CENTRAL MASSACHUSETTS METROPOLITAN PLANNING ORGANIZATION (CMMPO)

2020 - 2021
Freight Planning Progress Report:
An Overview of Ongoing Activities

CMMPO
Central Massachusetts
Metropolitan Planning Organization

C M R P C
Central Massachusetts Regional Planning Commission

December 2022

Prepared in cooperation with the Massachusetts Department of Transportation and the U.S. Department of Transportation – Federal Highway Administration and the Federal Transit Administration. The views and opinions of the Central Massachusetts Regional Planning Commission expressed herein do not necessarily reflect those of the Massachusetts Department of Transportation or the U.S. Department of Transportation. A portion of this document was completed using District Local Technical Assistance (DLTA) funds provided to CMRPC.

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Preface

The compilation of the Biennial Freight Planning Progress Report details the CMMPO's staff's efforts concerning highway trucking, railroad - both freight and passenger, as well as intermodal freight movement activities throughout the greater planning region. Chapter materials concerning a range of freight planning activities & topics are included in this document. Various sectional text, maps, tables, and graphics were either newly created or updated since the production of the last summary document two years ago. Updated report graphics include aerials of the highway/railroad intermodal facilities in the CMRPC planning region (including highway/air at Worcester Regional Airport) as well as heavy vehicle volume & percentage maps. Also, an overview of staff's work to date with the subregional *Highway Freight Accommodation Assessment Studies* conducted in the North and West transportation planning subregions is summarized in this report. This study series has examined the potential for strategically-located increases in the truck parking opportunities available in these subregions. Further, included in the Progress Report are updated excerpts from the current LRTP, *Mobility2040 the Update for 2020*, specifically the current status of identified freight and intermodal Needs in the planning region.

I. Introduction

The primary mission of Freight Planning is to improve the performance and connectivity of the intermodal transportation system. Improvements in system performance increase the opportunities to move freight and interregional passengers with fewer impediments and at less cost. Freight planning aspects are fully considered by the CMMPO when establishing policy and in the screening and selection of both TIP and LRTP Major Infrastructure projects. Further, Freight Planning efforts provide useful inputs to the overall transportation planning process through the continued evolution, review and refinement of measures that seek to improve system performance. This is accomplished by balancing intermodal cost and operating efficiencies with the potential impacts of proposed decisions.

The three main goals of Freight Planning in the region are as follows:

1. Improve the system performance of freight and interregional passenger intermodal corridors and terminals.
2. Work with host communities, decision makers and stakeholders, from the public and private sectors.
3. Assist in identifying and considering the funding, environmental (natural, Title VI, EJ, LEP), energy, congestion & safety impacts of potential policy and programming decisions.

The CMMPO, following the intent of US DOT Freight Planning provisions, is required to provide the opportunity for input from member communities as well as interested stakeholders. The CMRPC staff has formed relationships with various modal transportation providers in the region, including the railroads, trucking industry and intermodal transfer operators. Perhaps more than ever, it is critical for the CMMPO, host communities and stakeholders to understand the advantages and challenges of freight mobility when forming regional transportation policy as well as screening potential improvement projects for the TIP or LRTP.

1. Overview of Recent Freight Planning Accomplishments

The following provides a brief overview of recent freight planning accomplishments by the CMRPC staff on behalf of the CMMPO.

CMMPO Advisory Committee Support

During 2020 & 2021, staff continued to support the freight-related efforts of the CMMPO Advisory Committee. The Committee consists of a broad membership with a wide range of expertise and experience. As necessary, staff provides updates to the Committee about freight planning activities in the greater region including existing operations, identified deficiencies and

planned improvements. Staff seeks both feedback and general guidance from the Committee's broad perspective. Further, staff continued to document any Freight Planning-related proceedings of the Advisory Committee, providing a record for consideration and reference by the CMMPO.

Additionally, as appropriate/requested, the CMMPO staff continued to host and/or attend meetings of significance with providers of freight and/or interregional passenger service, allowing the opportunity for sharing information and strategy building, seeking to identify both challenges and advantages. This included staff participation in both the ongoing Northern Tier Passenger Rail Study as well as efforts associated with the East - West Passenger Rail Study proposal to bring increased service between Worcester, Springfield and points further west. Notably, it should also be mentioned that the CMMPO staff is a long-standing member of the 495/MetroWest Partnership's Transportation Committee.

Freight Planning Progress Report Compilation

Staff continued the compilation of biennial regional *Freight Planning Progress Report* documents, the earliest in 2008-2009 to this most recent edition. The reports provide an overview of staff's ongoing freight planning efforts. Addressing a range of federal requirements, these efforts, in part, help to inform the screening and prioritization of TIP & LRTP Major Infrastructure projects. In this most recent edition of the Progress Report, an overview of staff's work to date with the ongoing subregional highway freight accommodation assessment study series is detailed. Updated report graphics include aerials of the highway/railroad intermodal facilities in the CMRPC planning region as well as heavy vehicle volume & percentage maps. Further, included in the Progress Report are updated excerpts from the most recent LRTP, *Mobility2040 the Update for 2020*, specifically the current status of identified freight and intermodal Needs in the planning region.

Highway Freight Accommodation Assessment Study Series

As part of regional freight planning activities during calendar year 2019, staff commenced an envisioned series of "Highway Freight Accommodation Assessments" for federal-aid state numbered routes. The first such study, or pilot, focused on CMRPC's North transportation planning subregion. The "Preface" passage for the North subregion study is included in the following paragraphs.

> In order to assure that the federal-aid highway system in each of the CMRPC's transportation planning subregions is adequately accommodating existing trucking needs as well as those projected for the future, the CMMPO UPWP for FY 2020 initiates a new study series, "Highway Freight Accommodation Assessments" for federal-aid state numbered routes. A study focusing on the North subregion is intended to result in several suggested roadway improvement as well as local

trucking policy options to assure the continued flow of freight on the region's major highways while mitigating identified local impacts.

Further, as noted in the state's 2017 *Massachusetts Freight Plan*, there is an identified need to improve the Commonwealth's stock of truck parking and servicing areas. The compilation of the *Highway Freight Accommodation Assessment Study* series is intended to assist in addressing this identified need. This study will examine the potential for wisely located increases in truck parking available in various parts of the region, with a particular focus on rural highway freight movement needs.

Subsequently, the study for the North subregion was completed and was followed by the study for the West subregion, which was included within the CMMPO Endorsed UPWP for 2021. The third installment in this study series will focus on the Southwest transportation planning subregion and is expected to be largely complete during calendar year 2022. The next study in the series will focus on the Southeast subregion to be undertaken in calendar year 2023. The major suggested recommendations from both the completed North and West subregional studies are included in this document as a record of the study results that could potentially be implemented in the future by either MassDOT or the host communities.

II. Region-Wide Freight Planning Efforts

This section of the Progress Report summarizes a number of region-wide freight planning efforts. Produced every four years, the federally-required Long Range Transportation Plan (LRTP) for the planning region *Mobility2040, the Update for 2020*, was endorsed by the CMMPO in July 2019. The LRTP includes an overview of freight planning efforts in the region as well as a summary of LRTP-identified "Needs" for both freight rail providers and highway trucking that has also been included in this Progress Report. The next LRTP for the planning region, named *2050 Connections*, is anticipated to be completed during the summer of 2023.

This section of the Progress Report also provides the Executive Summaries to both the current Massachusetts State Rail Plan and the Massachusetts State Freight Plan. Concerning the State's Freight Plan, this Progress Report lists a number of strategies included in the Freight Plan along with an updated summary of corresponding regional responses from the CMMPO staff. Similar to the planning region's LRTP document, both the State Rail and Freight Plans will be updated by MassDOT starting in calendar year 2023.

1. Long Range Transportation Plan (LRTP) Mobility2040, the Update for 2020

Summary of LRTP Identified NEEDS for Highway Trucking & Freight Railroads

Summarized from the detailed discussion provided in Chapter IV of the current LRTP, the following freight-related needs for both highway and railroad were prioritized in the document's Chapter V for further study or potential future year implementation. The needs range from new or revised policy & procedures to potential key infrastructure improvements.

Highway Trucking

A number of priority highway trucking-related projects have been identified in the planning region. They include both studies and initiatives that should be considered *beyond* the Major Infrastructure (MI) projects for highways identified elsewhere in the LRTP. The financially-constrained, highway-related MI projects all appear to address various needs of the highway trucking industry, such as increasing roadway safety and reducing chronic congestion-US DOT emphasis areas.

Beyond typical federal and state funding resources, such suggested improvements could be supported through private sector funding, an example being the construction and operation of full-service rest stops catering to long-distance trucking. Still others may have the opportunity to benefit from a public-private funding scenario, where private funding is used to leverage designated public monies.

Truck Parking Initiative

Consider implementation of modern, full-service rest stops in the region serving the trucking industry, a potential public-private improvement effort. As is widely known, the trucking community often lacks adequate facilities to park, rest, bathe, eat, purchase fuel and make repairs. Detailed below, the *Highway Freight Accommodation Assessment Studies* conducted by the CMMPO staff in the North and West transportation planning subregions have examined the potential for strategically-located increases in the truck parking opportunities available in these parts of the region, with a particular focus on rural highway freight movement needs.

Notably, during 2022, the MassDOT Office of Transportation Planning (OTP) is planning to conduct a statewide study to identify key locations for potential future truck stops in an analytic manner. Potential locations identified through this effort would eventually fill significant gaps in available facilities serving long-distance trucking.

Highway Freight Accommodation Assessment Study Series

Similar to the ongoing Corridor Profile study series, CMMPO staff has, to date, conducted and completed *Highway Freight Accommodation Assessment Studies* for federal-aid eligible state numbered routes in both the North and West transportation planning subregions in FY ’20 and FY ’22, respectively. Further, during calendar year 2022, staff began to compile the next installment in the series for the Southwest transportation planning subregion. These study efforts assess the accommodation of both existing and anticipated future freight movement in the respective planning subregions. Each study has resulted in the compilation of a range of suggested roadway improvement options to assure the continued flow of freight while mitigating any identified local impacts. The suggested improvement options listed in both the North and West subregional studies are included later in this Progress Report.

As indicated earlier, the next installment in this study series will focus on the Southwest transportation planning subregion and is expected to be largely complete during calendar year 2022. A study for the Southeast subregion will be undertaken in calendar year 2023. As both the Southeast and the Northeast subregions include the I-495 corridor, interaction with the Central Transportation Planning Staff (CTPS) is anticipated. Eventually, the entire Central Massachusetts planning region will be addressed through this ongoing effort.

Continue Road Safety Audit (RSA) Study Series

The established Road Safety Audit (RSA) effort led by MassDOT should continue on a statewide basis. CMMPO staff regularly participate in the RSAs scheduled in the planning region. Following visits to the field in order to observe local conditions first-hand, documented vehicle crash histories are reviewed and a summary document is produced. The resulting RSA report provides a listing of suggested improvement options for consideration by MassDOT and the host communities. Suggested improvements often benefit highway trucking activities on the

region's major freight routes. Over 20 RSAs have been conducted in the planning region since 2016. Later in this Progress Report, a cumulative listing and an accompanying map are provided.

Freight Railroads

The following lists priority freight rail-related studies and projects identified in the planning region. Some will potentially be implemented using federal grant monies; others perhaps by the private sector with private funding. Still others may be able to benefit from a public-private funding scenario, such as the MassDOT's Industrial Rail Access Program (IRAP), where private railroad funding is often used to leverage available public monies.

Improve Highway/Railroad At-Grade Crossings

Continue efforts to eliminate or mitigate hazards at public highway/railroad at-grade crossings. The MassDOT Grade Crossing Program seeks to improve safety at existing highway-rail grade crossings through the installation of protective devices. As necessary, improvements to public at-grade crossings should be considered an ongoing, as needed activity. Such improvements should occur at already-identified locations as well as those that may potentially be identified in the future.

Prevent Crashes with Overhead Railroad Structures

Further investigation should be conducted at those Overhead Railroad Crossing locations (examples in Westborough & Worcester) where reported crashes have occurred in recent years. Beyond bridge replacement or alterations, efforts should be made to ensure proper yellow diamond warning signs and other precautions or mitigation strategies that will serve to avoid, eliminate or reduce the number of truck crashes with low bridge structures in the planning region.

2. Massachusetts State Rail Plan

The CMMPO staff participated in MassDOT's development of the 2018 Massachusetts State Railroad Plan. Staff both attended meetings at various locations and assisted MassDOT by hosting meetings at CMRPC's former office in Worcester's historic Union Station Intermodal Transportation Center (ITC). Further, staff provided commentary on the draft document prior to finalization by MassDOT. An excerpt of the Executive Summary from the Massachusetts State Railroad Plan is provided below. *The entire document can be located on the MassDOT website at https://www.mass.gov/service-details/rail-plan. (An update of this document is anticipated in 2024.)*

State Rail Plan Executive Summary

The purpose of the State Rail Plan is to guide the future of the rail system and rail services in the State. Specifically, it is intended to:

- Set forth Commonwealth policy involving freight and passenger rail transportation.
- Establish policies, priorities and strategies to enhance rail services in the Commonwealth that provide benefits to the public.
- Serve as the basis for Federal and State rail investments within Massachusetts.
- Establish the means and mechanism to coordinate with adjoining States, private parties and the Federal Government in projects of regional and national significance, including corridor planning and investment strategies.
- Meet the planning requirement established by the Federal Railroad Administration.
- The State Rail Plan includes both a near-term 5-year plan, where funding has already been identified or will be identified for the upcoming annual State transportation budget process, as well as a 20-year, long-term strategy for State investment in rail. *(Because of parallel planning processes addressing the future of Commuter Rail (Focus40 and the MBTA Rail Vision), the State Rail Plan is not a planning or policy document for MBTA Commuter Rail.)*

3. Massachusetts State Multi-Modal Freight Plan

The CMMPO staff participated in MassDOT's development of the 2017 Massachusetts State Multi-Modal Freight Plan. Staff both attended meetings at various locations and assisted MassDOT by hosting meetings at CMRPC's former office in Worcester's historic Union Station Intermodal Transportation Center (ITC). Further, staff provided commentary on the draft document prior to finalization by MassDOT. An excerpt of the Executive Summary from the Massachusetts State Multi-Modal Freight Plan is provided below. *The entire document can be located on the MassDOT website at https://www.mass.gov/service-details/freight-plan. (An update of this document is anticipated in 2023.)*

State Freight Plan Executive Summary

MassDOT completed its last Freight Plan in 2010. Of the projects prioritized by that effort, MassDOT and its partners have completed improvements to Worcester's (CSXT) Franklin Street Terminal and MassDOT has instituted the recommended Industrial Rail Access Program (IRAP). Improvements to freight rail lines are ongoing.

MassPort is expanding Conley Terminal while MassDOT is improving the I-495/I-90 (MassPike) interchange to improve the flow of cargo along a "freight spine" that connects Conley Terminal

to the Interstate Highway System through local haul roads and to the national freight system through terminals in Worcester and other locations.

The strategies listed in the 2017 Plan build on those investments. Many of the 2010 Plan's policy initiatives, including preservation of sites for industrial and logistics development and construction of improved truck parking, are carried forward in this effort. The *2017 Freight Plan* recognizes that enhancements to the freight system can come as improvements to infrastructure, operational innovations, or as policy revisions.

Among the strategies proposed are:

- Improving the Commonwealth's stock of truck parking and servicing areas
- Resolving key bottlenecks on highways
- Maintaining freight access
- Leveraging connected vehicle technology
- Protecting freight facilities from climate change impacts
- Integrating supply chain data, and
- Encouraging use of underutilized ports and airports as cargo gateways

State Strategies & Central Massachusetts Planning Region Responses

As noted in the *2017 Massachusetts Freight Plan*, "Enhancements to the freight system can come as improvements to infrastructure, operational innovations, or policy revisions." Applicable example *Massachusetts Freight Plan* strategies along with corresponding regional actions updated for this Progress Report include the following:

- **State Strategy**: Resolving key highway bottlenecks. As an example, MassDOT (presently) is leading the effort to improve the I-495/I-90 (MassPike) interchange to enhance the flow of cargo along a "freight spine" that connects Boston's Conley terminal to the Interstate System through local haul roads to the NHS and national rail network through intermodal freight facilities in Worcester and elsewhere in the state.
- **Regional Response**: Beginning prior to 2010, the CMMPO staff has participated in a range of planning studies focused on the I-495/I-90 (MassPike) interchange. Staff also served on the Technical Advisory Committee for MassDOT's feasibility study for this heavily utilized interchange, completed in 2012. The project has enjoyed continued support by the CMMPO, reflected in the LRTP Update for 2020 as well as the Boston MPO's current TIP. Groundbreaking for the nearly $400 million interchange construction phase is anticipated in late calendar year 2022.
- **State Strategy**: Improving the state's stock of truck parking and servicing areas.

- **Regional Response**: CMMPO staff has, to date, conducted and completed *Highway Freight Accommodation Assessment Studies* for federal-aid eligible state numbered routes in both the North and West transportation planning subregions. These studies have examined the potential for strategically-located increases in the truck parking opportunities available in these parts of the region, with a particular focus on rural highway freight movement needs.

  Further, it is anticipated that during 2022 that the MassDOT Office of Transportation Planning (OTP) will conduct a statewide study to identify key locations for potential future truck stops in an analytic manner. Potential locations identified through this effort would eventually fill significant gaps in available facilities serving long-distance trucking.

- **State Strategy**: Maintaining freight access.

- **Regional Response**: Reconstruction of the I-495/I-90 (MassPike) interchange is anticipated to be underway in late 2022. In addition, the CMMPO staff continues to highlight the need to also modernize the nearby I-495/Route 9 interchange. Bridge deterioration levels will eventually trigger the need for reconstruction. In the earlier feasibility study for this location, a "braided ramp" conceptual improvement was suggested to lessen the number of needed merging maneuvers.

- **State Strategy**: Protecting freight facilities from climate change impacts.

- **Regional Response**: The CMMPO staff periodically contacts key freight rail freight providers and intermodal facility operators in the region to discuss current operations, encountered challenges as well as general plans for the future. Previously, staff assisted the Grafton & Upton Railroad with federal grant proposals for both Clean Diesel and trackage upgrades, both of which were proposed to provide significant environmental safeguards.

- **State Strategy**: Integrating supply chain data.

- **Regional Response**: CMMPO staff may periodically utilize the INRIX data provided by MassDOT-OTP.

- **State Strategy**: Encouraging use of underutilized seaports and airports as cargo gateways.

- **Regional Response**: Over the past decades, the CMMPO has approved funding for several TIP-listed highway improvements associated with land-side access to the Worcester Regional Airport as well as CSX, Genesee & Wyoming-Providence & Worcester and Intransit Container Incorporated (ICI) intermodal freight handling facilities in the city of Worcester. Future years of the CMMPO TIP include improvement

projects on Route 9 in both East Brookfield and Spencer as well as the construction of modern roundabouts at the Route 49 intersections with both Route 9 and Putnam Road. These improvements will improve travel conditions and safety for a range of highway freight movement in this rural part of the planning region, including the nearby New England Automotive Gateway (NEAG) intermodal facility.

III. Passenger Rail Regional Activities & Efforts

In the CMMPO region, Commuter Rail services operated by the Massachusetts Bay Transportation Authority (MBTA) are the predominant form of passenger rail service used by the region's residents, followed by intercity rail services operated by Amtrak.

The MBTA owns a forty-four-mile segment of the former Boston & Albany Railroad (B&A) Main Line. This segment forms the MBTA's Worcester Line between Boston's South Station and Worcester's Union Station. Three of the Framingham-Worcester Line's passenger stops (Grafton, Westborough, and Worcester) are located in the CMMPO region; Worcester's Union Station is the terminus of the Line and is also the region's principal passenger rail activity hub.

Similar to other passenger railroad systems, Amtrak receives public funding for capital costs and operating expenses. The sole Amtrak service operating in Central Massachusetts is the Lake Shore Limited, which operates between Boston and Chicago, directly serving Cleveland, Buffalo, Albany, Springfield, Worcester, and Pittsfield among other cities. Amtrak operates on the former B&A Main Line and the CSX-owned segment from Worcester Union Station west into the state of New York.

