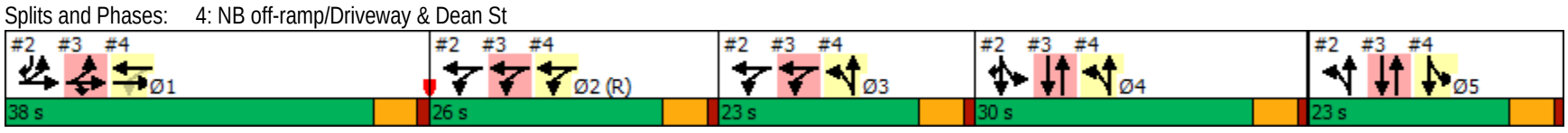
Lane Group	Ø5
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	5
Permitted Phases	
Total Split (s)	23.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø3	Ø4
Lane Configurations														
Traffic Volume (vph)	0	220	50	40	500	40	100	5	165	0	0	5		
Future Volume (vph)	0	220	50	40	500	40	100	5	165	0	0	5		
Satd. Flow (prot)	0	3261	0	0	3312	0	1594	1444	0	0	1528	0		
Flt Permitted					0.906		0.950	0.997						
Satd. Flow (perm)	0	3261	0	0	3010	0	1594	1444	0	0	1528	0		
Satd. Flow (RTOR)														
Lane Group Flow (vph)	0	321	0	0	691	0	107	214	0	0	6	0		
Turn Type		NA		pm+pt	NA		Split	NA			NA			
Protected Phases		1		2	1 2		3 4	3 4		5	5		3	4
Permitted Phases				1 2										
Total Split (s)		38.0		26.0						23.0	23.0		23.0	30.0
Total Lost Time (s)		5.0									5.0			
Act Effct Green (s)		32.7			54.0		48.0	48.0			18.0			
Actuated g/C Ratio		0.23			0.39		0.34	0.34			0.13			
v/c Ratio		0.42			0.57		0.20	0.43			0.03			
Control Delay		6.9			32.8		33.6	38.9			54.0			
Queue Delay		1.0			1.3		0.0	0.0			0.0			
Total Delay		7.9			34.1		33.6	38.9			54.0			
LOS		A			C		C	D			D			
Approach Delay		7.9			34.1			37.1			54.0			
Approach LOS		A			C			D			D			

Intersection Summary	
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 0 (0%), Referenced to phase 2:WBTL, Start of Green, Master Intersection	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 28.6	Intersection LOS: C
Intersection Capacity Utilization 55.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 4: NB off-ramp/Driveway & Dean St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Volume (vph)	170	40	30	80	50	60	30	110	1090	150	210	120	560	120
Future Volume (vph)	170	40	30	80	50	60	30	110	1090	150	210	120	560	120
Satd. Flow (prot)	1678	1653	0	1678	1621	0	0	1678	3355	1501	0	1678	3355	1501
Flt Permitted	0.616			0.702				0.950				0.950		
Satd. Flow (perm)	1088	1653	0	1240	1621	0	0	1678	3355	1501	0	1678	3355	1501
Satd. Flow (RTOR)														
Lane Group Flow (vph)	202	84	0	95	130	0	0	167	1297	178	0	393	666	143
Turn Type	Perm	NA		Perm	NA		Prot	Prot	NA	Prot	Prot	Prot	NA	Prot
Protected Phases		4			8		5	5	2	2	1	1	6	6
Permitted Phases	4			8										
Total Split (s)	22.0	22.0		22.0	22.0		23.0	23.0	47.0	47.0	31.0	31.0	55.0	55.0
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0	5.0	5.0		5.0	5.0	5.0
Act Effct Green (s)	17.0	17.0		17.0	17.0			14.6	42.8	42.8		25.2	53.4	53.4
Actuated g/C Ratio	0.17	0.17		0.17	0.17			0.15	0.43	0.43		0.25	0.53	0.53
v/c Ratio	1.10	0.30		0.45	0.47			0.68	0.90	0.28		0.93	0.37	0.18
Control Delay	135.7	39.6		45.1	43.9			54.6	37.3	20.4		66.8	14.8	13.5
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	135.7	39.6		45.1	43.9			54.6	37.3	20.4		66.8	14.8	13.5
LOS	F	D		D	D			D	D	C		E	B	B
Approach Delay		107.5			44.4				37.2				31.6	
Approach LOS		F			D				D				C	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 25 (25%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.10	
Intersection Signal Delay: 41.7	Intersection LOS: D
Intersection Capacity Utilization 90.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 5: Boston-Providence Hwy & Morse Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Volume (vph)	90	50	40	30	120	190	120	200	1290	30	30	70	480	70
Future Volume (vph)	90	50	40	30	120	190	120	200	1290	30	30	70	480	70
Satd. Flow (prot)	1678	1766	1501	0	1748	1501	0	1678	3355	1501	0	1678	3355	1501
Flt Permitted	0.623				0.915			0.950				0.950		
Satd. Flow (perm)	1100	1766	1501	0	1616	1501	0	1678	3355	1501	0	1678	3355	1501
Satd. Flow (RTOR)														
Lane Group Flow (vph)	107	59	48	0	179	226	0	381	1534	36	0	119	571	83
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	Prot	NA	Perm	Prot	Prot	NA	Perm
Protected Phases		4			8		1	1	6		5	5	2	
Permitted Phases	4		4	8		8				6				2
Total Split (s)	21.0	21.0	21.0	21.0	21.0	21.0	34.1	34.1	49.0	49.0	20.0	20.0	34.9	34.9
Total Lost Time (s)	8.0	8.0	8.0		8.0	8.0		8.5	6.5	6.5		8.0	6.5	6.5
Act Effct Green (s)	13.0	13.0	13.0		13.0	13.0		23.0	45.0	45.0		10.4	28.6	28.6
Actuated g/C Ratio	0.15	0.15	0.15		0.15	0.15		0.26	0.51	0.51		0.12	0.33	0.33
v/c Ratio	0.66	0.23	0.22		0.75	1.02		0.86	0.89	0.05		0.60	0.52	0.17
Control Delay	57.2	36.5	36.8		57.3	105.7		51.4	29.3	13.1		50.3	26.6	23.3
Queue Delay	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	57.2	36.5	36.8		57.3	105.7		51.4	29.3	13.1		50.3	26.6	23.3
LOS	E	D	D		E	F		D	C	B		D	C	C
Approach Delay		46.9			84.3				33.3				29.9	
Approach LOS		D			F				C				C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 87.7	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.02	
Intersection Signal Delay: 39.6	Intersection LOS: D
Intersection Capacity Utilization 91.9%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 6: Boston-Providence Hwy & Sumner Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Volume (vph)	100	40	50	40	60	40	40	80	1470	20	20	20	450	90
Future Volume (vph)	100	40	50	40	60	40	40	80	1470	20	20	20	450	90
Satd. Flow (prot)	0	1660	0	0	1673	0	0	1678	3355	1501	0	1678	3355	1501
Flt Permitted		0.710			0.849			0.950				0.950		
Satd. Flow (perm)	0	1210	0	0	1441	0	0	1678	3355	1501	0	1678	3355	1501
Satd. Flow (RTOR)														
Lane Group Flow (vph)	0	226	0	0	167	0	0	143	1749	24	0	48	535	107
Turn Type	Perm	NA		Perm	NA		Prot	Prot	NA	Perm	Prot	Prot	NA	Perm
Protected Phases		4			8		1	1	6		5	5	2	
Permitted Phases	4			8						6				2
Total Split (s)	23.0	23.0		23.0	23.0		20.0	20.0	57.0	57.0	10.0	10.0	47.0	47.0
Total Lost Time (s)		5.0			5.0			5.0	5.0	5.0		5.0	5.0	5.0
Act Effct Green (s)		18.4			18.4			11.9	47.4	47.4		5.1	35.8	35.8
Actuated g/C Ratio		0.23			0.23			0.15	0.58	0.58		0.06	0.44	0.44
v/c Ratio		0.83			0.51			0.59	0.90	0.03		0.46	0.36	0.16
Control Delay		59.9			37.2			44.3	23.0	8.2		55.6	15.8	14.4
Queue Delay		0.0			0.0			0.0	0.0	0.0		0.0	0.0	0.0
Total Delay		59.9			37.2			44.3	23.0	8.2		55.6	15.8	14.4
LOS		E			D			D	C	A		E	B	B
Approach Delay		59.9			37.2				24.4				18.4	
Approach LOS		E			D				C				B	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 81.4	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 26.4	Intersection LOS: C
Intersection Capacity Utilization 81.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 7: Boston-Providence Hwy & Union Street

Part 5: 2040 Conditions: Weekday PM Peak-Hour LOS and Delays

Intersection	
Intersection Delay, s/veh	26.9
Intersection LOS	D

Approach	EB	WB	NB	SB
Entry Lanes	2	2	2	2
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	940	809	404	798
Demand Flow Rate, veh/h	959	826	412	813
Vehicles Circulating, veh/h	692	485	1311	826
Vehicles Exiting, veh/h	947	1238	340	485
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	28.6	10.7	25.3	42.0
Approach LOS	D	B	D	E

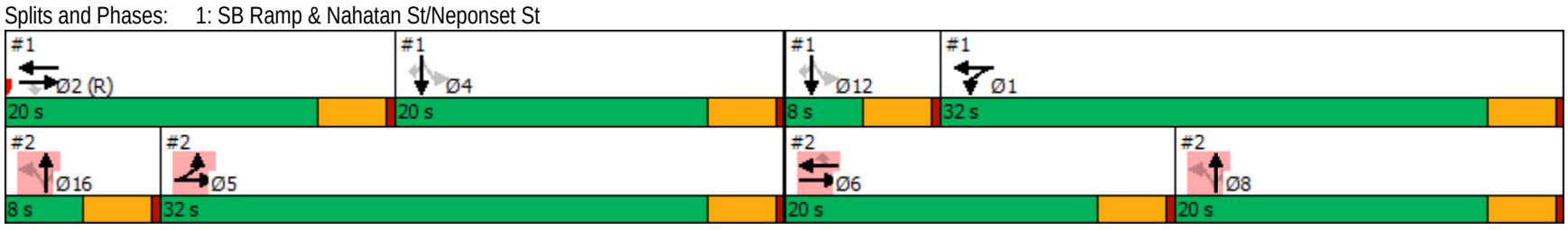
Lane	Left	Right	Left	Right	Left	Right	Left	Right
Designated Moves	LT	R	LT	R	LT	R	LT	R
Assumed Moves	LT	R	LT	R	LT	R	LT	R
RT Channelized								
Lane Util	0.709	0.291	0.648	0.352	0.735	0.265	0.791	0.209
Follow-Up Headway, s	2.535	2.535	2.535	2.535	2.535	2.535	2.535	2.535
Critical Headway, s	4.544	4.544	4.544	4.544	4.544	4.544	4.544	4.544
Entry Flow, veh/h	680	279	535	291	303	109	643	170
Cap Entry Lane, veh/h	756	756	913	913	431	431	670	670
Entry HV Adj Factor	0.980	0.982	0.980	0.979	0.979	0.982	0.981	0.982
Flow Entry, veh/h	666	274	524	285	297	107	631	167
Cap Entry, veh/h	741	743	895	894	422	423	657	658
V/C Ratio	0.899	0.369	0.586	0.319	0.704	0.253	0.960	0.254
Control Delay, s/veh	36.4	9.5	12.5	7.5	29.9	12.6	50.8	8.6
LOS	E	A	B	A	D	B	F	A
95th %tile Queue, veh	12	2	4	1	5	1	14	1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø4	Ø5	Ø6
Lane Configurations															
Traffic Volume (vph)	0	560	230	120	560	0	0	0	0	510	10	140			
Future Volume (vph)	0	560	230	120	560	0	0	0	0	510	10	140			
Satd. Flow (prot)	0	3539	1583	1770	3539	0	0	0	0	1681	1688	1583			
Flt Permitted				0.950						0.950	0.954				
Satd. Flow (perm)	0	3539	1474	1770	3539	0	0	0	0	1681	1688	1518			
Satd. Flow (RTOR)			268									177			
Lane Group Flow (vph)	0	652	268	140	652	0	0	0	0	303	303	163			
Turn Type		NA	Perm	Prot	NA					Perm	NA	Perm			
Protected Phases		2		1	2 1						4 12		4	5	6
Permitted Phases			2							4 12		4 12			
Total Split (s)		20.0	20.0	32.0									20.0	32.0	20.0
Total Lost Time (s)		4.0	4.0	4.0											
Act Effct Green (s)		21.4	21.4	23.1	48.5					23.5	23.5	23.5			
Actuated g/C Ratio		0.27	0.27	0.29	0.61					0.29	0.29	0.29			
v/c Ratio		0.69	0.45	0.27	0.30					0.61	0.61	0.29			
Control Delay		33.3	6.7	1.1	0.6					30.5	30.4	4.5			
Queue Delay		0.0	0.0	0.0	0.0					0.0	0.0	0.0			
Total Delay		33.3	6.7	1.1	0.6					30.5	30.4	4.5			
LOS		C	A	A	A					C	C	A			
Approach Delay		25.6			0.7						25.0				
Approach LOS		C			A						C				
Queue Length 50th (ft)		154	0	0	0					134	134	0			
Queue Length 95th (ft)		#271	60	m0	0					222	222	36			
Internal Link Dist (ft)		510			334			298			479				
Turn Bay Length (ft)			150	150								150			
Base Capacity (vph)	948	591	619	2147						480	482	560			
Starvation Cap Reductn	0	0	0	0						0	0	0			
Spillback Cap Reductn	0	0	0	0						0	0	0			
Storage Cap Reductn	0	0	0	0						0	0	0			
Reduced v/c Ratio	0.69	0.45	0.23	0.30						0.63	0.63	0.29			

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 0 (0%), Referenced to phase 2:EBWB, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 17.4	Intersection LOS: B
Intersection Capacity Utilization 56.7%	ICU Level of Service B
Analysis Period (min) 15	

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

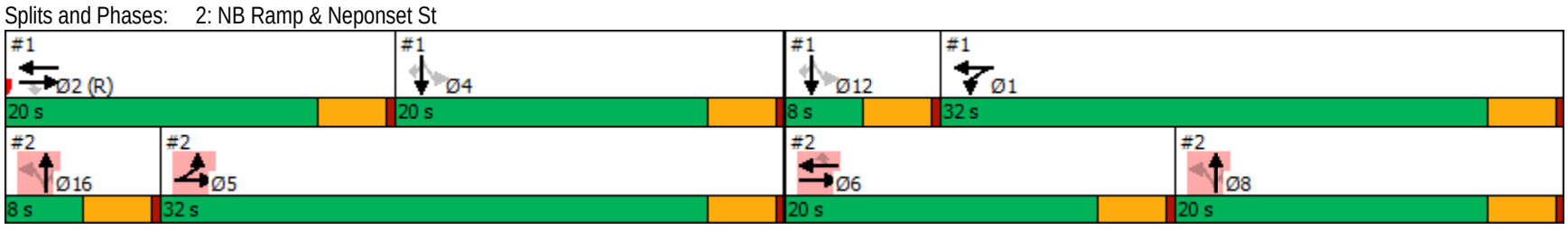
Splits and Phases: 1: SB Ramp & Nahatan St/Neponset St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø1	Ø2	Ø4
Lane Configurations															
Traffic Volume (vph)	280	790	0	0	440	240	240	10	90	0	0	0			
Future Volume (vph)	280	790	0	0	440	240	240	10	90	0	0	0			
Satd. Flow (prot)	1770	3539	0	0	3539	1583	1681	1692	1583	0	0	0			
Flt Permitted	0.950						0.950	0.956							
Satd. Flow (perm)	1770	3539	0	0	3539	1474	1681	1692	1518	0	0	0			
Satd. Flow (RTOR)						280			177						
Lane Group Flow (vph)	326	920	0	0	513	280	146	146	105	0	0	0			
Turn Type	Prot	NA			NA	Perm	Perm	NA	Perm						
Protected Phases	5	5 6			6			8 16					1	2	4
Permitted Phases						6	8 16		8 16						
Total Split (s)	32.0				20.0	20.0							32.0	20.0	20.0
Total Lost Time (s)	4.0				4.0	4.0									
Act Effct Green (s)	26.9	46.8			16.0	16.0	25.2	25.2	25.2						
Actuated g/C Ratio	0.34	0.58			0.20	0.20	0.32	0.32	0.32						
v/c Ratio	0.55	0.44			0.73	0.54	0.28	0.27	0.18						
Control Delay	7.7	1.7			36.7	8.1	23.0	23.0	1.2						
Queue Delay	0.0	0.1			0.0	0.0	0.0	0.0	0.0						
Total Delay	7.7	1.8			36.7	8.1	23.0	23.0	1.2						
LOS	A	A			D	A	C	C	A						
Approach Delay		3.3			26.6			17.3							
Approach LOS		A			C			B							
Queue Length 50th (ft)	163	2			127	0	58	57	0						
Queue Length 95th (ft)	261	0			181	62	108	107	7						
Internal Link Dist (ft)		334			440			310			487				
Turn Bay Length (ft)	150					150			150						
Base Capacity (vph)	619	2057			717	521	528	532	598						
Starvation Cap Reductn	0	299			0	0	0	0	0						
Spillback Cap Reductn	0	0			0	0	0	0	0						
Storage Cap Reductn	0	0			0	0	0	0	0						
Reduced v/c Ratio	0.53	0.52			0.72	0.54	0.28	0.27	0.18						

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 0 (0%), Referenced to phase 2:EBWB, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 13.2	Intersection LOS: B
Intersection Capacity Utilization 56.7%	ICU Level of Service B
Analysis Period (min) 15	

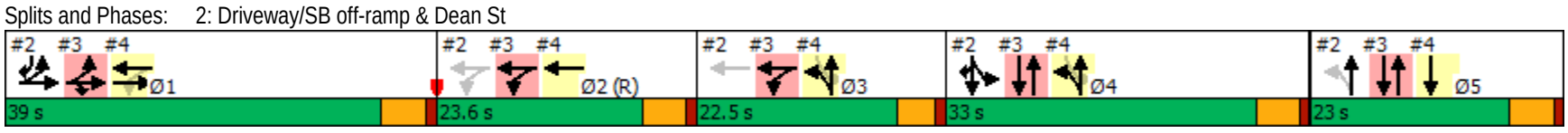
Splits and Phases: 2: NB Ramp & Neponset St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø3
Lane Configurations													
Traffic Volume (vph)	20	520	30	40	310	50	30	0	40	150	30	170	
Future Volume (vph)	20	520	30	40	310	50	30	0	40	150	30	170	
Satd. Flow (prot)	0	3387	0	0	3339	0	0	1627	0	1625	1656	1531	
Flt Permitted		0.998			0.804			0.822		0.950	0.968		
Satd. Flow (perm)	0	3387	0	0	2698	0	0	1366	0	1625	1656	1531	
Satd. Flow (RTOR)													
Lane Group Flow (vph)	0	679	0	0	476	0	0	84	0	107	107	202	
Turn Type	Split	NA		custom	NA		Perm	NA		Split	NA	pt+ov	
Protected Phases	1	1						5		4	4	4 1	3
Permitted Phases				2	2 3		5						
Total Split (s)	39.0	39.0		23.6			23.0	23.0		33.0	33.0		22.5
Total Lost Time (s)		5.0						5.0		5.0	5.0		
Act Effct Green (s)		34.0			41.1			18.0		28.0	28.0	62.0	
Actuated g/C Ratio		0.24			0.29			0.13		0.20	0.20	0.44	
v/c Ratio		0.83			0.61			0.48		0.33	0.33	0.30	
Control Delay		60.9			18.8			67.4		51.9	51.7	15.2	
Queue Delay		1.6			0.2			0.2		0.0	0.0	0.0	
Total Delay		62.4			19.0			67.6		51.9	51.7	15.2	
LOS		E			B			E		D	D	B	
Approach Delay		62.4			19.0			67.6			34.1		
Approach LOS		E			B			E			C		

Intersection Summary	
Cycle Length: 141.1	
Actuated Cycle Length: 141.1	
Offset: 0 (0%), Referenced to phase 2:WBTL, Start of Green, Master Intersection	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay: 43.1	Intersection LOS: D
Intersection Capacity Utilization 54.6%	ICU Level of Service A
Analysis Period (min) 15	

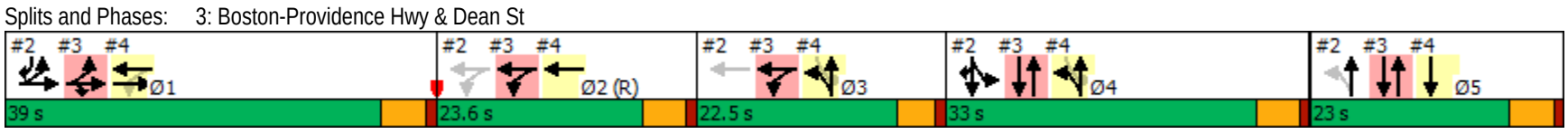
Splits and Phases: 2: Driveway/SB off-ramp & Dean St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2	Ø3	Ø4
Lane Configurations															
Traffic Volume (vph)	250	380	80	300	310	120	0	930	20	0	1220	50			
Future Volume (vph)	250	380	80	300	310	120	0	930	20	0	1220	50			
Satd. Flow (prot)	3319	1801	1531	1711	3278	0	0	4901	0	0	4886	0			
Flt Permitted	0.950			0.950											
Satd. Flow (perm)	3319	1801	1531	1711	3278	0	0	4901	0	0	4886	0			
Satd. Flow (RTOR)															
Lane Group Flow (vph)	297	452	95	357	512	0	0	1130	0	0	1510	0			
Turn Type	Split	NA	Prot	Split	NA			NA			NA				
Protected Phases	1	1	1	2 3	2 3			4 5			4 5		2	3	4
Permitted Phases															
Total Split (s)	39.0	39.0	39.0										23.6	22.5	33.0
Total Lost Time (s)	5.0	5.0	5.0												
Act Effct Green (s)	34.0	34.0	34.0	41.1	41.1			51.0			51.0				
Actuated g/C Ratio	0.24	0.24	0.24	0.29	0.29			0.36			0.36				
v/c Ratio	0.37	1.04	0.26	0.72	0.54			0.64			0.86				
Control Delay	16.7	70.1	17.2	38.5	29.9			39.4			47.5				
Queue Delay	0.8	13.3	0.0	58.3	54.9			0.0			0.0				
Total Delay	17.5	83.4	17.2	96.8	84.7			39.4			47.5				
LOS	B	F	B	F	F			D			D				
Approach Delay		52.8			89.7			39.4			47.5				
Approach LOS		D			F			D			D				

Intersection Summary	
Cycle Length: 141.1	
Actuated Cycle Length: 141.1	
Offset: 0 (0%), Referenced to phase 2:WBTL, Start of Green, Master Intersection	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay: 54.8	Intersection LOS: D
Intersection Capacity Utilization 81.8%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 3: Boston-Providence Hwy & Dean St



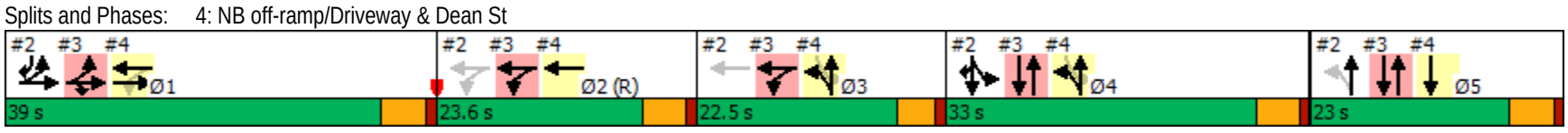
Lane Group	Ø5
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	5
Permitted Phases	
Total Split (s)	23.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2	Ø3	Ø4
Lane Configurations															
Traffic Volume (vph)	0	350	40	20	550	5	180	5	300	0	0	5			
Future Volume (vph)	0	350	40	20	550	5	180	5	300	0	0	5			
Satd. Flow (prot)	0	3367	0	0	3411	0	1625	1468	0	0	1558	0			
Flt Permitted					0.923		0.950	0.997							
Satd. Flow (perm)	0	3367	0	0	3155	0	1625	1468	0	0	1558	0			
Satd. Flow (RTOR)															
Lane Group Flow (vph)	0	464	0	0	684	0	193	384	0	0	6	0			
Turn Type		NA		D.Pm	NA		Split	NA			NA				
Protected Phases		1			1 2		3 4	3 4			5		2	3	4
Permitted Phases				1						3 4					
Total Split (s)		39.0		39.0							23.0		23.6	22.5	33.0
Total Lost Time (s)		5.0									5.0				
Act Effct Green (s)		34.0			57.6		51.0	51.0			18.0				
Actuated g/C Ratio		0.24			0.41		0.36	0.36			0.13				
v/c Ratio		0.57			0.53		0.33	0.72			0.03				
Control Delay		9.2			33.4		34.6	48.3			54.5				
Queue Delay		4.4			2.4		0.0	4.4			0.0				
Total Delay		13.5			35.9		34.6	52.6			54.5				
LOS		B			D		C	D			D				
Approach Delay		13.5			35.9			46.6			54.5				
Approach LOS		B			D			D			D				

Intersection Summary	
Cycle Length: 141.1	
Actuated Cycle Length: 141.1	
Offset: 0 (0%), Referenced to phase 2:WBTL, Start of Green, Master Intersection	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay: 33.5	Intersection LOS: C
Intersection Capacity Utilization 64.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 4: NB off-ramp/Driveway & Dean St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Volume (vph)	200	80	80	300	120	70	20	60	740	80	190	160	1210	110
Future Volume (vph)	200	80	80	300	120	70	20	60	740	80	190	160	1210	110
Satd. Flow (prot)	1711	1666	0	1711	1702	0	0	1711	3421	1531	0	1711	3421	1531
Flt Permitted	0.501			0.561				0.950				0.950		
Satd. Flow (perm)	902	1666	0	1010	1702	0	0	1711	3421	1531	0	1711	3421	1531
Satd. Flow (RTOR)														
Lane Group Flow (vph)	238	190	0	357	226	0	0	95	880	95	0	416	1439	131
Turn Type	Perm	NA		Perm	NA		Prot	Prot	NA	Perm	Prot	Prot	NA	Perm
Protected Phases		4			8		1	1	6		5	5	2	
Permitted Phases	4			8						6				2
Total Split (s)	31.0	31.0		31.0	31.0		13.0	13.0	33.0	33.0	31.0	31.0	51.0	51.0
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0	5.0	5.0		5.0	5.0	5.0
Act Effct Green (s)	26.0	26.0		26.0	26.0			8.0	28.0	28.0		24.9	47.6	47.6
Actuated g/C Ratio	0.28	0.28		0.28	0.28			0.09	0.30	0.30		0.27	0.51	0.51
v/c Ratio	0.96	0.41		1.28	0.48			0.65	0.86	0.21		0.92	0.83	0.17
Control Delay	83.1	31.4		181.4	32.8			64.1	41.7	26.7		60.9	26.0	14.3
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	83.1	31.4		181.4	32.8			64.1	41.7	26.7		60.9	26.0	14.3
LOS	F	C		F	C			E	D	C		E	C	B
Approach Delay		60.2			123.8				42.3				32.5	
Approach LOS		E			F				D				C	

Intersection Summary	
Cycle Length: 95	
Actuated Cycle Length: 93.9	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.28	
Intersection Signal Delay: 51.1	Intersection LOS: D
Intersection Capacity Utilization 90.8%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 5: Boston-Providence Hwy & Morse Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Volume (vph)	140	150	60	20	70	80	120	160	670	50	60	270	1140	150
Future Volume (vph)	140	150	60	20	70	80	120	160	670	50	60	270	1140	150
Satd. Flow (prot)	1711	1801	1531	0	1781	1531	0	1711	3421	1531	0	1711	3421	1531
Flt Permitted	0.688				0.830			0.950				0.950		
Satd. Flow (perm)	1239	1801	1531	0	1495	1531	0	1711	3421	1531	0	1711	3421	1531
Satd. Flow (RTOR)														
Lane Group Flow (vph)	167	178	71	0	107	95	0	333	797	59	0	392	1356	178
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	Prot	NA	Perm	Prot	Prot	NA	Perm
Protected Phases		4			8		1	1	6		5	5	2	
Permitted Phases	4		4	8		8				6				2
Total Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	27.0	27.0	37.0	37.0	33.0	33.0	43.0	43.0
Total Lost Time (s)	8.0	8.0	8.0		8.0	8.0		8.5	6.5	6.5		8.0	6.5	6.5
Act Effct Green (s)	12.0	12.0	12.0		12.0	12.0		18.5	32.2	32.2		23.3	36.5	36.5
Actuated g/C Ratio	0.13	0.13	0.13		0.13	0.13		0.21	0.36	0.36		0.26	0.41	0.41
v/c Ratio	1.01	0.74	0.35		0.54	0.47		0.95	0.65	0.11		0.88	0.98	0.29
Control Delay	115.1	57.5	40.8		47.3	44.3		74.0	27.8	21.1		54.7	46.9	19.6
Queue Delay	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	115.1	57.5	40.8		47.3	44.3		74.0	27.8	21.1		54.7	46.9	19.6
LOS	F	E	D		D	D		E	C	C		D	D	B
Approach Delay		77.8			45.9				40.4				46.0	
Approach LOS		E			D				D				D	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 1.01	
Intersection Signal Delay: 47.7	Intersection LOS: D
Intersection Capacity Utilization 94.6%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 6: Boston-Providence Hwy & Sumner Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Volume (vph)	60	50	60	30	40	20	50	70	750	50	60	40	1420	160
Future Volume (vph)	60	50	60	30	40	20	50	70	750	50	60	40	1420	160
Satd. Flow (prot)	0	1685	0	0	1719	0	0	1711	3421	1531	0	1711	3421	1531
Flt Permitted		0.839			0.771			0.950				0.950		
Satd. Flow (perm)	0	1438	0	0	1347	0	0	1711	3421	1531	0	1711	3421	1531
Satd. Flow (RTOR)														
Lane Group Flow (vph)	0	201	0	0	108	0	0	142	892	59	0	119	1689	190
Turn Type	Perm	NA		Perm	NA		Prot	Prot	NA	Perm	Prot	Prot	NA	Perm
Protected Phases		4			8		1	1	6		5	5	2	
Permitted Phases	4			8						6				2
Total Split (s)	19.0	19.0		19.0	19.0		16.0	16.0	53.0	53.0	18.0	18.0	55.0	55.0
Total Lost Time (s)		5.0			5.0			5.0	5.0	5.0		5.0	5.0	5.0
Act Effct Green (s)		13.9			13.9			10.4	47.3	47.3		11.0	47.9	47.9
Actuated g/C Ratio		0.16			0.16			0.12	0.54	0.54		0.13	0.55	0.55
v/c Ratio		0.88			0.50			0.70	0.48	0.07		0.55	0.90	0.23
Control Delay		74.6			44.0			57.1	13.6	10.2		46.6	25.6	11.0
Queue Delay		0.0			0.0			0.0	0.0	0.0		0.0	0.0	0.0
Total Delay		74.6			44.0			57.1	13.6	10.2		46.6	25.6	11.0
LOS		E			D			E	B	B		D	C	B
Approach Delay		74.6			44.0				19.1				25.5	
Approach LOS		E			D				B				C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 87.2	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 26.9	Intersection LOS: C
Intersection Capacity Utilization 79.0%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 7: Boston-Providence Hwy & Union Street

6: 2040 Conditions: Weekend Saturday PM Peak-Hour LOS and Delays

Intersection	
Intersection Delay, s/veh	12.6
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	2	2	2	2
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	897	886	338	688
Demand Flow Rate, veh/h	906	894	341	695
Vehicles Circulating, veh/h	565	423	1071	705
Vehicles Exiting, veh/h	835	989	400	612
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	13.2	9.3	12.7	15.8
Approach LOS	B	A	B	C

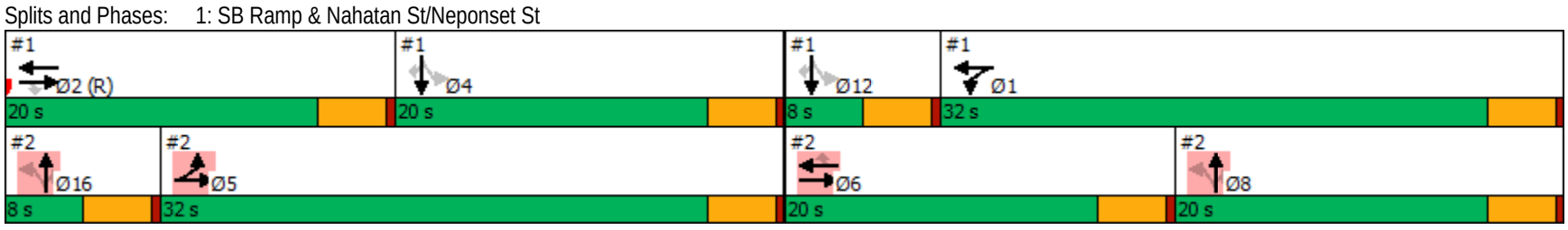
Lane	Left	Right	Left	Right	Left	Right	Left	Right
Designated Moves	LT	R	LT	R	LT	R	LT	R
Assumed Moves	LT	R	LT	R	LT	R	LT	R
RT Channelized								
Lane Util	0.624	0.376	0.539	0.461	0.689	0.311	0.745	0.255
Follow-Up Headway, s	2.535	2.535	2.535	2.535	2.535	2.535	2.535	2.535
Critical Headway, s	4.544	4.544	4.544	4.544	4.544	4.544	4.544	4.544
Entry Flow, veh/h	565	341	482	412	235	106	518	177
Cap Entry Lane, veh/h	849	849	966	966	536	536	748	748
Entry HV Adj Factor	0.990	0.991	0.991	0.990	0.991	0.991	0.990	0.989
Flow Entry, veh/h	559	338	478	408	233	105	513	175
Cap Entry, veh/h	841	842	958	957	531	531	740	739
V/C Ratio	0.665	0.402	0.499	0.426	0.439	0.198	0.693	0.237
Control Delay, s/veh	15.7	9.1	9.9	8.7	14.2	9.4	18.5	7.6
LOS	C	A	A	A	B	A	C	A
95th %tile Queue, veh	5	2	3	2	2	1	6	1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø4	Ø5	Ø6
Lane Configurations															
Traffic Volume (vph)	0	480	290	140	560	0	0	0	0	440	10	150			
Future Volume (vph)	0	480	290	140	560	0	0	0	0	440	10	150			
Satd. Flow (prot)	0	3574	1599	1787	3574	0	0	0	0	1698	1705	1599			
Flt Permitted				0.950						0.950	0.954				
Satd. Flow (perm)	0	3574	1489	1787	3574	0	0	0	0	1698	1705	1533			
Satd. Flow (RTOR)			338									177			
Lane Group Flow (vph)	0	559	338	163	652	0	0	0	0	262	263	175			
Turn Type		NA	Perm	Prot	NA					Perm	NA	Perm			
Protected Phases		2		1	2 1						4 12		4	5	6
Permitted Phases			2							4 12		4 12			
Total Split (s)		20.0	20.0	32.0									20.0	32.0	20.0
Total Lost Time (s)		4.0	4.0	4.0											
Act Effct Green (s)		21.5	21.5	23.5	48.9					23.1	23.1	23.1			
Actuated g/C Ratio		0.27	0.27	0.29	0.61					0.29	0.29	0.29			
v/c Ratio		0.58	0.52	0.31	0.30					0.54	0.54	0.31			
Control Delay		30.3	6.8	1.5	0.6					28.4	28.3	5.2			
Queue Delay		0.0	0.0	0.0	0.0					0.0	0.0	0.0			
Total Delay		30.3	6.8	1.5	0.6					28.4	28.3	5.2			
LOS		C	A	A	A					C	C	A			
Approach Delay		21.5			0.8						22.6				
Approach LOS		C			A						C				
Queue Length 50th (ft)		130	0	0	0					113	113	0			
Queue Length 95th (ft)		#211	68	m0	0					189	189	42			
Internal Link Dist (ft)		510			334			298			479				
Turn Bay Length (ft)			150	150								150			
Base Capacity (vph)	959	647	625	2186						483	485	563			
Starvation Cap Reductn	0	0	0	0						0	0	0			
Spillback Cap Reductn	0	0	0	0						0	0	0			
Storage Cap Reductn	0	0	0	0						0	0	0			
Reduced v/c Ratio	0.58	0.52	0.26	0.30						0.54	0.54	0.31			

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 0 (0%), Referenced to phase 2:EBWB, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.67
Intersection Signal Delay: 14.8 Intersection LOS: B
Intersection Capacity Utilization 66.5% ICU Level of Service C
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

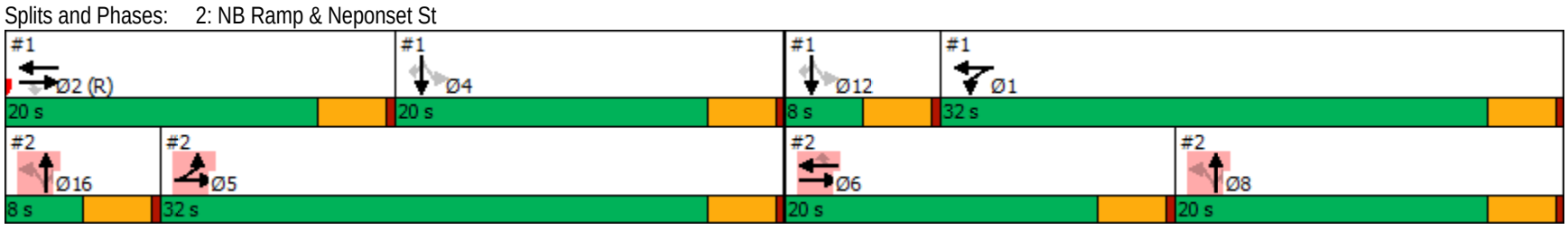
Splits and Phases: 1: SB Ramp & Nahatan St/Neponset St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø1	Ø2	Ø4
Lane Configurations															
Traffic Volume (vph)	300	620	0	0	410	350	290	10	90	0	0	0			
Future Volume (vph)	300	620	0	0	410	350	290	10	90	0	0	0			
Satd. Flow (prot)	1787	3574	0	0	3574	1599	1698	1708	1599	0	0	0			
Flt Permitted	0.950						0.950	0.956							
Satd. Flow (perm)	1787	3574	0	0	3574	1489	1698	1708	1533	0	0	0			
Satd. Flow (RTOR)						408			177						
Lane Group Flow (vph)	349	722	0	0	478	408	176	174	105	0	0	0			
Turn Type	Prot	NA			NA	Perm	Perm	NA	Perm						
Protected Phases	5	5 6			6			8 16					1	2	4
Permitted Phases						6	8 16		8 16						
Total Split (s)	32.0				20.0	20.0							32.0	20.0	20.0
Total Lost Time (s)	4.0				4.0	4.0									
Act Effct Green (s)	26.3	46.3			16.0	16.0	25.7	25.7	25.7						
Actuated g/C Ratio	0.33	0.58			0.20	0.20	0.32	0.32	0.32						
v/c Ratio	0.59	0.35			0.67	0.65	0.32	0.32	0.17						
Control Delay	9.5	1.2			34.8	8.8	23.6	23.5	1.2						
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0	0.0						
Total Delay	9.5	1.2			34.8	8.8	23.6	23.5	1.2						
LOS	A	A			C	A	C	C	A						
Approach Delay		3.9			22.8			18.4							
Approach LOS		A			C			B							
Queue Length 50th (ft)	176	0			116	0	71	70	0						
Queue Length 95th (ft)	275	0			167	77	128	126	7						
Internal Link Dist (ft)		334			440			310			487				
Turn Bay Length (ft)	150					150			150						
Base Capacity (vph)	625	2081			738	631	545	549	612						
Starvation Cap Reductn	0	0			0	0	0	0	0						
Spillback Cap Reductn	0	0			0	0	0	0	0						
Storage Cap Reductn	0	0			0	0	0	0	0						
Reduced v/c Ratio	0.56	0.35			0.65	0.65	0.32	0.32	0.17						

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 0 (0%), Referenced to phase 2:EBWB, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 13.6	Intersection LOS: B
Intersection Capacity Utilization 66.5%	ICU Level of Service C
Analysis Period (min) 15	

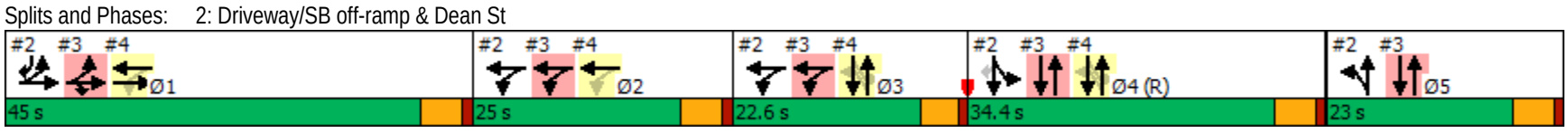
Splits and Phases: 2: NB Ramp & Neponset St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2	Ø3
Lane Configurations														
Traffic Volume (vph)	20	470	40	70	240	40	30	0	40	250	40	170		
Future Volume (vph)	20	470	40	70	240	40	30	0	40	250	40	170		
Satd. Flow (prot)	0	3410	0	0	3362	0	0	1643	0	1641	1667	1546		
Flt Permitted		0.998			0.990			0.979		0.950	0.965			
Satd. Flow (perm)	0	3410	0	0	3362	0	0	1643	0	1641	1667	1546		
Satd. Flow (RTOR)														
Lane Group Flow (vph)	0	618	0	0	409	0	0	82	0	169	169	198		
Turn Type	Split	NA		Split	NA		Split	NA		Split	NA	pm+ov		
Protected Phases	1	1		2 3	2 3		5	5		4	4	1	2	3
Permitted Phases												4		
Total Split (s)	45.0	45.0					23.0	23.0		34.4	34.4	45.0	25.0	22.6
Total Lost Time (s)		5.0						5.0		5.0	5.0	5.0		
Act Effct Green (s)		40.0			42.6			18.0		29.4	29.4	69.4		
Actuated g/C Ratio		0.27			0.28			0.12		0.20	0.20	0.46		
v/c Ratio		0.68			0.43			0.42		0.53	0.52	0.28		
Control Delay		53.7			18.1			68.2		60.8	60.5	14.7		
Queue Delay		0.4			0.4			0.4		0.0	0.0	0.0		
Total Delay		54.1			18.5			68.6		60.8	60.5	14.7		
LOS		D			B			E		E	E	B		
Approach Delay		54.1			18.5			68.6			43.7			
Approach LOS		D			B			E			D			

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 4:SBTL and 8:, Start of Green, Master Intersection	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 42.6	Intersection LOS: D
Intersection Capacity Utilization 56.2%	ICU Level of Service B
Analysis Period (min) 15	

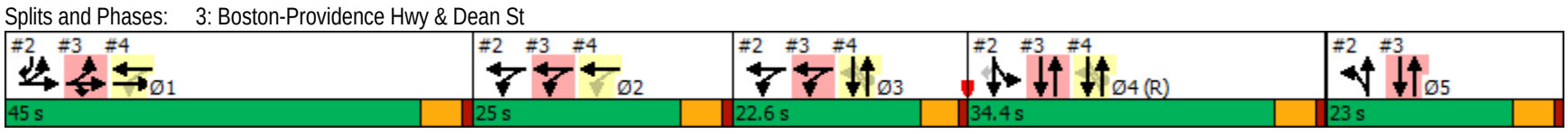
Splits and Phases: 2: Driveway/SB off-ramp & Dean St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2	Ø3	Ø4
Lane Configurations															
Traffic Volume (vph)	300	350	100	310	290	140	0	1180	30	0	1120	60			
Future Volume (vph)	300	350	100	310	290	140	0	1180	30	0	1120	60			
Satd. Flow (prot)	3351	1818	1546	1728	3286	0	0	4945	0	0	4925	0			
Flt Permitted	0.950			0.950											
Satd. Flow (perm)	3351	1818	1546	1728	3286	0	0	4945	0	0	4925	0			
Satd. Flow (RTOR)															
Lane Group Flow (vph)	349	408	116	361	501	0	0	1410	0	0	1375	0			
Turn Type	Split	NA	Prot	Split	NA			NA			NA				
Protected Phases	1	1	1	2 3	2 3			4 5			4 5		2	3	4
Permitted Phases															
Total Split (s)	45.0	45.0	45.0										25.0	22.6	34.4
Total Lost Time (s)	5.0	5.0	5.0												
Act Effct Green (s)	40.0	40.0	40.0	42.6	42.6			52.4			52.4				
Actuated g/C Ratio	0.27	0.27	0.27	0.28	0.28			0.35			0.35				
v/c Ratio	0.39	0.84	0.28	0.74	0.54			0.82			0.80				
Control Delay	19.7	37.6	19.5	46.4	36.2			49.1			48.4				
Queue Delay	1.1	13.0	1.3	57.8	55.0			0.0			0.0				
Total Delay	20.8	50.6	20.8	104.2	91.2			49.1			48.4				
LOS	C	D	C	F	F			D			D				
Approach Delay		34.7			96.7			49.1			48.4				
Approach LOS		C			F			D			D				

Intersection Summary			
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 0 (0%), Referenced to phase 4:SBTL and 8:, Start of Green, Master Intersection			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay: 55.2		Intersection LOS: E	
Intersection Capacity Utilization 79.2%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 3: Boston-Providence Hwy & Dean St



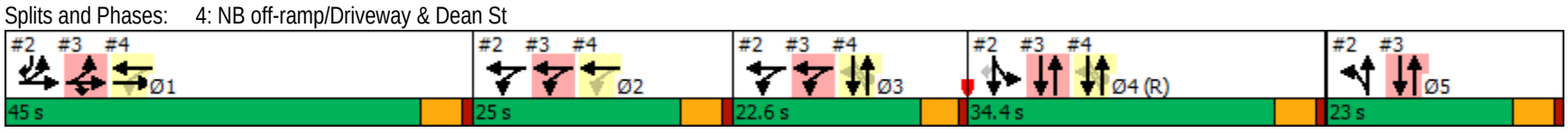
Lane Group	Ø5
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	5
Permitted Phases	
Total Split (s)	23.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø2	Ø3	Ø4
Lane Configurations															
Traffic Volume (vph)	0	320	60	20	545	20	190	0	210	0	0	5			
Future Volume (vph)	0	320	60	20	545	20	190	0	210	0	0	5			
Satd. Flow (prot)	0	3372	0	0	3431	0	1641	1483	0	0	1573	0			
Flt Permitted					0.925		0.754	0.980							
Satd. Flow (perm)	0	3372	0	0	3180	0	1303	1459	0	0	1573	0			
Satd. Flow (RTOR)															
Lane Group Flow (vph)	0	443	0	0	681	0	199	267	0	0	6	0			
Turn Type		NA		Perm	NA		Perm	NA			NA				
Protected Phases		1			1 2			3 4			3 4		2	3	4
Permitted Phases				1 2			3 4			3 4					
Total Split (s)		45.0											25.0	22.6	34.4
Total Lost Time (s)		5.0													
Act Effct Green (s)		40.0			65.0		52.5	52.5			52.5				
Actuated g/C Ratio		0.27			0.43		0.35	0.35			0.35				
v/c Ratio		0.49			0.49		0.44	0.52			0.01				
Control Delay		7.1			32.2		41.1	43.3			32.0				
Queue Delay		2.0			2.2		0.0	1.3			0.0				
Total Delay		9.1			34.4		41.1	44.6			32.0				
LOS		A			C		D	D			C				
Approach Delay		9.1			34.4			43.1			32.0				
Approach LOS		A			C			D			C				

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 0 (0%), Referenced to phase 4:SBTL and 8:, Start of Green, Master Intersection	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 29.9	Intersection LOS: C
Intersection Capacity Utilization 62.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 4: NB off-ramp/Driveway & Dean St



Lane Group	Ø5
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	5
Permitted Phases	
Total Split (s)	23.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Volume (vph)	190	50	60	120	50	90	20	80	1090	80	150	110	1120	150
Future Volume (vph)	190	50	60	120	50	90	20	80	1090	80	150	110	1120	150
Satd. Flow (prot)	1728	1669	0	1728	1642	0	0	1728	3455	1546	0	1728	3455	1546
Flt Permitted	0.583			0.662				0.950				0.950		
Satd. Flow (perm)	1060	1669	0	1070	1642	0	0	1728	3455	1546	0	1728	3455	1546
Satd. Flow (RTOR)														
Lane Group Flow (vph)	221	128	0	140	163	0	0	116	1270	93	0	303	1305	175
Turn Type	Perm	NA		Perm	NA		Prot	Prot	NA	Perm	Prot	Prot	NA	Perm
Protected Phases		4			8		1	1	6		5	5	2	
Permitted Phases	4			8						6				2
Total Split (s)	23.0	23.0		23.0	23.0		17.0	17.0	42.0	42.0	25.0	25.0	50.0	50.0
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0	5.0	5.0		5.0	5.0	5.0
Act Effct Green (s)	18.1	18.1		18.1	18.1			10.5	35.4	35.4		18.2	46.1	46.1
Actuated g/C Ratio	0.21	0.21		0.21	0.21			0.12	0.41	0.41		0.21	0.53	0.53
v/c Ratio	1.00	0.37		0.63	0.48			0.56	0.90	0.15		0.83	0.71	0.21
Control Delay	99.7	34.4		47.1	36.9			47.5	34.5	17.3		54.1	19.1	12.9
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	99.7	34.4		47.1	36.9			47.5	34.5	17.3		54.1	19.1	12.9
LOS	F	C		D	D			D	C	B		D	B	B
Approach Delay		75.8			41.6				34.5				24.5	
Approach LOS		E			D				C				C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 86.8	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.00	
Intersection Signal Delay: 34.2	Intersection LOS: C
Intersection Capacity Utilization 88.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 5: Boston-Providence Hwy & Morse Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Volume (vph)	220	120	100	30	80	100	120	230	940	40	60	140	880	240
Future Volume (vph)	220	120	100	30	80	100	120	230	940	40	60	140	880	240
Satd. Flow (prot)	1728	1818	1546	0	1795	1546	0	1728	3455	1546	0	1728	3455	1546
Flt Permitted	0.675				0.860			0.950				0.950		
Satd. Flow (perm)	1227	1818	1546	0	1564	1546	0	1728	3455	1546	0	1728	3455	1546
Satd. Flow (RTOR)														
Lane Group Flow (vph)	256	140	116	0	128	116	0	408	1095	47	0	233	1025	280
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	Prot	NA	Prot	Prot	Prot	NA	Prot
Protected Phases		4			8		1	1	6	6	5	5	2	2
Permitted Phases	4		4	8		8								
Total Split (s)	18.0	18.0	18.0	18.0	18.0	18.0	25.0	25.0	33.0	33.0	18.0	18.0	26.0	26.0
Total Lost Time (s)	8.0	8.0	8.0		8.0	8.0		8.5	6.5	6.5		8.0	6.5	6.5
Act Effct Green (s)	10.0	10.0	10.0		10.0	10.0		16.5	26.5	26.5		10.0	19.5	19.5
Actuated g/C Ratio	0.14	0.14	0.14		0.14	0.14		0.24	0.38	0.38		0.14	0.28	0.28
v/c Ratio	1.45	0.53	0.52		0.57	0.52		0.99	0.83	0.08		0.93	1.05	0.64
Control Delay	257.6	35.6	36.4		38.5	36.4		71.2	25.9	14.1		75.0	69.7	29.6
Queue Delay	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	257.6	35.6	36.4		38.5	36.4		71.2	25.9	14.1		75.0	69.7	29.6
LOS	F	D	D		D	D		E	C	B		E	E	C
Approach Delay		146.8			37.5				37.5				63.2	
Approach LOS		F			D				D				E	

Intersection Summary	
Cycle Length: 69	
Actuated Cycle Length: 69	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.45	
Intersection Signal Delay: 62.3	Intersection LOS: E
Intersection Capacity Utilization 95.7%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 6: Boston-Providence Hwy & Sumner Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Volume (vph)	70	120	80	60	40	40	80	90	1080	50	60	40	1070	180
Future Volume (vph)	70	120	80	60	40	40	80	90	1080	50	60	40	1070	180
Satd. Flow (prot)	0	1723	0	0	1711	0	0	1728	3455	1546	0	1728	3455	1546
Flt Permitted		0.860			0.644			0.950				0.950		
Satd. Flow (perm)	0	1501	0	0	1125	0	0	1728	3455	1546	0	1728	3455	1546
Satd. Flow (RTOR)														
Lane Group Flow (vph)	0	315	0	0	164	0	0	198	1258	58	0	117	1246	210
Turn Type	Perm	NA		Perm	NA		Prot	Prot	NA	Prot	Prot	Prot	NA	Prot
Protected Phases		4			8		1	1	6	6	5	5	2	2
Permitted Phases	4			8										
Total Split (s)	27.0	27.0		27.0	27.0		19.0	19.0	49.0	49.0	14.0	14.0	44.0	44.0
Total Lost Time (s)		5.0			5.0			5.0	5.0	5.0		5.0	5.0	5.0
Act Effct Green (s)		20.6			20.6			12.9	39.8	39.8		8.9	35.8	35.8
Actuated g/C Ratio		0.24			0.24			0.15	0.47	0.47		0.11	0.42	0.42
v/c Ratio		0.86			0.60			0.75	0.77	0.08		0.65	0.85	0.32
Control Delay		56.2			40.0			54.9	22.5	12.7		56.7	29.1	18.3
Queue Delay		0.0			0.0			0.0	0.0	0.0		0.0	0.0	0.0
Total Delay		56.2			40.0			54.9	22.5	12.7		56.7	29.1	18.3
LOS		E			D			D	C	B		E	C	B
Approach Delay		56.2			40.0				26.3				29.7	
Approach LOS		E			D				C				C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 84.5	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay: 31.1	Intersection LOS: C
Intersection Capacity Utilization 75.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 7: Boston-Providence Hwy & Union Street

Appendix E

Traffic Safety Data

1: Crashes 2015–19

Part 1: Crashes 2015–19

SYMBOLS		TYPES OF CRASH	CRASH INDEX AND SEVERITY
Moving Vehicle	Parked Vehicle	Head On	# Property Damage Only Crash Index Number
Backing Vehicle	Fixed Object	Angle	(#) Injury Crash Index Number
Non-Involved Vehicle	Bicycle	Rear End	(#) Fatal Crash Index Number
Pedestrian	Animal	Sideswipe	Nighttime Crash
		Out of Control	