This section of the Progress Report covers the movement of passengers by rail and provides a summary of four (4) major passenger rail activities & efforts in the greater region. First, this section includes an overview of planned infrastructure improvements for Worcester's Union Station Intermodal Transportation Center (ITC). Currently under construction, a new high-level center platform is being installed at Union Station. This long-envisioned improvement will allow the station to serve two trains simultaneously, as opposed to only a single train as has been the case since the station's earlier reconstruction. Next, an overview of MassDOT's currently ongoing Northern Tier Passenger Rail Study is provided. The Northern Tier Study is a conceptual planning effort assessing passenger rail alternatives along the Boston-Greenfield-North Adams corridor. This is followed by a status summary of the earlier East-West Passenger Rail Study, completed in January 2021. It should be noted that CMRPC Executive Director Janet A. Pierce served on the Advisory Committee established for the East-West Study. Lastly, a recent executive summary for the Northeast Corridor (NEC) Future study is also provided. A graphic summarizing the "Selected Alternative" for the Massachusetts, Rhode Island and Connecticut segments of the Corridor is provided.

1. MBTA Worcester Union Station Improvements & Associated Track Work (Center Platform Construction)

Worcester Union Station is undergoing significant platform, track, and accessibility improvements. Although a key transportation hub for the Worcester area and the terminus of

the Framingham/Worcester Line, it is currently the only station on the passenger rail route that can serve only a single train at a time. The upgrades now underway will improve Union Station's function, capacity, level of service, and safety, while also making it fully accessible.

- Contract awarded: October 2021
- Projected Completion: Winter 2023
- Budget: $45 million
- Status: Construction

Rider Benefits

- A new, high-level center platform
- Track, signal, communications, and infrastructure upgrades
- New elevators, stairways, and pedestrian bridge
- Accessibility improvements to the commuter parking area

The planned new pedestrian bridge and elevators will be steel and glass structures complete with lighting and wayfinding signs. This will provide a fully accessible route for riders to move safely and comfortably to and from the new center platform to the MBTA parking area and the neighboring community.

During Construction

Beginning in March 2022, riders will use a temporary platform to board passenger trains. From March 14th onward, signage will direct riders from the parking garage through Union Station, then lead them through the rotunda to the temporary platform at the east end of the station. Riders will also be able to access the temporary platform from the Commuter Rail parking lot off Shrewsbury Street. This parking lot will remain open during the construction period. Some parking spaces will be unavailable during different phases of the project. Accessible spaces will remain available. Further, there is a designated drop-off point near the ramp to allow full access to the platform. Below is a diagram of the construction area.

Dotted red lines show the paths from parking facilities to the temporary platform during construction

2. MassDOT Northern Tier Passenger Rail Study

The Massachusetts Department of Transportation (MassDOT) is conducting a feasibility study to examine the benefits, costs, and investments necessary to implement passenger rail service from Boston to Greenfield and North Adams with the speed, frequency, and reliability necessary to be a competitive option for travel along this corridor. The MBTA currently operates part of the rail line from Boston's North Station to Wachusett Station in Fitchburg while Pan Am Railways freight rail operates exclusively west of Wachusett Station. The consultants will examine right-of-way, restrictions, and other considerations for the entire study corridor.

The Northern Tier Passenger Rail Study will be similar to the earlier East-West Passenger Rail Study, also summarized in this section of the Progress report, which evaluated potential alternatives for providing new passenger rail connections between Pittsfield, Springfield, Worcester, Boston, and intermediate communities. The East-West Passenger Rail Study demonstrated both the importance of increased transportation options and the investments likely required to realize the benefits of new passenger rail service.

The consulting team hired by MassDOT will be examining six (6) service alternatives. There will be a two-phase approach to this process. The first phase will look at two alternatives:

1. Minimum build - The level of passenger service possible under the existing rail conditions.
2. Maximum build - The best level of passenger rail service through major investments in the rail infrastructure.

The public will have the opportunity to review the two initial service plan alternatives and provide comments. Comments received will be used during the second phase of the study to develop the four (4) final service plan alternatives. In addition to regular meetings of a Working Group established for this effort, there will a number of public engagement opportunities including workshops, interactive websites, and a comment and subscription form. Study completion is anticipated sometime during 2023. Included below, is a June 28, 2022 newsletter for the Northern Tier Passenger Rail Study.

Issue Date: 06/28/2022

June Newsletter

Public Meeting Announcement

The Northern Tier Passenger Rail Study team invites the public to a virtual Public Information Meeting, to be held on **Thursday, July 14 at 6:00 PM via Zoom**. Information about registering for this meeting will be posted to the study website: https://www.mass.gov/northern-tier-passenger-rail-study

At this meeting, the study team will share an overview of the study's background, review the existing conditions analysis, and garner feedback on issues and opportunities along the corridor.

Recap of Working Group Meeting #2

The Northern Tier Passenger Rail Study Working Group met for the second time on Wednesday, June 22, 2022. At this meeting, the study team provided a study update and engaged the Working Group in a review and discussion of existing conditions in the study area. Meeting materials, including the StoryMap presentation and video recording, will be made available on the study website.

Massachusetts Intercity Passenger Rail Governance White Paper - Summary and Highlights

In November 2021, the Massachusetts Department of Transportation developed the *Massachusetts Intercity Passenger Rail Governance White Paper* to identify governance options for expanded passenger rail in Western Massachusetts. The White

Paper documented important attributes of passenger rail services that impact operational feasibility and funding options. The document was developed as a follow-up to the *East-West Passenger Rail Study* and includes information relevant to the evaluation of future passenger rail services along the Northern Tier Corridor. The following is a summary of information to highlight as the Northern Tier Passenger Rail Study progresses.

Commuter Rail Service vs. Intercity Rail Passenger Service

According to federal definitions outlined in 49 U.S. Code Subsection 24102:

> "commuter rail passenger transportation" means **short-haul rail passenger transportation in metropolitan and suburban areas** usually having reduced fare, multiple-ride, and commuter tickets and morning and evening peak period operations; and
>
> "intercity rail passenger transportation" means rail passenger transportation, except commuter rail passenger transportation.

Given the federal definitions, the west-east service alternatives (and services with similar characteristics) would be defined as Intercity Passenger Rail.

Amtrak's Rights of Access

Amtrak is the only railroad that has rights of access to the facilities of any other railroad or regional transportation authority. These access rights provide Amtrak with access to any rail line in the United States and give Amtrak the ability to use any host (owner) railroads' facilities, such as stations or railyards.

Additional Information

The White Paper also provides detail on these and many other rail operational and governance considerations, which could apply to rail service along the Northern Tier Corridor. To review the Massachusetts Intercity Passenger Rail Governance White Paper, please visit the MassDOT East-West Passenger Rail Study website at: https://www.mass.gov/lists/east-west-passenger-rail-study-documents#governance-white-paper-

3. East-West Passenger Rail Effort

The Massachusetts Department of Transportation (MassDOT) launched the East – West Passenger Rail Study to examine the potential benefits, costs, and investments necessary to implement new passenger rail service connecting western Massachusetts communities with central and eastern Massachusetts. The 2018 Massachusetts State Rail Plan included a recommendation to evaluate a "Western Massachusetts to Boston Passenger Rail Service Study," and community leaders, stakeholders, and residents have expressed a desire for such a passenger rail link to enhance multi-modal transportation options available for Massachusetts communities west of Worcester. The final report was completed in January 2021.

The East-West Passenger Rail Study:

- Identifies transportation corridors that provide new passenger rail connections between Pittsfield, Springfield, Worcester, Boston, and intermediate communities.
- Assesses the geographic, infrastructure, and demographic conditions in the East – West rail corridor.
- Evaluates potential improvement alternatives for enhancing passenger rail connections among the Corridor communities.
- Summarizes the projected benefits, costs, impacts, and trade-offs of the improvement alternatives.

The study has entailed a comprehensive civic engagement process involving residents, the study's Advisory Committee—a group comprised of individuals representing diverse perspectives from Pittsfield to Boston, and other stakeholders in a series of meetings and through online interaction. This included cooperative development of the following goals for the project:

- Provide better transportation options to and from Western Massachusetts
- Support economic development throughout the East – West rail corridor
- Improve the attractiveness of Western Massachusetts as an affordable place to live
- Reduce the number of automobile trips along the corridor
- Reduce greenhouse gas emissions and air quality impacts from transportation

MassDOT recognizes that a robust transportation system is essential to providing residents, businesses, and visitors with mobility to satisfy their economic, personal, and recreational needs. Passenger rail transportation can be an important component of a multi-modal transportation system that increases travel options and reduces greenhouse gas emissions.

4. Northeast Corridor (NEC) Future

NEC FUTURE is a comprehensive planning effort to define, evaluate, and prioritize future investments in the Northeast Corridor (NEC) from Washington, D.C., to Boston. The NEC is the rail transportation spine of the Northeast and a key component of the region's transportation system. The NEC supports the operation of eight regional rail authorities and Amtrak—the Intercity rail service provider—as well as four freight railroads.

The Federal Railroad Administration launched NEC FUTURE in 2012 to evaluate improvements to address passenger rail transportation needs within the multi-state Study Area. NEC FUTURE results in a framework for future investment in the NEC through 2040 and beyond. The FRA prepared a Tier 1 Environmental Impact Statement (Tier 1 EIS). The Federal Transit Administration (FTA) was a cooperating agency in the NEPA process.

FRA released the Tier 1 Draft EIS in November 2015, for a public comment period that ended in mid-February 2016. Using comments and information received from the public and stakeholders during the comment process, along with consideration of the findings of the Tier 1 Draft EIS analysis as well as DOT and FRA policy, the FRA developed a Preferred Alternative that outlines a vision and investment program to guide future passenger rail investment on the NEC. The FRA presented the Preferred Alternative along with an analysis of its impacts and benefits, in the Tier 1 Final EIS, released in December 2016. The Tier 1 Final EIS also included responses to comments received on the Tier 1 Draft EIS.

After holding a waiting period after the release of the Tier 1 Final EIS, during which FRA invited the public to review and provide feedback on the Preferred Alternative and the contents of the Tier 1 Final EIS, FRA released a Record of Decision in July 2017. The Record of Decision (ROD) presents the Selected Alternative, which is intended to guide future investments on the NEC and reflects feedback from numerous stakeholders, agencies, organizations and individuals. The FRA selected a corridor-wide vision for the NEC that encompasses improvements to grow the role of rail within the transportation system of the Northeast region. To achieve this vision, the Selected Alternative includes the following four (4) components:

1. **Improve Rail Service:** Corridor-wide service and performance objectives for frequency, travel time, design speed, and passenger convenience.
2. **Modernize NEC Infrastructure:** Corridor-wide repair, replacement, and rehabilitation of the existing NEC to bring the corridor into a state of good repair and increase reliability.
3. **Expand Rail Capacity:** Additional infrastructure between Washington, D.C., and New Haven, CT, and between Providence, RI, and Boston, MA, as needed to achieve the service and performance objectives, including investments that add capacity, increase speeds, and eliminate chokepoints.

4. **Study New Haven to Providence Capacity:** Planning study in Connecticut and Rhode Island to identify additional on- and off-corridor infrastructure as needed to achieve the service and performance objectives.

The ROD marks the completion of the Tier 1 environmental review process; however, the ROD does not result in construction, and no agency permits or approvals will be applied for or issued as part of the Tier 1 process. The pace and phasing to advance the Selected Alternative will depend on many factors, including decisions by the railroads and Northeast states, the availability of funding, market conditions, and practical operating constraints. A project-level Tier 2 environmental review would need to be conducted as part of any future proposed project. The following information sheet shows the selected alternative for the Connecticut, Rhode Island, and Massachusetts area.

The Selected Alternative:

Connecticut - Rhode Island - Massachusetts Area

NEC FUTURE
A Rail Investment Plan for the Northeast Corridor

The Federal Railroad Administration (FRA) sponsored the NEC FUTURE program to create a comprehensive plan for improving the Northeast Corridor (NEC) from Washington, D.C., to Boston, MA. Through NEC FUTURE, the FRA has worked closely with NEC states, railroads, stakeholders, and the public to define a common vision for the corridor's future.

Selecting the Grow Vision

The Selected Alternative provides the level of service necessary to grow the role of rail in the regional transportation system. The Selected Alternative will improve the reliability, capacity, connectivity, performance, and resiliency of passenger rail services on the NEC to meet future Northeast mobility needs for 2040 and beyond.

IMPROVE RAIL SERVICE

Corridor-wide service and performance objectives for frequency, travel time, design speed, and passenger convenience.

MODERNIZE NEC INFRASTRUCTURE

Corridor-wide repair, replacement, and rehabilitation of the existing NEC to bring the corridor into a state of good repair and increase reliability.

EXPAND RAIL CAPACITY

Additional infrastructure between Washington, D.C., and New Haven, CT, and between Providence, RI, and Boston, MA, as needed to achieve the service and performance objectives, including investments that add capacity, increase speeds, and eliminate chokepoints.

STUDY NEW HAVEN TO PROVIDENCE CAPACITY

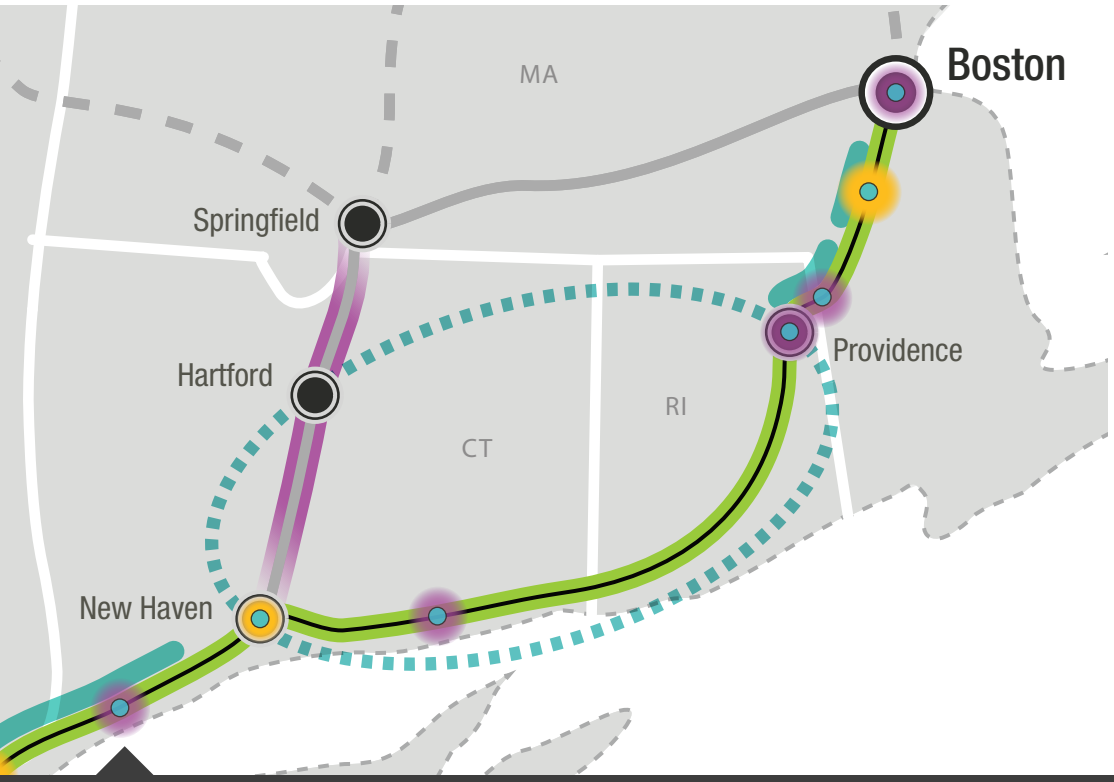
Planning study in Connecticut and Rhode Island to identify additional on- and off-corridor infrastructure as needed to achieve the service and performance objectives.

Area Benefits

The Selected Alternative brings the NEC to a state of good repair, eliminates chokepoints that delay trains, and supports significant growth in service, including:

+ A new Regional rail station in Pawtucket, RI improves connectivity to the NEC in northeast Rhode Island
+ Boston South Station expansion, consistent with the Boston South Station Expansion and Layover Facility Project
+ Express travel time target of 2 hours 45 minutes between New York City and Boston, MA (with 5 intermediate stops)
+ Additional capacity improvements will be subject to the findings of the New Haven to Providence Capacity Planning Study

Features in the Connecticut - Rhode Island - Massachusetts Area



SELECTED ALTERNATIVE:

- Existing NEC
- Improve Rail Service / Modernize Infrastructure
  - *State of Good Repair*
  - *More Frequent Service*
  - *Better Connections*
- Expand Rail Capacity
- Study New Haven to Providence Capacity
- Chokepoint Relief Project
- Related / Ongoing Projects
- Study Area
- Connecting Corridor
- National Passenger Rail Network
- Rail Station (not all shown)

Illustrative and not to scale

Infrastructure (including Related Projects)

+ Chokepoint relief project at New Haven Station
+ New Haven-Hartford-Springfield Rail Program
+ Connecticut River Bridge replacement
+ Station Improvements at Providence and Pawtucket, RI
+ New track between Pawtucket, RI and Sharon, MA
+ Canton Junction to Readville track and junction improvements
+ New segment between Sharon and Hyde Park, MA
+ Boston South Station expansion

More frequent trains

(total Intercity trains per peak hour/peak direction)

EXISTING SELECTED ALTERNATIVE

New Haven to **Boston**

New Haven to Providence Capacity Planning Study

The Selected Alternative calls for the states of Connecticut and Rhode Island, in cooperation with the FRA, to complete a New Haven to Providence Capacity Planning Study to identify on- and off-corridor infrastructure elements as needed to achieve the service and performance objectives. The study area should encompass the geographic area within the following approximate limits: along the Hartford/Springfield Line from New Haven to Hartford, from Hartford to Providence, and along the existing NEC from New Haven to Providence. While the geographic focus is in Connecticut and Rhode Island, Massachusetts and other stakeholders should be engaged as appropriate. A continuing partnership between the FRA and the NEC states and railroads is essential to sustain the collaboration required to implement the Selected Alternative.

IV. Freight Railroad Providers: Modal Provider Monitoring & Technical Assistance

Central Massachusetts is a significant intermodal freight hub for the state of Massachusetts and the greater New England region. Currently, there are five active railroads in the planning region. The five railroads are:

1) CSX
2) East Brookfield & Spencer Railroad
3) Grafton & Upton Railroad
4) Genesee & Wyoming Inc. (owner of Providence & Worcester Railroad), and
5) MassCentral Railroad

In addition to the five railroads, there are ten major intermodal facilities operating throughout the planning region and are located in the communities of Barre, East Brookfield/Spencer, Grafton, Hopedale, Upton, Westborough, and Worcester. Nine are rail-highway intermodal facilities and one, the Worcester Regional Airport, is an airside-highway intermodal facility.

This section includes brief overviews of the freight railroads operating in the planning region. Ariel images are provided, where applicable, showing major intermodal facilities operated by the different railroad lines. Further, the rail freight, provider-specific identified *Needs* listed in the most recent LRTP, *Mobility2040 the Update for 2020* have been both summarized and updated. This section also includes summaries of the Technical Assistance provided to two (2) of the freight rail providers operating in the planning region, the East Brookfield & Spencer Railroad (EB&S RR) and the Grafton & Upton Railroad (GURR). **Figure 1** is a map of the Highway and Railroad Freight Network with Major Intermodal Facilities in the CMRPC region.