BOSTON
REGION
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North

Route 1 at Union Street
Collision Diagram, 2015–19

Addressing Priority Corridors from the LRTP Needs Assessment: Route 1 in Norwood

Route 1 at Union Street

Index	Crash Number	Crash Date	Crash Severity	Crash Time	Max Injury Severity Reported	Driver Contributing Circumstances (All Drivers)	Light Conditions	Manner of Collision	Road Surface Condition	Vehicle Actions Prior to Crash (All Vehicles)	Weather Conditions
1	4018995	02/01/2015	Non-fatal injury	11:42 AM	Non-fatal injury - Possible	D1: (Inattention),(Failed to yield right of way) / D2: (No improper drivin	Daylight	Rear-end	Dry	V1: Turning right / V2: Travelling straight ahead	Clear
2	4006945	02/06/2015	Property damage on	10:16 AM	No injury	D1: (Unknown)	Daylight	Angle	Ice	V1: Turning left / V2: Parked	Clear
3	4013283	02/26/2015	Property damage on	4:40 PM	No injury	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Slowing or st	Cloudy
4	4031915	04/14/2015	Non-fatal injury	8:20 PM	Non-fatal injury - Non-incapacitating	D1: (Unknown)	Dark - lighted roadway	Single vehicle crash	Dry	V1: Changing lanes	Clear/Other
5	4065484	07/22/2015	Property damage on	7:54 AM	No injury	D1: (No improper driving) / D2: (Other improper action)	Daylight	Rear-end	Dry	V1: Travelling straight ahead / V2: Travelling straigh	Clear
6	4065490	07/23/2015	Property damage on	7:51 PM	No injury	D1: (Disregarded traffic signs, signals, road markings) / D2: (No impro	Dusk	Sideswipe, same directio	Dry	V1: Overtaking/passing / V2: Turning right	Clear
7	4072054	08/09/2015	Non-fatal injury	8:36 PM	Non-fatal injury - Possible	D1: (No improper driving) / D2: (Failure to keep in proper lane or runni	Dark - lighted roadway	Sideswipe, same directio	Dry	V1: Travelling straight ahead / V2: Overtaking/passi	Clear
8	4098534	10/13/2015	Property damage on	8:32 PM	No injury	D1: (No improper driving) / D2: (Inattention)	Dark - lighted roadway	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Slowing or st	Clear
9	4102292	10/29/2015	Property damage on	12:23 PM	No injury	D1: (Followed too closely) / D2: (No improper driving)	Daylight	Rear-end	Dry	V1: Changing lanes / V2: Travelling straight ahead	Clear
10	4115001	11/27/2015	Property damage on	10:20 AM	No injury	D1: (Inattention) / D2: (Operating vehicle in erratic, reckless, careless, r	Daylight	Angle	Dry	V1: Turning left / V2: Travelling straight ahead / V3:	Clear
11	4115576	11/30/2015	Property damage on	5:24 PM	No injury	D1: (Unknown) / D2: (No improper driving)	Dark - lighted roadway	Rear-end	Dry	V1: Travelling straight ahead / V2: Slowing or stopp	Clear
12	4134343	01/12/2016	Non-fatal injury	7:46 AM	Non-fatal injury - Possible	D1: (No improper driving) / D2: (Followed too closely)	Daylight	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Travelling str	Clear
13	4142978	01/29/2016	Property damage on	7:27 AM	No injury	D1: (No improper driving) / D2: (Unknown)	Daylight	Angle	Wet	V1: Slowing or stopped in traffic / V2: Entering traff	Cloudy
14	4163801	02/24/2016	Property damage on	8:28 AM	No injury	D1: (Failed to yield right of way) / D2: (No improper driving)	Daylight	Rear-end	Wet	V1: Slowing or stopped in traffic / V2: Travelling str	Rain
15	4168660	03/26/2016	Property damage on	12:13 PM	No injury	D1: (Unknown) / D2: (Unknown)	Daylight	Angle	Dry	V1: Turning left / V2: Turning left	Cloudy
16	4168665	03/27/2016	Non-fatal injury	2:57 PM	Non-fatal injury - Possible	D1: (Exceeded authorized speed limit),(Disregarded traffic signs, signals	Daylight	Angle	Dry	V1: Travelling straight ahead / V2: Travelling straigh	Clear
17	4182709	04/29/2016	Property damage on	4:31 PM	No injury	D1: (Inattention) / D2: (No improper driving)	Daylight	Angle	Dry	V1: Slowing or stopped in traffic / V2: Travelling str	Clear
18	4259527	10/07/2016	Property damage on	7:35 AM	No injury	D1: (No improper driving) / D2: (Followed too closely)	Daylight	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Travelling str	Clear
19	4277432	11/07/2016	Non-fatal injury	1:16 PM	Non-fatal injury - Non-incapacitating	D1: (No improper driving) / D2: (Distracted)	Daylight	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Travelling str	Clear
20	4290096	11/28/2016	Property damage on	4:40 PM	No injury	D1: (Failed to yield right of way) / D2: (No improper driving)	Dark - lighted roadway	Angle	Dry	V1: Entering traffic lane / V2: Travelling straight ahe	Clear
21	4292585	12/01/2016	Property damage on	12:25 PM	No injury	D1: (Disregarded traffic signs, signals, road markings) / D2: (No impro	Daylight	Angle	Dry	V1: Travelling straight ahead / V2: Travelling straigh	Clear
22	4304855	12/31/2016	Property damage on	11:23 PM	No injury	D1: (Unknown) / D2: (No improper driving)	Dark - lighted roadway	Angle	Wet	V1: Turning right / V2: Travelling straight ahead	Rain
23	4306681	01/04/2017	Property damage on	7:24 AM	No injury	D1: (Fatigued/asleep)	Daylight	Single vehicle crash	Wet	V1: Travelling straight ahead	Cloudy/Rain
24	4328027	02/18/2017	Property damage on	2:57 PM	No injury	D1: (Unknown) / D2: (Unknown)	Daylight	Sideswipe, same directio	Dry	V1: Turning left / V2: Turning left	Clear/Other
25	4350480	04/02/2017	Property damage on	5:32 PM	No injury	D1: (Glare) / D2: (No improper driving)	Daylight	Rear-end	Dry	V1: Travelling straight ahead / V2: Travelling straigh	Clear
26	4357043	04/28/2017	Non-fatal injury	2:06 PM	Non-fatal injury - Non-incapacitating	D1: (Failed to yield right of way) / D2: (No improper driving)	Daylight	Angle	Dry	V1: Travelling straight ahead / V2: Travelling straigh	Clear
27	4368759	05/26/2017	Property damage on	4:32 PM	No injury	D1: (Driving too fast for conditions) / D2: (No improper driving)	Daylight	Rear-end	Wet	V1: Travelling straight ahead / V2: Slowing or stopp	Rain
28	4388849	07/12/2017	Non-fatal injury	6:37 PM	Non-fatal injury - Non-incapacitating	D1: (Followed too closely) / D2: (No improper driving)	Dusk	Rear-end	Wet	V1: Travelling straight ahead / V2: Slowing or stopp	Rain
29	4437486	10/03/2017	Property damage on	3:28 PM	No injury	D1: (No improper driving) / D2: (Glare)	Daylight	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Travelling str	Clear
30	4437569	10/07/2017	Non-fatal injury	1:05 PM	Non-fatal injury - Non-incapacitating	D1: (No improper driving) / D2: (No improper driving) / D3: (No impro	Daylight	Angle	Dry	V1: Slowing or stopped in traffic / V2: Slowing or st	Clear
31	4505547	02/22/2018	Property damage on	6:03 PM	No injury	D1: (No improper driving) / D2: (Failed to yield right of way)	Dark - lighted roadway	Sideswipe, opposite direc	Wet	V1: Travelling straight ahead / V2: Turning left	Snow/Rain
32	4621156	11/07/2018	Property damage on	1:56 PM	No injury	D1: (No improper driving) / D2: (No improper driving)	Daylight	Angle	Dry	V1: Travelling straight ahead / V2: Turning left	Clear
33	4648559	01/04/2019	Non-fatal injury	1:14 PM	Non-fatal injury - Possible	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Travelling str	Cloudy
34	4650782	01/12/2019	Property damage on	3:03 PM	No injury	D1: (Inattention) / D2: (No improper driving)	Daylight	Angle	Dry	V1: Changing lanes / V2: Turning right	Clear
35	4664997	02/15/2019	Property damage on	10:03 AM	No injury	D1: (Failed to yield right of way) / D2: (No improper driving) / D3: (No i	Daylight	Angle	Dry	V1: Changing lanes / V2: Travelling straight ahead /	Cloudy
36	4675789	03/12/2019	Non-fatal injury	2:55 PM	Possible Injury (C)	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Travelling str	Clear/Cloudy
37	4790742	03/28/2019	Non-fatal injury	3:39 PM	Suspected Minor Injury (B)	D1: (No improper driving) / D2: (Other improper action)	Daylight	Angle	Dry	V1: Travelling straight ahead / V2: Travelling straigh	Clear
38	4710065	05/31/2019	Property damage on	10:15 AM	No Apparent Injury (O)	D1: (Inattention),(Exceeded authorized speed limit)	Daylight	Head-on	Dry	V1: Travelling straight ahead / V2: Parked	Clear
39	4711219	06/11/2019	Property damage on	1:11 PM	No Apparent Injury (O)	D1: (No improper driving)	Daylight	Sideswipe, same directio	Dry	V1: Travelling straight ahead	Clear
40	4718046	06/26/2019	Non-fatal injury	6:35 PM	Possible Injury (C)	D1: (No improper driving) / D2: (Failed to yield right of way)	Daylight	Angle	Dry	V1: Turning left / V2: Turning left	Clear
41	4749899	09/13/2019	Non-fatal injury	8:07 AM	Possible Injury (C)	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Slowing or st	Clear
42	4752882	09/20/2019	Property damage on	8:18 AM	No Apparent Injury (O)	D1: (Unknown) / D2: (No improper driving) / D3: (No improper driving)	Daylight	Rear-end	Dry	V1: Travelling straight ahead / V2: Slowing or stopp	Clear
43	4762173	10/15/2019	Non-fatal injury	2:04 PM	Suspected Minor Injury (B)	D1: (Unknown)	Daylight	Single vehicle crash	Dry	V1: Turning left	Clear
44	4777291	11/18/2019	Property damage on	12:56 PM	No Apparent Injury (O)	D1: (Unknown) / D2: (No improper driving)	Daylight	Rear-end	Wet	V1: Travelling straight ahead / V2: Slowing or stopp	Rain
45	4780514	11/25/2019	Property damage on	12:13 PM	No Apparent Injury (O)	D1: (No improper driving) / D2: (No improper driving)	Daylight	Rear-end	Dry	V1: Turning right / V2: Turning right	Cloudy
46	4790676	12/13/2019	Property damage on	6:02 AM	No Apparent Injury (O)	D1: (No improper driving) / D2: (No improper driving)	Dawn	Sideswipe, same directio	Ice	V2: Travelling straight ahead / V1: Changing lanes	Cloudy

Data Level:
Query Type:
Criteria:

The number next to each collision can be used to look up crash record information included in Appendix E

Bertucci's
Stop & Shop
Norwell Police
Norwell Fire Department
Wendy's
US Route 1/Providence Highway
Plymouth Drive
Sumner Street
Bristol Drive

25, 27
4, 9, 32, 35
38
19, 44
1, 10, 28, 36, 41
14
3
22
13
15
8
7
23
21
29
2, 11, 18, 24, 33, 34
37, 39, 40, 43
20
5, 6, 26
16
28
12, 17, 31
42

SYMBOLS				TYPES OF CRASH		CRASH INDEX AND SEVERITY	
Moving Vehicle		Parked Vehicle		Head On		# , (#) , (#)	
Backing Vehicle		Fixed Object		Angle		#	Property Damage Only Crash Index Number
Non-Involved Vehicle		Bicycle		Rear End		(#)	Injury Crash Index Number
Pedestrian		Animal				(#)	Fatal Crash Index Number
				Sideswipe			Nighttime Crash
				Out of Control			

BOSTON REGION MPO

North

Route 1 at Sumner Street
Collision Diagram, 2015–19

Addressing Priority Corridors from the LRTP Needs Assessment: Route 1 in Norwood

Route 1 at Sumner Street

Index	Crash Number	Crash_Date	Crash Severity	Crash_Time	Crash_Year	Max Injury Severity Reported	Driver Contributing Circumstances (All Drivers)	Light Conditions	Manner Collision	Road Surface	Vehicle Actions Prior to Crash (All Vehicles)	Weather Conditions
1	4010639	02/20/2015	Non-fatal injury	6:21 PM	2015	Non-fatal injury - Possible	D1: (No improper driving)	Dark - lighted roadway	Rear-end	Dry	V1: Slowing or stopped in traffic	Clear
2	4028898	04/02/2015	Non-fatal injury	11:39 AM	2015	Non-fatal injury - Non-incapacitating	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Travelling str	Cloudy
3	4046841	05/30/2015	Property damage only (none	12:07 PM	2015	No injury	D1: (No improper driving) / D2: (Failure to keep in proper	Daylight	Sideswipe, same direction	Dry	V1: Travelling straight ahead / V2: Travelling straigh	Clear
4	4057103	07/01/2015	Property damage only (none	1:05 PM	2015	No injury	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Dry	V1: Travelling straight ahead / V2: Travelling straigh	Clear
5	4061251	07/13/2015	Property damage only (none	5:58 AM	2015	No injury	D1: (Inattention) / D2: (No improper driving) / D3: (No in	Daylight	Rear-end	Dry	V1: Travelling straight ahead / V2: Slowing or stopp	Clear
6	4061642	07/14/2015	Property damage only (none	7:56 AM	2015	No injury	D1: (Distracted) / D2: (No improper driving) / D3: (No im	Daylight	Rear-end	Dry	V1: Travelling straight ahead / V2: Slowing or stopp	Clear
7	4073884	08/16/2015	Non-fatal injury	11:03 AM	2015	Non-fatal injury - Possible	D1: (Followed too closely) / D2: (Failure to keep in proper	Daylight	Angle	Dry	V1: Turning left / V2: Turning right	Clear
8	4082565	09/08/2015	Property damage only (none	3:03 PM	2015	No injury	D1: (No improper driving)	Daylight	Angle	Dry	V1: Turning left	Clear
9	4095181	10/10/2015	Property damage only (none	4:50 PM	2015	No injury	D1: (Followed too closely) / D2: (No improper driving)	Daylight	Rear-end	Dry	V1: Travelling straight ahead / V2: Travelling straigh	Clear
10	4107463	11/06/2015	Property damage only (none	12:54 PM	2015	No injury	D1: (Inattention) / D2: (No improper driving)	Daylight	Rear-end	Dry	V1: Travelling straight ahead / V2: Slowing or stopp	Clear
11	4120917	12/13/2015	Property damage only (none	10:03 AM	2015	No injury	D1: (No improper driving) / D2: (Distracted)	Daylight	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Slowing or sto	Cloudy
12	4147984	02/09/2016	Non-fatal injury	8:56 AM	2016	Non-fatal injury - Possible	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Ice	V1: Slowing or stopped in traffic / V2: Travelling str	Cloudy
13	4151068	02/12/2016	Property damage only (none	6:43 PM	2016	No injury	D1: (Other improper action) / D2: (No improper driving)	Dark - lighted roadway	Angle	Dry	V1: Making U-turn / V2: Travelling straight ahead	Clear
14	4155655	02/27/2016	Property damage only (none	2:23 PM	2016	No injury	D1: (Unknown)	Daylight	Rear-end	Dry	V1: Slowing or stopped in traffic	Clear
15	4187612	05/05/2016	Property damage only (none	9:40 AM	2016	No injury	D1: (Unknown) / D2: (Unknown)	Daylight	Angle	Dry	V1: Travelling straight ahead / V2: Travelling straigh	Cloudy
16	4190312	05/13/2016	Property damage only (none	6:07 PM	2016	No injury	D1: (No improper driving)	Daylight	Single vehicle crash	Wet	V1: Changing lanes	Cloudy
17	4266453	10/18/2016	Property damage only (none	8:00 AM	2016	No injury	D1: (Inattention) / D2: (No improper driving)	Daylight	Rear-end	Wet	V1: Travelling straight ahead / V2: Travelling straigh	Cloudy
18	4289513	11/24/2016	Non-fatal injury	9:21 PM	2016	Non-fatal injury - Possible	D1: (Operating vehicle in erratic, reckless, careless, neglig	Dark - lighted roadway	Rear-end	Dry	V1: Travelling straight ahead / V2: Slowing or stopp	Clear
19	4317437	01/26/2017	Non-fatal injury	8:19 PM	2017	Non-fatal injury - Possible	D1: (No improper driving) / D2: (Inattention)	Dark - lighted roadway	Angle	Dry	V1: Slowing or stopped in traffic / V2: Travelling str	Clear
20	4318124	01/27/2017	Property damage only (none	5:15 PM	2017	No injury	D1: (Inattention) / D2: (No improper driving)	Dusk	Rear-end	Dry	V1: Travelling straight ahead / V2: Slowing or stopp	Clear
21	4321538	02/03/2017	Non-fatal injury	8:56 AM	2017	Non-fatal injury - Non-incapacitating	D1: (Inattention)	Daylight	Single vehicle crash	Dry	V1: Turning right	Clear
22	4334153	03/06/2017	Property damage only (none	8:51 PM	2017	No injury	D1: (Operating vehicle in erratic, reckless, careless, neglig	Dark - lighted roadway	Single vehicle crash	Dry	V1: Travelling straight ahead	Clear
23	4373185	06/06/2017	Property damage only (none	8:25 PM	2017	No injury	D1: (Unknown) / D2: (Unknown)	Dark - lighted roadway	Angle	Wet	V1: Travelling straight ahead / V2: Turning left	Rain
24	4390068	07/13/2017	Property damage only (none	8:42 AM	2017	No injury	D1: (Followed too closely) / D2: (No improper driving)	Daylight	Rear-end	Dry	V1: Travelling straight ahead / V2: Slowing or stopp	Cloudy
25		9/20/2017	Property damage only (none injured)			No injury			Rear-end		V1: Slowing or stopped in traffic / V2: Travelling straight ahead	
26	4448126	11/01/2017	Non-fatal injury	1:53 PM	2017	Non-fatal injury - Possible	D1: (No improper driving) / D2: (No improper driving) / D	Daylight	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Slowing or sto	Clear
27	4483975	01/12/2018	Property damage only (none	12:04 PM	2018	No injury	D1: (No improper driving) / D2: (Followed too closely)	Daylight	Rear-end	Wet	V1: Slowing or stopped in traffic / V2: Travelling str	Rain
28	4485615	01/17/2018	Non-fatal injury	10:14 AM	2018	Non-fatal injury - Non-incapacitating	D1: (No improper driving) / D2: (Followed too closely)	Daylight	Rear-end	Snow	V1: Slowing or stopped in traffic / V2: Travelling str	Snow
29	4513854	03/07/2018	Property damage only (none	10:02 PM	2018	No injury	D1: (No improper driving) / D2: (No improper driving)	Dark - lighted roadway	Angle	Snow	V1: Travelling straight ahead / V2: Slowing or stopp	Snow/Blowing sand, snow
30	4541777	05/21/2018	Property damage only (none	4:48 PM	2018	No injury	D1: (Followed too closely) / D2: (No improper driving) / D	Daylight	Rear-end	Dry	V1: Travelling straight ahead / V2: Travelling straigh	Clear
31	4551048	06/07/2018	Non-fatal injury	8:20 AM	2018	Non-fatal injury - Non-incapacitating	D1: (No improper driving) / D2: (Followed too closely)	Daylight	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Travelling str	Clear
32	4554162	06/16/2018	Non-fatal injury	11:55 AM	2018	Non-fatal injury - Possible	D1: (Inattention) / D2: (No improper driving)	Daylight	Rear-end	Dry	V1: Travelling straight ahead / V2: Slowing or stopp	Clear
33	4588620	08/27/2018	Non-fatal injury	5:39 PM	2018	Non-fatal injury - Possible	D1: (No improper driving) / D2: (Physical impairment)	Daylight	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Travelling str	Clear
34	4593719	09/12/2018	Property damage only (none	11:35 AM	2018	No injury	D1: (No improper driving) / D2: (Followed too closely)	Daylight	Rear-end	Wet	V1: Travelling straight ahead / V2: Travelling straigh	Cloudy
35	4604371	10/02/2018	Property damage only (none	9:25 AM	2018	No injury	D1: (Followed too closely) / D2: (No improper driving)	Daylight	Rear-end	Wet	V1: Travelling straight ahead / V2: Slowing or stopp	Rain
36	4618206	11/02/2018	Property damage only (none	8:37 AM	2018	No injury	D1: (Followed too closely),(Inattention)	Daylight	Rear-end	Wet	V1: Travelling straight ahead	Cloudy
37	4640145	12/19/2018	Property damage only (none	7:59 AM	2018	No injury	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Travelling str	Clear
38	4663693	02/12/2019	Property damage only (none	3:16 PM	2019	No injury	D1: (Over-correcting/over-steering)	Daylight	Single vehicle crash	Snow	V1: Travelling straight ahead	Snow
39	4682031	02/28/2019	Property damage only (none	6:41 PM	2019	No injury	D1: (No improper driving) / D2: (Inattention)	Dark - lighted roadway	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Slowing or sto	Clear
40	4675335	03/10/2019	Property damage only (none	9:59 PM	2019	No Apparent Injury (O)	D1: (No improper driving) / D2: (Inattention)	Dark - lighted roadway	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Slowing or sto	Cloudy
41	4689828	04/12/2019	Property damage only (none	11:19 AM	2019	No Apparent Injury (O)	D1: (Unknown) / D2: (No improper driving)	Daylight	Rear-end	Dry	V1: Changing lanes / V2: Slowing or stopped in traffi	Clear
42	4706282	05/25/2019	Property damage only (none	3:22 PM	2019	No Apparent Injury (O)	D1: (Inattention) / D2: (No improper driving)	Daylight	Rear-end	Dry	V1: Entering traffic lane / V2: Travelling straight ahe	Clear
43	4719312	06/29/2019	Property damage only (none	12:16 PM	2019	No Apparent Injury (O)	D1: (Inattention) / D2: (No improper driving)	Daylight	Rear-end	Dry	V1: Travelling straight ahead / V2: Travelling straigh	Clear
44	4736066	08/09/2019	Property damage only (none	10:19 AM	2019	No Apparent Injury (O)	D1: (No improper driving) / D2: (Inattention)	Daylight	Angle	Dry	V1: Slowing or stopped in traffic / V2: Turning left	Clear

SYMBOLS				TYPES OF CRASH		CRASH INDEX AND SEVERITY	
Moving Vehicle		Parked Vehicle		Head On		# , (#) , (#)	
Backing Vehicle		Fixed Object		Angle	Sideswipe	#	Property Damage Only Crash Index Number
Non-Involved Vehicle		Bicycle		Rear End	Out of Control	(#)	Injury Crash Index Number
Pedestrian		Animal				(#)	Fatal Crash Index Number
							Nighttime Crash

BOSTON REGION MPO

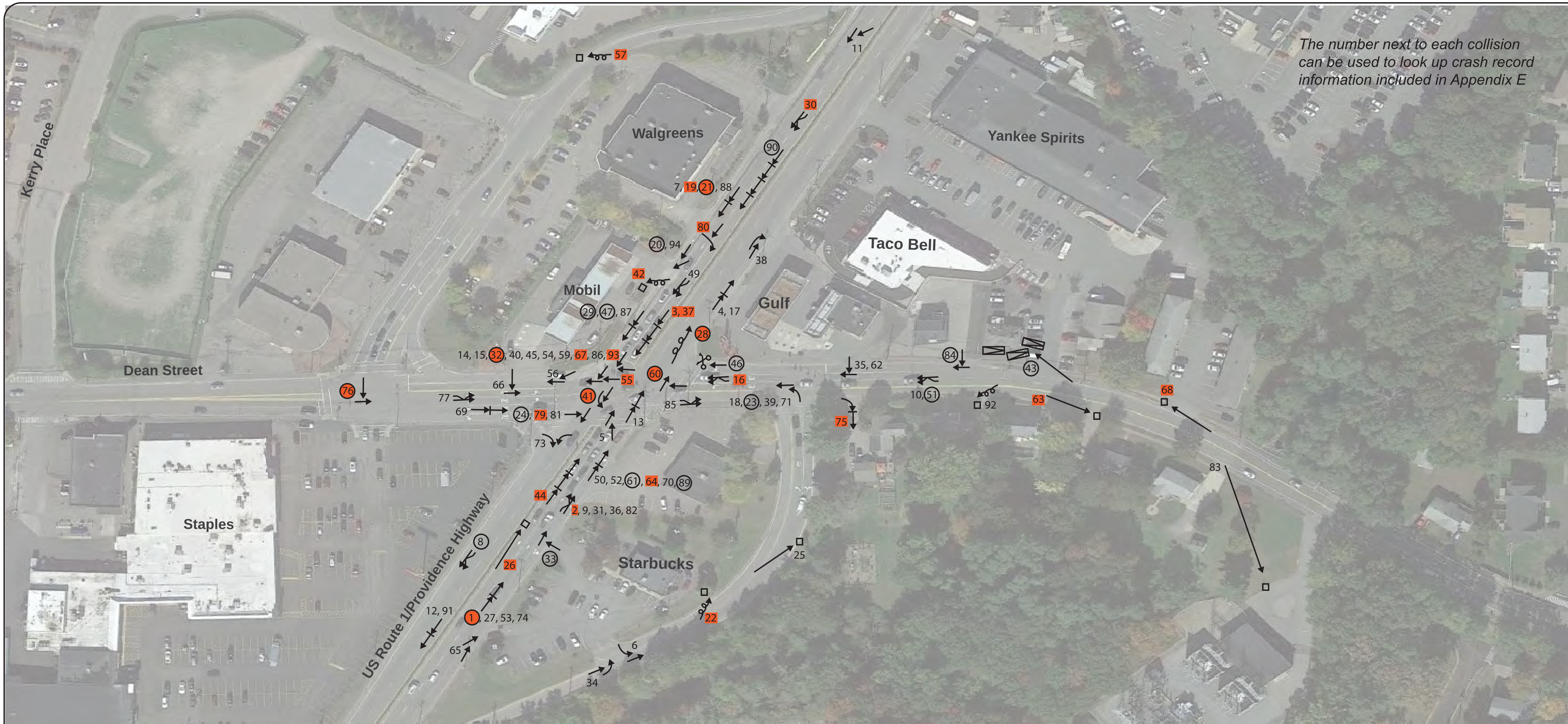
North

Route 1 at Morse Street
Collision Diagram, 2015–19

Addressing Priority Corridors from the LRTP Needs Assessment: Route 1 in Norwood

Route 1 at Morse Street

Index	Crash Number	Crash_Date	Crash_Sev	Crash_Time	Crash_Year	Max Injury Severity Reported	Driver Contributing Circumstances (All Drivers)	Light Condition	Manner Collision	Road Surface Condition	Vehicle Actions Prior to Crash (All Vehicles)	Weather Conditions
1	3992243	01/09/2015	Property damage only (none i	9:40 AM	2015	No injury	D1: (No improper driving) / D2: (No improper driving)	Daylight	Rear-end	Ice	V1: Slowing or stopped in traffic / V2: Turning left	Snow
2	4001664	02/03/2015	Property damage only (none i	11:42 AM	2015	No injury	D1: (Followed too closely) / D2: (No improper driving)	Daylight	Rear-end	Wet	V1: Travelling straight ahead / V2: Slowing or stopped in traffic	Other
3	4009982	02/14/2015	Property damage only (none i	8:12 PM	2015	No injury	D1: (No improper driving) / D2: (No improper driving)	Dark - lighted roadway	Rear-end	Snow	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffi	Snow
4	4049134	06/04/2015	Non-fatal injury	1:58 PM	2015	Non-fatal injury - Possible	D1: (No improper driving)	Daylight	Rear-end	Dry	V1: Slowing or stopped in traffic	Clear
5	4051979	06/12/2015	Non-fatal injury	5:53 PM	2015	Non-fatal injury - Possible	D1: (Inattention),(Followed too closely) / D2: (No improper d	Daylight	Rear-end	Dry	V1: Travelling straight ahead / V2: Slowing or stopped in traffic / V	Clear/Other
6	4060641	07/09/2015	Property damage only (none i	5:15 PM	2015	No injury	D1: (Inattention) / D2: (No improper driving)	Daylight	Sideswipe, same direction	Dry	V1: Travelling straight ahead / V2: Slowing or stopped in traffic	Clear
7	4068624	07/30/2015	Property damage only (none i	5:56 PM	2015	No injury	D1: (No improper driving) / D2: (Followed too closely)	Daylight	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	Clear
8	4072119	08/11/2015	Property damage only (none i	5:06 PM	2015	No injury	D1: (Inattention) / D2: (No improper driving)	Daylight	Angle	Wet	V1: Turning left / V2: Travelling straight ahead	Rain/Cloudy
9	4077386	08/22/2015	Non-fatal injury	1:45 PM	2015	Non-fatal injury - Possible	D1: (No improper driving) / D2: (Disregarded traffic signs, sig	Daylight	Angle	Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Cloudy
10	4076920	08/24/2015	Non-fatal injury	8:22 AM	2015	Non-fatal injury - Possible	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	Cloudy
11	4088343	09/22/2015	Property damage only (none i	3:15 PM	2015	No injury	D1: (No improper driving) / D2: (Other improper action)	Daylight	Angle	Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
12	4095179	10/10/2015	Non-fatal injury	11:56 AM	2015	Non-fatal injury - Possible	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	Clear
13	4096301	10/14/2015	Property damage only (none i	9:18 PM	2015	No injury	D1: (No improper driving) / D2: (No improper driving) / D3: (	Dark - lighted roadway	Rear-end	Dry	V1: Travelling straight ahead / V2: Travelling straight ahead / V3:	Clear/Other
14	4100720	10/24/2015	Non-fatal injury	4:27 AM	2015	Non-fatal injury - Possible	D1: (Unknown) / D2: (Unknown)	Dark - lighted roadway	Angle	Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
15	4116514	12/01/2015	Non-fatal injury	8:07 AM	2015	Non-fatal injury - Possible	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	Cloudy
16	4137579	01/20/2016	Property damage only (none i	11:52 AM	2016	No injury	D1: (No improper driving) / D2: (Disregarded traffic signs, sig	Daylight	Angle	Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
17	4151616	02/17/2016	Non-fatal injury	9:19 PM	2016	Non-fatal injury - Non-incapacitating	D1: (Disregarded traffic signs, signals, road markings) / D2: (N	Dark - lighted roadway	Angle	Dry	V1: Overtaking/passing / V2: Travelling straight ahead	Clear
18	4241963	09/03/2016	Property damage only (none i	1:01 PM	2016	No injury	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	Cloudy
19	4255787	09/29/2016	Property damage only (none i	6:56 AM	2016	No injury	D1: (No improper driving) / D2: (Disregarded traffic signs, sig	Daylight	Angle	Dry	V1: Turning left / V2: Travelling straight ahead / V3: Turning left	Clear
20	4304230	12/24/2016	Non-fatal injury	2:43 PM	2016	Non-fatal injury - Possible	D1: (Inattention) / D2: (No improper driving) / D3: (No impro	Daylight	Rear-end	Wet	V1: Travelling straight ahead / V2: Travelling straight ahead / V3: T	Clear
21	4318122	01/27/2017	Property damage only (none i	11:41 AM	2017	No injury	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Dry	V1: Turning right / V2: Turning right	Clear
22	4381611	06/21/2017	Property damage only (none i	9:03 AM	2017	No injury	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
23	4402765	08/04/2017	Property damage only (none i	6:21 PM	2017	No injury	D1: (Operating vehicle in erratic, reckless, careless, negligent	Daylight	Sideswipe, same direction	Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
24	4416034	09/01/2017	Non-fatal injury	6:41 PM	2017	Non-fatal injury - Possible	D1: (No improper driving) / D2: (Operating vehicle in erratic,	Daylight	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	Clear
25	4464390	12/05/2017	Non-fatal injury	10:24 AM	2017	Non-fatal injury - Possible	D1: (No improper driving) / D2: (No improper driving)	Daylight	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	Cloudy
26	4498654	02/08/2018	Non-fatal injury	12:09 PM	2018	Non-fatal injury - Non-incapacitating	D1: (No improper driving) / D2: (Followed too closely)	Daylight	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	Clear
27	4530136	04/24/2018	Property damage only (none i	9:21 AM	2018	No injury	D1: (Unknown) / D2: (Unknown)	Daylight	Sideswipe, same direction	Dry	V1: Changing lanes / V2: Travelling straight ahead	Clear
28	4540094	05/17/2018	Property damage only (none i	10:47 AM	2018	No injury	D1: (Operating defective equipment) / D2: (No improper driv	Daylight	Rear-end	Dry	V1: Travelling straight ahead / V2: Slowing or stopped in traffic	Cloudy
29	4551046	05/18/2018	Property damage only (none i	5:04 PM	2018	No injury	D1: (No improper driving) / D2: (No improper driving) / D3: (	Daylight	Sideswipe, same direction	Dry	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffi	Clear
30	4543393	05/22/2018	Property damage only (none i	4:51 PM	2018	No injury	D1: (No improper driving) / D2: (No improper driving) / D3: (	Daylight	Rear-end	Wet	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffi	Rain
31	4543394	05/22/2018	Non-fatal injury	4:51 PM	2018	Non-fatal injury - Possible	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Wet	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffi	Rain
32	4543396	05/23/2018	Property damage only (none i	3:43 PM	2018	No injury	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffi	Clear
33	4575297	07/31/2018	Property damage only (none i	5:05 PM	2018	No injury	D1: (Followed too closely) / D2: (No improper driving)	Daylight	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffi	Clear
34	4585940	08/17/2018	Property damage only (none i	6:39 AM	2018	No injury	D1: (Distracted)	Daylight	Single vehicle crash	Dry	V1: Travelling straight ahead	Clear
35	4631486	12/02/2018	Non-fatal injury	5:29 AM	2018	Non-fatal injury - Possible	D1: (Unknown) / D2: (Unknown)	Dark - lighted roadway	Angle	Wet	V1: Travelling straight ahead / V2: Travelling straight ahead	Rain
36	4682017	01/11/2019	Property damage only (none i	3:40 PM	2019	No injury	D1: (Inattention) / D2: (No improper driving)	Daylight	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffi	Clear
37	4670293	02/27/2019	Property damage only (none i	3:20 PM	2019	No injury	D1: (No improper driving) / D2: (No improper driving)	Daylight	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	Clear
38	4672485	03/04/2019	Property damage only (none i	9:09 PM	2019	No injury	D1: (Distracted) / D2: (No improper driving)	Dark - lighted roadway	Rear-end	Dry	V1: Travelling straight ahead / V2: Slowing or stopped in traffic	Clear
39	4691649	04/18/2019	Property damage only (none i	12:38 PM	2019	No Apparent Injury (O)	D1: (Unknown) / D2: (Unknown)	Daylight	Sideswipe, same direction	Dry	V1: Turning left / V2: Travelling straight ahead	Clear
40	4714163	06/17/2019	Non-fatal injury	4:07 PM	2019	Suspected Minor Injury (B)	D1: (Inattention) / D2: (No improper driving)	Dawn	Rear-end	Dry	V1: Travelling straight ahead / V2: Slowing or stopped in traffic	Clear
41	4754252	09/25/2019	Non-fatal injury	9:34 AM	2019	Suspected Serious Injury (A)	D1: (Failed to yield right of way) / D2: (No improper driving)	Daylight	Angle	Dry	V1: Entering traffic lane / V2: Travelling straight ahead	Clear
42	4756844	10/02/2019	Property damage only (none i	4:28 PM	2019	No Apparent Injury (O)	D1: (Unknown)	Daylight	Single vehicle crash	Wet	V1: Making U-turn	Rain/Cloudy
43	4761368	10/11/2019	Non-fatal injury	8:46 AM	2019	Suspected Minor Injury (B)	D1: (Driving too fast for conditions),(Operating defective equ	Daylight	Rear-end	Wet	V1: Travelling straight ahead / V2: Slowing or stopped in traffic	Rain
44	4782194	11/30/2019	Non-fatal injury	4:47 PM	2019	Suspected Serious Injury (A)	D1: (No improper driving) / D2: (Unknown)	Dark - lighted roadway	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffi	Clear



SYMBOLS		TYPES OF CRASH		CRASH INDEX AND SEVERITY
Moving Vehicle	Parked Vehicle	Head On	Sideswipe	# Property Damage Only Crash Index Number
Backing Vehicle	Fixed Object	Angle	Out of Control	(#) Injury Crash Index Number
Non-Involved Vehicle	Bicycle	Rear End		(#) Fatal Crash Index Number
Pedestrian	Animal			Nighttime Crash

BOSTON
REGION
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North

Route 1 at Dean Street
Collision Diagram, 2015–19

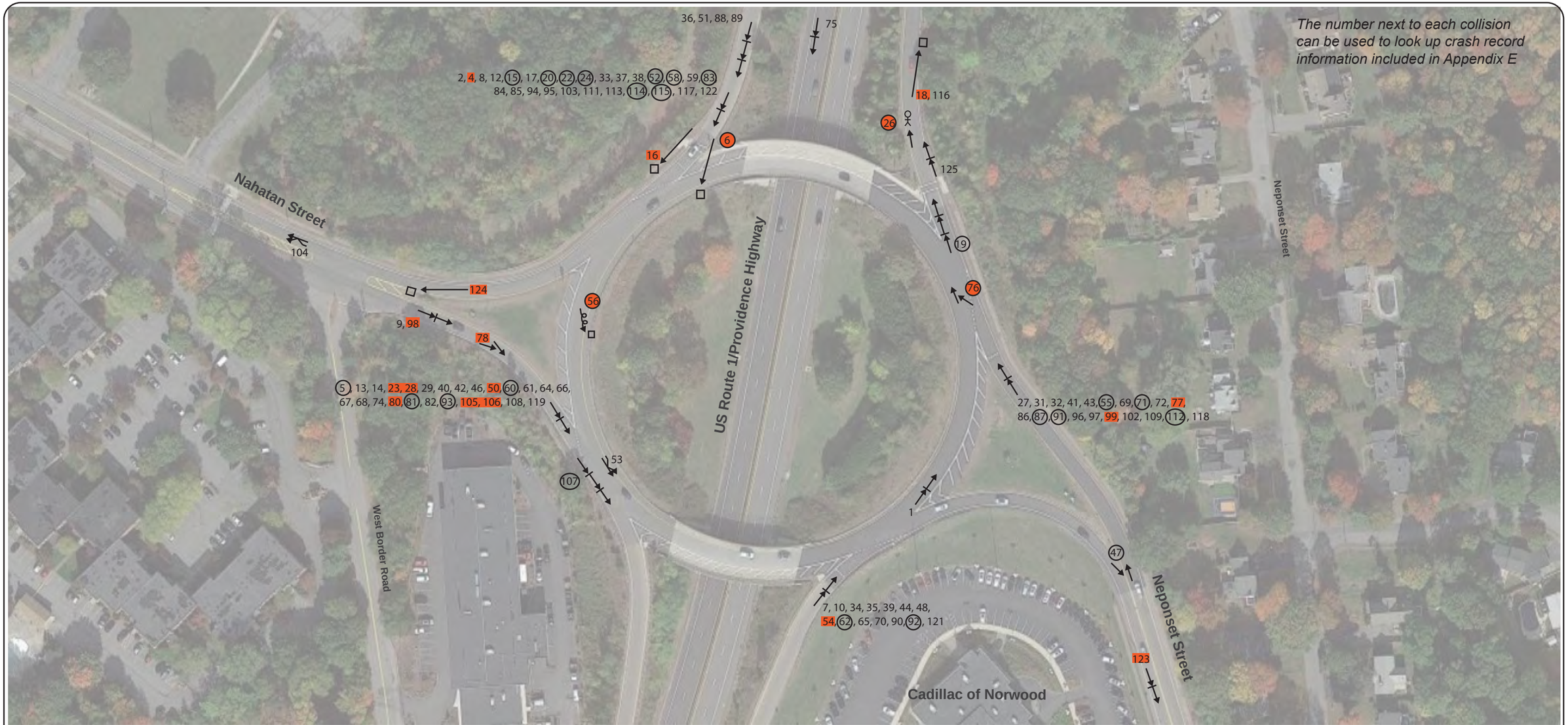
Addressing Priority Corridors from the LRTP Needs Assessment: Route 1 in Norwood

Route 1 at Dean Street

Index	Crash Number	Crash Date	Crash Severity	Crash Time	Max Injury Severity Reported	Driver Contributing Circumstances (All Drivers)	Light Conditions	Manner of Collision	Road Surface Condition	Vehicle Actions Prior to Crash (All Vehicles)	Weather Conditions
1	3991545	01/06/2015	Non-fatal injury	6:37 AM	Non-fatal injury - Possible	D1: (No improper driving) / D2: (Other improper action)	Dark - roadway not lighted	Rear-end	Dry	V1: Travelling straight ahead / V2: Travelling s	Clear
2	3991546	01/07/2015	Property damage only (no	5:14 PM	No injury	D1: (No improper driving) / D2: (Other improper action)	Dark - lighted roadway	Sideswipe, same direction	Dry	V1: Travelling straight ahead / V2: Changing la	Clear
3	3996572	01/17/2015	Property damage only (no	6:17 PM	No injury	D1: (No improper driving) / D2: (No improper driving) / D	Dark - lighted roadway	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Slowing	Clear
4	4001238	02/01/2015	Property damage only (no	2:18 PM	No injury	D1: (No improper driving) / D2: (Unknown)	Daylight	Rear-end	Dry	V1: Travelling straight ahead / V2: Travelling s	Clear
5	4006947	02/09/2015	Property damage only (no	9:53 AM	No injury	D1: (No improper driving) / D2: (Failed to yield right of wa	Daylight	Angle	Snow	V1: Travelling straight ahead / V2: Turning left	Snow
6	4006952	02/14/2015	Property damage only (no	3:39 PM	No injury	D1: (No improper driving) / D2: (Failed to yield right of wa	Daylight	Angle	Snow	V1: Travelling straight ahead / V2: Entering tra	Snow
7	4014090	02/27/2015	Property damage only (no	1:42 PM	No injury	D1: (No improper driving) / D2: (No improper driving)	Daylight	Rear-end	Dry	V1: Travelling straight ahead / V2: Travelling s	Clear
8	4022635	03/18/2015	Non-fatal injury	2:58 PM	Non-fatal injury - Possible	D1: (Swerving or avoiding due to wind, slippery surface, ve	Daylight	Sideswipe, same direction	Dry	V1: Changing lanes / V2: Travelling straight ah	Clear
9	4025174	03/25/2015	Property damage only (no	6:13 PM	No injury	D1: (No improper driving) / D2: (Inattention),(Failed to yie	Daylight	Sideswipe, same direction	Dry	V1: Travelling straight ahead / V2: Changing la	Cloudy
10	4046456	05/28/2015	Property damage only (no	5:47 PM	No injury	D1: (Inattention) / D2: (No improper driving)	Daylight	Sideswipe, same direction	Dry	V1: Travelling straight ahead / V2: Travelling s	Clear
11	4060643	07/12/2015	Property damage only (no	12:57 PM	No injury	D1: (Unknown) / D2: (Unknown)	Daylight	Angle	Dry	V1: Travelling straight ahead / V2: Changing la	Clear
12	4066009	07/24/2015	Property damage only (no	7:12 PM	No injury	D1: (No improper driving) / D2: (Followed too closely)	Daylight	Rear-end	Dry	V1: Travelling straight ahead / V2: Travelling s	Clear
13	4081599	09/06/2015	Property damage only (no	5:18 PM	No injury	D1: (Unknown) / D2: (Unknown)	Daylight	Rear-end	Dry	V1: Travelling straight ahead / V2: Travelling s	Clear
14	4081600	09/06/2015	Property damage only (no	6:55 PM	No injury	D1: (No improper driving) / D2: (No improper driving)	Daylight	Angle	Dry	V1: Travelling straight ahead / V2: Travelling s	Clear
15	4098047	10/19/2015	Property damage only (no	12:51 PM	No injury	D1: (Unknown) / D2: (Unknown)	Daylight	Angle	Dry	V1: Travelling straight ahead / V2: Travelling s	Clear
16	4130635	12/20/2015	Property damage only (no	3:17 AM	No injury	D1: (No improper driving) / D2: (Failure to keep in proper	Dark - lighted roadway	Sideswipe, same direction	Dry	V1: Travelling straight ahead / V2: Turning rigt	Clear
17	4130638	12/21/2015	Property damage only (no	8:34 AM	No injury	D1: (Followed too closely) / D2: (No improper driving)	Daylight	Rear-end	Dry	V1: Travelling straight ahead / V2: Travelling s	Clear/Unknown
18	4130646	12/24/2015	Property damage only (no	8:56 AM	No injury	D1: (Unknown) / D2: (No improper driving)	Daylight	Angle	Dry	V1: Travelling straight ahead / V2: Turning left	Cloudy
19	4132931	01/11/2016	Property damage only (no	4:33 PM	No injury	D1: (Inattention) / D2: (No improper driving)	Dark - lighted roadway	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Slowing	Clear
20	4137573	01/14/2016	Non-fatal injury	3:01 PM	Non-fatal injury - Non-incapacita	D1: (Made an improper turn) / D2: (No improper driving)	Daylight	Angle	Dry	V1: Turning right / V2: Travelling straight ahea	Clear
21	4142388	01/28/2016	Non-fatal injury	5:45 PM	Non-fatal injury - Possible	D1: (Inattention) / D2: (No improper driving)	Dark - lighted roadway	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Slowing	Clear
22	4153609	02/22/2016	Not Reported	12:12 AM	Unknown	D1: (Operating vehicle in erratic, reckless, careless, negli	Dark - lighted roadway	Single vehicle crash	Dry	V1: Travelling straight ahead	Clear
23	4155780	02/27/2016	Non-fatal injury	3:21 PM	Non-fatal injury - Non-incapacita	D1: (Unknown) / D2: (No improper driving)	Daylight	Angle	Dry	V1: Travelling straight ahead / V2: Turning left	Clear
24	4166292	03/20/2016	Non-fatal injury	10:37 AM	Non-fatal injury - Incapacitating	D1: (No improper driving) / D2: (Disregarded traffic signs,	Daylight	Angle	Dry	V1: Travelling straight ahead / V2: Turning left	Clear
25	4169304	03/28/2016	Property damage only (no	5:10 PM	No injury	D1: (Inattention)	Daylight	Single vehicle crash	Wet	V1: Changing lanes	Rain
26	4169306	03/29/2016	Property damage only (no	10:21 PM	No injury	D1: (Other improper action)	Dark - lighted roadway	Single vehicle crash	Dry	V1: Changing lanes	Clear
27	4190313	05/13/2016	Property damage only (no	6:42 PM	No injury	D1: (No improper driving) / D2: (Distracted)	Daylight	Rear-end	Wet	V1: Slowing or stopped in traffic / V2: Travellir	Rain
28	4191245	05/17/2016	Non-fatal injury	12:45 AM	Non-fatal injury - Non-incapacita	D1: (Operating vehicle in erratic, reckless, careless, negli	Dark - roadway not lighted	Single vehicle crash	Dry	V1: Leaving traffic lane	Clear
29	4204496	06/12/2016	Non-fatal injury	6:05 PM	Non-fatal injury - Possible	D1: (No improper driving) / D2: (Followed too closely)	Daylight	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Travellir	Clear
30	4208760	06/25/2016	Property damage only (no	2:04 AM	No injury	D1: (No improper driving) / D2: (Inattention),(Fatigued/as	Dark - lighted roadway	Sideswipe, same direction	Dry	V1: Changing lanes / V2: Travelling straight ah	Clear
31	4215439	07/12/2016	Property damage only (no	2:21 PM	No injury	D1: (Inattention) / D2: (No improper driving)	Daylight	Sideswipe, same direction	Dry	V1: Changing lanes / V2: Travelling straight ah	Clear
32	4237880	08/25/2016	Non-fatal injury	7:45 PM	Non-fatal injury - Non-incapacita	D1: (Inattention) / D2: (No improper driving)	Dark - lighted roadway	Angle	Dry	V1: Travelling straight ahead / V2: Travelling s	Clear
33	4276423	11/04/2016	Non-fatal injury	8:53 AM	Non-fatal injury - Possible	D1: (No improper driving) / D2: (Failed to yield right of wa	Daylight	Angle	Dry	V1: Travelling straight ahead / V2: Entering tra	Clear
34	4287073	11/19/2016	Property damage only (no	10:16 AM	No injury	D1: (No improper driving) / D2: (Inattention),(Other impr	Daylight	Angle	Dry	V1: Turning left / V2: Travelling straight ahead	Clear/Other
35	4287701	11/20/2016	Property damage only (no	3:28 PM	No injury	D1: (No improper driving) / D2: (Failed to yield right of wa	Daylight	Angle	Dry	V1: Travelling straight ahead / V2: Turning left	Cloudy
36	4304231	12/25/2016	Property damage only (no	1:50 PM	No injury	D1: (Unknown) / D2: (Unknown)	Daylight	Sideswipe, same direction	Dry	V1: Travelling straight ahead / V2: Changing la	Clear
37	4305037	12/26/2016	Property damage only (no	5:59 PM	No injury	D1: (No improper driving) / D2: (No improper driving) / D	Dark - lighted roadway	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Slowing	Clear
38	4318123	01/27/2017	Property damage only (no	3:15 PM	No injury	D1: (No improper driving) / D2: (No improper driving)	Daylight	Angle	Dry	V1: Turning right / V2: Travelling straight ahea	Clear
39	4320053	01/27/2017	Property damage only (no	12:17 PM	No injury	D1: (No improper driving) / D2: (Disregarded traffic signs,	Daylight	Angle	Dry	V1: Turning left / V2: Travelling straight ahead	Clear
40	4318402	01/30/2017	Property damage only (no	12:59 PM	No injury	D1: (No improper driving) / D2: (Disregarded traffic signs,	Daylight	Angle	Dry	V1: Travelling straight ahead / V2: Travelling s	Clear/Other
41	4336508	03/11/2017	Non-fatal injury	12:10 AM	Non-fatal injury - Non-incapacita	D1: (No improper driving) / D2: (Made an improper turn)	Dark - lighted roadway	Angle	Wet	V1: Travelling straight ahead / V2: Turning left	Clear
42	4340274	03/18/2017	Property damage only (no	8:14 PM	No injury	D1: (Swerving or avoiding due to wind, slippery surface, ve	Dark - lighted roadway	Single vehicle crash	Dry	V1: Leaving traffic lane	Clear
43	4350482	04/04/2017	Non-fatal injury	2:05 PM	Non-fatal injury - Incapacitating	D1: (Physical impairment),(Operating vehicle in erratic, re	Daylight	Head-on	Wet	V1: Leaving traffic lane / V2: Parked / V3: Park	Cloudy/Rain
44	4350485	04/07/2017	Property damage only (no	7:19 PM	No injury	D1: (Followed too closely) / D2: (No improper driving) / D	Dusk	Rear-end	Dry	V1: Travelling straight ahead / V2: Slowing or s	Clear
45	4357041	04/28/2017	Property damage only (no	5:31 PM	No injury	D1: (Disregarded traffic signs, signals, road markings) / D2	Daylight	Angle	Dry	V1: Travelling straight ahead / V2: Travelling s	Clear
46	4357044	04/29/2017	Non-fatal injury	7:42 AM	Non-fatal injury - Non-incapacita	D1: (No improper driving)	Daylight	Angle	Dry	V1: Slowing or stopped in traffic	Clear
47	4359782	05/04/2017	Non-fatal injury	10:05 AM	Non-fatal injury - Possible	D1: (No improper driving) / D2: (Followed too closely)	Daylight	Rear-end	Dry	V1: Travelling straight ahead / V2: Travelling s	Clear
48	4375510	06/10/2017	Property damage only (no	7:01 PM	No injury	D1: (Failure to keep in proper lane or running off road) / D	Daylight	Sideswipe, opposite directio	Dry	V1: Turning left / V2: Travelling straight ahead	Clear
49	4376830	06/12/2017	Property damage only (no	7:37 PM	No injury	D1: (Inattention) / D2: (No improper driving)	Daylight	Sideswipe, same direction	Dry	V1: Changing lanes / V2: Travelling straight ah	Clear
50	4395648	06/27/2017	Property damage only (no	7:31 PM	No injury	D1: (Followed too closely) / D2: (No improper driving)	Daylight	Rear-end	Dry	V1: Travelling straight ahead / V2: Slowing or s	Clear
51	4406951	08/11/2017	Non-fatal injury	7:36 AM	Non-fatal injury - Possible	D1: (Failure to keep in proper lane or running off road) / D	Daylight	Sideswipe, same direction	Dry	V1: Leaving traffic lane / V2: Travelling straigh	Clear
52	4408817	08/14/2017	Property damage only (no	7:55 AM	No injury	D1: (No improper driving) / D2: (Unknown)	Daylight	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Slowing	Clear
53	4420666	09/11/2017	Property damage only (no	9:05 AM	No injury	D1: (No improper driving) / D2: (Other improper action)	Daylight	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Slowing	Clear
54	4442522	10/19/2017	Property damage only (no	5:03 PM	No injury	D1: (Disregarded traffic signs, signals, road markings) / D2	Daylight	Angle	Dry	V1: Travelling straight ahead / V2: Travelling s	Clear
55	4458852	11/20/2017	Property damage only (no	10:25 PM	No injury	D1: (Disregarded traffic signs, signals, road markings) / D2	Dark - lighted roadway	Angle	Dry	V1: Travelling straight ahead / V2: Travelling s	Clear
56	4458856	11/26/2017	Property damage only (no	9:14 AM	No injury	D1: (No improper driving) / D2: (No improper driving)	Daylight	Angle	Dry	V1: Turning right / V2: Travelling straight ahea	Clear
57	4480721	01/06/2018	Property damage only (no	4:44 PM	No injury	D1: (Operating vehicle in erratic, reckless, careless, negli	Dusk	Single vehicle crash	Dry	V1: Travelling straight ahead / V2: Travelling s	Clear
58	4488807	01/17/2018	Property damage only (no	5:31 PM	No injury	D1: (No improper driving) / D2: (Disregarded traffic signs,	Dark - lighted roadway	Angle	Wet	V1: Turning right / V2: Travelling straight ahea	Snow