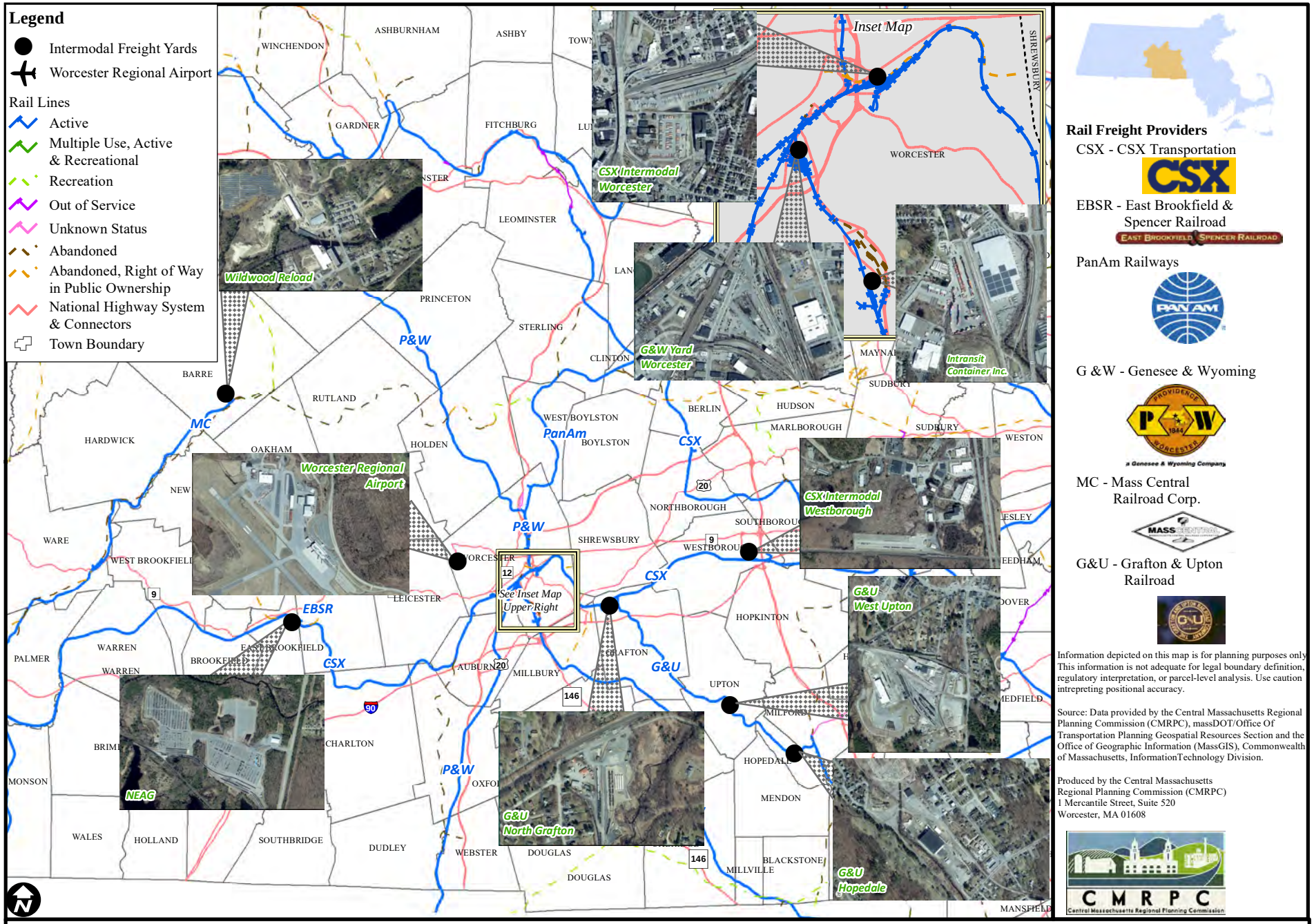


Figure 1 - Highway and Railroad Freight Network with Major Intermodal Facilities

1. CSX Transportation

Rail Freight Provider Overview

CSX Corporation, together with its subsidiaries based in Jacksonville, FL, is one of the nation's leading transportation providers. The company's rail and intermodal businesses provide rail-based transportation services including traditional rail service and the transport of intermodal containers and trailers. CSX serves the eastern US with a system that stretches from Maine and Massachusetts to Florida, out west to Chicago, and south along the Mississippi River to New Orleans.

CSX transports a broad portfolio of products, ranging from coal and new energy sources, such as biodiesel and ethanol, to automobiles, chemicals, military equipment and consumer products. Some other factoids about CSX include:

- Operates an average of 1,850 trains per day
- Transports more than 3.5 million carloads of products and raw materials each year
- Maintains a fleet of more than 3,500 locomotives
- Maintains a fleet of approximately 51,000 freight cars

Further, CSX moves their customer's freight across the country in a way that minimizes the effect on the environment, takes traffic off an already congested highway system, and minimizes fuel consumption and transportation costs.

CSX operations in central Massachusetts include CSX intermodal facilities in both Worcester and Westborough that serve the greater region through "last mile" distribution handled by the trucking industry.

The CMRPC transportation planning staff has continued to monitor the progress of rail giant CSX, via in-the-field observations and periodic interaction with railroad officials, as they seek to improve service for both existing customers and potential future users of national rail freight. **Figures 2 & 3** are aerial images from the Westborough and Worcester intermodal yards.

CSX LRTP-Identified Needs

- Continue to monitor, participating in a limited manner, the now underway Northern Tier Passenger Rail study. Study results as to the feasibility of expanded passenger rail service along the newly-acquired CSX corridor (formerly Pan Am Railways) from Boston to Greenfield and North Adams are anticipated sometime in 2023. Staff plans to attend the public meetings that are forthcoming for this consultant-led study effort.

- In regards to the proposed implementation of the earlier findings of the East-West Passenger Rail study, which seeks expanded future year passenger rail service on the CSX Boston Line between Worcester, Springfield, Pittsfield and potentially Albany, NY, the agency's Executive Director continues to participate in statewide efforts to secure needed funding. Communities west of Worcester have expressed a high level of interest in accessing such service in the future, either directly or through shuttle services. The higher-speed and more frequent passenger service envisioned along this corridor was initially analyzed in the Northern New England Intercity Rail Initiative (NNEIRI) study. Staff served as a member of the technical advisory team assembled for that project.

- Staff prepared for and attended the kick-off "Northern Tier Passenger Rail Community Meeting" held virtually on 7/13/21. The effort is anticipated to take 18 months to complete. (Consultant HNTB has been selected as part of the project team.) *Staff will likely participate in the study process in a peripheral manner.*

  Date: 7/13/21
  Location: At-desk Webinar
  Topic: Northern Tier Passenger Rail Community (kick-off) Meeting
  Attendance: Staff Krishnan, Rydant

- Staff prepared for and attended the "Northern Tier Passenger Rail Working Group Meeting #1" held virtually on 12/16/21. The effort is anticipated to take in excess of another year to complete. (Consultant HNTB has been hired by MassDOT to serve on the project team. At the meeting, HNTB staff presented and offered their perspectives on a range of poised questions.) *Staff will continue to participate in the study process in a peripheral manner.*

  Date: 12/16/21
  Location: At-desk Webinar
  Topic: Northern Tier Passenger Rail Working Group Meeting #1
  Attendance: Staff Krishnan, Rydant

- Conducted research concerning an overview of the proposed CSX merger with Pan Am Railways. Read materials in industry periodical *Rail Pace* concerning the proposed CSX

merger or acquisition of Pan Am Railways. Many parties appear to be offering negative commentary and relaying same to the STB. The Pan Am system could well be divided up and not kept whole in order to preserve regional rail freight competitiveness.

- Staff will continue to follow the potential CSX absorption of Pan Am Railways (PAR) through a pending merger between the two railroads. The US Surface Transportation Board (STB) is anticipated to review and potentially approve the proposed merger sometime in early 2022. It is expected that a number of stipulations and mitigation activities will accompany such an approval. Improvements to track, bridges and train speeds in the planning region may result. *(A detailed news media article concerning the eventual 2022 approval of the merger by the STB is included on the following pages.)*

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WESTBOROUGH CSX TRANSPORTATION INTERMODAL YARD
AERIAL VIEW WITH MAJOR FEATURES
FIGURE 2

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EAST WORCESTER CSX TRANSPORTATION INTERMODAL YARD
AERIAL VIEW WITH MAJOR FEATURES
FIGURE 3

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Central Massachusetts Regional Planning Commission

WASHINGTON – Federal regulators on Thursday gave the green light to CSX Transportation's acquisition of New England regional Pan Am Railways.

The Surface Transportation Board's unanimous, 75-page decision approving the merger becomes effective on May 14. But CSX said it planned to close on the transaction on June 1.

Regulators largely agreed with CSX's arguments that the merger will result in much-needed capital improvements to the worn out Pan Am system while improving service and safety. CSX has pledged to spend more than $100 million to improve Pan Am's track, bridges, and yards as well as its aging and failure-prone locomotive fleet, over the next three years.

"After a searching review of the well-developed record in this proceeding, which included a two-day public hearing before the full Board, the Board concluded that this transaction satisfies the statutory criteria based on CSX's representations to the Board. I look forward to improvements in the rail network with respect to reliable service and competitive transportation options in New England and beyond," STB Chairman Martin J. Oberman said.

CSX, already the dominant freight railroad in the region, will extend its reach into Vermont, New Hampshire, and Maine, as well as to Saint John, New Brunswick, via Pan Am's haulage rights agreement with Irving-owned short lines.

"CSX is pleased that the STB approved the proposed acquisition of Pan Am and has recognized the significant benefits this transaction will bring to shippers and other New England stakeholders," CEO Jim Foote said in a statement. "We look forward to integrating Pan Am, their employees and the rail-served industries of the Northeast into CSX and to working in partnership with connecting railroads to provide exceptional supply chain solutions to New England and beyond."

The board also approved several transactions related to the Pan Am Southern, the joint venture between Pan Am Railways and Norfolk Southern. CSX will step into Pan Am Railways' shoes in the joint venture, which gives NS access to New England via the former Boston & Maine line from Mechanicville, N.Y., to Ayer, Mass., via Hoosac Tunnel.

The board approved Norfolk Southern's new trackage rights over CSX from the Albany, N.Y., area to Worcester and Ayer, Mass., as a faster and fully cleared route for intermodal and automotive traffic. The daily intermodal and automotive train NS operates over Pan Am Southern will shift to the CSX routing once a new connection is built at Voorheesville, N.Y.

The other big PAS-related transaction – the designation of Genesee & Wyoming subsidiary Berkshire & Eastern as neutral operator of the Pan Am Southern – also was approved. The board's five-year oversight of the merger will include a requirement that

CSX provide reports on Pan Am Southern traffic levels west of Ayer, Mass., for at least two years.

All agreements that CSX reached with various parties – including Amtrak, Vermont Rail System, and the Northern New England Passenger Rail Authority that sponsors the Downeaster service linking Portland, Maine, with Boston – were imposed as conditions on the merger.

But the STB declined to impose additional conditions that Amtrak and the Massachusetts Bay Transportation Authority had sought to protect passenger and commuter service, noting they are already covered under existing contracts or regulations.

"Whether the Board has authority to impose conditions relating to passenger and commuter rail has been the subject of debate throughout this proceeding. Without deciding whether the Board has such authority, the Board — even if it has such authority — would not exercise its discretion to use it here," the decision reads.

The decision orders CSX to uphold its commitments to keeping interchanges open on commercially reasonable terms, an issue that was important to Canadian Pacific and short line Vermont Rail System.

VRS was granted overhead trackage rights over Pan Am Southern between White River Junction, Vt., and Bellows Falls, Vt., as well as limited trackage rights from Bellows Falls to East Deerfield, Mass. CSX will have haulage rights over Pan Am Southern between Rotterdam Junction, N.Y., and Hoosick Junction, N.Y., the interchange with VRS.

Pan Am, a privately held company owned by Tim Mellon and other investors, went on the market in 2020. CSX's bid beat two other suitors who were interested in acquiring the largest regional railroad in North America.

Including haulage rights, Pan Am stretches 1,700 miles from the Albany, N.Y., area to Maine. It includes trackage of the former Maine Central, Boston & Maine, Portland Terminal, and Springfield Terminal railroads. Pan Am connects with four Class I railroads — CSX, Norfolk Southern, Canadian National, and Canadian Pacific — and 14 short lines.

CSX connects with Pan Am at Rotterdam Junction, N.Y., on its former New York Central Water Level Route, and outside of Worcester, Mass., via its former Boston & Albany main line, which is far and away the busiest freight route in New England.

Pan Am entered the rail business in 1981 when the company, then known as Guilford Transportation Industries, purchased the Maine Central for $15 million. Two years later, Guilford purchased the bankrupt Boston & Maine for $24.5 million. Guilford acquired the Delaware & Hudson from Norfolk & Western for $500,000 in 1984, but cast it off into bankruptcy in 1988.

Guilford Rail System was rebranded as Pan Am in 2006. Despite the long-term decline of Maine's paper and forest product industries, as well as manufacturing across New England, Pan Am and Guilford have managed to turn a profit every year.

Terms of the deal were not disclosed, although people familiar with the matter said the purchase price was approximately $700 million.

A detail from a map filed with the Surface Transportation Board shows how Pan Am Railways (in red) and Pan Am Southern (in green) connects with the easternmost portion of CSX Transportation. (CSX)

Updated at 6:20 p.m. Central Time with comment from CSX, including anticipated closing date of transaction.

2. East Brookfield & Spencer Railroad

Rail Freight Provider Overview

The East Brookfield & Spencer Railroad (EB&S RR) is a switching railroad that serves the New England Automotive Gateway (NEAG) intermodal transload facility located in the namesake communities of East Brookfield and Spencer. Long distance train deliveries to the site are made by CSX. CSX uses special railcars loaded with finished vehicles - cars and trucks manufactured in the American heartland - while the EB&S RR works to unload these railcars and ready them for the return trip to automotive plants. Final "last mile" delivery of the finished vehicles throughout the greater New England area is completed by a number of trucking companies that serve the NEAG site. Nearly 30,000 railcar loads are handled annually at the NEAG. *The operator of the NEAG and owner of the EB&S RR has participated in the regional transportation planning process since the early 1990's.*

Consultant TransDevelopment has served as development manager for this innovative rural intermodal facility since 1994. Acting for the landowner, operator and developer, the consultants conducted extensive planning and engineering studies at the site to meet stringent Massachusetts land-use and environmental requirements. Following Conrail's sale of the adjacent mainline to CSX, marketing of the gateway began in earnest in 1998. Two smaller, congested CSX automotive terminals in proximity to Boston were able to be repurposed following the NEAG's successful opening in October 2004.

The NEAG facility includes 50 acres of paved vehicle yards, and loading, support and setout tracks capable of holding 240 railcars. The EB&S RR provides continuous service to a 30-railcar spot loading ramp adjacent to the CSX mainline. In addition, the NEAG features state-of-the-art surveillance and security systems, a dedicated compressed air network to allow rapid train departures from the site, and a rail support and maintenance compound separated from vehicle handing areas. **Figure 4** is an aerial image of the NEAG intermodal facility.

East Brookfield & Spencer Railroad LRTP-Identified Needs

- Various future improvements and expansion activities, including potential IRAP-funded track improvements or other activities. Other future improvement projects for the NEAG site will likely evolve due to vendor necessity or changing market conditions. This has certainly been apparent during the recent pandemic.

- Consider future year expansion of existing private truck parking and rest facilities with amenities for both drivers and on-site personnel.
- Continue ongoing efforts to draw employment from both the host and immediately surrounding communities. NEAG management is aware of the nearby Environmental Justice populations as a source of potential site personnel.
- Federally-required drug testing requirements for employment at the NEAG are stringent and the availability of legal, commercially grown cannabis discourages some from seeking site employment it has been observed by site management.

Federal Certification Review, September 2020

- EB&S RR and the GU were both contacted to provide testimony at the Federal Certification proceedings held 9/15-16/20. EB&S president George Bell called in during the morning session of 9/16/20. The GU submitted a letter to the federal review team detailing their interactions with the CMRPC transportation staff, staff to the CMMPO.

CMMPO Technical Assistance 2020-2021: East Brookfield & Spencer Railroad Stakeholder Meetings

February 2020

- Spoke via conference call held 2/27/20 with East Brookfield & Spencer Railroad (EB&S RR) ownership concerning both the eligibility and outcome requirements associated with MassDOT's IRAP program. *(The EB&S RR is exploring the construction of a building where damaged/worn railcars can be repaired inside, protecting workers from the elements. The railroad will contact staff after conducting additional fact finding regarding the proposed structure.)*
- Prepared for and held conference call 12/9/20 with George Bell, President East Brookfield & Spencer Railroad. Topics of discussion included sale of Pan Am Railways to CSX as well as potential future year increased passenger service on the CSX Boston Line, adjacent to the New England Automotive Gateway (NEAG), the rail-to-truck intermodal facility served by the EB&S RR.

  Date: 12/9/20
  Location: At-desk conference call
  Topic: Pan Am Railways sale to CSX, future year passenger service on the CSX Boston Line
  Attendance: Staff Rydant, George Bell, President East Brookfield & Spencer Railroad

- Prepared for and attended meeting held 7/19/21 with the operator of the East Brookfield & Spencer Railroad (EB&S RR) and the New England Automotive Gateway (NEAG) to discuss a range of freight and passenger rail-related topics. *(As follow-up to the meeting, staff will forward the latest traffic counts on Route 49, both north of Route 20 and south of Route 9, to the site operator when complete.)*

  Date: 7/19/21
  Location: In-person meeting
  Topic: East Brookfield & Spencer Railroad (EB&S RR) and the New England Automotive Gateway (NEAG)
  Attendance: Staff Rydant

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NEW ENGLAND AUTOMOTIVE GATEWAY INTERMODAL FACILITY
SERVED BY CSX TRANSPORTATION AND EAST BROOKFIELD & SPENCER RAILROAD
AERIAL VIEW WITH MAJOR FEATURES
FIGURE 4

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3. Grafton & Upton Railroad

Rail Freight Provider Overview

GU is a rail carrier that was incorporated in Massachusetts in 1873 and that has been in continuous operation since that time. GU owns and operates a rail line that runs in a north-south direction between an interchange with CSX Transportation, Inc. ("CSX") at North Grafton and a connection with CSX's Franklin branch at Milford, a distance of approximately 16.5 miles. GU is a common carrier by rail that is subject to the jurisdiction of the US Surface Transportation Board (STB).

For over a decade, GU has invested millions of dollars in order to rehabilitate its line, beginning at the interchange with CSX at North Grafton and working south to Milford. Further, the railroad has worked to expand its ability to meet the demands of customers that want to ship commodities into New England by rail to be transloaded for final delivery by truck.

GU had previously expanded its yard in West Upton for use as an intermodal facility at which various commodities are transloaded between railcars and trucks. **Figure 5** is the aerial image of the Upton intermodal yard. **Figure 6** is the aerial image from the North Grafton yard where the GU operates a facility that receives liquid propane by rail for transloading and distribution by truck. In addition, GU has another rail yard located in Hopedale which can be seen in **Figure 7**.

By means of the activities and investments described above, GU has expanded its ability to meet the growing demand of customers for rail-truck transload service. An example of GU-owned industrial construction is shown on the following pages which detail a line-side Bulk Distribution Facility in the town of Upton. *(GU contractor R.H. White Construction Companies, another private regional stakeholder, provided this example project data sheet to staff.)*

Grafton & Upton Railroad LRTP-Identified Needs

- Implementation of various at-grade highway crossing improvements along southern segment of the line.
- Severed connection to CSX in Milford has been reestablished as planned, increasing the flexibility of the GU to meet the demand of its shippers.
- Continue a range of ongoing freight yard maintenance, improvements, installation of on-site features that improve the efficiency of the movement of goods.
- Various future infrastructure improvements, including potential CRISI or IRAP-funded activities. The GU seeks a restored running track parallel to the MBTA's two existing tracks in North Grafton. This would greatly help train movements associated with the North Grafton yard. This project would require space now occupied by the Route 140 highway bridge to the west of the yard. MassDOT anticipated the future year reconstruction of this bridge structure. At that time, columns and supports could potentially be rearranged to accommodate the GU envisioned restoration of the former running track.

Federal Certification Review, September 2020

- EB&S RR and the GU were both contacted to provide testimony at the Federal Certification proceedings held 9/15-16/20. EB&S president George Bell called in during the morning session of 9/16/20. The GU submitted a letter to the federal review team detailing their interactions with the CMRPC transportation staff, staff to the CMMPO.

CMMPO Technical Assistance 2021: CRISI Letter of Support

- As requested, in November 2021 staff prepared a letter of support for the Grafton & Upton Railroad (GU), later signed by Director Janet Pierce. The letter indicated CMRPC support for the GU's application to the Federal Railroad Administration (FRA) for Consolidated Rail Infrastructure and Safety Improvements (CRISI) Program funding for track improvements in North Grafton and elsewhere along the shortline railroad. If awarded, the CMRPC may have a role in the administration of the FRA grant. *(A copy of the letter of support is included on the following pages.)*

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GRAFTON & UPTON RAILROAD
WEST UPTON INTERMODAL FACILITY REVITALIZATION
AERIAL VIEW WITH MAJOR FEATURES
FIGURE 5

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GRAFTON & UPTON RAILROAD
NORTH GRAFTON INTERMODAL FACILITY
AERIAL VIEW WITH MAJOR FEATURES
FIGURE 6

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GRAFTON & UPTON RAILROAD
HOPEDALE INTERMODAL FACILITY
AERIAL VIEW WITH MAJOR FEATURES
FIGURE 7

CMRPC
Central Massachusetts Regional Planning Commission

November 17, 2021

Administrator Ronald Batory
Federal Railroad Administration
1200 New Jersey Avenue, SE
Washington, DC 20590

Re: Grafton and Upton Railroad Company (GU) FY '21 FRA CRISI Grant Application

Dear Mr. Batory:

The transportation staff of the Central Massachusetts Regional Planning Commission (CMRPC) has been active in a range of freight planning efforts for both freight railroads and highway tucking for the past three decades. In this role, the CMRPC would like to indicate its strong support of the Grafton and Upton Railroad Company's (GU) application for the Federal Railroad Administration's (FRA) Consolidated Rail Infrastructure and Safety Improvements (CRISI) grant program. The GU's 2021 application is targeted for the proposed ***State of Good Repair, Safety Improvement and Congestion Mitigation Project.***

Indicative of the regional planning agency's support, the CMRPC has committed to providing a week of in-kind services at the Project Manager level, with a corresponding value of approximately $4000, to assist with the administration of the CRISI program funding, should it be awarded to the GU.

Key aspects of the grant application for 2021 include the following:

- Construction to restore an interchange siding alongside the Massachusetts Bay Transportation Authority's (MBTA) double track Worcester Main Line (WML). The proposed interchange upgrades are designed to eliminate current capacity constraints and increase interchange efficiency by constructing a new wye track, thus increasing railcar capacity.

  This additional track is anticipated to provide a range of benefits including a vast reduction in redundant railcar travel & switching with CSX, address climate change with measurable reductions in locomotive emissions as well as noise mitigation for the GU's residential neighbors. The construction of this new segment of track also provides for reduced interference for MBTA Commuter Rail passenger service along this segment of the WML.

  The GU has determined that essential products, critical for the Massachusetts economy, ship by rail on a route that bypasses the GU interchange three times before eventually being delivered. According to the GU, this results in seventy-five (75) unnecessary travel miles, added days of travel and unnecessary locomotive emissions.

- Further, the GU's CRISI application for 2021 requests funding for the improvement of the GU mainline through the installation of heavier rail to support an increased carload capacity of 286,000 pounds, new ties, ballast and upgraded highway at-grade crossings. These improvements are designed to elevate the GU mainline from "excepted" track to "Class 2" track. This aspect of the CRISI grant will serve to improve the resiliency of the GU mainline between the host communities of North Grafton and Upton, providing benefits to a wide area of the CMRPC planning region. The improved track will allow for modest increases in train speeds along with increased railcar safety.

The GU CRISI application, if funded, will yield both immediate and long-term benefits. Overall, the proposed GU project is anticipated to, again, eliminate needless miles of redundant travel, thus reducing emissions and noise pollution to nearby residential neighborhoods. Through the elimination of congestion at this major GU interchange point with CSX, freight railcar-related congestion on the MBTA Commuter Rail-oriented WML is expected to be reduced as well.

In the spirit of the *Massachusetts State Rail Plan*, the GU has already laid the ground work for CRISI through privately-funded railyard improvements and prior locomotive idling reduction efforts in North Grafton. Further, such projects to improve the capacity and safety of freight movement serve to implement the intent of the planning region's Long-Range Transportation Plan (LRTP) *Mobility2040 the Update for 2020*. As such, joining with the host community of Grafton, MassDOT, the MBTA and CSX Transportation, the CMRPC would like to again indicate its full support for the GU Railroad's CRISI grant application for 2021.

Should you have any questions or require additional information, please do not hesitate to contact Rich Rydant, Transportation Project Manager, at rrydant@cmrpc.org.

Respectfully Submitted,

Janet A. Pierce
CMRPC Executive Director

OWNER
Grafton & Upton Railroad

ADDRESS
Upton, MA

ARCHITECT
Saccoccio and Associates, Inc.

PROJECT VALUE
$16,484,773

Scope of Services

Industrial Construction – Design and construct a new Bulk Distribution Facility consisting of 17 chemical storage tanks, 33,000 square feet of warehouse space and 3,300 square feet of office space.

Project Notes

+ **Prefabrication of pump skids** and process piping by our in-house welding services team.
+ **On site installation of process piping**, including:
  - Solvent System (2,800 LF)
  - Acid System (480 LF)
  - Caustic System (800 LF)
  - Oxidizer System (220 LF)
  - Nitrogen and Instrument Air Systems (2,200 LF)
+ **Project involved two inter-company divisions** for concrete and welding services.
+ Project also included **site preparation to accommodate for an expansion for up to 21 tanks**.

RHWhite
CONSTRUCTION & SERVICE SOLUTIONS

R.H. White Construction Companies | 41 Central Street (P.O. Box 404) | Auburn, MA 01501
T 508 832 3295 | F 508 832 7084 | www.rhwhite.com

4. Genesee & Wyoming Inc., Providence & Worcester Railroad Division

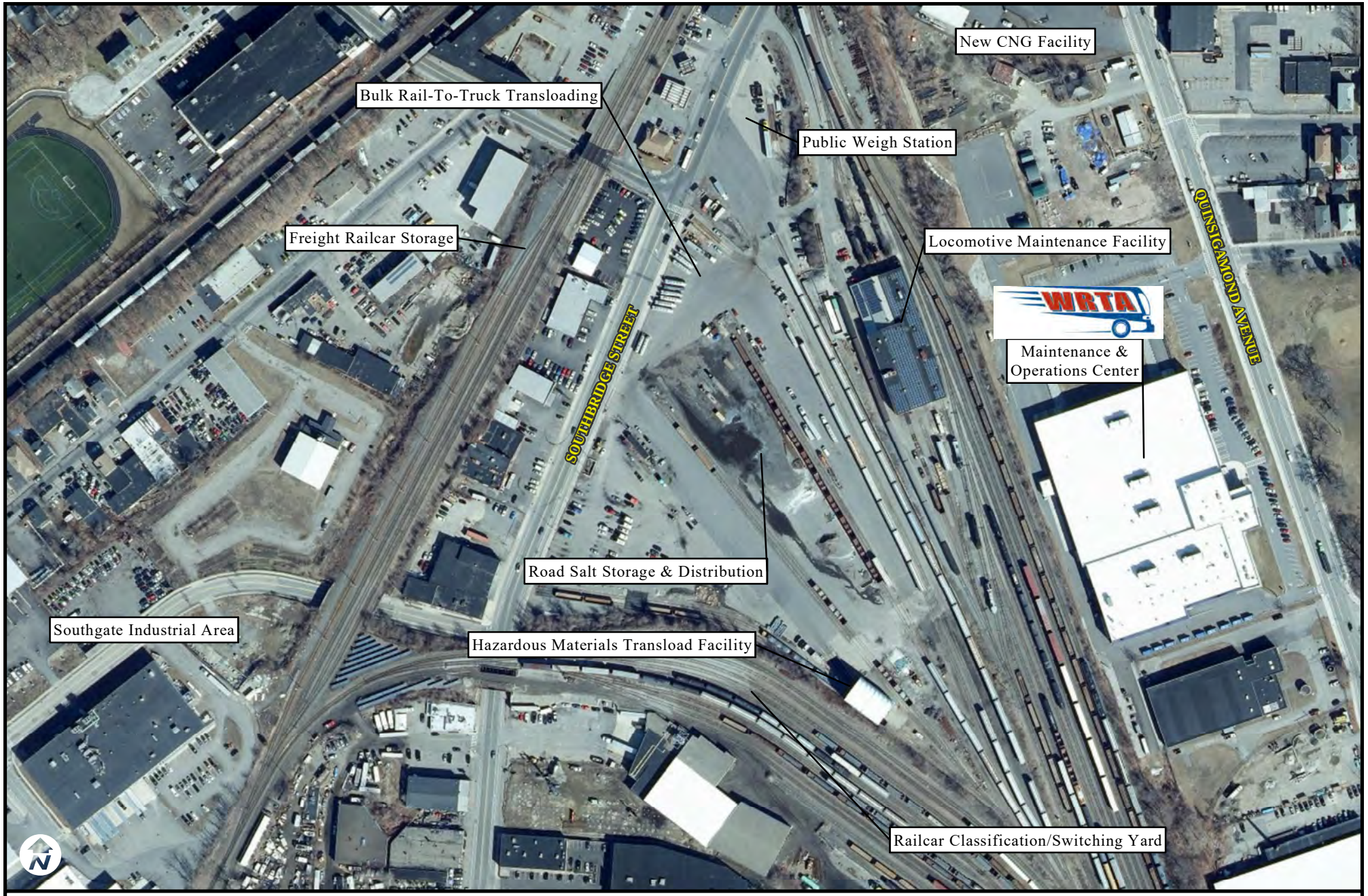
Rail Freight Provider Overview

The Genesee & Wyoming (G&W) is the largest corporate family of short line railroads in the US, a portfolio of 120 short-line railroads - regional lines that often connect to the Class 1 rail freight providers. Since late 2019, the G&W's owners are Canada's Brookfield Infrastructure Partners (BIP) and the Singapore sovereign-wealth fund GIC. The G&W operates on 16,000 miles of track, mostly in the US but also in the UK, Europe and Australia.

With the deregulation of the nation's railroads in the 1980's, G&W began assembling short-line operators around the country, including the purchase of RailAmerica over a decade ago, which made it into the largest short-line operator in the US. G&W's acquisition by BIP and GIC made the railroad a private entity. The company stopped reporting its monthly carloads and no longer held quarterly conference calls. **Figure 8** is an aerial image of the Worcester G&W intermodal yard.

Genesee & Wyoming Incorporated/Providence & Worcester LRTP-Identified Needs

- Various future improvements and expansion activities, including potential CRISI or IRAP-funded track improvements or other activities. Future improvement projects for the Worcester freight yard will likely evolve due to vendor necessity or changing market conditions.



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WORCESTER G&W INC. PROVIDENCE & WORCESTER RAILROAD YARD & INTERMODAL FACILITY
AERIAL VIEW WITH MAJOR FEATURES
FIGURE 8

CMRPC

5. MassCentral Railroad

Rail Freight Provider Overview

Since 1979, the Massachusetts Central Railroad (MCRR) has provided rail freight service to New England. Serving both on-line customers with rail direct delivery, as well as off-line customers through transload and distribution operations, MassCentral provides cost-effective transportation for a wide variety of commodities. MassCentral interchanges with both CSX and the New England Central Railroad, providing competitive access to the entire North American rail network.

The railroad's 29 miles of track in the Ware River Valley between Palmer and South Barre are near major highway routes providing access to Boston, Springfield, Hartford, Providence and the entirety of New England within hours. Customers of the MassCentral do not need to be located next to the tracks to optimize their freight logistics. MassCentral's transload and distribution facilities can extend the reach of the railroad though transloading almost any product between railcars and trucks. This allows freight shippers to combine the benefits of low-cost rail with the flexibility of highway trucking.

Two facilities on the MassCentral provide premier distribution and transload services for products moving to and from customers without rail service, 1) Gibbs Crossing Reload and 2) Wildwood Reload. The Gibbs Crossing Reload in Palmer is operated by A&R Transport and has access on Route 32. The Gibbs Crossing site handles dry bulk plastics using pneumatic transload equipment. Railyard capacity is 97 railcars. This location also has a truck scale.

The Wildwood Reload intermodal transload facility in South Barre, shown in **Figure 9**, is known as Phoenix Plaza. Located at the former wool products mill site, this facility handles breakbulk and dry bulk commodities. Transload equipment used at Wildwood Reload include a forklift, roll clamp and undercar conveyor. Four (4) on-site buildings provide the opportunity for both warehousing and storage, including a large salt shed. Significant acreage exists on the property to handle addition site expansion. Further, this location also has a truck scale.

MassCentral Railroad LRTP-Identified Needs

- Ongoing track maintenance & various at-grade highway crossing improvements. *(The MCRR right-of-way is largely owned by the Commonwealth.)*

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WILDWOOD RELOAD INTERMODAL FACILITY
SERVED BY MASS CENTRAL RAILROAD
AERIAL VIEW WITH MAJOR FEATURES
FIGURE 9

CMRPC

6. Intransit Container Incorporated (ICI)

Intransit Container Incorporated (ICI) operates the Wiser Avenue intermodal container yard in the city of Worcester. The ICI facility is served by rail freight provider G&W Inc. ICI's focus is international container traffic from around the globe. The site is a customs-bonded, inland port. Nearly a decade ago, yard expansion at the Wiser Avenue site was completed along with a number of internal improvements. These included an attractive wall shielding site operations and reducing noise and lighting spillover. In addition to more space for container and chassis storage, the Wiser Avenue yard also improved lift maneuverability, thus speeding transloading operations. An aerial view of the intermodal yard can be found in **Figure 10**.

ICI Wiser Avenue Intermodal Facility LRTP-Identified Needs

- Various future infrastructure improvements, including potential IRAP-funded activities. Future improvement projects for the ICI site will likely evolve due to vendor necessity or changing market conditions.
- Continue to investigate potential further expansion of the Wiser Avenue intermodal facility. Consider a range of on-site improvements to improve safety and efficiency of container transloading operations.
- Consider future year expansion of existing private truck parking and rest facilities with amenities for both drivers and on-site personnel.

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INTRANSIT CONTAINER INC. WISER AVENUE INTERMODAL FACILITY
AERIAL VIEW WITH MAJOR FEATURES
FIGURE 10

CMRPC

7. Worcester Regional Airport

Worcester Regional Airport was developed by the City of Worcester in 1946 on land in the municipalities of Worcester, Leicester, and Paxton. For nearly two decades, the Massachusetts Port Authority (Massport) operated the airport on the City's behalf, subsequently assuming both ownership and operation duties in 2010. Massport is governed by a seven-member Board. Massport's Chief Executive Officer serves at the pleasure of the Board and is responsible for carrying out its agenda with the assistance of Massport's executive staff. An aerial view of the Worcester Regional Airport can be found in **Figure 11**. Any future improvement projects for the airport site will likely evolve due to vendor necessity or changing market conditions.

Worcester Airport Factoids:

Fixed base operator (FBO) services at Worcester Regional Airport are provided by Rectrix Aviation. Rectrix Aviation provides upscale ground handling services to aircraft operators and executives who rely on corporate or private jets. Services include:

- Domestic and international handling
- Fast turnarounds
- Passenger and crew assistance
- Flight planning and weather
- Catering arrangements
- Hotel and restaurant reservations
- Limousine and car rental
- Aircraft charter reservation
- Customs and immigration assistance
- Traffic rights and landing permits
- Airport and airway slot coordination
- Change aircraft charter reservation (by aircraft & helicopter charter)
- Fueling and fueling arrangements

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WORCESTER REGIONAL AIRPORT
PASSENGER TERMINAL FACILITY AND AIRCRAFT SUPPORT SERVICES
AERIAL VIEW WITH MAJOR FEATURES
FIGURE 11

CMRPC

V. Trucking Activities in the Greater Region

Highway trucking activities in the greater region are monitored by the staff. As part of the traffic counting program, vehicle classification is determined so that the overall percentage of heavy vehicles can be monitored on a routine basis. Truck Travel Time Reliability is another topic that has received more attention recently and is also reflected in staff's ongoing Performance Management efforts. Staff has recently started to assess freight accommodation on the federal-aid highway network through a series of studies that will eventually cover the entire planning region. The staff also monitors progress on major highway reconstruction projects that impact regional truck flows. Additionally, the lack of reliable truck parking for long-distance drivers is a concern that MassDOT seeks to address with the participation of its regional planning partners.

This section of the Progress Report focuses on highway freight movement provided by the trucking industry. An overview of the highway network in the planning region is provided. This includes the National Highway System (NHS) with such important roadways as the Interstate System, US Route 20 and state numbered Route 9 and Route 146. All handle significant truck volumes, some are part of the National Highway Freight Network (NHFN). Next, an overview is provided of the region's defined Rural & Urban Critical Freight Corridors. Numerous graphics have been compiled showing the CMMPO staff's truck flow monitoring efforts that encompass the entirety of the planning region.

This section also includes an overview of regional trucking-related activities conducted by the staff. The availability of diesel fuel in the planning region is periodically reviewed and an updated listing of commercial establishments providing diesel was compiled for inclusion in the document. Next, an overview of US DOT's national Alternative Fuel Corridors (AFC) program is provided along with listings of those highways designated as such in the planning region. Further trucking-related topics include a summary of the truck parking activities where staff has recently participated. The supply of adequate truck parking for long-distance drivers is a concern that MassDOT is currently working to address with its regional planning partners. As such, staff participation in both a MassDOT truck parking survey and subsequent truck parking seminar is documented.

An excerpt from the CMMPO's Annual System Performance Report concerning Truck Travel Time Reliability (TTTR) is provided. TTTR is reflective of overall traffic flow reliability in the planning region. Next, a brief overview of the Road Safety Audits (RSAs) conducted in the region during the past five-year period is provided. RSA-derived suggested improvement options often benefit a range of users, including the trucking industry. Truck safety is also addressed and includes an updated summary of truck crashes with overhead bridge structures.

With the proliferation of warehousing in the region serving e-commerce, staff was requested by the town of Northborough to conduct a "post occupancy study" concerning two warehouses used by Amazon as a middle-mile sorting facility. An overview of this effort is included in the Progress Report. A number of major highway improvement projects in the region have been planned over the past decade and are poised for implementation. These include the Major Infrastructure improvement project to reconstruct and modernize the interchange of I-495 with I-90 (MassPike). A current overview of this project, anticipated to be under construction ion late 2022 is provided. Lastly, the *Highway Freight Accommodation* study series initiated by staff, intended to eventually address all the transportation planning subregions, has been completed in both the North and West subregions. This Progress Report includes overviews of both studies as well as the listings of suggested improvement options compiled, both overall and community-based.

1. Planning Region Highway Network

A. National Highway System (NHS) in Central Massachusetts

As stated by FHWA, the National Highway System (NHS) consists of roadways important to the nation's economy, defense, and mobility. The NHS includes the following subsystems of roadways. *Please note that a specific highway route may be on more than one subsystem.*

Interstate: The Eisenhower Interstate System of highways retains its separate identity within the NHS.

Other Principal Arterials: These are highways in rural and urban areas which provide access between an arterial and a major port, airport, public transportation facility, or other intermodal transportation facility.

Strategic Highway Network (STRAHNET): This is a network of highways which are important to nation's strategic defense policy and which provide defense access, continuity and emergency capabilities for defense purposes.

Major Strategic Highway Network Connectors: These are highways which provide access between major military installations and highways which are part of the Strategic Highway Network.

Intermodal Connectors: These highways provide access between major intermodal facilities and the other four subsystems making up the NHS.

The NHS was developed by the Department of Transportation (DOT) in cooperation with the states, local officials, and metropolitan planning organizations (MPOs). The National Highway System within the Central Massachusetts planning region is shown in **Figure 12**.

As can be seen from the figure, the NHS within the planning region includes all Interstate Highway and segments of US Route 20 as well as segments of Massachusetts State Numbered Routes 9, 16, 32, 49, 56, 62, 68, 122A, 131, 140, 146 and 169.