Route 1 at Dean Street

Index	Crash Number	Crash Date	Crash Severity	Crash Time	Max Injury Severity Reported	Driver Contributing Circumstances (All Drivers)	Light Conditions	Manner of Collision	Road Surface Condition	Vehicle Actions Prior to Crash (All Vehicles)	Weather Conditions
59	4513252	03/12/2018	Property damage only (no	3:43 PM	No injury	D1: (No improper driving) / D2: (Disregarded traffic signs,	Daylight	Angle	Dry	V1: Travelling straight ahead / V2: Travelling s	Cloudy
60	4517386	03/20/2018	Non-fatal injury	7:45 PM	Non-fatal injury - Possible	D1: (Operating vehicle in erratic, reckless, careless, negli	Dark - lighted roadway	Angle	Dry	V1: Travelling straight ahead / V2: Travelling s	Clear
61	4522395	04/01/2018	Non-fatal injury	4:39 PM	Non-fatal injury - Possible	D1: (Followed too closely) / D2: (No improper driving)	Daylight	Rear-end	Dry	V1: Travelling straight ahead / V2: Slowing or s	Clear
62	4537911	04/30/2018	Property damage only (no	3:22 PM	No injury	D1: (No improper driving) / D2: (No improper driving)	Daylight	Sideswipe, opposite directio	Wet	V1: Travelling straight ahead / V2: Turning left	Rain
63	4543636	05/27/2018	Property damage only (no	1:36 AM	No injury	D1: (Fatigued/asleep),(Operating vehicle in erratic, reckles	Dark - lighted roadway	Single vehicle crash	Wet	V1: Travelling straight ahead	Cloudy/Rain
64	4552702	06/11/2018	Property damage only (no	11:37 PM	No injury	D1: (Operating vehicle in erratic, reckless, careless, negli	Dark - lighted roadway	Rear-end	Dry	V1: Travelling straight ahead / V2: Slowing or s	Clear
65	4555912	06/20/2018	Property damage only (no	8:02 AM	No injury	D1: (No improper driving) / D2: (No improper driving)	Daylight	Angle	Dry	V1: Leaving traffic lane / V2: Travelling straigh	Clear
66	4579675	08/08/2018	Property damage only (no	12:41 PM	No injury	D1: (No improper driving) / D2: (Made an improper turn)	Daylight	Angle	Dry	V1: Travelling straight ahead / V2: Turning left	Clear
67	4609534	10/11/2018	Property damage only (no	6:46 PM	No injury	D1: (Failed to yield right of way) / D2: (No improper drivir	Dark - lighted roadway	Angle	Wet	V1: Travelling straight ahead / V2: Travelling s	Rain
68	4618230	10/25/2018	Unknown	7:14 PM	Unknown	D1: (Operating vehicle in erratic, reckless, careless, negli	Dark - lighted roadway	Single vehicle crash	Dry	V1: Travelling straight ahead	Clear
69	4618199	10/29/2018	Property damage only (no	1:57 PM	No injury	D1: (Unknown) / D2: (No improper driving)	Daylight	Rear-end	Dry	V2: Slowing or stopped in traffic / V1: Travellir	Clear
70	4618232	11/03/2018	Property damage only (no	2:05 PM	No injury	D1: (No improper driving) / D2: (No improper driving)	Daylight	Rear-end	Wet	V1: Travelling straight ahead / V2: Travelling s	Rain
71	4621163	11/10/2018	Property damage only (no	10:26 AM	No injury	D1: (Unknown) / D2: (Unknown)	Daylight	Angle	Wet	V1: Travelling straight ahead / V2: Turning left	Rain
72	4628480	11/17/2018	Property damage only (no	1:07 PM	No injury	D2: (Inattention)	Daylight	Angle	Dry	V1: Parked / V2: Turning left	Clear
73	4628547	11/21/2018	Property damage only (no	1:00 PM	No injury	D1: (No improper driving) / D2: (Failed to yield right of wa	Daylight	Angle	Dry	V2: Turning left / V1: Turning right	Cloudy
74	4628548	11/23/2018	Property damage only (no	12:20 PM	No injury	D1: (Inattention) / D2: (No improper driving)	Daylight	Rear-end	Dry	V1: Travelling straight ahead / V2: Travelling s	Clear
75	4629397	11/27/2018	Property damage only (no	6:25 PM	No injury	D1: (Failed to yield right of way) / D2: (No improper drivir	Dark - lighted roadway	Rear-end	Dry	V1: Travelling straight ahead / V2: Turning righ	Clear
76	4635235	12/07/2018	Non-fatal injury	6:25 AM	Non-fatal injury - Possible	D1: (No improper driving) / D2: (Unknown)	Dawn	Angle	Dry	V1: Travelling straight ahead / V2: Slowing or s	Clear
77	4639394	12/18/2018	Property damage only (no	3:33 PM	No injury	D1: (No improper driving) / D2: (No improper driving)	Daylight	Sideswipe, same direction	Dry	V1: Turning left / V2: Turning left	Clear
78	4640146	12/19/2018	Property damage only (no	1:12 PM	No injury	D1: (Swerving or avoiding due to wind, slippery surface, ve	Daylight	Sideswipe, same direction	Dry	V1: Travelling straight ahead / V2: Travelling s	Clear
79	4653716	01/20/2019	Property damage only (no	5:37 AM	No injury	D1: (No improper driving) / D2: (No improper driving)	Dark - lighted roadway	Sideswipe, opposite directio	Wet	V1: Travelling straight ahead / V2: Travelling s	Snow/Rain
80	4664793	02/13/2019	Property damage only (no	7:04 PM	No injury	D1: (Inattention) / D2: (No improper driving)	Dark - lighted roadway	Angle	Dry	V1: Entering traffic lane / V2: Travelling straigh	Clear
81	4672483	03/03/2019	Property damage only (no	8:25 AM	No injury	D1: (Inattention) / D2: (Inattention)	Daylight	Angle	Dry	V1: Travelling straight ahead / V2: Travelling s	Clear
82	4672484	03/04/2019	Property damage only (no	6:04 AM	No injury	D1: (Unknown) / D2: (Unknown)	Daylight	Sideswipe, same direction	Snow	V1: Travelling straight ahead / V2: Travelling s	Snow
83	4686326	04/04/2019	Property damage only (no	11:29 AM	No Apparent Injury (O)	D1: (Swerving or avoiding due to wind, slippery surface, ve	Daylight	Single vehicle crash	Dry	V1: Travelling straight ahead	Clear
84	4693860	04/23/2019	Non-fatal injury	11:34 AM	Suspected Minor Injury (B)	D1: (No improper driving) / D2: (Failed to yield right of wa	Daylight	Angle	Dry	V1: Travelling straight ahead / V2: Turning left	Cloudy
85	4698406	05/05/2019	Property damage only (no	9:15 AM	No Apparent Injury (O)	D1: (Unknown) / D2: (Unknown)	Daylight	Sideswipe, same direction	Wet	V1: Turning left / V2: Turning left	Rain
86	4704689	05/22/2019	Property damage only (no	10:24 AM	No Apparent Injury (O)	D1: (No improper driving) / D2: (Unknown)	Daylight	Front to Rear	Dry	V1: Travelling straight ahead / V2: Travelling s	Clear
87	4717818	06/19/2019	Property damage only (no	3:29 PM	No Apparent Injury (O)	D1: (Operating vehicle in erratic, reckless, careless, negli	Daylight	Rear-end	Dry	V1: Travelling straight ahead / V2: Slowing or s	Clear
88	4716637	06/20/2019	Property damage only (no	11:09 AM	No Apparent Injury (O)	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Wet	V1: Slowing or stopped in traffic / V2: Travellir	Cloudy
89	4716638	06/21/2019	Non-fatal injury	9:45 AM	Suspected Minor Injury (B)	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Changin	Clear
90	4725594	07/15/2019	Non-fatal injury	6:56 AM	Possible Injury (C)	D1: (Followed too closely) / D2: (No improper driving) / D	Daylight	Rear-end		V1: Travelling straight ahead / V2: Slowing or s	Clear
91	4727675	07/19/2019	Property damage only (no	11:15 AM	No Apparent Injury (O)	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end		V1: Slowing or stopped in traffic / V2: Travellir	Clear
92	4727678	07/21/2019	Property damage only (no	4:12 PM	Possible Injury (C)	D1: (Operating vehicle in erratic, reckless, careless, negli	Daylight	Single vehicle crash		V1: Backing	Clear
93	4790625	08/23/2019	Property damage only (no	2:15 AM	No Apparent Injury (O)	D1: (No improper driving) / D2: (Failed to yield right of wa	Dark - lighted roadway	Angle	Dry	V1: Travelling straight ahead / V2: Travelling s	Clear
94	4750771	09/05/2019	Property damage only (no	7:52 AM	No Apparent Injury (O)	D1: (No improper driving) / D2: (Failed to yield right of wa	Daylight	Angle	Dry	V2: Turning right / V1: Travelling straight ahea	Clear
95	4790678	12/13/2019	Property damage only (no	4:58 PM	No Apparent Injury (O)	D1: (Operating vehicle in erratic, reckless, careless, negli	Dawn	Rear-end	Dry	V1: Backing / V2: Parked	Cloudy



SYMBOLS				TYPES OF CRASH		CRASH INDEX AND SEVERITY	
Moving Vehicle		Parked Vehicle		Head On		# , (#) , (#)	
Backing Vehicle		Fixed Object		Angle		#	Property Damage Only Crash Index Number
Non-Involved Vehicle		Bicycle		Rear End		(#)	Injury Crash Index Number
Pedestrian		Animal		Sideswipe		(#)	Fatal Crash Index Number
				Out of Control			Nighttime Crash

BOSTON REGION MPO

North

Route 1 at Pendergast Circle
Collision Diagram, 2015–19

Addressing Priority Corridors from the LRTP Needs Assessment: Route 1 in Norwood

Route 1 at Pendergast Circle (Neponset Street Rotary)

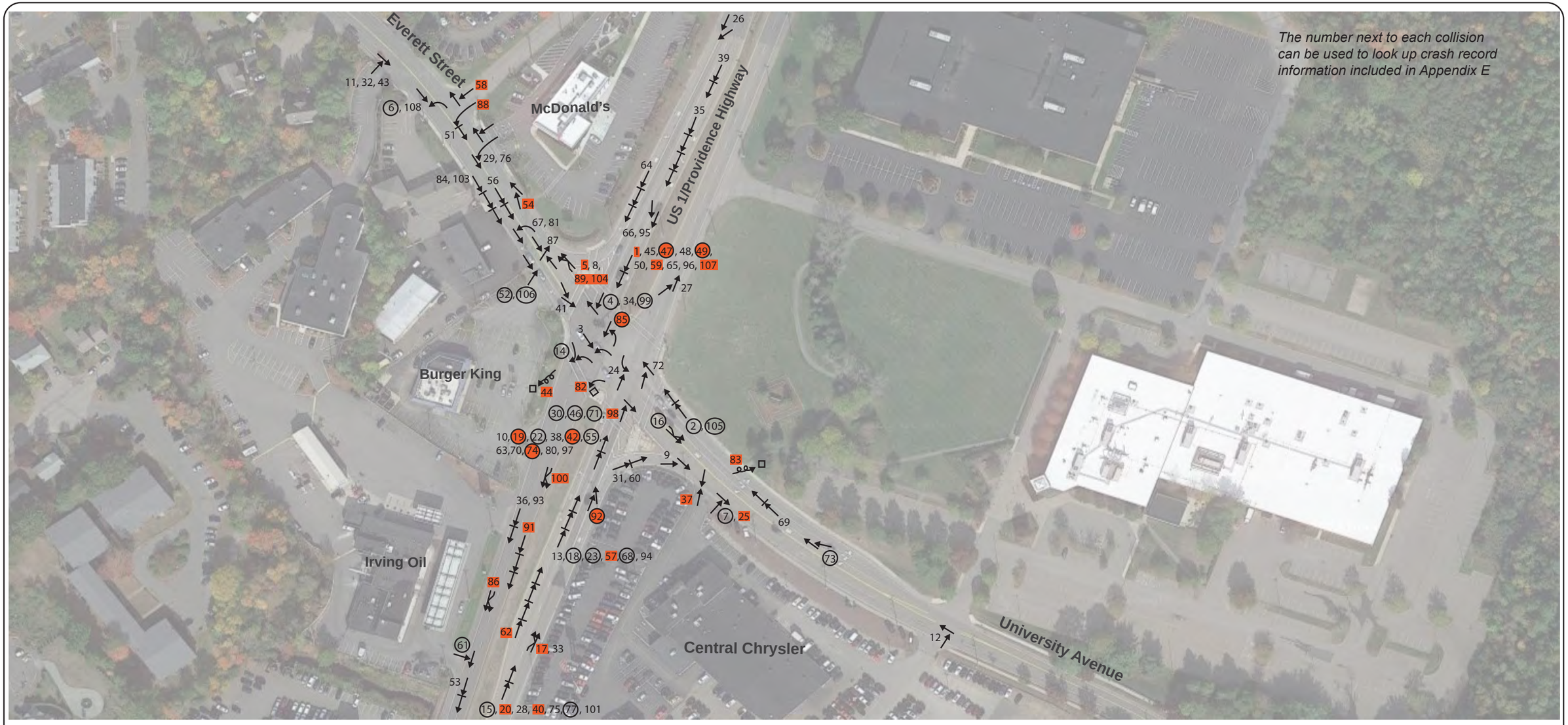
Index	Crash Number	Crash Date	Crash Severity	Crash Time	Crash Year	Max Injury Severity Reported	Driver Contributing Circumstances (All Drivers)	Light Conditions	Manner of Collision	Road Surface Condition	Weather Conditions
1	4000738	01/29/2015	Property damage o	4:45 PM	2015	No injury	D1: (Operating vehicle in erratic, reckless, careless, ne	Daylight	Rear-end	Dry	Clear
2	4001235	01/31/2015	Property damage o	10:50 AM	2015	No injury	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Dry	Clear
3	4010638	02/20/2015	Property damage o	7:35 PM	2015	No injury	D1: (Failed to yield right of way) / D2: (No improper d	Dark - lighted roadway	Rear-end	Dry	Clear
4	4012635	02/24/2015	Property damage o	7:00 PM	2015	No injury	D1: (No improper driving) / D2: (Followed too closely)	Dark - roadway not lighted	Rear-end	Wet	Clear
5	4019845	03/10/2015	Non-fatal injury	2:49 PM	2015	Non-fatal injury - Non-incapacitating	D1: (No improper driving) / D2: (Other improper actio	Daylight	Rear-end	Dry	Clear
6	4020634	03/13/2015	Non-fatal injury	11:42 PM	2015	Non-fatal injury - Possible	D1: (Fatigued/asleep),(Disregarded traffic signs, signal	Dark - roadway not lighted	Single vehicle crash	Dry	Clear/Other
7	4024636	03/24/2015	Property damage o	3:50 PM	2015	No injury	D1: (Followed too closely) / D2: (No improper driving)	Daylight	Rear-end	Dry	Clear
8	4024637	03/24/2015	Property damage o	5:12 PM	2015	No injury	D1: (No improper driving) / D2: (Inattention),(Followe	Daylight	Rear-end	Dry	Clear
9	4037147	05/03/2015	Property damage o	2:31 PM	2015	No injury	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Dry	Clear
10	4052417	06/15/2015	Property damage o	9:13 AM	2015	No injury	D1: (No improper driving) / D2: (Followed too closely)	Daylight	Rear-end	Wet	Rain
11	4054140	06/22/2015	Property damage o	2:09 PM	2015	No injury	D1: (Unknown) / D2: (Unknown)	Daylight	Sideswipe, same direction	Dry	Clear
12	4065488	07/23/2015	Property damage o	6:09 PM	2015	No injury	D1: (Inattention) / D2: (No improper driving)	Daylight	Rear-end	Dry	Clear
13	4068628	08/02/2015	Property damage o	5:47 PM	2015	No injury	D1: (No improper driving) / D2: (No improper driving)	Daylight	Rear-end	Dry	Clear
14	4079698	08/28/2015	Property damage o	1:25 PM	2015	No injury	D1: (Other improper action) / D2: (No improper drivin	Daylight	Rear-end	Dry	Clear
15	4081597	09/04/2015	Non-fatal injury	1:44 PM	2015	Non-fatal injury - Possible	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Dry	Cloudy
16	4085096	09/16/2015	Property damage o	12:57 AM	2015	No injury	D1: (Unknown)	Dark - roadway not lighted	Single vehicle crash	Dry	Clear
17	4094090	09/19/2015	Property damage o	5:33 PM	2015	No injury	D1: (No improper driving) / D2: (Followed too closely)	Daylight	Rear-end	Dry	Clear
18	4095178	10/09/2015	Property damage o	9:29 PM	2015	No injury	D1: (Over-correcting/over-steering),(Failure to keep in	Dark - lighted roadway	Single vehicle crash	Wet	Rain
19	4095180	10/10/2015	Non-fatal injury	12:20 PM	2015	Non-fatal injury - Non-incapacitating	D1: (Followed too closely),(Inattention) / D2: (No imp	Daylight	Rear-end	Dry	Clear
20	4101148	10/26/2015	Non-fatal injury	7:44 AM	2015	Non-fatal injury - Possible	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Dry	Clear
21	4101582	10/27/2015	Property damage o	2:23 PM	2015	No injury	D1: (Failed to yield right of way) / D2: (No improper d	Daylight	Angle	Dry	Clear
22	4107466	11/08/2015	Non-fatal injury	11:34 AM	2015	Non-fatal injury - Possible	D1: (No improper driving) / D2: (Followed too closely)	Daylight	Rear-end	Dry	Clear
23	4116515	12/01/2015	Property damage o	4:24 PM	2015	No injury	D1: (No improper driving) / D2: (Inattention),(Followe	Dark - roadway not lighted	Rear-end	Dry	Cloudy/Other
24	4121936	12/02/2015	Non-fatal injury	7:02 AM	2015	Non-fatal injury - Possible	D1: (Followed too closely) / D2: (No improper driving)	Daylight	Rear-end	Wet	Rain/Cloudy
25	4130628	12/13/2015	Property damage o	1:51 AM	2015	No injury	D1: (No improper driving) / D2: (No improper driving)	Dark - lighted roadway	Sideswipe, same direction	Dry	Clear
26	4123972	12/17/2015	Non-fatal injury	7:40 PM	2015	Non-fatal injury - Possible	D1: (No improper driving)	Dark - roadway not lighted	Single vehicle crash	Wet	Rain
27	4130641	12/23/2015	Property damage o	8:15 AM	2015	No injury	D1: (Followed too closely) / D2: (No improper driving)	Daylight	Rear-end	Wet	Clear
28	4132932	01/11/2016	Property damage o	5:17 PM	2016	No injury	D1: (Inattention),(Distracted) / D2: (No improper drivi	Dark - lighted roadway	Rear-end	Dry	Clear
29	4168128	03/22/2016	Property damage o	3:23 PM	2016	No injury	D1: (Inattention) / D2: (No improper driving)	Daylight	Rear-end	Dry	Clear
30	4177516	04/14/2016	Property damage o	1:49 PM	2016	No injury	D1: (No improper driving) / D2: (Disregarded traffic si	Daylight	Angle	Dry	Clear
31	4177522	04/18/2016	Property damage o	7:37 AM	2016	No injury	D1: (No improper driving) / D2: (Followed too closely)	Daylight	Rear-end	Dry	Clear
32	4178344	04/19/2016	Property damage o	1:01 PM	2016	No injury	D1: (No improper driving) / D2: (Followed too closely)	Daylight	Rear-end	Dry	Cloudy
33	4178827	04/20/2016	Property damage o	1:15 PM	2016	No injury	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Dry	Clear
34	4180328	04/24/2016	Property damage o	1:33 PM	2016	No injury	D1: (Inattention) / D2: (No improper driving)	Daylight	Rear-end	Dry	Clear
35	4180956	04/25/2016	Property damage o	4:20 PM	2016	No injury	D1: (Followed too closely) / D2: (No improper driving)	Daylight	Rear-end	Dry	Clear
36	4181486	04/26/2016	Property damage o	2:08 PM	2016	No injury	D1: (No improper driving) / D2: (No improper driving)	Daylight	Rear-end	Wet	Cloudy
37	4193376	05/19/2016	Property damage o	5:07 PM	2016	No injury	D1: (No improper driving) / D2: (Followed too closely)	Daylight	Rear-end	Dry	Clear
38	4206786	06/13/2016	Property damage o	4:49 PM	2016	No injury	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Dry	Cloudy
39	4206789	06/15/2016	Property damage o	7:58 AM	2016	No injury	D1: (No improper driving) / D2: (Other improper actio	Daylight	Rear-end	Dry	Clear
40	4212882	07/06/2016	Property damage o	5:40 PM	2016	No injury	D1: (Inattention) / D2: (No improper driving)	Daylight	Rear-end	Dry	Clear
41	4214300	07/11/2016	Property damage o	6:58 PM	2016	No injury	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Dry	Clear
42	4222625	07/23/2016	Property damage o	4:43 PM	2016	No injury	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Dry	Clear
43	4236382	08/01/2016	Property damage o	3:00 PM	2016	No injury	D1: (Disregarded traffic signs, signals, road markings)	Daylight	Rear-end	Dry	Clear
44	4235435	08/18/2016	Property damage o	11:55 AM	2016	No injury	D1: (Followed too closely) / D2: (No improper driving)	Daylight	Rear-end	Dry	Clear
45	4235956	08/22/2016	Property damage o	4:00 PM	2016	No injury	D1: (No improper driving) / D2: (Followed too closely)	Daylight	Rear-end	Dry	Clear
46	4246721	09/09/2016	Property damage o	3:47 PM	2016	No injury	D1: (No improper driving) / D2: (Inattention),(Followe	Daylight	Rear-end	Dry	Clear/Other
47	4256495	10/01/2016	Non-fatal injury	4:43 PM	2016	Non-fatal injury - Possible	D1: (Exceeded authorized speed limit) / D2: (No impro	Daylight	Angle	Wet	Rain/Cloudy
48	4268361	10/23/2016	Property damage o	11:47 AM	2016	No injury	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Dry	Clear
49	4275064	10/31/2016	Non-fatal injury	2:34 PM	2016	Non-fatal injury - Possible	D1: (No improper driving) / D2: (No improper driving)	Daylight	Head-on	Dry	Clear
50	4278862	11/08/2016	Property damage o	7:33 PM	2016	No injury	D1: (Followed too closely) / D2: (No improper driving)	Dark - lighted roadway	Rear-end	Dry	Clear
51	4282400	11/14/2016	Property damage o	12:16 PM	2016	No injury	D1: (Followed too closely) / D2: (No improper driving)	Daylight	Rear-end	Dry	Clear
52	4310542	01/11/2017	Non-fatal injury	3:50 PM	2017	Non-fatal injury - Possible	D1: (Other improper action) / D2: (No improper drivin	Daylight	Rear-end	Dry	Clear
53	4310742	01/11/2017	Property damage o	2:40 PM	2017	No injury	D1: (Unknown) / D2: (Unknown)	Daylight	Sideswipe, same direction	Dry	Clear
54	4317007	01/25/2017	Property damage o	6:04 PM	2017	No injury	D1: (No improper driving) / D2: (Inattention)	Dark - roadway not lighted	Rear-end	Dry	Clear
55	4343361	02/24/2017	Non-fatal injury	11:48 AM	2017	Non-fatal injury - Possible	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Dry	Cloudy
56	4350479	04/02/2017	Non-fatal injury	1:37 AM	2017	Non-fatal injury - Non-incapacitating	D1: (Operating vehicle in erratic, reckless, careless, ne	Dark - lighted roadway	Single vehicle crash	Wet	Rain/Snow
57	4352356	04/17/2017	Property damage o	10:14 AM	2017	No injury	D1: (No improper driving) / D2: (Disregarded traffic si	Daylight	Sideswipe, same direction	Dry	Clear

Route 1 at Pendergast Circle (Neponset Street Rotary)

Index	Crash Number	Crash Date	Crash Severity	Crash Time	Crash Year	Max Injury Severity Reported	Driver Contributing Circumstances (All Drivers)	Light Conditions	Manner of Collision	Road Surface Condition	Weather Conditions
58	4362840	05/12/2017	Non-fatal injury	4:46 PM	2017	Non-fatal injury - Possible	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Dry	Clear
59	4367050	05/23/2017	Property damage o	6:43 PM	2017	No injury	D1: (Followed too closely) / D2: (No improper driving)	Daylight	Rear-end	Dry	Clear
60	4370937	06/01/2017	Non-fatal injury	3:17 PM	2017	Non-fatal injury - Non-incapacitating	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Wet	Rain
61	4390069	07/13/2017	Property damage o	2:30 PM	2017	No injury	D1: (Inattention),(Distracted) / D2: (No improper drivi	Daylight	Rear-end	Dry	Cloudy
62	4391851	07/15/2017	Non-fatal injury	7:00 PM	2017	Non-fatal injury - Possible	D1: (Followed too closely) / D2: (No improper driving)	Daylight	Rear-end	Dry	Clear
64	4401716	08/03/2017	Property damage o	3:34 PM	2017	No injury	D1: (No improper driving) / D2: (Inattention),(Failed t	Daylight	Rear-end	Dry	Clear/Other
65	4411829	08/21/2017	Property damage o	10:59 AM	2017	No injury	D1: (Followed too closely) / D2: (No improper driving)	Daylight	Rear-end	Dry	Clear
66	4412848	08/24/2017	Property damage o	1:58 PM	2017	No injury	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Dry	Clear
67	4412550	08/25/2017	Property damage o	3:41 PM	2017	No injury	D1: (No improper driving) / D2: (No improper driving)	Daylight	Rear-end	Dry	Clear
68	4414603	08/30/2017	Property damage o	4:57 PM	2017	No injury	D1: (No improper driving) / D2: (Inattention),(Followe	Daylight	Rear-end	Dry	Clear
69	4421592	09/13/2017	Property damage o	7:06 AM	2017	No injury	D1: (No improper driving) / D2: (Followed too closely)	Daylight	Rear-end	Dry	Clear
70	4424794	09/18/2017	Property damage o	5:23 PM	2017	No injury	D1: (No improper driving) / D2: (Followed too closely)	Daylight	Rear-end	Dry	Cloudy
71	4437491	10/11/2017	Non-fatal injury	7:40 AM	2017	Non-fatal injury - Non-incapacitating	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Dry	Cloudy
72	4440898	10/17/2017	Property damage o	7:03 AM	2017	No injury	D1: (No improper driving) / D2: (Followed too closely)	Daylight	Rear-end	Dry	Clear
73	4443623	10/24/2017	Non-fatal injury	8:29 AM	2017	Non-fatal injury - Possible	D1: (No improper driving) / D2: (Disregarded traffic si	Daylight	Angle	Wet	Cloudy
74	4454009	11/08/2017	Property damage o	3:57 PM	2017	No injury	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Dry	Clear
75	4454928	11/10/2017	Property damage o	1:07 PM	2017	No injury	D1: (No improper driving) / D2: (No improper driving)	Daylight	Rear-end	Dry	Clear
76	4460865	11/27/2017	Non-fatal injury	5:10 AM	2017	Non-fatal injury - Non-incapacitating	D1: (Swerving or avoiding due to wind, slippery surfac	Dark - roadway not lighted	Angle	Dry	Clear
77	4465855	12/07/2017	Unknown	5:37 PM	2017	Unknown	D1: (No improper driving) / D2: (Followed too closely)	Dawn	Rear-end	Dry	Clear
78	4480632	01/07/2018	Property damage o	5:31 PM	2018	No injury	D1: (No improper driving) / D2: (Unknown)	Dark - lighted roadway	Angle	Ice	Clear
79	4482150	01/08/2018	Property damage o	8:56 PM	2018	No injury	D1: (Unknown) / D2: (Unknown)	Dark - lighted roadway	Angle	Wet	Clear
80	4495523	02/02/2018	Property damage o	6:30 PM	2018	No injury	D1: (Followed too closely) / D2: (No improper driving)	Dark - roadway not lighted	Rear-end	Dry	Clear
81	4506196	02/25/2018	Non-fatal injury	3:39 PM	2018	Non-fatal injury - Possible	D1: (No improper driving) / D2: (Distracted)	Daylight	Rear-end	Wet	Rain
82	4523517	03/29/2018	Property damage o	2:14 PM	2018	No injury	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Dry	Cloudy
83	4528894	04/18/2018	Non-fatal injury	6:18 PM	2018	Non-fatal injury - Possible	D1: (No improper driving) / D2: (Followed too closely)	Daylight	Rear-end	Dry	Clear
84	4529626	04/22/2018	Property damage o	3:33 PM	2018	No injury	D1: (Failed to yield right of way) / D2: (No improper d	Daylight	Rear-end	Dry	Clear
85	4537912	05/05/2018	Property damage o	5:23 PM	2018	No injury	D1: (Unknown) / D2: (Unknown)	Daylight	Rear-end	Dry	Clear
86	4537919	05/12/2018	Property damage o	12:14 PM	2018	No injury	D1: (No improper driving) / D2: (Inattention),(Followe	Daylight	Rear-end	Wet	Cloudy/Rain
87	4750916	05/18/2018	Non-fatal injury	12:58 PM	2018	Non-fatal injury - Possible	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Dry	Clear
88	4547181	05/31/2018	Property damage o	5:08 PM	2018	No injury	D1: (No improper driving) / D2: (Unknown)	Daylight	Rear-end	Dry	Clear
89	4555078	06/19/2018	Property damage o	5:04 PM	2018	No injury	D1: (No improper driving) / D2: (Unknown)	Daylight	Rear-end	Dry	Clear
90	4561126	06/27/2018	Property damage o	3:44 PM	2018	No injury	D1: (No improper driving) / D2: (No improper driving)	Daylight	Rear-end	Dry	Clear
91	4568214	07/16/2018	Non-fatal injury	9:41 AM	2018	Non-fatal injury - Possible	D1: (No improper driving) / D2: (No improper driving)	Daylight	Rear-end	Dry	Clear
92	4580957	08/10/2018	Non-fatal injury	5:31 PM	2018	Non-fatal injury - Possible	D1: (Followed too closely) / D2: (No improper driving)	Daylight	Rear-end	Dry	Clear
93	4588621	08/28/2018	Non-fatal injury	5:32 PM	2018	Non-fatal injury - Possible	D1: (Disregarded traffic signs, signals, road markings)	Daylight	Rear-end	Dry	Clear
94	4591509	09/04/2018	Property damage o	6:28 PM	2018	No injury	D1: (Unknown) / D2: (No improper driving)	Daylight	Rear-end	Dry	Clear
95	4591590	09/04/2018	Property damage o	1:31 PM	2018	No injury	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Dry	Clear
96	4596312	09/14/2018	Property damage o	5:04 PM	2018	No injury	D1: (Failed to yield right of way) / D2: (No improper d	Daylight	Rear-end	Dry	Clear
97	4596316	09/17/2018	Property damage o	7:45 AM	2018	No injury	D1: (No improper driving) / D2: (No improper driving)	Daylight	Rear-end	Dry	Clear
98	4604373	10/02/2018	Property damage o	7:06 PM	2018	No injury	D1: (Followed too closely) / D2: (No improper driving)	Dark - lighted roadway	Rear-end	Wet	Rain/Cloudy
99	4609532	10/10/2018	Property damage o	8:18 PM	2018	No injury	D1: (No improper driving) / D2: (Followed too closely)	Dark - lighted roadway	Rear-end	Dry	Clear
100	4631485	10/27/2018	Property damage o	9:00 AM	2018	No injury	D1: (No improper driving)	Daylight	Single vehicle crash	Wet	Rain/Cloudy
101	4621155	11/06/2018	Property damage o	7:23 PM	2018	No injury	D1: (Made an improper turn) / D2: (No improper drivi	Dark - lighted roadway	Sideswipe, opposite direction	Wet	Rain
102	4628481	11/17/2018	Property damage o	1:30 PM	2018	No injury	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Dry	Cloudy
103	4642333	12/27/2018	Property damage o	10:52 AM	2018	No injury	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Dry	Clear
104	4648721	01/06/2019	Property damage o	3:31 PM	2019	No injury	D1: (No improper driving) / D2: (Disregarded traffic si	Daylight	Sideswipe, same direction	Dry	Clear
105	4651945	01/15/2019	Property damage o	6:52 PM	2019	No injury	D1: (Followed too closely) / D2: (No improper driving)	Dark - lighted roadway	Rear-end	Dry	Clear
106	4656048	01/22/2019	Property damage o	8:46 PM	2019	No injury	D1: (No improper driving) / D2: (Operating vehicle in e	Dark - lighted roadway	Rear-end	Dry	Clear
107	4661424	02/05/2019	Non-fatal injury	3:46 PM	2019	Non-fatal injury - Possible	D1: (No improper driving) / D2: (No improper driving)	Daylight	Rear-end	Dry	Clear
108	4677442	03/16/2019	Property damage o	2:13 PM	2019	No Apparent Injury (O)	D1: (No improper driving) / D2: (Inattention),(No impr	Daylight	Rear-end	Dry	Clear
109	4680271	03/24/2019	Property damage o	2:21 PM	2019	No Apparent Injury (O)	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Dry	Clear
110	4687045	04/05/2019	Property damage o	9:39 AM	2019	No Apparent Injury (O)	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Dry	Clear
111	4698408	05/06/2019	Property damage o	12:54 PM	2019	No Apparent Injury (O)	D1: (No improper driving) / D2: (Followed too closely)	Daylight	Rear-end	Dry	Clear
112	4700422	05/10/2019	Non-fatal injury	10:31 AM	2019	Suspected Minor Injury (B)	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Dry	Cloudy
113	4703341	05/16/2019	Property damage o	3:10 PM	2019	No Apparent Injury (O)	D1: (Unknown) / D2: (Unknown)	Daylight	Rear-end	Dry	Clear
114	4707764	05/30/2019	Non-fatal injury	2:48 PM	2019	Possible Injury (C)	D1: (No improper driving) / D2: (Unknown)	Daylight	Rear-end	Dry	Clear