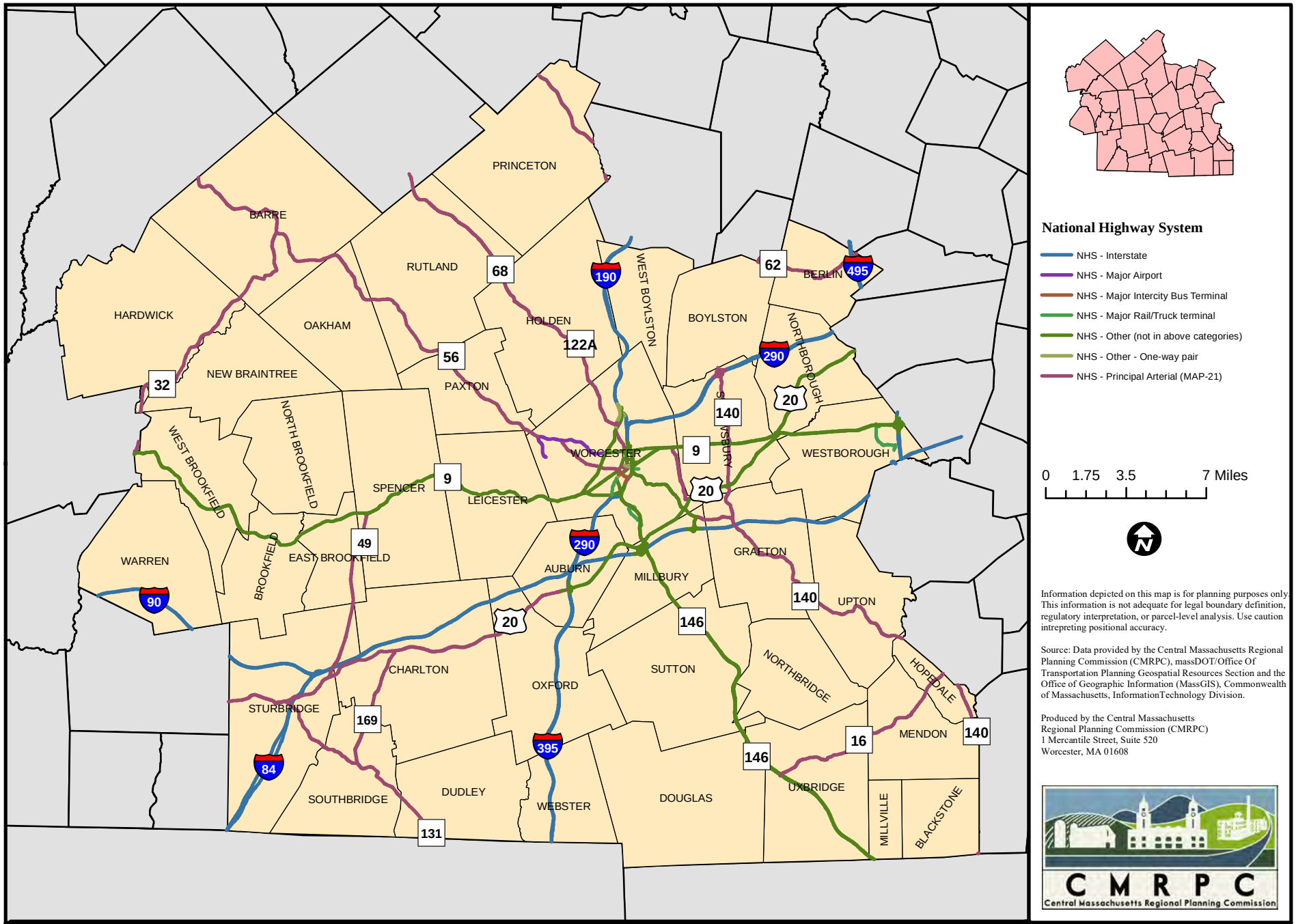

Figure 12: National Highway System - Central Massachusetts

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B. National Highway Freight Network (NHFN)

The NHFN was established by FHWA, as required by the FAST Act national transportation legislation, to strategically direct federal resources and policies toward improved performance of various highway portions of the nation's freight transportation system.

The NHFN includes the following subsets of roadways:

Primary Highway Freight System (PHFS): This is a network of highways identified as the most critical portions of the U.S. freight transportation system determined by measurable and objective national data. The network consists of 41,518 centerline miles, including 37,436 miles of Interstate and 4,082 miles of non-Interstate roads.

Other Interstate Portions not on the PHFS: These highways consist of the remaining portion of Interstate roads not included in the PHFS. These routes provide continuity and access to freight transportation facilities. These portions amount to approximately 9,511 centerline miles of Interstate, nationwide, and will fluctuate with additions and deletions to the Interstate Highway System.

Critical Rural Freight Corridors (CRFCs): These are public roads not in an urbanized area which provide access and connectivity to the PHFS and the Interstate System with other important ports, public transportation facilities or other intermodal freight facilities.

Critical Urban Freight Corridors (CUFCs): These are public roads in urbanized areas which provide access and connectivity to the PHFS and the Interstate System with other important ports, public transportation facilities or other intermodal freight facilities.

As can be seen in **Figure 13**, the NHFN within the planning region includes segments of I-84, I-90 (MassPike), I-290, I-495 as well as segments of Massachusetts State Numbered Routes 9 and 146. Both CRFCs and CUFCs in the planning region were established by the CMMPO in 2017 and included as part of the current Massachusetts Statewide Freight Plan. The CMRPC planning region's mileage allowance for both the rural and urban areas was based on criteria provided by MassDOT OTP. The Critical Rural and Urban Freight Corridors information and graphics can be found later in this document.

Figure 13

National Highway Freight Network: Massachusetts

C. Rural and Urban Critical Freight Corridors

Considered an ongoing effort, staff continued monitoring efforts on the region's established Critical Rural & Urban Freight Corridors, including conducting daily traffic volume and vehicle classification counts. **Figure 14** is a map of the Critical Rural and Urban Freight Corridors in the CMRPC region. **Table 1** contains vehicle classification counts near intermodal facilities along the freight corridors. It should also be noted that staff has continued the refinement of heavy vehicle monitoring procedures.

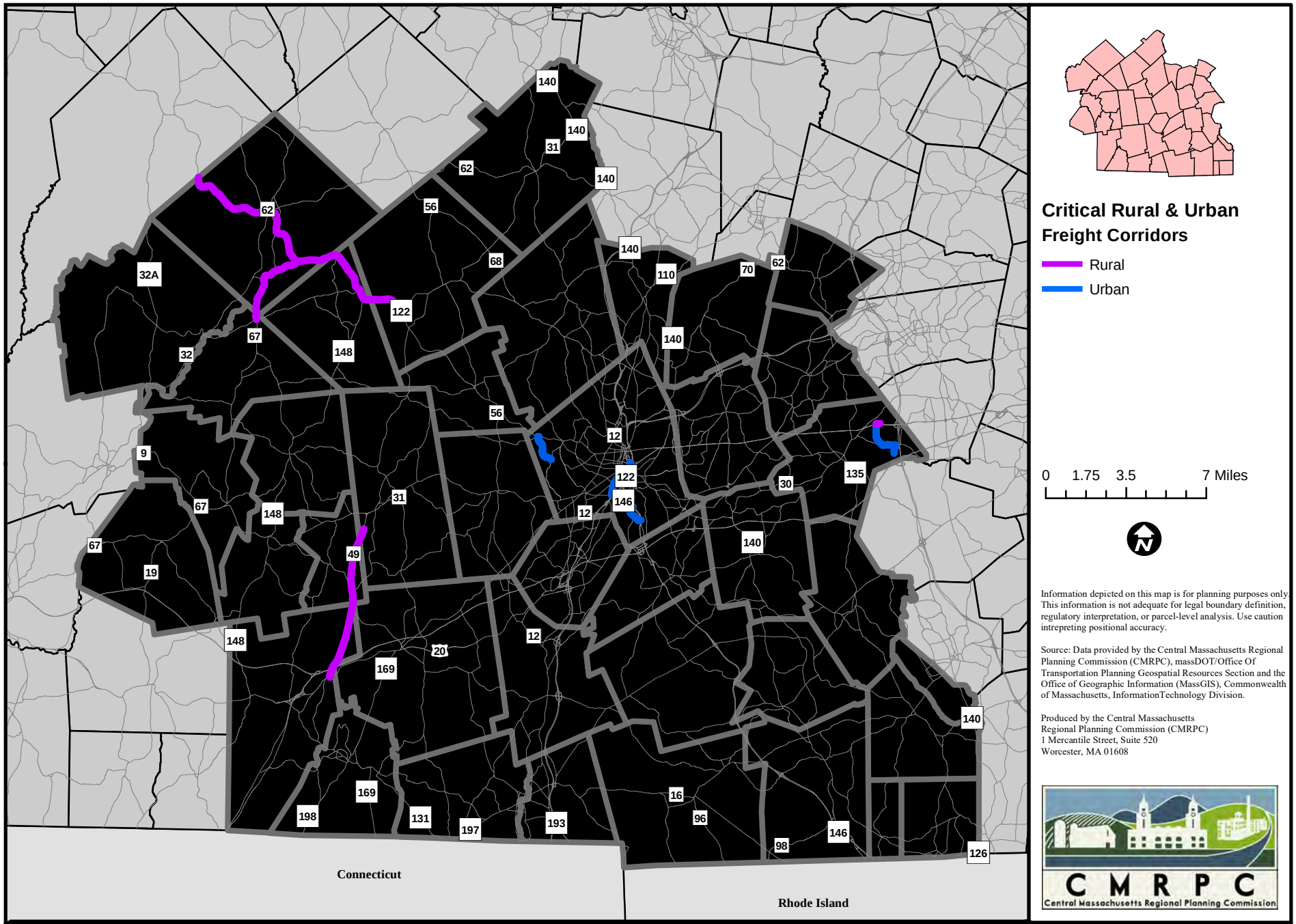

Figure 14: Critical Rural & Urban Freight Corridors

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TABLE 1
Vehicle Classification Observed On Established And Potential NHS Primary Freight Routes Serving Intermodal Operations

COUNT LOCATION & INTERMODAL SITE	COUNT DATE	VEHICLE TYPE/CLASS	DIRECTION		TOTALS	RESULTING PERCENTAGES	TRUCK TOTAL	TRUCK PERCENT
			NB/EB	SB/WB				
Rt 49 south of Rt 9	9/26/2019	Passenger vehicles	3683	3848	7531	93.75%		
Spencer - *New England Automotive*		Single-unit trucks/buses	138	87	225	2.80%		
Gateway Facility (NEAG)		Combination trucks	136	139	275	3.42%	502	6.24%
		Multi-trailer trucks	1	1	2	0.03%		
Rt 49 north of Rt 20	7/15/2021	Passenger vehicles	3151	3603	6754	74.70%		
Sturbridge - *New England Automotive*		Single-unit trucks/buses	739	933	1672	18.50%		
Gateway Facility (NEAG)		Combination trucks	273	258	531	5.80%	2283	25.30%
		Multi-trailer trucks	36	44	80	1.00%		
Connector Rd south of Rt 9	10/1/2013	Passenger vehicles	3760	2875	6635	89.59%		
Westborough - *CSX Intermodal*		Single-unit trucks/buses	284	179	463	6.25%		
Bulk Transloading		Combination trucks	162	146	308	4.16%	771	10.41%
		Multi-trailer trucks	0	0	0	0.00%		
Flanders Rd east of Connector Rd	8/17/2010	Passenger vehicles	3967	4509	8476	88.57%		
Westborough - *CSX Intermodal*		Single-unit trucks/buses	442	245	687	7.18%		
Bulk Transloading		Combination trucks	182	200	382	3.99%	1094	11.43%
		Multi-trailer trucks	14	11	25	0.26%		
Franklin St east of Grafton St	11/3/2021	Passenger vehicles	3852	4371	8223	84.29%		
Worcester - *CSX Intermodal*		Single-unit trucks/buses	601	648	1249	12.80%		
Domestic Container, Trailer on Flat		Combination trucks	100	130	230	2.35%	1532	15.70%
Car, Chassis		Multi-trailer trucks	14	39	53	0.56%		
Blackstone River Rd south of Greenwood St	8/28/2018	Passenger vehicles	1982	2237	4219	89.44%		
		Single-unit trucks/buses	186	238	424	8.99%		
Worcester - G&U *RR*		Combination trucks	33	41	74	1.57%	498	10.56%
Intransit Container Inc.,		Multi-trailer trucks	0	0	0	0.00%		
International Containers, Chassis								
Southbridge St north of Cambridge St	8/28/2018	Passenger vehicles	6272	6390	12662	89.50%		
Worcester - *G&W RR*		Single-unit trucks/buses	571	600	1171	8.28%		
Bulk Transloading, Intransit		Combination trucks	136	171	307	2.17%	1486	10.50%
Container Inc. Chassis		Multi-trailer trucks	5	3	8	0.06%		

Passenger vehicles consist of cars, light trucks, and motorcycles.
Single-unit trucks are trucks with 3-4 axles or dual wheels, on one frame.
Combination trucks have two units (for example, the typical 18-wheeler).
Multi-trailer trucks have three or more units (often called tandem trailers).

2. Regional Truck Flow Monitoring Efforts

CMRPC conducts mechanical traffic counts on numerous federal-aid roadways within the Central Massachusetts planning region. These automatic traffic recorders (ATRs) can collect volume data, as well as vehicle classification data. The most current data available on the federal-aid roadways are shown on the following maps. **Figure 15** shows the overall traffic volume flows for the CMRPC region. Each color on the map represents a different level of volume.

Figure 16 shows the total heavy vehicle traffic volumes in the CMRPC region. The thicker the red line, the higher number of heavy vehicles traveling on that road. In **Figure 17**, this map shows the percent of heavy vehicles on the major roadway network. Each color represents a different range of heavy vehicle percentages. Similarly, **Figures 18 and 19** show the truck volume totals for each travel direction, northbound and eastbound as well as southbound and westbound, respectively. Further, **Figures 20 and 21** show the same heavy vehicle flows and percentage with a focus on the City of Worcester.

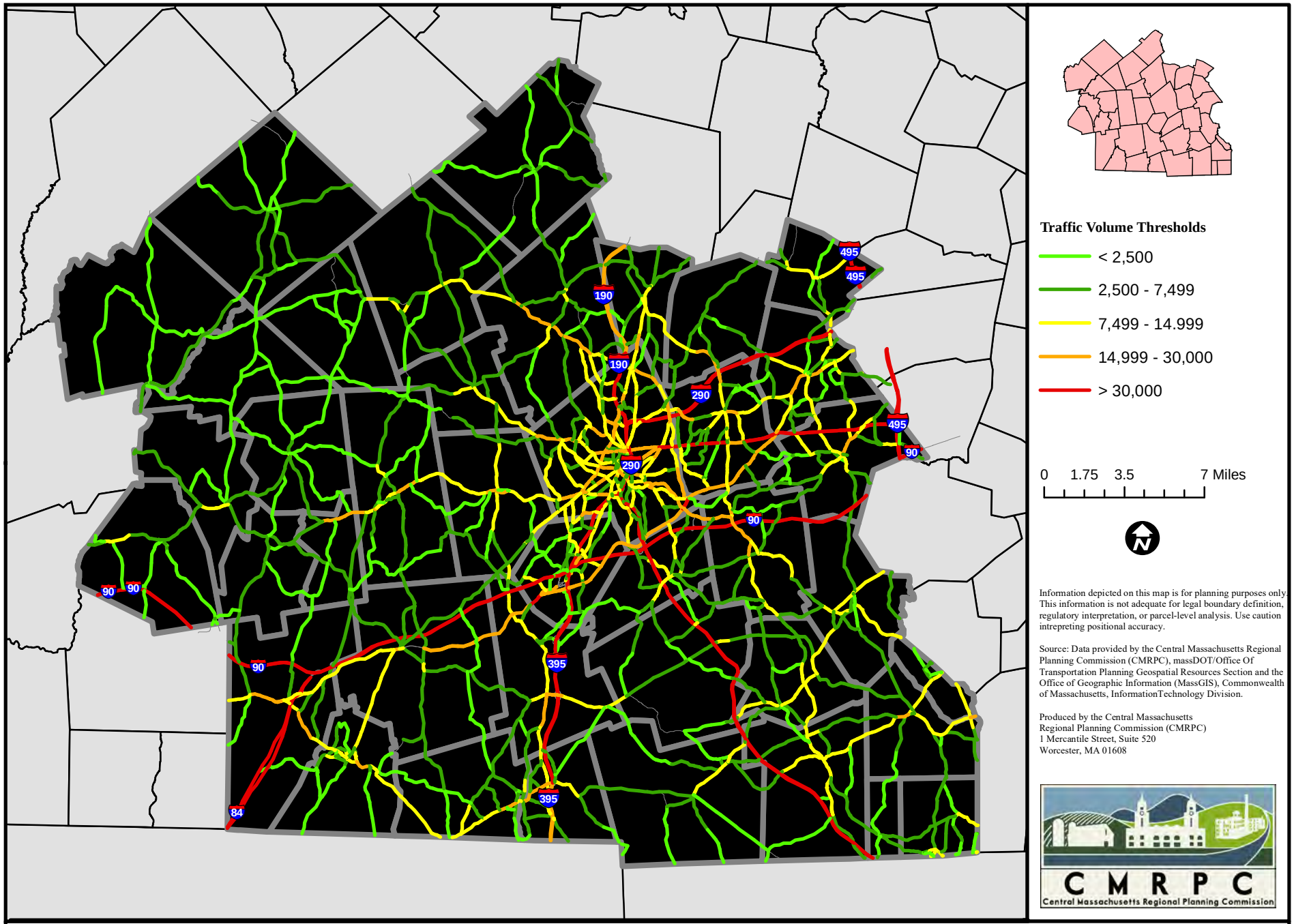

Figure 15: Traffic Volume Flows, CMRPC Region

Date: 1/13/2023

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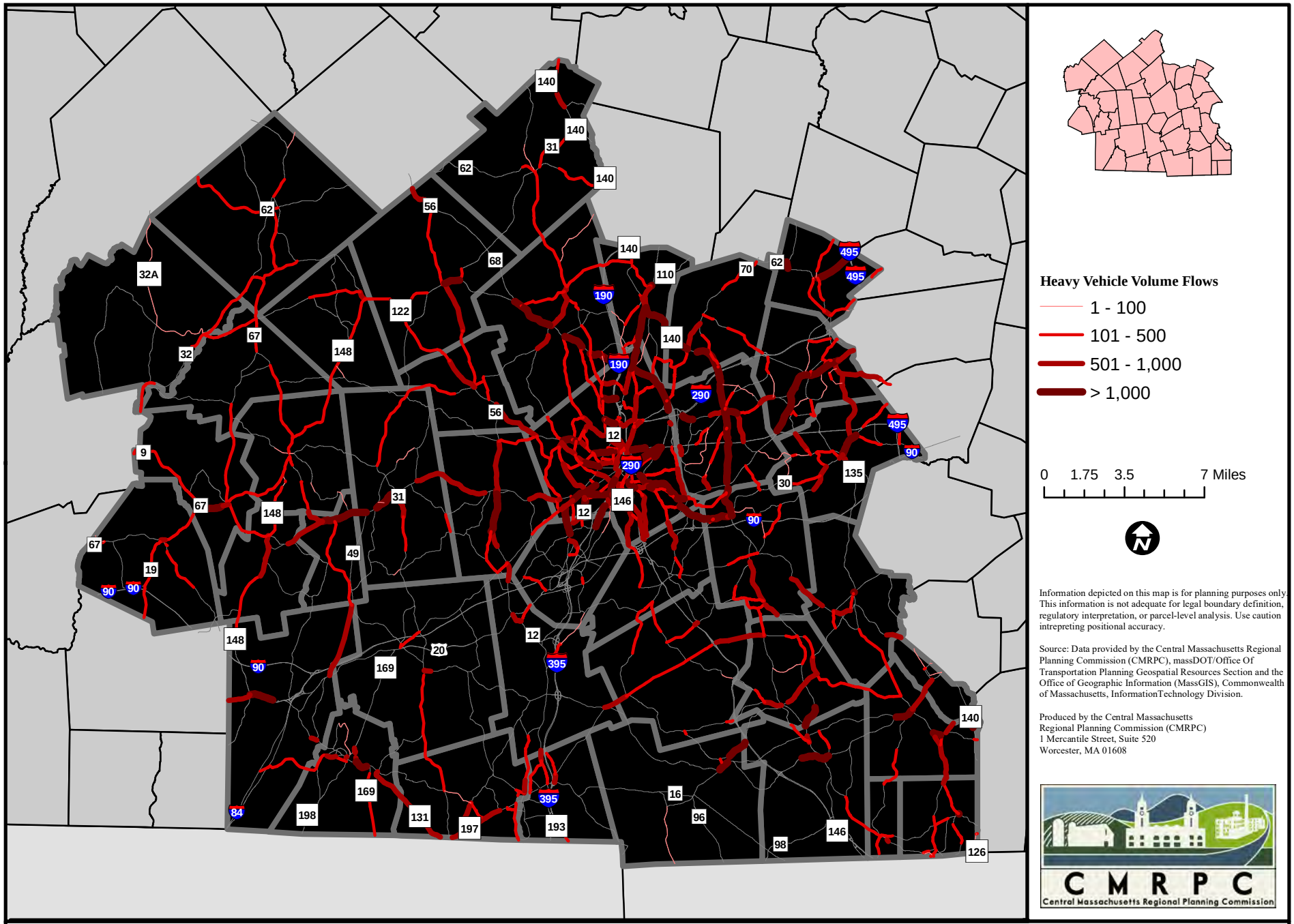

Figure 16: Heavy Vehicle Traffic Volume Flows, CMRPC Region

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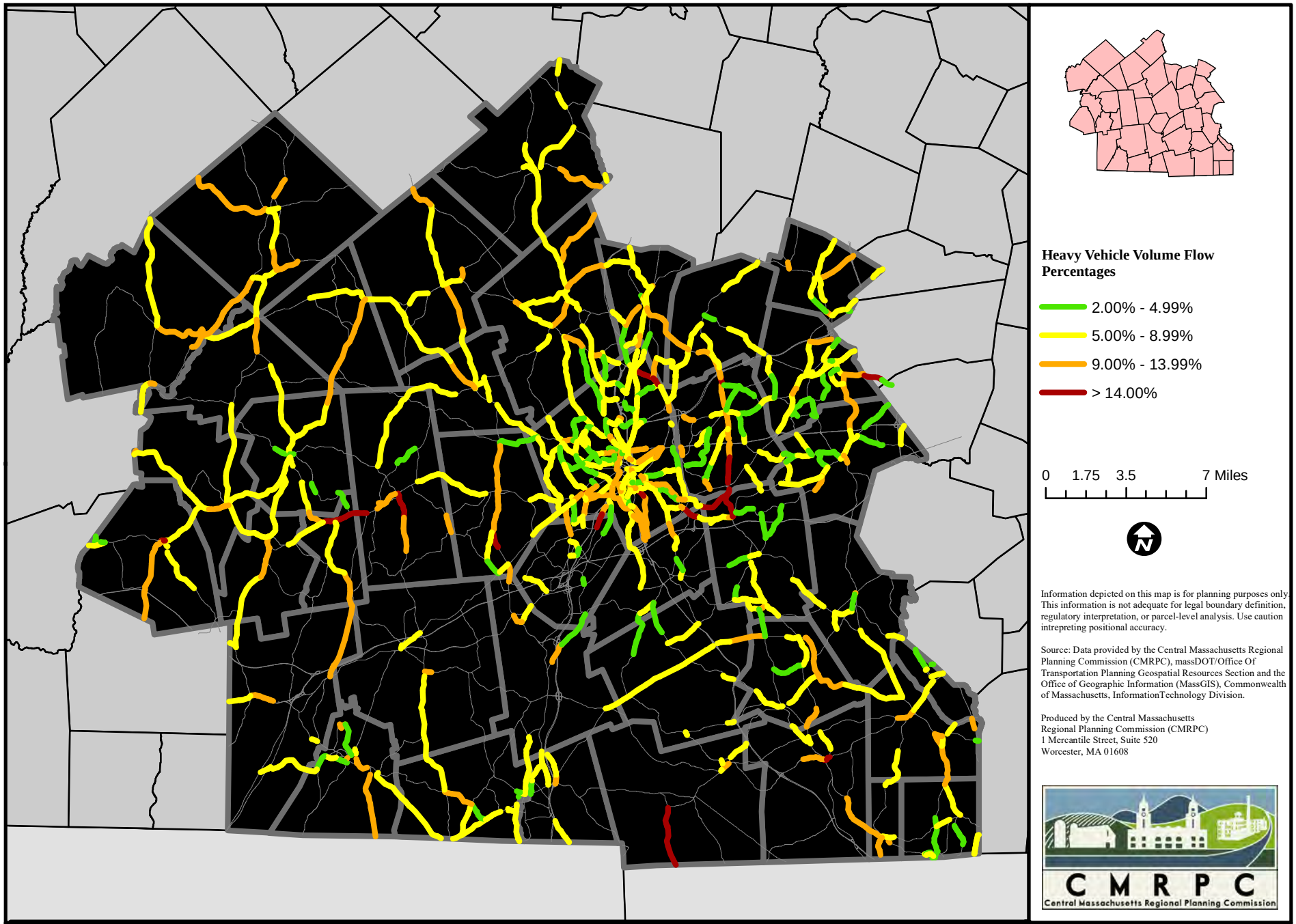

Figure 17: Heavy Vehicle Traffic Volume Flow Percentages, CMRPC Region

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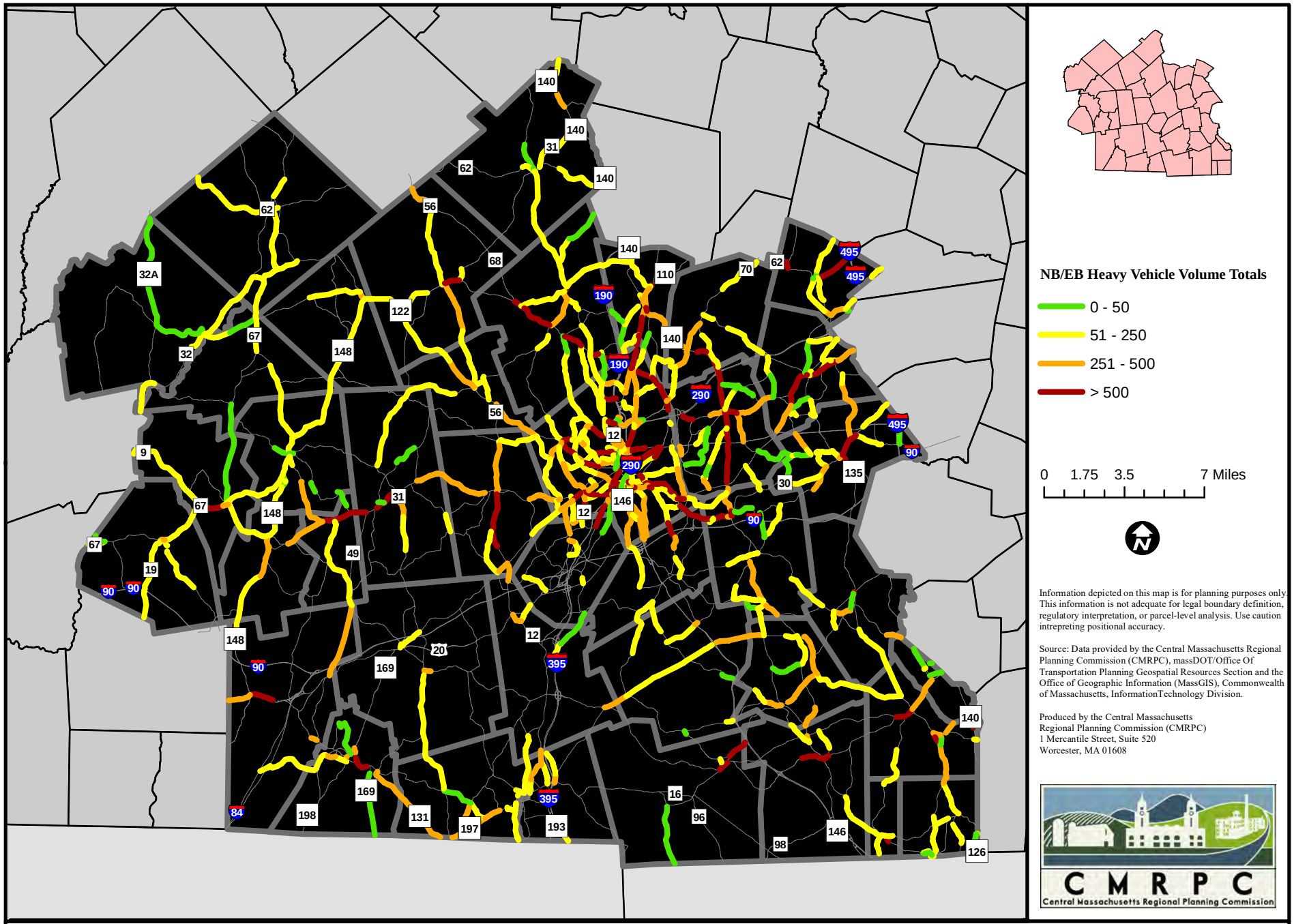

Figure 18: Heavy Vehicle Traffic Volume Flows, Northbound & Eastbound, CMRPC Region

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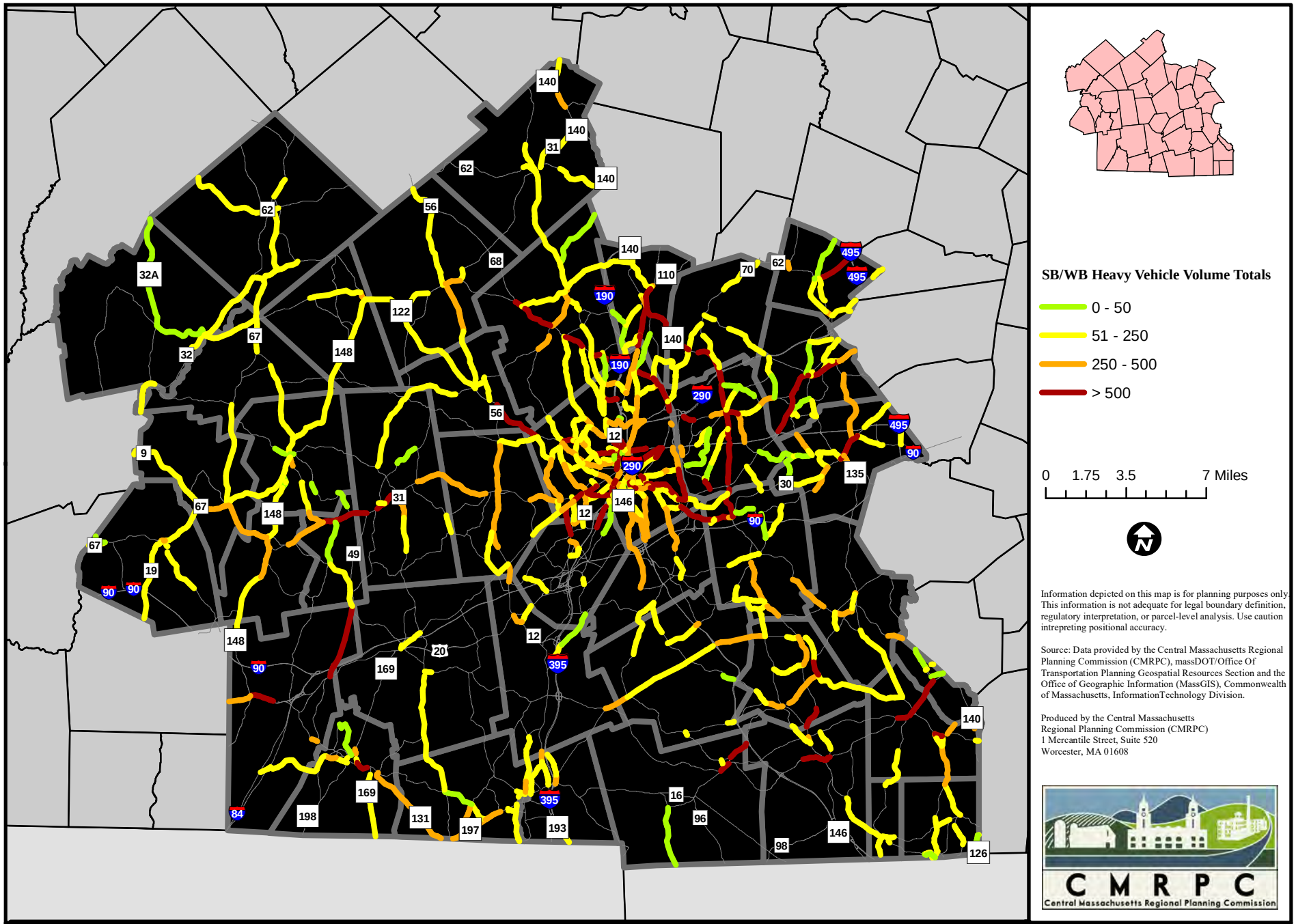

Figure 19: Heavy Vehicle Traffic Volume Flows, Southbound & Westbound, CMRPC Region

Date: 1/13/2023

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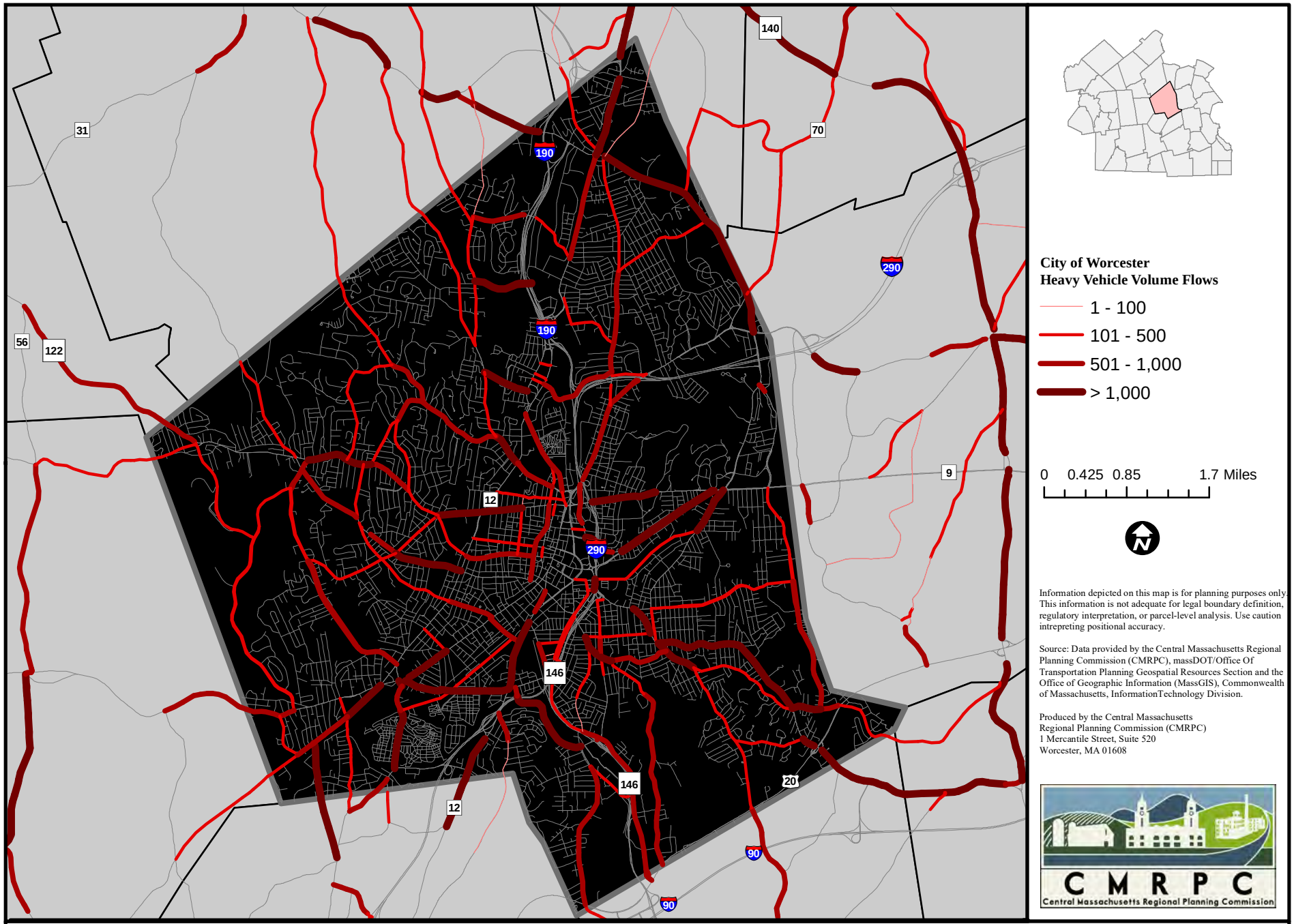

Figure 20: Heavy Vehicle Traffic Volume Flows, City of Worcester

Date: 1/13/2023

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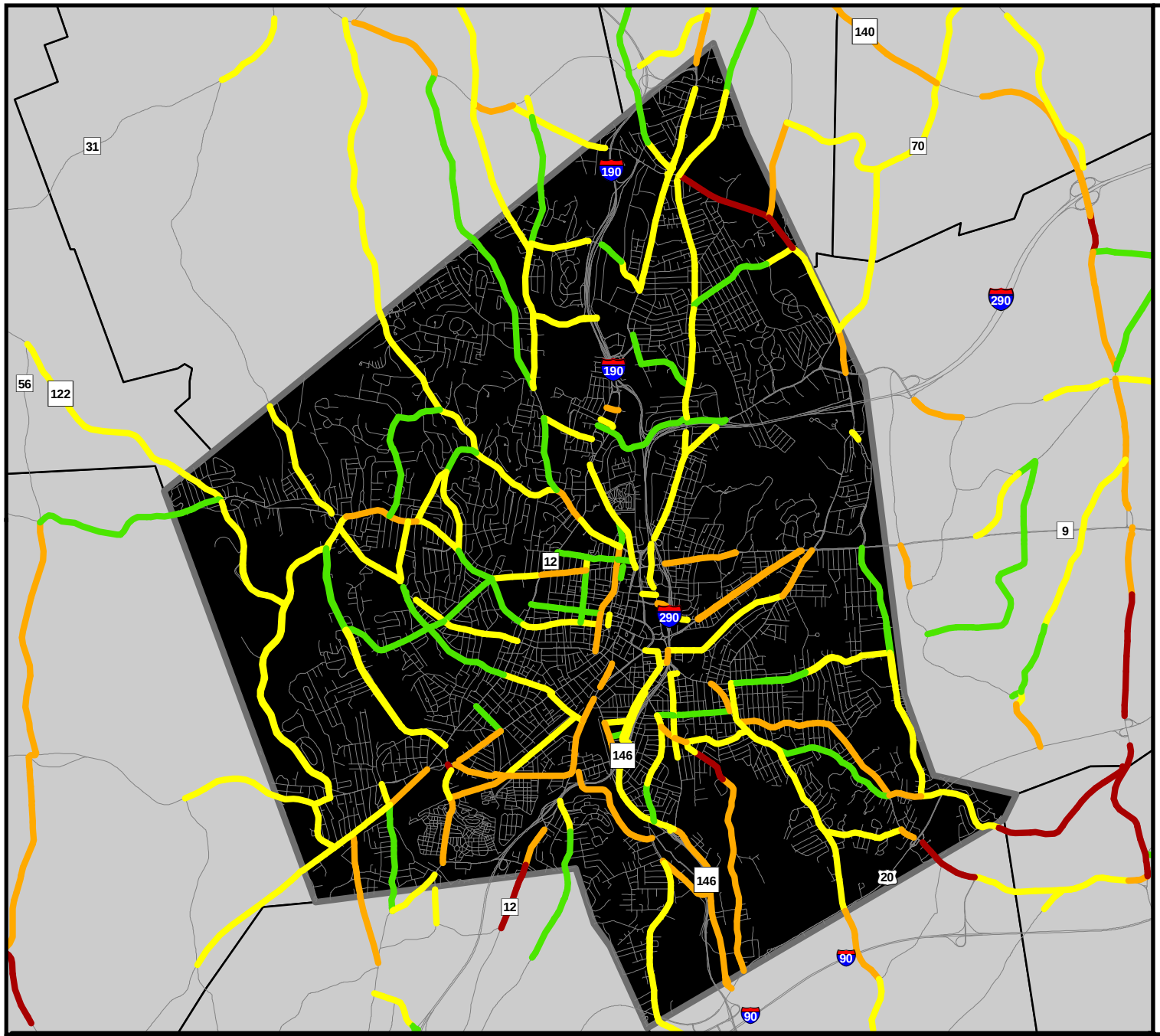

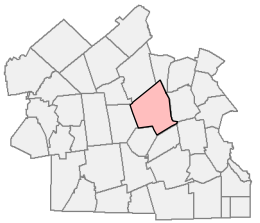

City of Worcester
Heavy Vehicle Percentages

- 2.00% - 4.99%
- 5.00% - 8.99%
- 9.00% - 13.99%
- > 14.00%

0 0.425 0.85 1.7 Miles

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Source: Data provided by the Central Massachusetts Regional Planning Commission (CMRPC), massDOT/Office Of Transportation Planning Geospatial Resources Section and the Office of Geographic Information (MassGIS), Commonwealth of Massachusetts, InformationTechnology Division.