Route 1 at Pendergast Circle (Neponset Street Rotary)

Index	Crash Number	Crash Date	Crash Severity	Crash Time	Crash Year	Max Injury Severity Reported	Driver Contributing Circumstances (All Drivers)	Light Conditions	Manner of Collision	Road Surface Condition	Weather Conditions
115	4718045	06/26/2019	Non-fatal injury	3:32 PM	2019	Suspected Minor Injury (B)	D1: (Unknown) / D2: (No improper driving)	Daylight	Rear-end	Dry	Clear
116	4724517	07/12/2019	Property damage o	7:25 AM	2019	No Apparent Injury (O)	D1: (No improper driving)	Daylight	Single vehicle crash	Wet	Rain
117	4730419	07/26/2019	Property damage o	5:20 PM	2019	No Apparent Injury (O)	D1: (Unknown) / D2: (No improper driving)	Daylight	Rear-end	Dry	Clear
118	4734679	08/06/2019	Property damage o	8:00 AM	2019	No Apparent Injury (O)	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Dry	Clear
119	4739579	08/20/2019	Property damage o	3:54 PM	2019	No Apparent Injury (O)	D1: (No improper driving) / D2: (Other improper actio	Daylight	Rear-end	Dry	Clear
120	4790664	08/29/2019	Property damage o	1:12 PM	2019	No Apparent Injury (O)	D1: (Unknown) / D2: (No improper driving)	Daylight	Sideswipe, same direction	Dry	Clear
121	4746740	09/05/2019	Property damage o	7:38 AM	2019	No Apparent Injury (O)	D1: (Followed too closely) / D2: (No improper driving)	Daylight	Rear-end	Dry	Clear
122	4756230	09/29/2019	Property damage o	5:34 PM	2019	No Apparent Injury (O)	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Dry	Clear
123	4773723	11/10/2019	Property damage o	6:19 PM	2019	No Apparent Injury (O)	D1: (No improper driving) / D2: (Inattention)	Dark - lighted roadway	Rear-end	Dry	Clear
124	4780487	11/25/2019	Property damage o	9:20 PM	2019	No Apparent Injury (O)	D1: (Other improper action)	Dark - lighted roadway	Single vehicle crash	Dry	Cloudy
125	4790632	12/17/2019	Property damage o	2:17 PM	2019	No Apparent Injury (O)	D1: (Followed too closely) / D2: (No improper driving)	Daylight	Rear-end	Ice	Snow/Cloudy



SYMBOLS

- Moving Vehicle
- Backing Vehicle
- Non-Involved Vehicle
- Pedestrian
- Parked Vehicle
- Fixed Object
- Bicycle
- Animal

TYPES OF CRASH

- Head On
- Angle
- Rear End
- Sideswipe
- Out of Control

CRASH INDEX AND SEVERITY

, (#) , (#)

- # Property Damage Only Crash Index Number
- (#) Injury Crash Index Number
- (#) Fatal Crash Index Number
- Nighttime Crash

BOSTON REGION MPO

North

Route 1 at Everett Street and University Avenue
Collision Diagram, 2015–19

Addressing Priority Corridors from the LRTP Needs Assessment: Route 1 in Norwood

Route 1 at Everett St and University Avenue
Crash Data 2015-19

Index	Crash Number	Crash Date	Crash Severity	Crash Time	Max Injury Severity Reported	Driver Contributing Circumstances (All Drivers)	Light Conditions	Manner of Collision	Road Surface Condition	Vehicle Actions Prior to Crash (All Vehicles)	Weather Conditions
1	3990092	01/03/2015	Property damage o	9:41 PM	No injury	D1: (Inattention),(Unknown) / D2: (No improper drivi	Dark - lighted roadway	Rear-end	Wet	V1: Slowing or stopped in traffic / V2: Slowing or stopped in	Sleet, hail (freezing rain or
2	3991102	01/05/2015	Non-fatal injury	6:54 AM	Non-fatal injury - Possible	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Slowing or stopped in	Clear
3	4029544	04/03/2015	Property damage o	5:00 PM	No injury	D1: (Failed to yield right of way) / D2: (No improper d	Daylight	Head-on	Wet	V1: Turning left / V2: Travelling straight ahead	Clear
4	4031030	04/09/2015	Non-fatal injury	9:49 AM	Non-fatal injury - Possible	D1: (No improper driving) / D2: (Disregarded traffic s	Daylight	Angle	Wet	V1: Travelling straight ahead / V2: Travelling straight ahead	Rain
5	4035328	04/22/2015	Property damage o	8:48 PM	No injury	D1: (Unknown) / D2: (Unknown)	Dark - lighted roadway	Sideswipe, same direction	Wet	V1: Travelling straight ahead / V2: Entering traffic lane	Rain
6	4037728	05/04/2015	Non-fatal injury	3:15 PM	Non-fatal injury - Possible	D1: (No improper driving) / D2: (Inattention)	Daylight	Angle	Dry	V1: Travelling straight ahead / V2: Turning left	Clear
7	4058113	06/30/2015	Non-fatal injury	1:02 PM	Non-fatal injury - Non-incapacitatin	D1: (Unknown) / D2: (Visibility obstructed)	Daylight	Angle	Dry	V1: Entering traffic lane / V2: Entering traffic lane	Clear
8	4067604	07/27/2015	Property damage o	3:12 PM	No injury	D1: (No improper driving)	Daylight	Sideswipe, same direction	Dry	V1: Travelling straight ahead	Clear
9	4067606	07/29/2015	Property damage o	10:05 AM	No injury	D1: (Other improper action) / D2: (No improper drivi	Daylight	Angle	Dry	V1: Turning right / V2: Turning left	Clear
10	4075675	08/20/2015	Property damage o	8:34 AM	No injury	D1: (Followed too closely) / D2: (No improper driving	Daylight	Rear-end	Dry	V1: Travelling straight ahead / V2: Slowing or stopped in tra	Clear
11	4075678	08/20/2015	Property damage o	6:28 PM	No injury	D1: (Inattention) / D2: (No improper driving)	Daylight	Angle	Dry	V1: Entering traffic lane / V2: Travelling straight ahead	Clear
12	4077336	08/25/2015	Property damage o	9:05 AM	No injury	D1: (Unknown) / D2: (No improper driving)	Daylight	Angle	Dry	V1: Entering traffic lane / V2: Travelling straight ahead	Clear
13	4080561	09/01/2015	Property damage o	6:35 AM	No injury	D1: (Followed too closely) / D2: (No improper driving	Daylight	Rear-end	Dry	V1: Travelling straight ahead / V2: Slowing or stopped in tra	Clear
14	4094546	10/08/2015	Non-fatal injury	6:46 PM	Non-fatal injury - Possible	D1: (No improper driving) / D2: (No improper driving	Daylight	Angle	Dry	V1: Turning right / V2: Turning left	Clear
15	4115575	10/17/2015	Non-fatal injury	4:05 PM	Non-fatal injury - Possible	D1: (No improper driving) / D2: (Followed too closely	Daylight	Rear-end	Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
16	4100721	10/24/2015	Non-fatal injury	12:49 PM	Non-fatal injury - Non-incapacitatin	D1: (Failed to yield right of way) / D2: (Unknown)	Daylight	Sideswipe, same direction	Dry	V1: Changing lanes / V2: Travelling straight ahead	Cloudy
17	4120406	11/07/2015	Property damage o	5:14 PM	No injury	D1: (No improper driving) / D2: (Failure to keep in pr	Dusk	Sideswipe, same direction	Dry	V1: Travelling straight ahead / V2: Changing lanes	Clear/Other
18	4115574	11/14/2015	Non-fatal injury	11:42 AM	Non-fatal injury - Possible	D1: (No improper driving) / D2: (No improper driving	Daylight	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Slowing or stopped in	Cloudy
19	4117798	12/03/2015	Non-fatal injury	6:11 AM	Non-fatal injury - Possible	D1: (No improper driving) / D2: (Inattention)	Dark - lighted roadway	Rear-end	Wet	V1: Slowing or stopped in traffic / V2: Slowing or stopped in	Cloudy
20	4120914	12/11/2015	Property damage o	4:48 PM	No injury	D1: (Distracted) / D2: (No improper driving)	Dark - lighted roadway	Rear-end	Dry	V1: Travelling straight ahead / V2: Slowing or stopped in tra	Clear
21	4130651	12/28/2015	Property damage o	12:40 PM	No injury	D1: (Unknown) / D2: (No improper driving)	Daylight	Angle	Dry	V1: Entering traffic lane / V2: Travelling straight ahead / V3:	Clear
22	4130655	12/31/2015	Non-fatal injury	1:06 PM	Non-fatal injury - Non-incapacitatin	D1: (No improper driving) / D2: (Distracted)	Daylight	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Travelling straight ahe	Clear
23	4132237	01/01/2016	Non-fatal injury	1:24 PM	Non-fatal injury - Non-incapacitatin	D1: (No improper driving) / D2: (No improper driving	Daylight	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Slowing or stopped in	Cloudy
24	4139724	01/19/2016	Property damage o	2:43 PM	No injury	D1: (Unknown) / D2: (Unknown)	Daylight	Angle	Dry	V1: Travelling straight ahead / V2: Turning left	Clear
25	4142505	01/28/2016	Property damage o	3:54 AM	No injury	D1: (No improper driving) / D2: (Failed to yield right o	Dark - lighted roadway	Angle	Dry	V1: Entering traffic lane / V2: Entering traffic lane	Clear
26	4164139	03/03/2016	Property damage o	4:05 PM	No injury	D1: (No improper driving) / D2: (Failure to keep in pr	Daylight	Sideswipe, same direction	Dry	V1: Turning right / V2: Travelling straight ahead	Clear
27	4172167	03/30/2016	Property damage o	7:09 AM	No injury	D1: (No improper driving) / D2: (Disregarded traffic s	Daylight	Angle	Dry	V1: Turning left / V2: Turning left	Clear
28	4172168	04/04/2016	Property damage o	12:13 PM	No injury	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Snow	V1: Slowing or stopped in traffic / V2: Travelling straight ahe	Rain
29	4177515	04/13/2016	Property damage o	12:39 PM	No injury	D1: (No improper driving) / D2: (Failed to yield right o	Daylight	Angle	Dry	V1: Slowing or stopped in traffic / V2: Entering traffic lane	Clear
30	4201828	06/06/2016	Non-fatal injury	2:17 PM	Non-fatal injury - Possible	D1: (No improper driving) / D2: (Disregarded traffic s	Daylight	Head-on	Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
31	4206788	06/14/2016	Property damage o	1:52 PM	No injury	D1: (Other improper action) / D2: (No improper drivi	Daylight	Rear-end	Dry	V1: Travelling straight ahead / V2: Slowing or stopped in tra	Clear
32	4222960	07/22/2016	Property damage o	8:26 AM	No injury	D1: (No improper driving) / D2: (Inattention)	Daylight	Angle	Dry	V1: Travelling straight ahead / V2: Turning left	Clear
33	4239784	08/30/2016	Property damage o	6:28 AM	No injury	D1: (Operating vehicle in erratic, reckless, careless, ne	Daylight	Sideswipe, same direction	Dry	V1: Travelling straight ahead / V2: Slowing or stopped in tra	Clear
34	4257251	10/04/2016	Property damage o	3:01 PM	No injury	D1: (Unknown) / D2: (Disregarded traffic signs, signal	Daylight	Angle	Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
35	4275065	11/01/2016	Property damage o	4:04 PM	No injury	D1: (Operating vehicle in erratic, reckless, careless, ne	Daylight	Rear-end	Dry	V1: Travelling straight ahead / V2: Slowing or stopped in tra	Clear
36	4292042	11/30/2016	Property damage o	6:41 AM	No injury	D1: (Driving too fast for conditions) / D2: (No improp	Daylight	Rear-end	Wet	V1: Travelling straight ahead / V2: Slowing or stopped in tra	Rain/Cloudy
37	4297625	12/13/2016	Property damage o	9:21 PM	No injury	D1: (No improper driving) / D2: (Operating vehicle in	Dark - lighted roadway	Head-on	Dry	V1: Slowing or stopped in traffic / V2: Travelling straight ahe	Clear
38	4298872	12/15/2016	Property damage o	8:10 AM	No injury	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Travelling straight ahe	Clear
39	4324255	01/14/2017	Property damage o	4:12 PM	No injury	D1: (No improper driving) / D2: (Unknown)	Daylight	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Slowing or stopped in	Clear
40	4330726	02/25/2017	Property damage o	7:16 PM	No injury	D1: (Unknown) / D2: (No improper driving)	Dark - lighted roadway	Rear-end	Wet	V1: Changing lanes / V2: Travelling straight ahead	Rain
41	4340277	03/20/2017	Property damage o	6:03 PM	No injury	D1: (Unknown) / D2: (Unknown)	Daylight	Angle	Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
42	4342211	03/25/2017	Non-fatal injury	8:46 PM	Non-fatal injury - Non-incapacitatin	D1: (Followed too closely) / D2: (No improper driving	Dark - lighted roadway	Rear-end	Wet	V1: Travelling straight ahead / V2: Slowing or stopped in tra	Cloudy
43	4364075	05/11/2017	Property damage o	2:29 PM	No injury	D1: (No improper driving) / D2: (Failed to yield right o	Daylight	Angle	Dry	V1: Travelling straight ahead / V2: Entering traffic lane	Clear/Unknown
44	4368662	05/24/2017	Property damage o	12:27 AM	No injury	D1: (Operating vehicle in erratic, reckless, careless, ne	Dark - lighted roadway	Single vehicle crash	Dry	V1: Travelling straight ahead	Clear
45	4368663	05/25/2017	Property damage o	10:18 AM	No injury	D1: (Driving too fast for conditions),(Followed too clos	Daylight	Rear-end	Wet	V1: Travelling straight ahead / V2: Travelling straight ahead	Cloudy/Rain
46	4369623	05/27/2017	Non-fatal injury	12:18 PM	Non-fatal injury - Non-incapacitatin	D1: (No improper driving) / D2: (Glare)	Daylight	Angle	Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
47	4375511	06/11/2017	Non-fatal injury	9:37 PM	Non-fatal injury - Possible	D1: (Unknown) / D2: (No improper driving)	Dark - lighted roadway	Rear-end	Dry	V1: Travelling straight ahead / V2: Slowing or stopped in tra	Clear
48	4387453	07/07/2017	Property damage o	6:32 PM	No injury	D1: (No improper driving) / D2: (Followed too closely	Daylight	Rear-end	Wet	V1: Travelling straight ahead / V2: Travelling straight ahead	Cloudy/Rain
49	4388101	07/10/2017	Non-fatal injury	9:19 PM	Non-fatal injury - Possible	D1: (No improper driving) / D2: (No improper driving	Dark - lighted roadway	Rear-end	Dry	V1: Travelling straight ahead / V2: Slowing or stopped in tra	Clear
50	4388664	07/11/2017	Property damage o	7:34 AM	No injury	D1: (No improper driving) / D2: (No improper driving	Daylight	Rear-end	Wet	V1: Slowing or stopped in traffic / V2: Travelling straight ahe	Rain/Cloudy
51	4391852	07/18/2017	Property damage o	6:14 PM	No injury	D1: (Unknown) / D2: (No improper driving)	Daylight	Rear-end	Wet	V1: Entering traffic lane / V2: Slowing or stopped in traffic	Cloudy
52	4398111	07/27/2017	Non-fatal injury	4:52 PM	Non-fatal injury - Possible	D1: (Failed to yield right of way) / D2: (No improper d	Daylight	Sideswipe, opposite direction	Dry	V1: Turning left / V2: Travelling straight ahead	Cloudy
53	4399035	07/31/2017	Property damage o	8:28 PM	No injury	D1: (No improper driving)	Daylight	Sideswipe, same direction	Dry	V1: Travelling straight ahead	Clear
54	4411828	08/20/2017	Not Reported	11:06 PM	Unknown	D1: (No improper driving) / D2: (Failed to yield right o	Dark - lighted roadway	Angle	Dry	V1: Travelling straight ahead / V2: Changing lanes	Clear
55	4437484	09/22/2017	Non-fatal injury	10:58 AM	Non-fatal injury - Non-incapacitatin	D1: (No improper driving) / D2: (Followed too closely	Daylight	Rear-end	Wet	V1: Slowing or stopped in traffic / V2: Travelling straight ahe	Rain
56	4456108	11/15/2017	Property damage o	7:28 AM	No injury	D1: (Unknown) / D2: (Unknown)	Daylight	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Slowing or stopped in	Clear
57	4474026	12/27/2017	Property damage o	7:29 PM	No injury	D1: (No improper driving) / D2: (No improper driving	Dark - lighted roadway	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Slowing or stopped in	Clear
58	4477628	12/28/2017	Property damage o	9:47 PM	No injury	D1: (No improper driving) / D2: (Unknown)	Dark - lighted roadway	Angle	Ice	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
59	4477572	12/29/2017	Property damage o	8:18 PM	No injury	D1: (No improper driving) / D2: (Operating vehicle in	Dark - lighted roadway	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Travelling straight ahe	Clear
60	4484019	01/10/2018	Property damage o	8:24 AM	No injury	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Dry	V1: Turning right / V2: Turning right	Clear