Produced by the Central Massachusetts
Regional Planning Commission (CMRPC)
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C M R P C
Central Massachusetts Regional Planning Commission

Figure 21: Heavy Vehicle Traffic Volume Flow Percentages, City of Worcester

Date: 1/13/2023

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3. Trucking Activities Overview

This section of the Progress Report includes an overview of the regional trucking-related activities conducted by the staff. The availability of diesel fuel in the planning region as well as an overview of US DOT's national Alternative Fuel Corridors (AFC) program is provided. A summary of the truck parking activities where staff has participated is listed, including staff participation in both a MassDOT truck parking survey and truck parking seminar. Next, the topic of Truck Travel Time Reliability (TTTR) is detailed. An overview of the Road Safety Audits (RSAs) conducted in the region during the past five-year period is provided. Truck safety in particular is also addressed, focusing on truck crashes with overhead bridge structures. A summary of the "post occupancy study" for two Amazon-operated warehouses in the host community of Northborough is provided. A status update for the Major Infrastructure improvement project to reconstruct and modernize the interchange of I-495 with I-90 (MassPike) is included. Lastly, this Progress Report provides overviews of the *Highway Freight Accommodation Assessment* studies that have been completed for both the North and West transportation planning subregions.

A. Availability of Diesel Fuel in the Planning Region

Staff has conducted research to identify existing substantive diesel fueling opportunities in the planning region. This information is useful to long-distance trucking as well as for emergency situations that could strike the region. The Massachusetts Department of Environmental Protection (DEP) maintains a database of permitted locations for diesel storage.

This information for the CMRPC planning region was extracted from the DEP database and is shown in **Table 2**. Based on the DEP information, at this time there are 113 commercial outlets in the CMRPC planning region providing diesel fuel sales. The City of Worcester has the most locations with a total of 26, while the second most was Westborough with a total of 9. Of the 40 communities in the CMRPC planning region, 28 of them have at least one diesel fuel location.

Table 2
Diesel Fuel Locations in the Planning Region

Facility Name	Facility Address Line 1	Facility City
CUMBERLAND FARMS #2449	502 WASHINGTON ST	AUBURN
BJ's Wholesale Club - Auburn, MA	782 Washington Street	AUBURN
MA0054	860 SOUTHBRIDGE ST	AUBURN
NOURIA STORE #04005	64 RIVER RD WEST	BERLIN
BERLIN AUTO SERVICE INC	51 WEST ST	BERLIN
BERLIN ENERGY NORTH #2121	265 CENTRAL ST	BERLIN
NOURIA STORE# 04035	328 SHREWSBURY ST	BOYLSTON
BOYLSTON GAS & MARKET LLC	270 SHREWSBURY STREET	BOYLSTON
CHARLTON GAS & MARKET LLC	28 WORCESTER ROAD	CHARLTON
Global Montello Group #2761	38 WORCESTER RD	CHARLTON
GULF OIL LIMITED PARTNERSHIP #3907	MM 83.8 WB MA TURNPIKE	CHARLTON
GULF OIL LIMITED PARTNERSHIP #3906	MM 80.4 EB MA TURNPIKE	CHARLTON
EZ Mart 105	311 MAIN ST	DOUGLAS
PATRIOT GAS	251 WEST MAIN ST	DUDLEY
Hi Lo Gas	5 W MAIN ST	DUDLEY
CUMBERLAND FARMS #2512	217 WORCESTER ST	GRAFTON
GRAFTON AUTO SERVICE INC	101 WORCESTER STREET	GRAFTON
LAKE RIPPLE XTRA MART	87 WORCESTER RD	GRAFTON
GLOBAL MONTELLO GROUP #1427	1175 MAIN ST	HOLDEN
SPEEDWAY #2466	770 MAIN ST	HOLDEN
CUMBERLAND FARMS #2153	115 MENDON ST	HOPEDALE
PETERSON OIL SERVICE	154 MAIN ST	LEICESTER
IMPERIAL GAS LLC	1 MILLVILLE RD	MENDON
GASCO EXPRESS FACILITY	23 CAPE RD	MENDON
RIVERSIDE MART	54 CANAL ST	MILLBURY
MILLBURY XTRAMART	100 WORCESTER PROVIDENCE TPK	MILLBURY
CUMBERLAND FARMS #2503	15 MAIN ST	NORTHBOROUGH
PETERSON-NORTHBOROUGH	23 BELMONT ST	NORTHBOROUGH
NORTHBOROUGH MOBIL	7 BELMONT ST	NORTHBOROUGH
SANDZ-E, LLC #MA0062	48 W MAIN ST	NORTHBOROUGH
NYDAM OIL CO INC	205 PROVIDENCE RD	NORTHBRIDGE
PETERSON OIL SERVICE	191 PROVIDENCE RD	NORTHBRIDGE
SPEEDWAY #2415	1144 PROVIDENCE RD	NORTHBRIDGE
Whitinsville Gas & Market, LLC	4 N MAIN ST	NORTHBRIDGE
OXFORD SHELL	138 SOUTHBRIDGE RD	OXFORD
OXFORD SUNOCO	366 MAIN ST	OXFORD
ZAM ZAM MART LLC	484 MAIN ST	OXFORD
Global Montello Group #664	123 Sutton Avenue	OXFORD
Global Montello Group #2759	24 SUTTON AVE	OXFORD
NORTH OXFORD XTRA MART	93 SOUTHBRIDGE RD	OXFORD
RUTLAND SAVEWAY GAS	249 MAIN ST	RUTLAND
COLONIAL CONVENIENCE	222 BARRE PAXTON RD	RUTLAND
FLYNNS TRUCK STOP	307 HARTFORD TNPK	SHREWSBURY

Facility Name	Facility Address Line 1	Facility City
Shell #81 (Seasons Corner Market #81)	604 Hartford Turnpike	SHREWSBURY
NOURIA #04021	271 BOSTON TURNPIKE	SHREWSBURY
SHREWSBURY GAS & MARKET LLC	22 MAPLE AVE	SHREWSBURY
CUMBERLAND FARMS #2517	357 Main Street	SOUTHBRIDGE
Daous Convenience	716 WORCESTER ST	SOUTHBRIDGE
SOUTHBRIDGE XTRA MART	465 EAST MAIN ST	SOUTHBRIDGE
OM Mobil Mart Inc.	491 E MAIN ST	SOUTHBRIDGE
LANEY'S SUNOCO	353 E MAIN ST	SPENCER
SPENCER XTRA MART	94 MAIN ST	SPENCER
SUNOCO #80000541-00141077	73 W MAIN ST	SPENCER
CUMBERLAND FARMS #2131	506 MAIN ST	STURBRIDGE
PILOT TRAVEL CENTER #222	400 HAYNES ST	STURBRIDGE
STURBRIDGE GAS	173 MAIN ST	STURBRIDGE
C&R TIRE CO OF STURBRIDGE INC	649 MAIN ST	STURBRIDGE
HERITAGE XTRA MART	215 CHARLTON RD	STURBRIDGE
236 RT 15 - MA0006	236 RTE 15	STURBRIDGE
Lucky Mart	122 Main St.	STURBRIDGE
J D BOUSQUET & SONS INC	37 MAIN ST	SUTTON
SUTTON NORTH XTRAMART	27 WORCESTER-PROVIDENCE TRPK	SUTTON
SUTTON MINI MART	RTE 146 & BOSTON RD	SUTTON
GASCO EXPRESS FACILITY	44 MILFORD ST	UPTON
CUMBERLAND FARMS #2531	128 North Main Street	UXBRIDGE
HELLEN GARAGE INC	277 N MAIN ST	UXBRIDGE
NOURIA #04024	30 LACKEY DAM ROAD	UXBRIDGE
MA0081	2 HARTFORD AVE	UXBRIDGE
QUAKER DIAMOND	674 QUAKER HWY	UXBRIDGE
BILL'S CITGO	961 MAIN ST	WARREN
WARREN XTRA MART	1300 W MAIN ST	WARREN
GAMA GAS D/B/A HI-LO GAS	82-92 MAIN ST	WEBSTER
Global Montello Group #3827	188 GORE RD	WEBSTER
MA0027	88 E MAIN ST	WEBSTER
WEBSTER XTRA MART	74 E MAIN ST	WEBSTER
WEBSTER ENERGY NORTH #2123	144 THOMPSON ROAD	WEBSTER
CUMBERLAND FARMS #2525	184 West Boylston Street	WEST BOYLSTON
HandR	21 W BOYLSTON ST	WEST BOYLSTON
CUMBERLAND FARMS #2535	55 East Main Street	WESTBOROUGH
CUMBERLAND FARMS #V0555	165 FLANDERS RD	WESTBOROUGH
Global Montello Group #2720	130 TURNPIKE RD	WESTBOROUGH
NOURIA #04044	128 TURNPIKE RD	WESTBOROUGH
NOURIA #04219	27 E MAIN STREET	WESTBOROUGH
Westboro Gas & Repairs	49 MILK ST	WESTBOROUGH
MA0069	11 MILK ST	WESTBOROUGH
GULF OIL LIMITED PARTNERSHIP #3909	MM 104.4 WB MA TURNPIKE	WESTBOROUGH
WESTBOROUGH XTRA MART	183 TURNPIKE RD	WESTBOROUGH
CUMBERLAND FARMS #2493	263 GRAFTON ST	WORCESTER
DUQUETTE SERVICE STATION INC	690 GRAFTON ST	WORCESTER
PATS SERVICE CENTER	27-33 SHREWSBURY ST	WORCESTER

Facility Name	Facility Address Line 1	Facility City
PETERSON OIL SERVICE	514 W BOYLSTON ST	WORCESTER
CHARLES GROSVENOR	102 HIGHLAND ST	WORCESTER
YATCO EXXON	446 LINCOLN ST	WORCESTER
SOUTHBRIGE STREET GULF	399 SOUTHBRIDGE ST	WORCESTER
YATCO MANAGEMENT SERVICES LLC	185 MADISON ST	WORCESTER
THOMAS ENERGY CENTER	1128 PLEASANT ST	WORCESTER
NOURIA #04030	719 SOUTHBRIDGE ST	WORCESTER
NOURIA #04028	340 GROVE ST	WORCESTER
NOURIA #04029	466 LINCOLN STREET	WORCESTER
NOURIA #04413	747 PLANTATION STREET	WORCESTER
NOURIA SITE #04220	853 W BOYLSTON ST	WORCESTER
PARK AVE GAS & MARKET	185 PARK AVE	WORCESTER
MOBIL	334 GRAFTON ST	WORCESTER
A L PRIME ENERGY 155 Worc Southbridge	950 SOUTHBRIDGE ST	WORCESTER
BEE ZEE CONVENIENCE PLUS	177 SOUTHWEST CUTOFF	WORCESTER
PROVIDENCE & BALLARD XTRAMART	280 PROVIDENCE ST	WORCESTER
EXIT 4 XTRAMART	1181 WEST BOYLSTON ST	WORCESTER
GRAFTON STREET XTRAMART	1099 GRAFTON ST	WORCESTER
SPEEDWAY #2520	312 BELMONT ST	WORCESTER
VALU GAS	1255 MILLBURY ST	WORCESTER
Petrogas Group New England Inc #2019	350 GREENWOOD ST	WORCESTER
Corner Store	635 CHANDLER ST	WORCESTER
Webster Square Gas & Market LLC	640 Park Avenue	WORCESTER

B. Alternative Fuel Corridors

The U.S. Department of Transportation (USDOT) Federal Highway Administration (FHWA) designates a national network of plug-in electric vehicle (EV) charging and hydrogen, propane, and compressed natural gas (CNG), and liquid natural gas (LNG) fueling infrastructure along national highway system (NHS) corridors. These networks are otherwise known as Alternative Fuel Corridors (AFC). To be designated as an AFC, the FHWA solicits nominations from state, MPO's, local governments, political subdivisions, and tribal governments. The grant program will help the USDOT work with the entity to deploy alternative fueling infrastructure along the designated AFC.

The Fixing America's Surface Transportation Act of 2015 required the USDOT to designate national AFC (Title 23, United States Code, Section 151) and the Bipartisan Infrastructure Law further supports this effort to update and redesignate the corridors and establish a recurring process to regularly update and redesignate the corridors.

Since 2016, FHWA has solicited nominations to designate AFC's. The latest Round (Round 6) occurred in 2022. Nationwide, these designations have included segments of over 200 segments of Interstates and numbered highways/State roads covering 46 States. The latest Round 6 designations are now tied to the requirements outlined in the BIL National Electric Vehicle Infrastructure (NEVI) Formula Program funding. FHWA will designate nominated highway corridors as either "corridor-ready" or "corridor-pending":

- **Corridor-Ready** – segments currently contain a sufficient number of fueling facilities to allow for corridor travel with the designated alternative fuel.
- **Corridor-Pending** – segments that do not currently have sufficient alternative fuel facilities to support alternative fuel vehicle travel.

Through the Charging and Fueling Infrastructure Program developed by the BIL the AFC program focuses on improving the network by converting corridor-pending corridors to corridor-ready corridors.

The infrastructure coverage criteria for each fuel type for Round 6 included:

Fuel/Technology	**Corridor-Ready NHS Segment Has**	**Corridor Pending NHS Segment Has**
EV Charging	• Public DC Fast Charging • No greater than 50 miles between one station/site and the next on corridor • No more than 1 mile from Interstate exits of highway intersections along corridor	• A strategy/plan and timeline for public DC Fast Charging stations separated by more than 50 miles. Locations of station/site no more than 1 mile form Interstate exits

Fuel/Technology	Corridor-Ready NHS Segment Has	Corridor Pending NHS Segment Has
	• Stations should include Combined Charging System (CCS) connections – Type 1 ports (charging 4 EVs at same time) • Site power capability no less than 600 kW per port across 4 ports at same time • Maximum charge power per DC port should not be below 150 kW	or highway intersections along corridor.
Hydrogen	Public hydrogen stations no greater than 150 miles between stations on corridor and no more than 5 miles from Interstate exits or highway intersections along corridor.	Public hydrogen stations separated by more than 150 miles and location of stations no more than 5 miles from Interstate exits or highway intersections along corridor.
Propane	Public propane stations no greater than 150 miles between stations on corridor and no more than 5 miles from Interstate exits or highway intersections along corridor. Consistent with requirements in BIL, propane fueling infrastructure should be limited to infrastructure for medium and heavy-duty vehicles.	Public, primary propane stations separated by more than 150 miles. Location of stations no more than 5 miles from Interstate exits or highway intersections along corridor.
CNG	Public, fast fill, 3,600 psi CNG stations no greater than 150 miles between stations on corridor and no more than 5 miles from Interstate exits or highway intersections along corridor.	Public, fast-fill, 3,600 psi CNG stations separated by more than 150 miles. Location of stations no more than 5 miles from Interstate exits of highway intersections along the corridor.

Fuel/Technology	Corridor-Ready NHS Segment Has	Corridor Pending NHS Segment Has
LNG	Public LNG stations no greater than 200 miles between stations on corridor, and no more than 5 miles from Interstate exits or highway intersections along corridor.	Public LNG stations separated by more than 200 miles. Location of stations no more than 5 miles from Interstate exits or highway intersections along corridor.

Massachusetts Designated Interstates (both Corridor-Ready and Corridor-Pending)

- I-84
- I-90
- I-91
- I-93
- I-95
- I-195
- I-290
- I-395
- I-495

Massachusetts Designated US Routes/State Highways (both Corridor-Ready and Corridor-Pending)

- SR-2
- SR-3
- SR-24
- US-3
- US-6

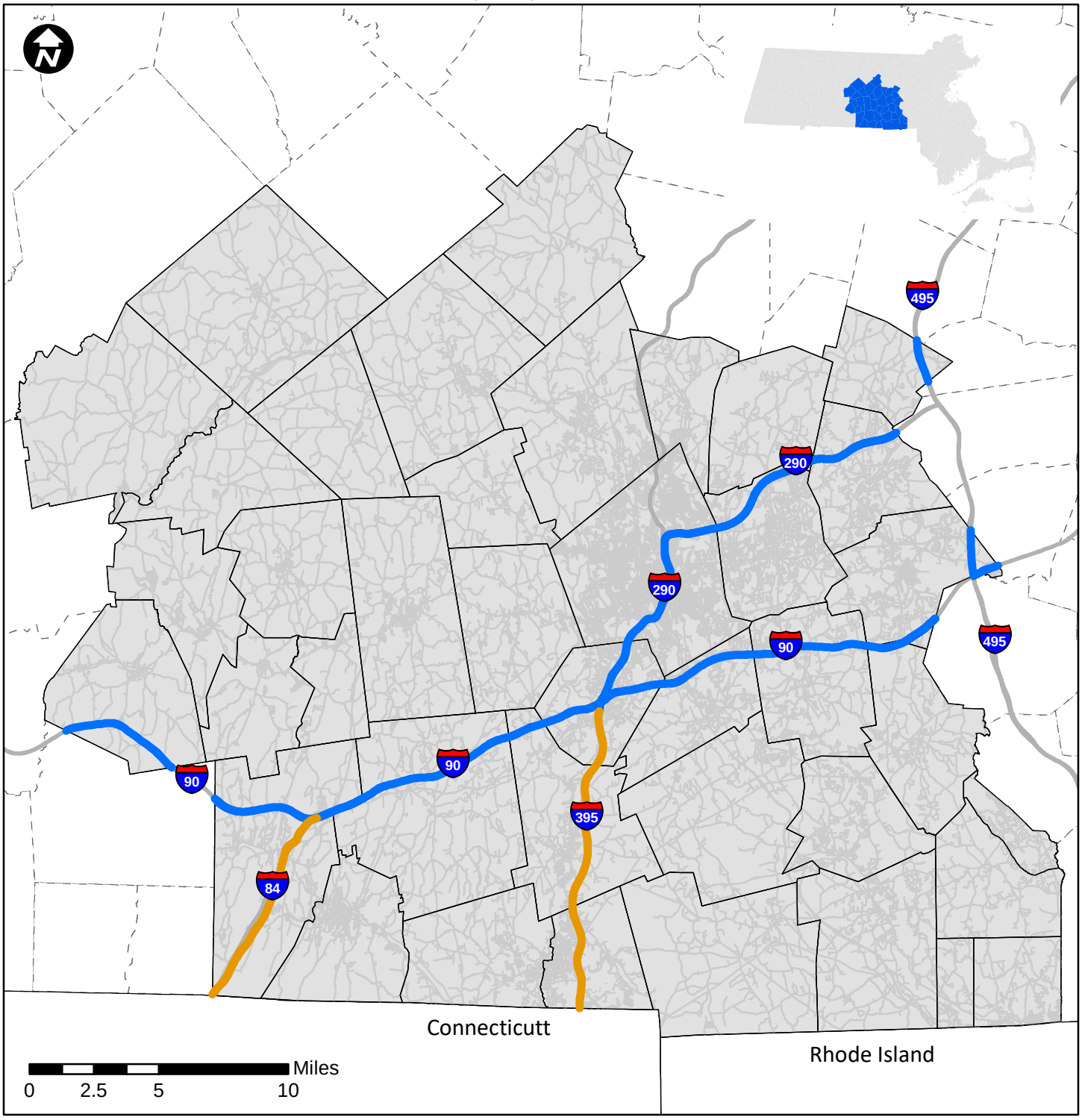
As shown in **Figure 22**, during Round 6 (2022) no Massachusetts Interstates, US Routes/State Highways were designated as Corridor-Ready. However, I-84, I-395, US-6, SR-2, and SR-24 were designated as Corridor-Pending for EV charging infrastructure. No other fueling infrastructure was designated for Massachusetts during Round 6.