Route 1 at Everett St and University Avenue
Crash Data 2015-19

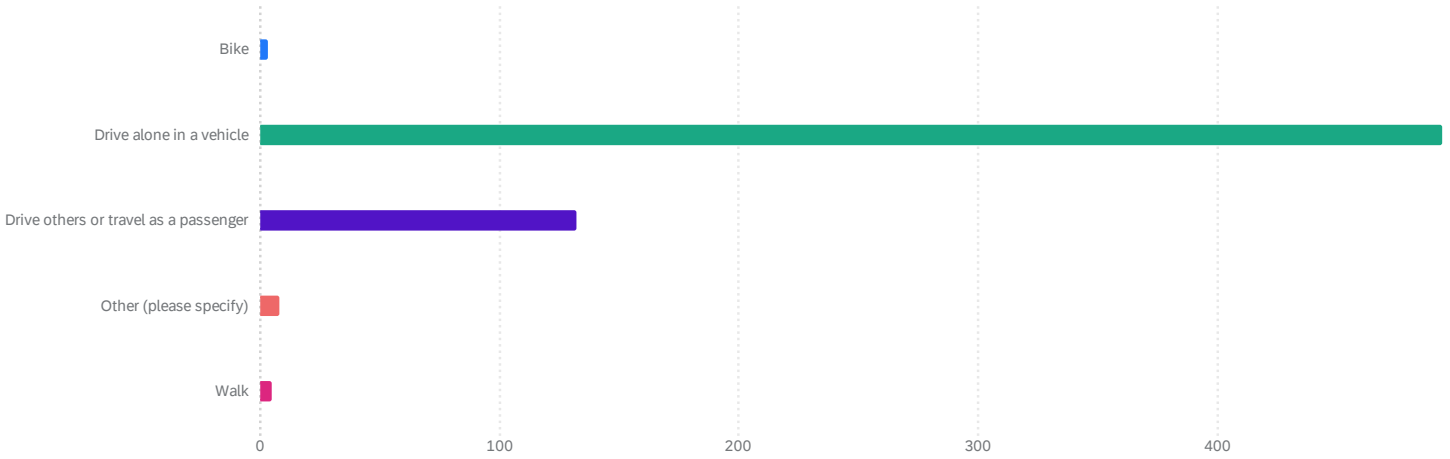
Index	Crash Number	Crash Date	Crash Severity	Crash Time	Max Injury Severity Reported	Driver Contributing Circumstances (All Drivers)	Light Conditions	Manner of Collision	Road Surface Condition	Vehicle Actions Prior to Crash (All Vehicles)	Weather Conditions
61	4483976	01/13/2018	Non-fatal injury	4:20 PM	Non-fatal injury - Non-incapacitatin	D1: (Failed to yield right of way) / D2: (No improper c	Daylight	Angle	Dry	V1: Entering traffic lane / V2: Travelling straight ahead	Clear
62	4493743	01/29/2018	Property damage c	7:43 PM	No injury	D1: (Swerving or avoiding due to wind, slippery surfac	Dawn	Rear-end	Dry	V1: Travelling straight ahead / V2: Slowing or stopped in tra	Snow
63	4493753	01/31/2018	Property damage c	11:22 AM	No injury	D1: (No improper driving) / D2: (No improper driving	Daylight	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Slowing or stopped in	Clear
64	4501314	02/13/2018	Property damage c	8:44 AM	No injury	D1: (No improper driving) / D2: (Inattention) / D3: (I	Daylight	Rear-end	Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear/Other
65	4502248	02/18/2018	Property damage c	5:09 PM	No injury	D1: (Inattention) / D2: (No improper driving)	Daylight	Rear-end	Dry	V1: Travelling straight ahead / V2: Slowing or stopped in tra	Cloudy
66	4514476	03/15/2018	Property damage c	1:50 PM	No injury	D1: (No improper driving) / D2: (Distracted),(Failed to	Daylight	Angle	Dry	V2: Overtaking/passing / V1: Travelling straight ahead	Clear
67	4517388	03/22/2018	Property damage c	9:18 AM	No injury	D1: (No improper driving) / D2: (Failed to yield right c	Daylight	Angle	Snow	V1: Travelling straight ahead / V2: Turning left	Snow
68	4524865	04/06/2018	Non-fatal injury	2:43 PM	Non-fatal injury - Possible	D1: (No improper driving) / D2: (Followed too closely	Daylight	Rear-end	Snow	V1: Slowing or stopped in traffic / V2: Slowing or stopped in	Snow
69	4525565	04/10/2018	Property damage c	9:00 AM	No injury	D1: (No improper driving) / D2: (Unknown)	Daylight	Rear-end	Dry	V1: Turning left / V2: Travelling straight ahead	Clear
70	4526749	04/13/2018	Property damage c	7:01 AM	No injury	D1: (No improper driving),(No improper driving)	Daylight	Rear-end	Dry	V1: Slowing or stopped in traffic	Clear/Clear
71	4541148	05/20/2018	Non-fatal injury	2:29 PM	Non-fatal injury - Possible	D1: (No improper driving) / D2: (Other improper acti	Daylight	Angle	Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Cloudy
72	4554560	06/18/2018	Property damage c	12:08 PM	No injury	D1: (Disregarded traffic signs, signals, road markings),	Daylight	Angle	Dry	V1: Slowing or stopped in traffic / V2: Travelling straight ahe	Clear
73	4564266	07/11/2018	Non-fatal injury	7:07 PM	Non-fatal injury - Possible	D1: (Made an improper turn) / D2: (No improper driv	Daylight	Angle	Dry	V1: Turning left / V2: Travelling straight ahead	Clear
74	4579676	08/08/2018	Non-fatal injury	8:11 PM	Non-fatal injury - Possible	D1: (Followed too closely) / D2: (No improper driving	Dark - lighted roadway	Rear-end	Wet	V1: Travelling straight ahead / V2: Slowing or stopped in tra	Rain
75	4580959	08/11/2018	Property damage c	2:09 PM	No injury	D1: (No improper driving) / D2: (Inattention),(Follow	Daylight	Rear-end	Wet	V1: Slowing or stopped in traffic / V2: Travelling straight ahe	Cloudy/Rain
76	4585937	08/15/2018	Property damage c	6:27 PM	No injury	D1: (Failed to yield right of way) / D2: (No improper c	Daylight	Sideswipe, opposite direction	Dry	V1: Turning left / V2: Travelling straight ahead	Clear
77	4601434	09/26/2018	Non-fatal injury	9:14 AM	Non-fatal injury - Possible	D1: (No improper driving) / D2: (No improper driving	Daylight	Rear-end	Wet	V1: Slowing or stopped in traffic / V2: Travelling straight ahe	Clear
78	4673141	09/29/2018	Not Reported	9:19 AM	Not reported		Not reported	Not reported	Not reported	V1: Not reported	Not Reported
79	4618196	10/25/2018	Non-fatal injury	5:30 PM	Non-fatal injury - Possible	D1: (Failed to yield right of way) / D2: (No improper c	Daylight	Sideswipe, same direction	Dry	V2: Travelling straight ahead / V1: Turning right	Clear
80	4618207	11/02/2018	Property damage c	8:50 AM	No injury	D1: (No improper driving) / D2: (Inattention)	Daylight	Rear-end	Wet	V1: Slowing or stopped in traffic / V2: Travelling straight ahe	Cloudy
81	4621154	11/06/2018	Property damage c	9:52 AM	No injury	D1: (Visibility obstructed) / D2: (No improper driving)	Daylight	Angle	Wet	V1: Travelling straight ahead / V2: Turning left	Cloudy
82	4628478	11/16/2018	Property damage c	10:39 PM	No injury	D1: (Driving too fast for conditions)	Dark - lighted roadway	Single vehicle crash	Ice	V1: Turning left	Clear
83	4628479	11/16/2018	Property damage c	9:53 PM	No injury	D1: (Operating vehicle in erratic, reckless, careless, ne	Dark - lighted roadway	Single vehicle crash	Ice	V1: Turning right	Clear
84	4639393	12/18/2018	Property damage c	8:21 AM	No injury	D1: (Distracted) / D2: (No improper driving) / D3: (No	Daylight	Rear-end	Dry	V1: Travelling straight ahead / V2: Slowing or stopped in tra	Clear
85	4642241	12/25/2018	Non-fatal injury	5:22 PM	Non-fatal injury - Possible	D1: (Failed to yield right of way) / D2: (No improper c	Dark - lighted roadway	Angle	Dry	V1: Turning left / V2: Travelling straight ahead	Clear
86	4643530	12/27/2018	Property damage c	5:17 PM	No injury	D1: (Inattention) / D2: (No improper driving)	Dark - lighted roadway	Sideswipe, same direction	Dry	V1: Turning right / V2: Travelling straight ahead	Clear
87	4643532	12/28/2018	Property damage c	3:13 PM	No injury	D1: (No improper driving) / D2: (No improper driving	Daylight	Angle	Wet	V1: Slowing or stopped in traffic / V2: Travelling straight ahe	Rain/Cloudy
88	4650780	01/10/2019	Property damage c	7:20 PM	No injury	D1: (Unknown) / D2: (No improper driving)	Dark - lighted roadway	Angle	Dry	V1: Turning right / V2: Travelling straight ahead	Clear
89	4656652	01/27/2019	Property damage c	6:04 PM	No injury	D1: (No improper driving) / D2: (No improper driving	Dark - lighted roadway	Angle	Dry	V1: Entering traffic lane / V2: Travelling straight ahead	Clear
90	4678900	03/19/2019	Property damage c	3:06 PM	No Apparent Injury (O)	D1: (Unknown) / D2: (Other improper action)	Daylight	Rear to Side	Dry	V1: Parked / V2: Backing	Clear
91	4683972	03/30/2019	Property damage c	10:58 PM	No Apparent Injury (O)	D1: (Failed to yield right of way) / D2: (No improper c	Dawn	Rear-end	Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
92	4688703	04/09/2019	Non-fatal injury	8:23 PM	Possible Injury (C)	D1: (Failure to keep in proper lane or running off road	Dark - lighted roadway	Angle	Wet	V1: Changing lanes / V2: Slowing or stopped in traffic	Rain
93	4690693	04/16/2019	Property damage c	9:28 AM	No Apparent Injury (O)	D1: (Unknown) / D2: (No improper driving)	Daylight	Rear-end	Dry	V1: Travelling straight ahead / V2: Turning right	Clear
94	4700321	05/10/2019	Property damage c	10:13 AM	No Apparent Injury (O)	D1: (Unknown) / D2: (Unknown) / D3: (No improper	Daylight	Rear-end	Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
95	4706281	05/24/2019	Property damage c	5:17 PM	No Apparent Injury (O)	D1: (No improper driving) / D2: (No improper driving	Daylight	Angle	Dry	V1: Slowing or stopped in traffic / V2: Slowing or stopped in	Clear
96	4706283	05/27/2019	Property damage c	12:31 PM	No Apparent Injury (O)	D1: (Unknown),(Other improper action) / D2: (No im	Daylight	Rear-end	Dry	V1: Travelling straight ahead / V2: Changing lanes	Clear
97	4727677	07/21/2019	Property damage c	8:43 AM	No Apparent Injury (O)	D1: (No improper driving) / D2: (Followed too closely	Daylight	Rear-end		V1: Slowing or stopped in traffic / V2: Travelling straight ahe	Clear
98	4728690	07/22/2019	Property damage c	10:15 PM	No Apparent Injury (O)	D1: (No improper driving) / D2: (No improper driving	Dark - lighted roadway	Sideswipe, same direction		V1: Travelling straight ahead / V2: Travelling straight ahead	Rain/Cloudy
99	4734695	08/02/2019	Non-fatal injury	9:05 AM	Suspected Minor Injury (B)	D1: (No improper driving) / D2: (Inattention),(Other i	Daylight	Angle	Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
100	4736012	08/10/2019	Property damage c	10:27 PM	No Apparent Injury (O)	D1: (No improper driving) / D2: (No improper driving	Dark - lighted roadway	Sideswipe, same direction	Dry	V1: Turning left / V2: Turning left	Clear
101	4742716	08/27/2019	Property damage c	3:34 PM	No Apparent Injury (O)	D1: (No improper driving) / D2: (No improper driving	Daylight	Rear to Side	Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
102	4750772	09/11/2019	Property damage c	4:05 PM	No Apparent Injury (O)	D1: (No improper driving) / D2: (Unknown)	Daylight	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Slowing or stopped in	Clear
103	4790668	09/26/2019	Property damage c	8:16 PM	No Apparent Injury (O)	D1: (Unknown) / D2: (No improper driving)	Dark - lighted roadway	Rear-end	Wet	V1: Travelling straight ahead / V2: Slowing or stopped in tra	Clear/Rain
104	4759731	10/08/2019	Property damage c	6:11 AM	No Apparent Injury (O)	D1: (Unknown) / D2: (Unknown)	Dawn	Sideswipe, same direction	Wet	V2: Travelling straight ahead / V1: Travelling straight ahead	Cloudy
105	4775730	11/14/2019	Non-fatal injury	10:40 AM	Suspected Minor Injury (B)	D1: (Followed too closely),(Inattention) / D2: (Unkno	Daylight	Rear-end	Dry	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
106	4779908	11/21/2019	Non-fatal injury	9:19 AM	Suspected Minor Injury (B)	D1: (No improper driving) / D2: (Failed to yield right c	Daylight	Angle	Dry	V1: Travelling straight ahead / V2: Entering traffic lane	Clear
107	4779912	11/24/2019	Property damage c	12:38 AM	No Apparent Injury (O)	D1: (No improper driving) / D2: (Operating vehicle in	Dark - lighted roadway	Rear-end	Dry	V1: Slowing or stopped in traffic / V2: Travelling straight ahe	Clear
108	4785903	12/06/2019	Property damage c	7:13 AM	No Apparent Injury (O)	D1: (No improper driving) / D2: (Failed to yield right c	Daylight	Angle	Dry	V1: Travelling straight ahead / V2: Turning left	Clear

Appendix F

Community Survey Results

Responses: 676

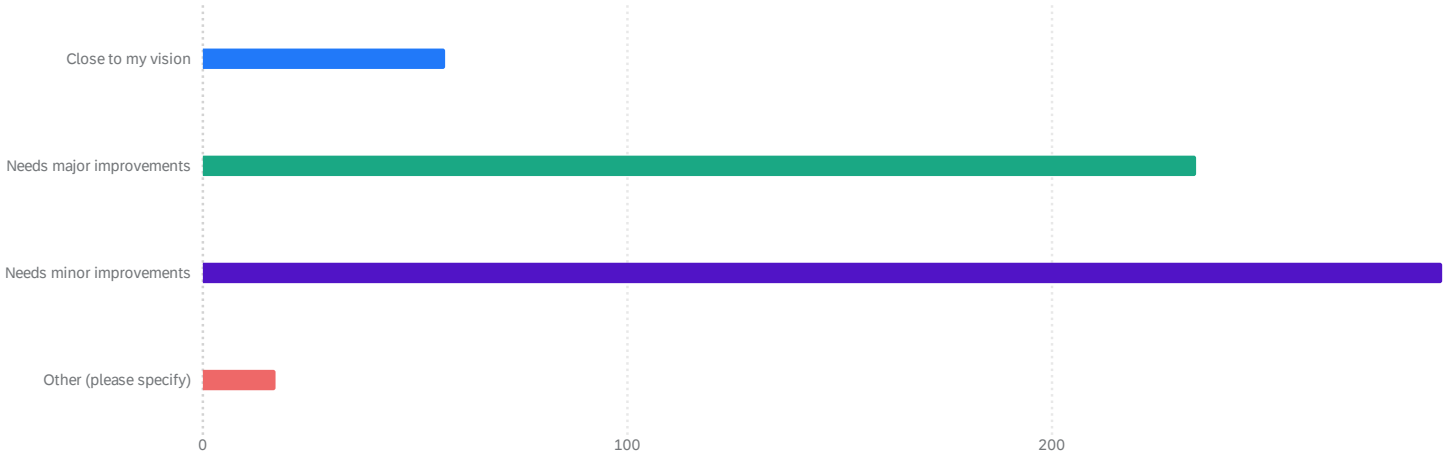
How do you typically travel on this corridor? Select only one.



How do you typically travel on this corridor? Select only one.: Other (please specify)

- Bus
- shuttle bus
- Moderna shuttle
- drive alone and with others
- Drive myself and family
- All of the above.

How close is Route 1 to the vision you have for the area? Select only one.



How close is Route 1 to the vision you have for the area? Select only one.: Other (please specify)

Do not travel on rt 1

I don't have a vision for the area

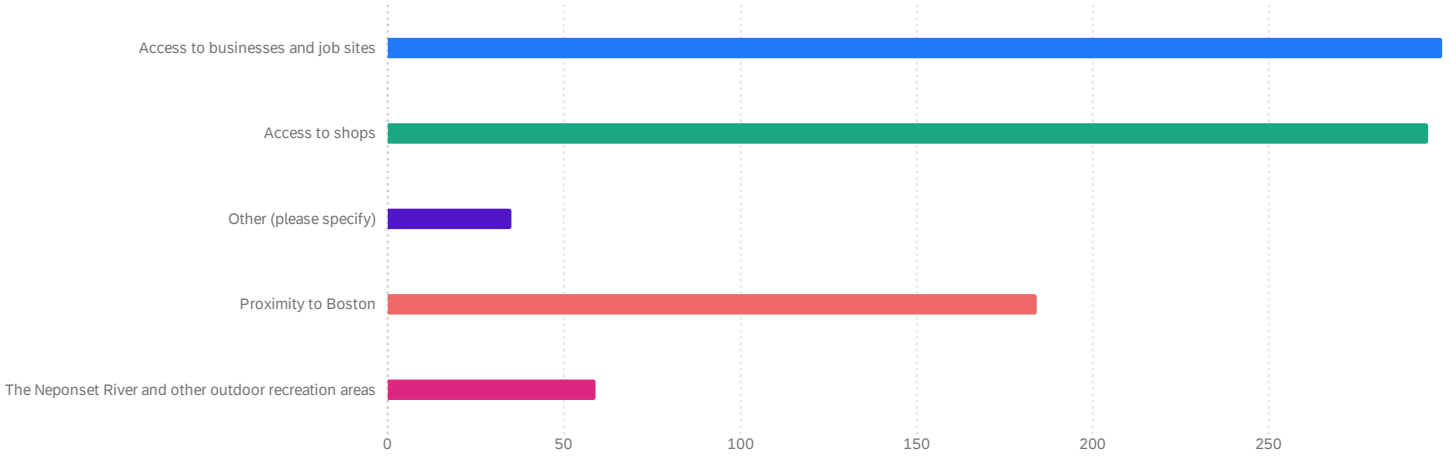
Unclear what question is asking

Has not seemingly changed in the 40 years I've known it

Haven't given much thought

As it is I avoid it as much as possible.

What do you like most about the Route 1 corridor? Select all that apply.



What do you like most about the Route 1 corridor? Select all that apply.: Other (please specify)

Closest route to get to work

quickest route to work

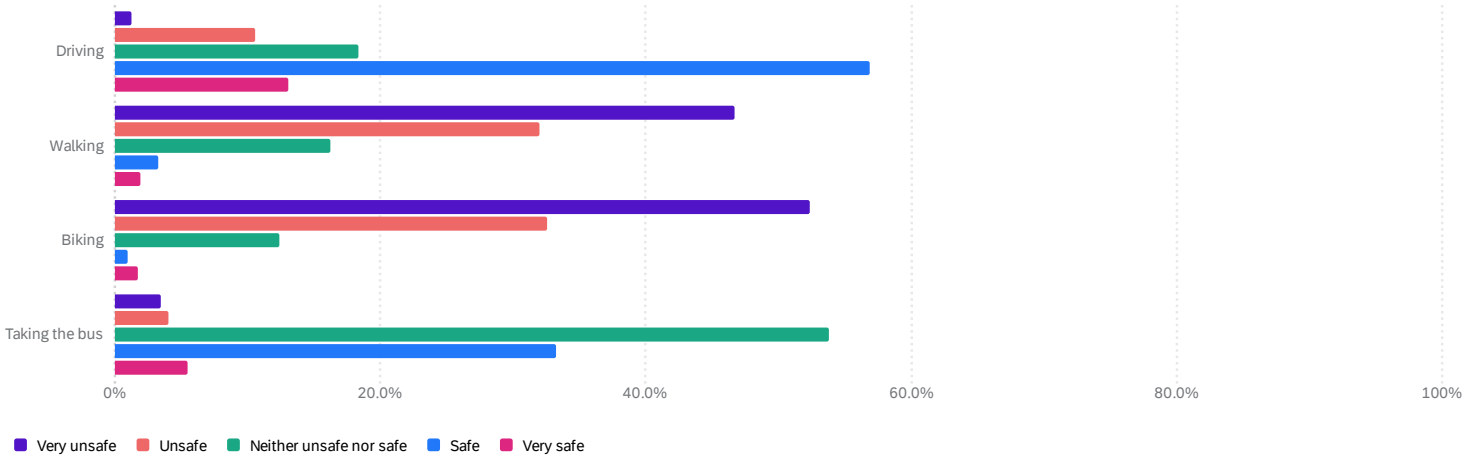
i work on route 1

Commute to/from work

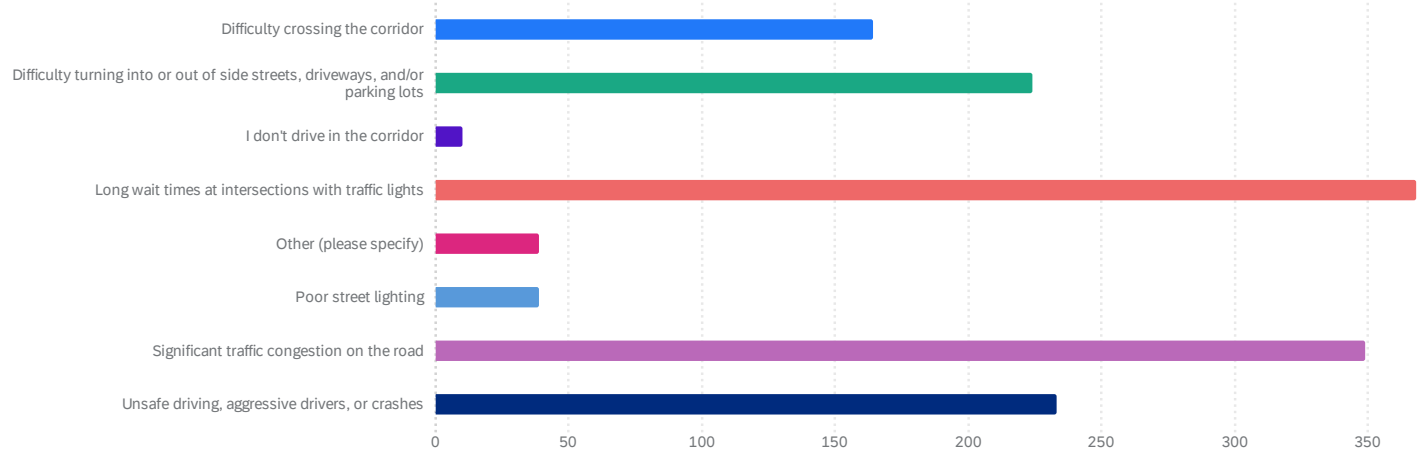
Faster than Route 1A. Good for moving around Norwood and the surrounding town without using the highway.

good alternative to 128, 95, downtown Norwood

How safe do you feel doing the following activities in the corridor? Select only one for each transportation mode.



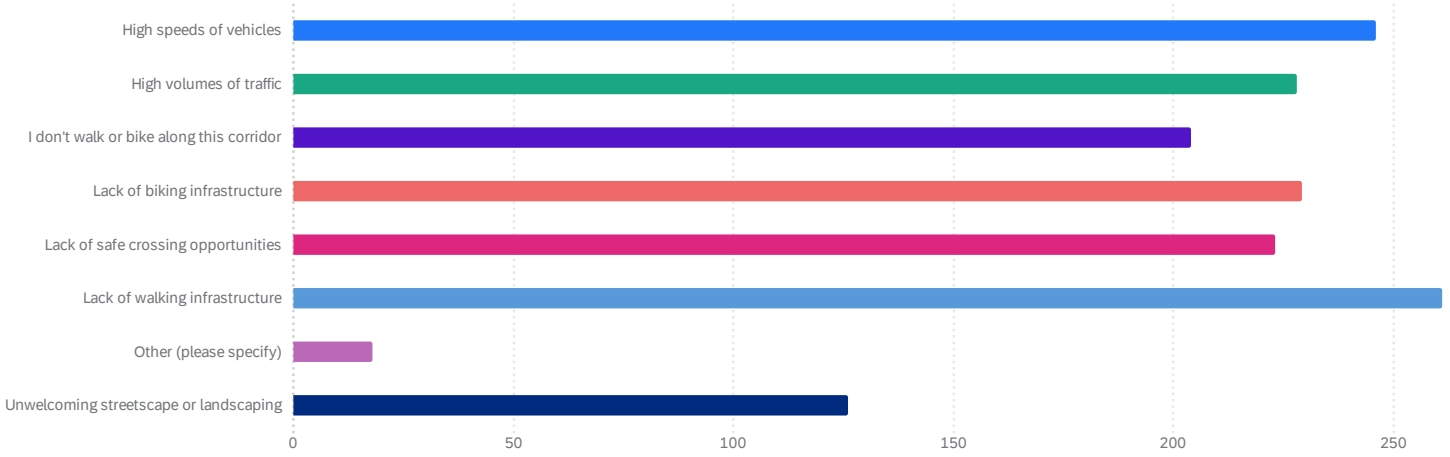
What challenges do you experience driving in the corridor? Select all that apply.



What challenges do you experience driving in the corridor? Select all that apply.: Other (please specify)

- The Rotary is challenging, People do not yeild
- People driving way too fast, difficult to merge, relentless tailgating if you don't drive 60 MPH
- That intersection is just horrendous all the way around.
- it's fine, outside of peak congested times
- The circle has aggressive drivers
- rough road

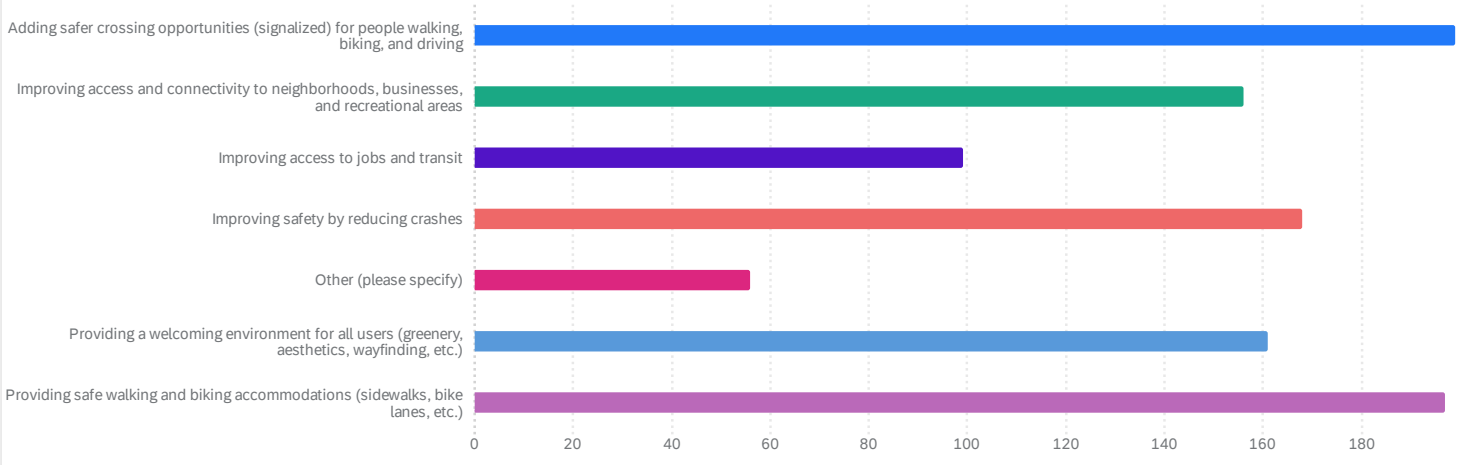
What challenges do you experience walking or biking in the corridor? Select all that apply.



What challenges do you experience walking or biking in the corridor? Select all that apply.: Other (please specify)

Not walkable or bikeable at all really. Many sections without sidewalks. No bikelanes anywhere. Few opportunities to cross the road.
NA
I don't bike but would like to
Not at all set up for walking or biking
again, the map only allowed for three locations. the entire corridor is dangerous for walking and biking. and one reason that isn't listed specifically, though could be embedded in unwelcoming landscaping, is overgrowth on the sidewalk because MASSDOT does not maintain the sidewalks well, either in terms of safe and even concrete or clearing poison ivy and other invasive vegetation.

What are two major ways you would like to see Route 1 improved? Select only two.



What are two major ways you would like to see Route 1 improved? Select only two.: Other (please specify)

1. Better traffic flow/less congestion

improve lights and intersections that back up considerably and take too long

Dangerous intersections at Everett, Access/Nahatan, Dean, Morse are made more dangerous by the numerous business with entry/exit very close to Rte 1

Improve road quality. Route 1 has significant amount of potholes and debris

I don't walk or bike along the corridor and don't see many other people doing it either. My biggest issue is with traffic at the Everrett St/Rt 1 intersection. The left onto Everrett when going south on RT 1 could be improved which would alleviate some of the backup.

Please use the space below to provide any additional comments.

Improved visibility to signage for side streets, Highway, Major retail (seniors looking for Frugal Fannies, for example)

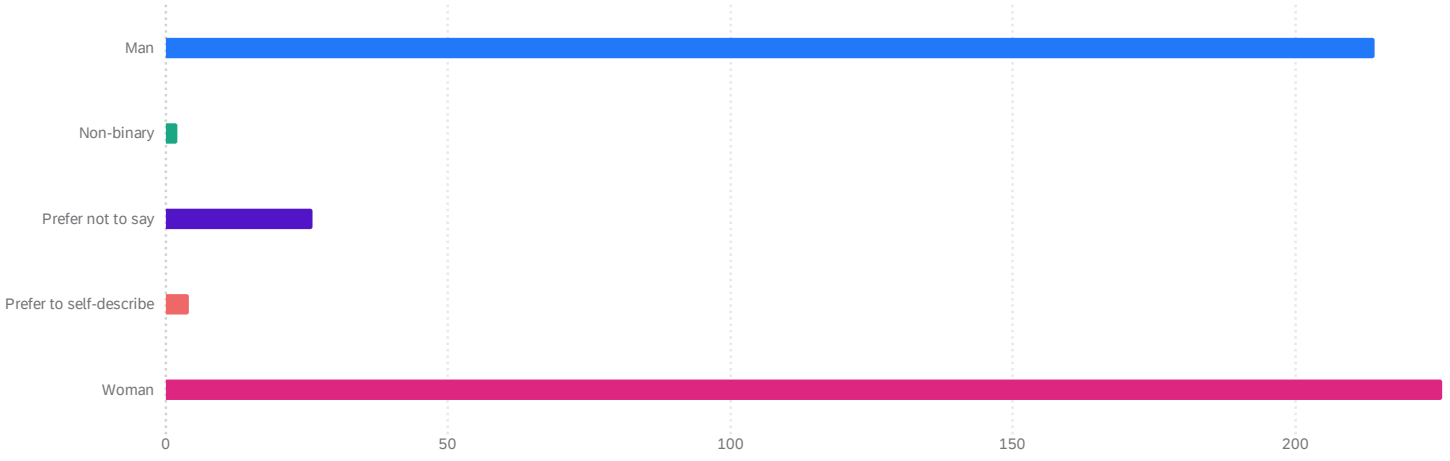
Biking along Route 1, or even crossing Route 1 on a bike doesn't feel very safe. It would be nice if it was safer.

Route 1 is a major, high speed, road way. I do not expect to see/have people walking/riding bikes on this road for that reason. I have seen people run across the road, over the barriers -- not safe. If there are needs for crossing at other locations, then consider installing pedestrian bridges

The area is tired looking and has not changed in the 40 + years I've lived/worked in the area. I never see any police and drivers know it and are super aggressive. A little sprucing up and some police presence would be a good start to changing the mindsets of the area as a Nascar raceway.

The Everett St/University Ave intersection is always backed up when coming from Everett St

How do you identify by gender?



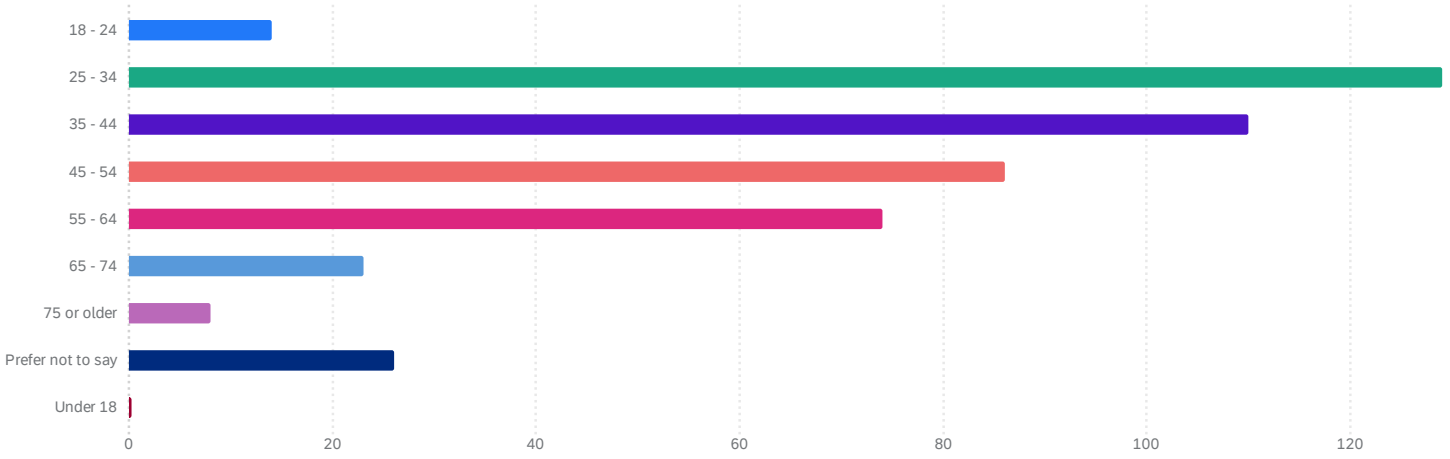
How do you identify by gender?: Prefer to self-describe

Meat popsicle

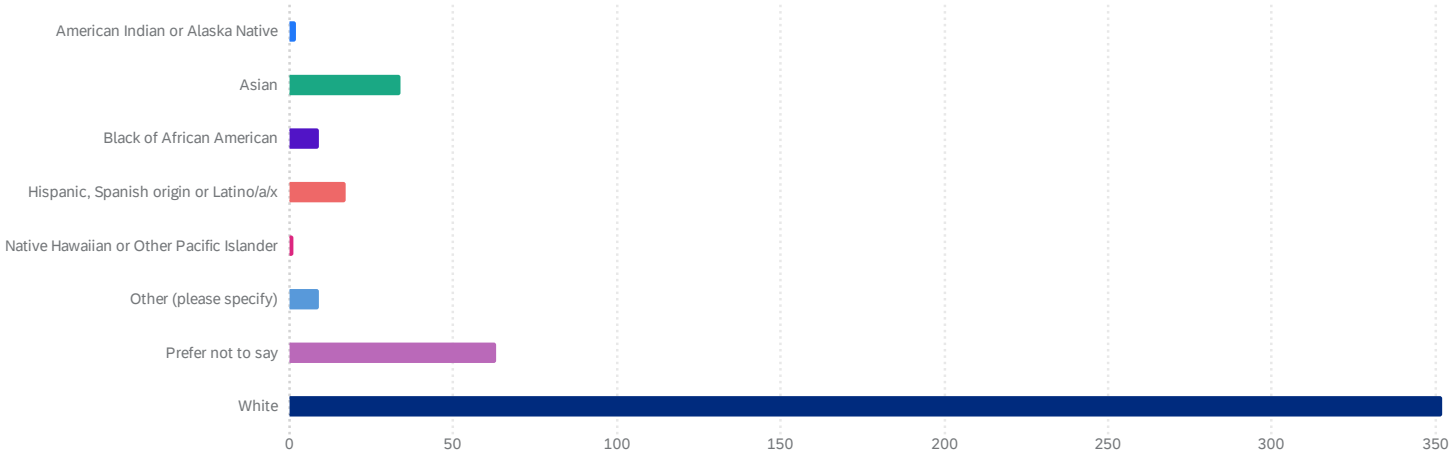
Usually at brith, it's pretty obvious.

No more results to show

What is your age?



How do you self-identify by race or ethnicity? Check all that apply.



How do you self-identify by race or ethnicity? Check all that apply.: Other (please specify)

American

ME

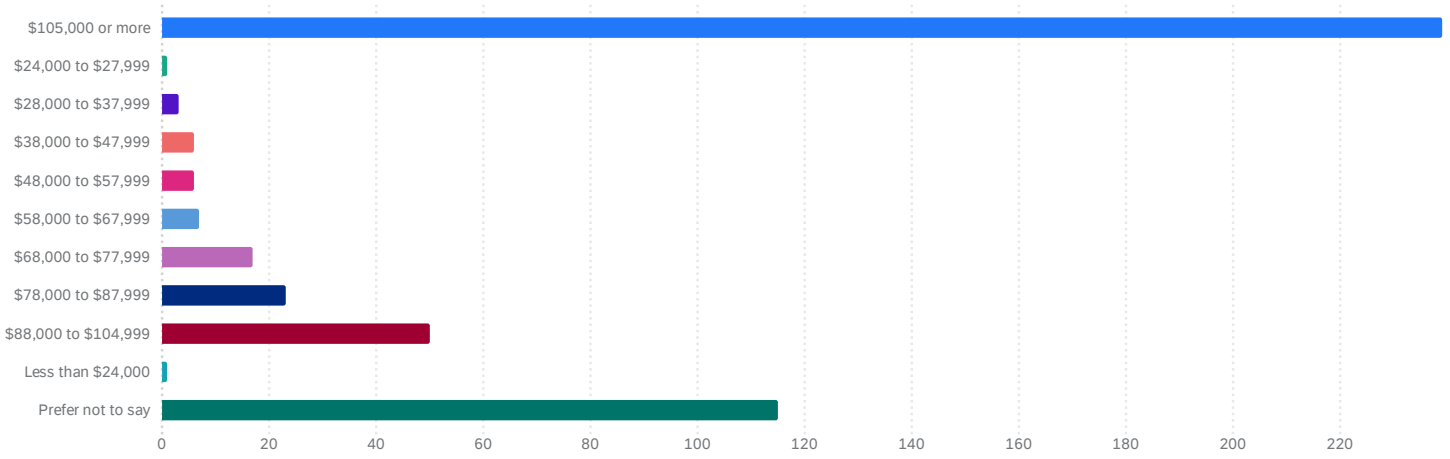
American.

Why does this matter?

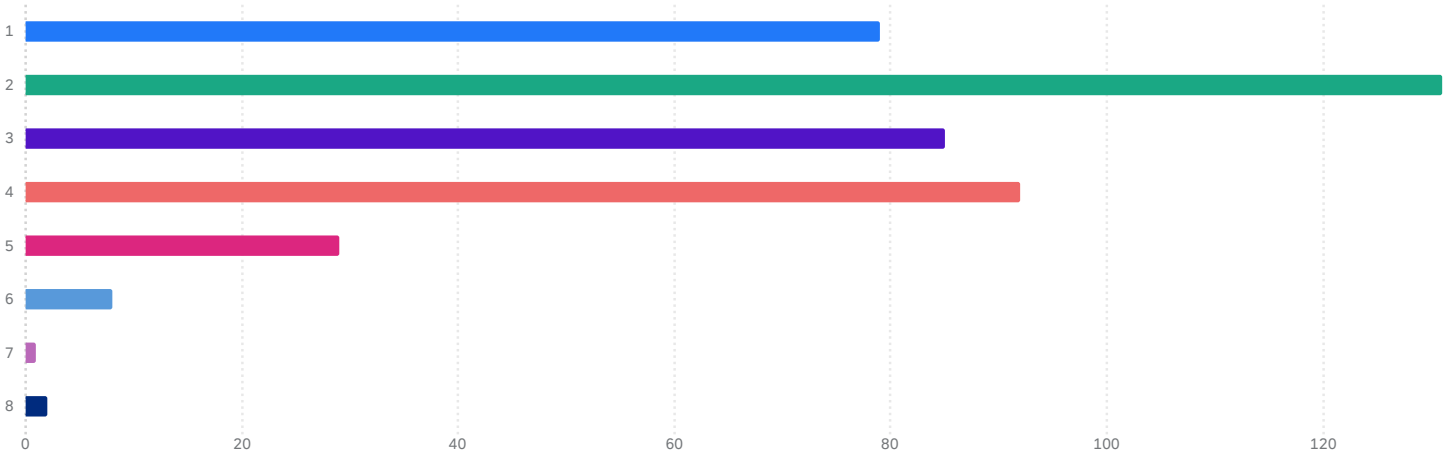
American

Arab

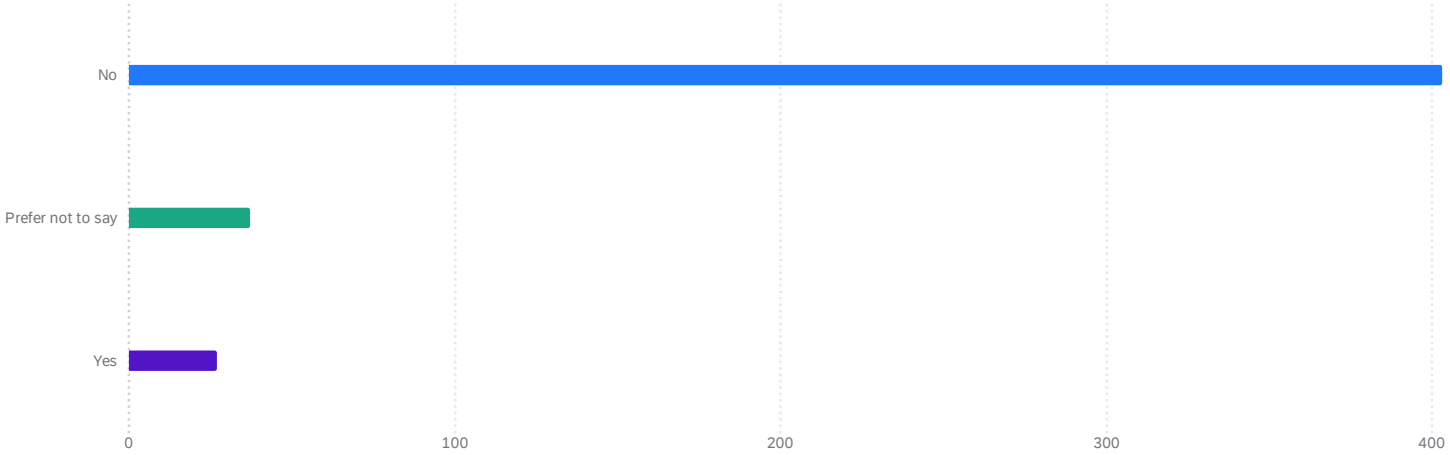
What is your annual household income?



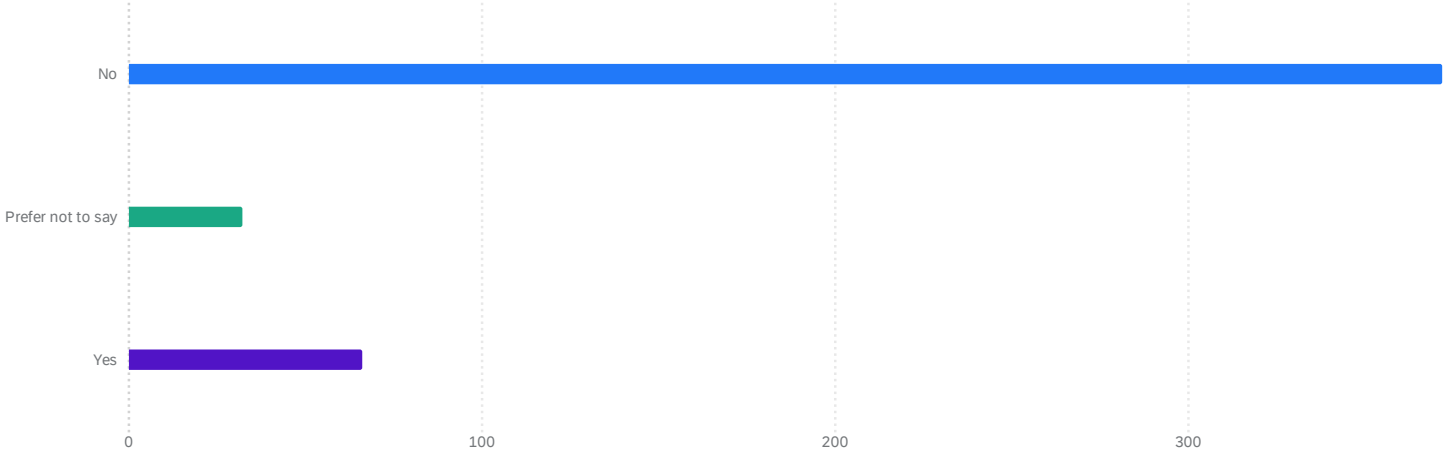
How many people live in your household?



Do you have a disability?



Do you speak a language other than English at home?



If yes, what is the language?

- Spanish
- telugu , hindi
- spanish
- spanish
- Arabic
- Mandarin Chinese

What is your home zip code?

02026

01760

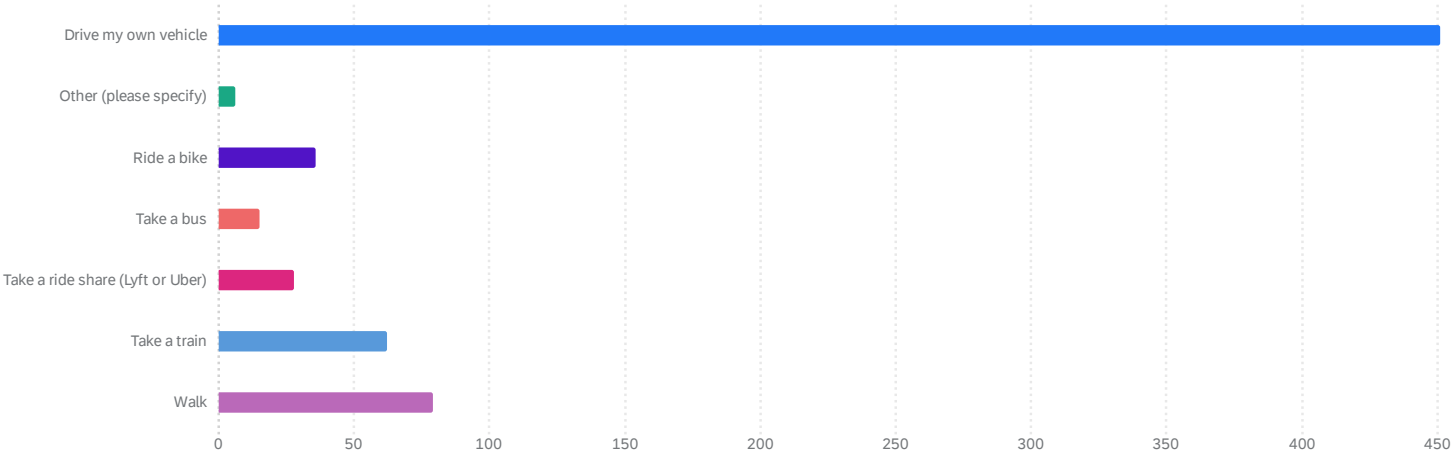
02035

02090

02766

02144

How do you usually travel? Select all that apply.



How do you usually travel? Select all that apply.: Other (please specify)

Family drives

Moped

motorcycle

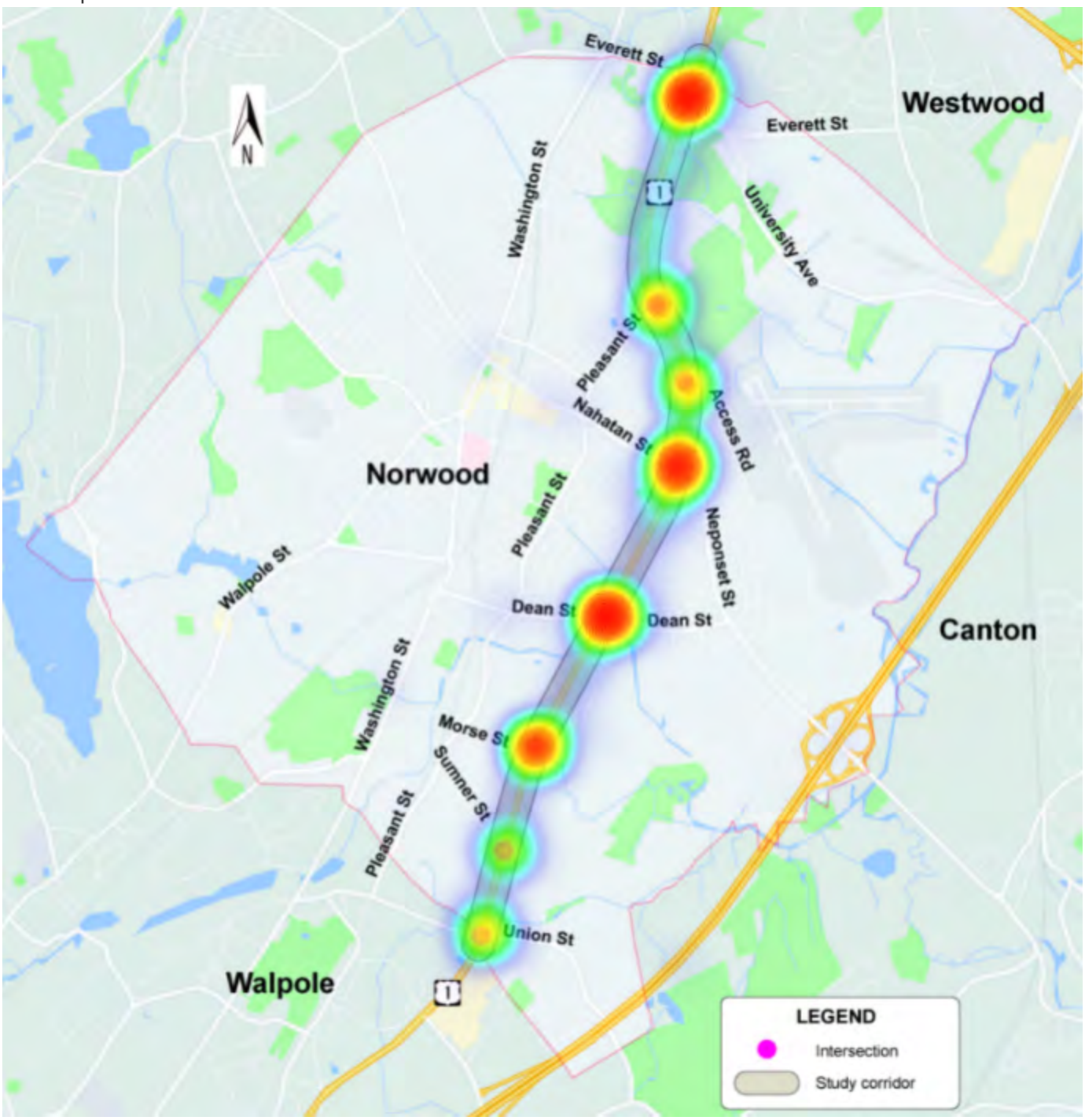
My fiancé drives a motorcycle. I've seen an increase in motorcycle traffic on Route 1

Carpool

What bus goes on route 1 in Norwood

Q10 - Using the map below, click on the locations where you feel unsafe driving.

732 Responses



Q13 - Using the map below, click on the locations where you feel unsafe walking or biking.

896 Responses

Appendix G

MassDOT Highway Division Project Development Process

Overview of the Project Development Process

Transportation decision-making is complex and can be influenced by legislative mandates, environmental regulations, financial limitations, agency programmatic commitments, and partnering opportunities. Decision-makers and reviewing agencies, when consulted early and often throughout the project development process, can ensure that all participants understand the potential impact these factors can have on project implementation. Project development is the process that takes a transportation improvement from concept through construction.

The MassDOT Highway Division has developed a comprehensive project development process which is contained in Chapter 2 of the *MassDOT Highway Division's Project Development and Design Guide*. The eight-step process covers a range of activities extending from identification of a project need, through completion of a set of finished contract plans, to construction of the project. The sequence of decisions made through the project development process progressively narrows the project focus and, ultimately, leads to a project that addresses the identified needs. The descriptions provided below are focused on the process for a highway project, but the same basic process will need to be followed for non-highway projects as well.

1. Needs Identification

For each of the locations at which an improvement is to be implemented, MassDOT leads an effort to define the problem, establishes project goals and objectives, and defines the scope of the planning needed for implementation. To that end, it has to complete a Project Need Form (PNF), which states in general terms the deficiencies or needs related to the transportation facility or location. The PNF documents the problems and explains why corrective action is needed. For this study, the information defining the need for the project will be drawn primarily, perhaps exclusively, from the present report. Also, at this point in the process, MassDOT meets with potential participants, such as the Metropolitan Planning Organization (MPO) and community members, to allow for an informal review of the project.

The PNF is reviewed by the MassDOT Highway Division district office whose jurisdiction includes the location of the proposed project. MassDOT also sends the PNF to the MPO, for informational purposes. The outcome of this step determines whether the project requires further planning, whether it is already well supported by prior planning studies, and, therefore, whether it is ready to move forward into the design phase, or whether it should be dismissed from further consideration.

2. Planning

This phase will likely not be required for the implementation of the improvements proposed in this planning study, as this planning report should constitute the outcome of this step. However, in general, the purpose of this implementation step is for the project proponent to identify issues, impacts, and approvals that may need to be obtained, so that the subsequent design and permitting processes are understood.

The level of planning needed will vary widely, based on the complexity of the project. Typical tasks include: define the existing context, confirm project need, establish goals and objectives, initiate public outreach, define the project, collect data, develop and analyze alternatives, make recommendations, and provide documentation. Likely outcomes include consensus on the project definition to enable it to move forward into environmental documentation (if needed) and design, or a recommendation to delay the project or dismiss it from further consideration.

3. Project Initiation

At this point in the process, the proponent, MassDOT Highway Division, fills out a Project Initiation Form (PIF) for each improvement, which is reviewed by its Project Review Committee (PRC) and the MPO. The PRC is composed of the Chief Engineer, each District Highway Director, and representatives of the Project Management, Environmental, Planning, Right-of-Way, Traffic, and Bridge departments, and the MassDOT Federal Aid Program Office (FAPO). The PIF documents the project type and description, summarizes the project planning process, identifies likely funding and project management responsibility, and defines a plan for interagency and public participation. First the PRC reviews and evaluates the proposed project based on the MassDOT's statewide priorities and criteria. If the result is positive, MassDOT Highway Division moves the project forward to the design phase, and to programming review by the MPO. The PRC may provide a Project Management Plan to define roles and responsibilities for subsequent steps. The MPO review includes project evaluation based on the MPO's regional priorities and criteria. The MPO may assign project evaluation criteria score, a Transportation Improvement Program (TIP) year, a tentative project category, and a tentative funding category.

4. Environmental Permitting, Design, and Right-of-Way Process

This step has four distinct but closely integrated elements: public outreach, environmental documentation and permitting (if required), design, and right-of-way acquisition (if required). The outcome of this step is a fully designed and permitted project ready for construction. However, a project does not have to be fully designed in order for the MPO to program it in the TIP. The sections below provide more detailed information on the four elements of this step of the project development process.

Public Outreach

Continued public outreach in the design and environmental process is essential to maintain public support for the project and to seek meaningful input on the design elements. The public outreach is often in the form of required public hearings, but can also include less formal dialogues with those interested in and affected by a proposed project.

Environmental Documentation and Permitting

The project proponent, in coordination with the Environmental Services section of the MassDOT Highway Division, will be responsible for identifying and complying with all applicable federal, state, and local environmental laws and requirements. This includes determining the appropriate project category for both the Massachusetts Environmental Protection Act (MEPA) and the National Environmental Protection Act (NEPA). Environmental documentation and permitting is often completed in conjunction with the **Preliminary Design** phase described below.

Design

There are three major phases of design. The first is **Preliminary Design**, which is also referred to as the 25-percent submission. The major components of this phase include full survey of the project area, preparation of base plans, development of basic geometric layout, development of preliminary cost estimates, and submission of a functional design report. Preliminary Design, although not required to, is often completed in conjunction with the Environmental Documentation and Permitting. The next phase is **Final Design**, which is also referred to as the 75-percent and 100-percent submission. The major components of this phase include preparation of a subsurface exploratory plan (if required), coordination of utility relocations, development of traffic management plans through construction zones, development of final cost estimates, and refinement and finalization of the construction plans. Once Final Design is complete, a full set of **Plans, Specifications, and Estimates (PS&E)** is developed for the project.

Right-of-Way Acquisition
A separate set of Right-of-Way plans are required for any project that requires land acquisition or easements. The plans must identify the existing and proposed layout lines, easements, property lines, names of property owners, and the dimensions and areas of estimated takings and easements.

5. Programming (Identification of Funding)
Programming, which typically begins during the design phase, can actually occur at any time during the process, from planning to design. In this step, which is distinct from project initiation, the proponent requests that the MPO place the project in the region's Transportation Improvement Program (TIP). The proponent requesting the project's listing on the TIP can be the community or it can be one of the MPO member agencies (the Regional Planning Agency, MassDOT, and the Regional Transit Authority). The MPO then considers the project in terms of state and regional needs, evaluation criteria, and compliance with the regional Transportation Plan and decides whether to place it in the draft TIP for public review and then in the final TIP.

6. Procurement
Following project design and programming of a highway project, the MassDOT Highway Division publishes a request for proposals. It then reviews the bids and awards the contract to the qualified bidder with the lowest bid.

7. Construction
After a construction contract is awarded, MassDOT Highway Division and the contractor develop a public participation plan and a management plan for the construction process.

8. Project Assessment
The purpose of this step is to receive constituents' comments on the project development process and the project's design elements. MassDOT Highway Division can apply what is learned in this process to future projects.

Project Development Schematic Timetable

Description	Schedule Influence	Typical Duration
Step I: Problem/Need/Opportunity Identification The proponent completes a Project Need Form (PNF). This form is then reviewed by the MassDOT District office which provides guidance to the proponent on the subsequent steps of the process.	The Project Need Form has been developed so that it can be prepared quickly by the proponent, including any supporting data that is readily available. The District office shall return comments to the proponent within one month of PNF submission.	1 to 3 months
Step II: Planning Project planning can range from agreement that the problem should be addressed through a clear solution to a detailed analysis of alternatives and their impacts.	For some projects, no planning beyond preparation of the Project Need Form is required. Some projects require a planning study centered on specific project issues associated with the proposed solution or a narrow family of alternatives. More complex projects will likely require a detailed alternatives analysis.	Project Planning Report: 3 to 24+ months
Step III: Project Initiation The proponent prepares and submits a Project Initiation Form (PIF) and a Transportation Evaluation Criteria (TEC) form in this step. The PIF and TEC are informally reviewed by the Metropolitan Planning Organization (MPO) and MassDOT District office, and formally reviewed by the PRC.	The PIF includes refinement of the preliminary information contained in the PNF. Additional information summarizing the results of the planning process, such as the Project Planning Report, are included with the PIF and TEC. The schedule is determined by PRC staff review (dependent on project complexity) and meeting schedule.	1 to 4 months
Step IV: Design, Environmental, and Right of Way The proponent completes the project design. Concurrently, the proponent completes necessary environmental permitting analyses and files applications for permits. Any right of way needed for the project is identified and the acquisition process begins.	The schedule for this step is dependent upon the size of the project and the complexity of the design, permitting, and right-of-way issues. Design review by the MassDOT district and appropriate sections is completed in this step.	3 to 48+ months
Step V: Programming The MPO considers the project in terms of its regional priorities and determines whether or not to include the project in the draft Regional Transportation Improvement Program (TIP) which is then made available for public comment. The TIP includes a project description and funding source.	The schedule for this step is subject to each MPO's programming cycle and meeting schedule. It is also possible that the MPO will not include a project in its Draft TIP based on its review and approval procedures.	3 to 12+ months
Step VI: Procurement The project is advertised for construction and a contract awarded.	Administration of competing projects can influence the advertising schedule.	1 to 12 months
Step VII: Construction The construction process is initiated including public notification and any anticipated public involvement. Construction continues to project completion.	The duration for this step is entirely dependent upon project complexity and phasing.	3 to 60+ months
Step VIII: Project Assessment The construction period is complete and project elements and processes are evaluated on a voluntary basis.	The duration for this step is dependent upon the proponent's approach to this step and any follow-up required.	1 month

Source: MassDOT Highway Division Project Development and Design Guide