Sources:

- https://afdc.energy.gov/laws/11675#:~:text=The%20U.S.%20Department%20of%20Transportation,along%20national%20highway%20system%20corridors.
- https://afdc.energy.gov/laws/12730
- https://www.fhwa.dot.gov/environment/alternative_fuel_corridors/nominations/2022_request_for_nominations_r6.pdf
- https://www.fhwa.dot.gov/environment/alternative_fuel_corridors/all_corridors/
- https://www.fhwa.dot.gov/environment/alternative_fuel_corridors/pending/
- https://www.fhwa.dot.gov/environment/alternative_fuel_corridors/ready/

Figure 22

FHWA EV Alternative Fuel Corridors (AFC) - Round 6 Nominations



FHWA EV Alternative Fuel Corridors (Round 6)

- Signage Ready
- Signage Pending
- Interstates
- Major Roads
- CMRPC Towns

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C. Truck Parking Activities

The supply of adequate truck parking for long-distance drivers is a concern that MassDOT is currently working to address with its regional planning partners. As such, CMMPO staff participation in both a MassDOT truck parking survey and subsequent truck parking seminar is summarized below. Notably, staff had the opportunity to directly participate in the truck parking seminar, presenting the findings of the *North Subregion Highway Freight Accommodation Assessment* study series, summarized later in this Progress Report. The seminar was attended by both state and federal transportation officials. A statewide truck parking study conducted by MassDOT is anticipated to commence in 2022.

MassDOT Truck Parking Survey, 12/1/20 deadline

- As requested through the statewide TMG, staff responded to the state truck parking survey conducted by MassDOT-OTP staff Makaela Niles, prior to the 12/1/20 deadline.
- As requested at the November TMG meeting, staff filled out the MassDOT Truck Parking Survey and submitted same to Makaela Niles, prior to the December TMG meeting.

Statewide Truck Parking Seminar

- Staff Rydant asked on 10/22/21 to present at statewide Truck Parking Seminar planned for late November/early December by MassDOT OTP staff Makala Niles. Staff later agrees to participate and begins to compile a summary presentation of the recently completed North Subregion Highway Freight Accommodation Assessment Study.
- Staff Rydant asked on 10/22/21 to present at statewide Truck Parking Seminar scheduled for 11/30/21 (& 12/2/21) by MassDOT OTP staff Makala Niles. Staff later agreed and (staff Gemperline) completed the compilation of a PowerPoint presentation (outlined by staff Rydant) summarizing the recently completed *North Subregion Highway Freight Accommodation Assessment Study*. Staff Rydant prepared for, attended and presented on Day One of the Truck Parking Seminar held 11/30/21. (Staff Rydant also attended a seminar segment "dry run" conducted on 11/29/21 to review the presentation forum and work out any hanging technical issues associated with the *Adobe Connect* platform used by FHWA.)

  Date: 11/30/21, 10:30 AM to 1:45 PM
  Location: Zoom virtual meeting
  Topic: Truck Parking Seminar, FHWA & MassDOT OTP Sponsored
  Attendance: MPO Roundtable: Rydant, CMRPC, Gary Roux, PVPC and Bill Kuttner, CTPS. Around 50 persons in attendance.

D. Truck Travel Time Reliability (TTTR)

TTTR is the amount of time it takes trucks to drive the length of a road segment. This measure is *only* calculated for the Interstate System. The following steps are used to calculate the TTTR measure:

1. Calculate the travel times from the five time periods used in this measure (**Table 3**)
2. Find and calculate the TTTR ratio from the 50th and 95th percentile times for each time period
3. The TTTR Index is generated by multiplying each segment's largest ratio of the five periods by its length, then dividing the sum of all length-weighted segments by the total length of the Interstate segment.

Table 3

Level of Truck Travel Time Reliability (TTTR) *(Single Segment, Interstate Highway System)*		
Monday - Friday	6am – 10am	$\text{TTTR} = \frac{55 \text{ sec}}{35 \text{ sec}} = 1.57$
	10am – 4pm	TTTR = 1.25
	4pm – 8pm	**TTTR = 2.52**
Weekends	6am – 8pm	TTTR = 1.2
All Days	8pm – 6am	TTTR = 1.05

MassDOT TTTR Targets and CMMPO Comparison

MassDOT was unable to use multi-year trend data to assist with the initial target setting for this measure. Between 2016 and 2017, FHWA switched contractors for maintaining the NPMRDS, resulting in significant differences in data consistency between the years. Because of the differences, FHWA had advised that state DOTs set conservative targets based on 2017 data and then adjust future targets when more data became available.

Table 4 shows the annual results for the TTTR ratio for both statewide and CMMPO Interstate highways. The Interstate TTTR target of 1.85 is also included. For an Interstate segment to be considered reliable, the TTTR ratio must be under 1.85. As the data shows, the statewide Interstate ratio has met the target for four (4) of the five (5) years of data. For the CMMPO region, the target was met for all five (5) years. The TTTR ratios in 2020 are well below the previous three (3) years of data due to the COVID-19 pandemic as people were either required to stay at home or work from home, which generated less vehicles on the Interstate System. The following Statewide and CMMPO interstate and non-interstate percentages are from the Probe Data Analytics Suite of the Regional Integrated Transportation Information System (RITIS)

website. The actual numbers reported from the 2020 Mid Performance Period Progress Report was 1.86 Interstate TTTR, which is just above the target.

Table 4

Year	Statewide Interstate TTTR Ratio	CMMPO Interstate TTTR Ratio	Interstate TTTR Target
2017	1.81	1.71	1.85
2018	1.88	1.79	
2019	1.84	1.77	
2020*	1.44	1.22	
2021	1.61	1.59	

**COVID-19 pandemic occurred during 2020*

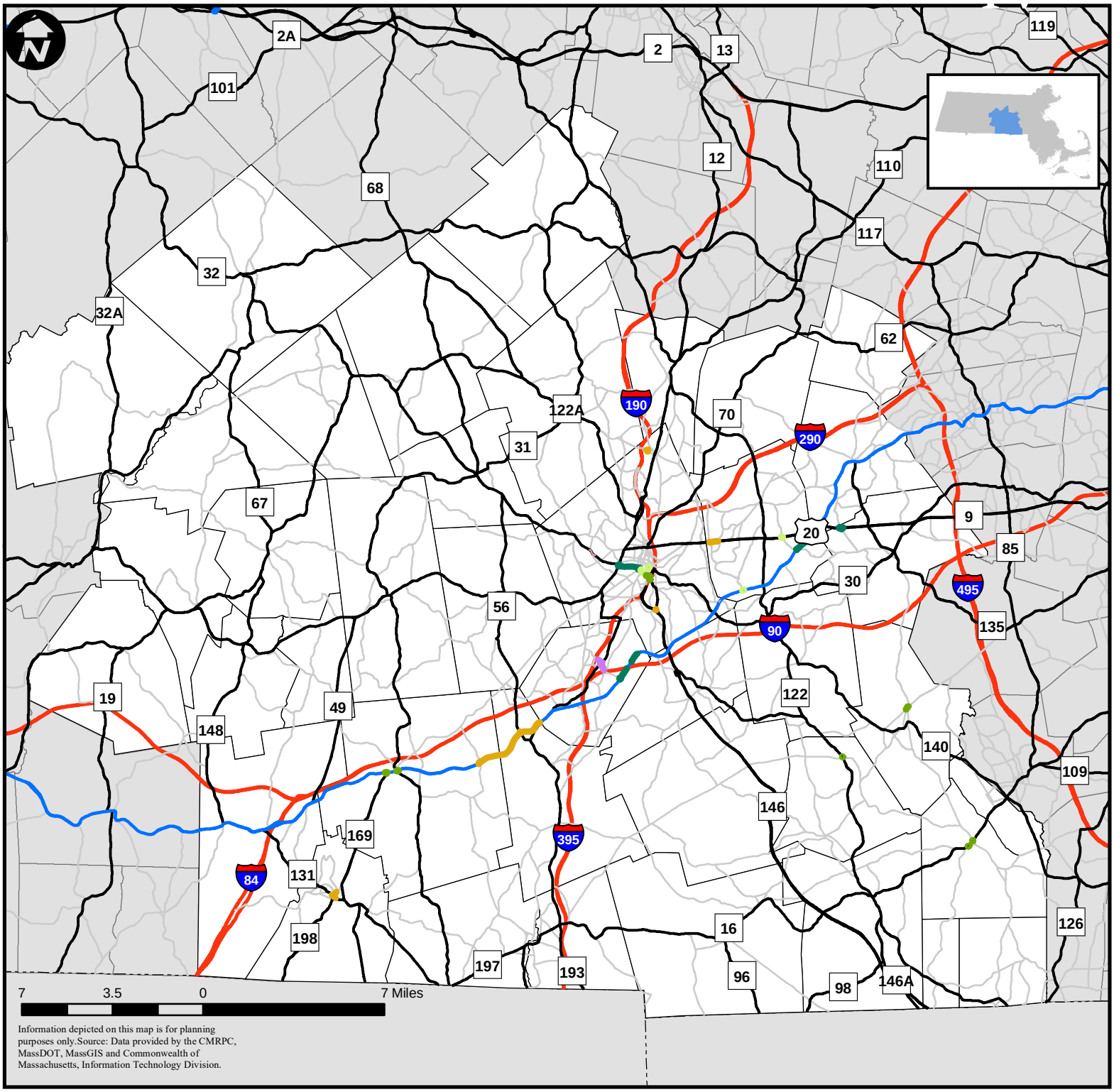
E. Road Safety Audits (RSA) Overview

This section of the Progress Report provides a brief overview of the Road Safety Audits (RSAs) conducted in the planning region during the past five-year period. The Federal Highway Administration (FHWA) defines an RSA as the formal safety examination of an existing or future road or intersection by an independent, multidisciplinary team. The purpose of an RSA is to identify potential safety issues and possible opportunities for safety improvements considering all roadway users. As part of the MassDOT's established guidelines, RSAs are required for Highway Safety Improvement Program (HSIP) eligible locations and should be conducted prior to the development of the 25-percent design submission or prior to the submission of a Draft Environmental Impact Report (DEIR) for a project of regional impact. RSA-derived, customized, and targeted improvement options often serve to benefit a range of users, including the trucking industry. The RSA locations are listed in **Table 5** and shown in **Figure 23**.

Table 5
Completed Road Safety Audits (RSA)
(2016-2021)

Town	Location	Date
Auburn	Auburn Street at Southbridge Street (Route 12)	3/2/2017
Auburn	Route 20 At Millbury Street, to Montclair Drive, and Westec Dr to Lundgren	11/16/2021
Charlton	Route 20 at Route 169 and Route 20 at Route 31	11/30/2018
Mendon	Rt 16 at Washington St./Emerson St./Maple St. & Rt 16 at North Ave./Main St	9/11/2018
Northbridge	Providence Road (Route 122) at Sutton Street/School Street/Upton Street	5/9/2018
Oxford	Highway Safety Improvement Program	2/26/2016
Shrewsbury	Worcester Turnpike (Rt 9) at Harrington Ave; Dewey Road; Quinsigamond Ave	7/19/2016
Shrewsbury	Route 20 at Lake Street	5/14/2019
Shrewsbury	Route 9 at South Street	6/26/2019
Shrewsbury	Route 20 Shrewsbury RSA Report	9/30/2021
Southbridge	Downtown Southbridge – 2 Locations	9/22/2016
Upton	High Street/Hopkinton Road at School Street/Westboro	8/28/2018
Westborough	Route 9 at Otis Street	1/6/2021
Worcester	Providence Street (Route 122A) at McKeon Road/Millbury Street	6/8/2016
Worcester	Mountain Street West at I-190 Frontage Road/Brooks Street	9/15/2016
Worcester	Kelley Square	8/23/2018
Worcester	Madison Street from Beacon Street to Assonet Street	5/16/2019
Worcester	Francis J. McGrath Blvd/ Foster St/ Franklin St/ Green St	5/16/2019
Worcester	Route 20 at Massasoit Road and Route 20 at Sunderland Road	5/12/2020
Worcester	Chandler Street Corridor	8/4/2020
Worcester	Chandler Street – Park Avenue to Main Street	3/18/2021

Figure 23



CMMPO Road Safety Audits in Region (2016 - 2021)

CMMPO

2016
2017
2018
2019
2020
2021

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F. Truck Safety

As shown in **Table 6**, during the period of 2011-2019, there were a total of 113 crashes with overhead railroad bridges with a low-vertical clearance in the CMMPO region. Most of these crashes occurred during daylight hours and under dry roadway conditions. Almost all of the crashes involved a single vehicle travelling straight ahead, and most of the time, the severity reported was only property damage, with an exception of five (5) injury crashes.

Motor vehicle-railroad crashes occurred multiple times in a few locations. Worcester accounted for the highest number of crashes. The locations where these crashes occurred were Cambridge Street (24), Webster Street (11), Hammond Street (7), Madison Street and Sunderland Road with 4 crashes each, three crashes at Green Street, and one crash each at Kansas Street, Southbridge Street, and Southwest Cutoff. The number of crashes associated with the overhead bridge at Cambridge Street had actually decreased since the installation of the overhead chains that are intended to alert truck drivers of the low clearance ahead.

Besides the crashes in Worcester, the second location with the most frequent crashes was Saint Paul Street in Blackstone where 18 crashes occurred during the 2011-2019 period. The height of the G&W railway overpass is posted as 11'-8". Another location with 18 crashes is the MBTA's overhead bridge on Route 30 (East Main Street) in Westborough. In Northborough, there are 6 crashes at the aqueduct on Hudson Street and 4 crashes occurred at Mill Street in Leicester. There were 3 crashes on Hopedale Street in Hopedale, two crashes in Sutton at Providence Road and two crashes on Barre Road in Hardwick. Lastly, one crash each was recorded in Auburn at the Leicester Street/Rochdale Street intersection (2016), in Oxford at Industrial Park West (2017) and in Spencer at Lyford Road (2013).

Table 6
Overhead Railroad Bridge Crashes

City/Town	Year	Crash Location	Crash Severity	Vehicle Configuration	Road Surface Condition	Ambient Lighting	Manner of Collision	Overpass
Auburn	2016	Leicester Street / Rochdale Street	Property Damage Only	Single-unit truck (2-axle, 6-tire)	Dry	Daylight	Single vehicle crash	
Blackstone	2012	St. Paul Street / Canal Street	Property Damage Only	Passenger car	Dry	Daylight	Single vehicle crash	P&W Railroad overpass, DCR Bike Trail
Blackstone	2012	St. Paul Street / Canal Street	Property Damage Only	Truck/Trailer	Dry	Daylight	Unknown	P&W Railroad overpass, DCR Bike Trail
Blackstone	2014	St. Paul Street / Canal Street	Property Damage Only	Single-unit truck (3-or-more-axles)	Dry	Daylight	Single vehicle crash	P&W Railroad overpass, DCR Bike Trail
Blackstone	2014	St. Paul Street / Canal Street	Property Damage Only	Tractor-semi trailer	Dry	Daylight	Single vehicle crash	P&W Railroad overpass, DCR Bike Trail
Blackstone	2014	St. Paul Street / Canal Street	Property Damage Only	Tractor-semi trailer	Wet	Dark-lighted roadway	Single vehicle crash	P&W Railroad overpass, DCR Bike Trail
Blackstone	2014	St. Paul Street / Canal Street	Property Damage Only	Truck/Trailer	Dry	Daylight	Single vehicle crash	P&W Railroad overpass, DCR Bike Trail
Blackstone	2015	St. Paul Street / Canal Street	Property Damage Only	Single-unit truck (2-axle, 6-tire)	Dry	Daylight	Single vehicle crash	P&W Railroad overpass, DCR Bike Trail
Blackstone	2015	St. Paul Street / Canal Street	Property Damage Only	Tractor-semi trailer	Dry	Daylight	Single vehicle crash	P&W Railroad overpass, DCR Bike Trail
Blackstone	2015	St. Paul Street / Canal Street	Property Damage Only	Tractor-semi trailer	Wet	Dawn	Rear-end	P&W Railroad overpass, DCR Bike Trail
Blackstone	2016	St. Paul Street / Canal Street	Property Damage Only	Tractor-semi trailer	Dry	Daylight	Single vehicle crash	P&W Railroad overpass, DCR Bike Trail
Blackstone	2017	St. Paul Street	Property Damage Only	Single-unit truck (2-axle, 6-tire)	Dry	Daylight	Single vehicle crash	Railroad bridge
Blackstone	2017	St. Paul Street	Property Damage Only	Truck/trailer	Dry	Daylight	Single vehicle crash	Railroad bridge
Blackstone	2018	St. Paul Street / Canal Street	Property Damage Only	Tractor-semi trailer	Dry	Daylight	Single vehicle crash	P&W Railroad overpass
Blackstone	2018	St. Paul Street / Canal Street	Property Damage Only	Single-unit truck (2-axle, 6-tire)	Dry	Daylight	Single vehicle crash	P&W Railroad overpass
Blackstone	2018	St. Paul Street / Canal Street	Property Damage Only	Single-unit truck (2-axle, 6-tire)	Dry	Daylight	Single vehicle crash	P&W Railroad overpass
Blackstone	2019	St. Paul Street / Canal Street	Property Damage Only	Single-unit truck (2-axle, 6-tire)	Dry	Daylight	Single vehicle crash	P&W Railroad overpass
Blackstone	2019	St. Paul Street / Canal Street	Property Damage Only	Single-unit truck (3-or-more-axles)	Dry	Daylight	Single vehicle crash	P&W Railroad overpass
Blackstone	2019	St. Paul Street / Canal Street	Property Damage Only	Tractor-semi trailer	Dry	Daylight	Single vehicle crash	P&W Railroad overpass
Hardwick	2012	Barre Road	Property Damage Only	Tractor-semi trailer	Wet	Daylight	Single vehicle crash	
Hardwick	2017	Barre Road / Lower Road Rte 32	Property Damage Only	Single-unit truck (2-axle, 6-tire)	Dry	Daylight	Single vehicle crash	Railroad bridge
Hopedale	2016	Hopedale Street	Property Damage Only	Truck/Trailer	Dry	Daylight	Single vehicle crash	
Hopedale	2018	Hopedale Street	Property Damage Only	Single-unit truck (2-axle, 6-tire)	Wet	Daylight	Single vehicle crash	Railroad bridge
Hopedale	2019	Hopedale Street	Property Damage Only	Single-unit truck (2-axle, 6-tire)	Dry	Daylight	Single vehicle crash	Railroad bridge
Leicester	2011	Mill Street	Property Damage Only	Tractor-semi trailer	Dry	Daylight	Single vehicle crash	CSX railroad overpass
Leicester	2012	Mill Street	Property Damage Only	Tractor-semi trailer	Dry	Daylight	Single vehicle crash	CSX railroad overpass
Leicester	2016	Mill Street	Non-fatal injury	Tractor-semi trailer	Dry	Daylight	Single vehicle crash	CSX railroad overpass
Leicester	2019	Mill Street	Property Damage Only	Single-unit truck (2-axle, 6-tire)	Dry	Daylight	Single vehicle crash	CSX railroad overpass
Northborough	2017	190 Hudson Street	Property Damage Only	Single-unit truck (2-axle, 6-tire)	Dry	Daylight	Single vehicle crash	Hudson Aqueduct
Northborough	2017	190 Hudson Street	Property Damage Only	Light truck with only four tires	Wet	Daylight	Single vehicle crash	Aqueduct
Northborough	2018	190 Hudson Street	Property Damage Only	Tractor-semi trailer	Dry	Daylight	Single vehicle crash	Aqueduct
Northborough	2018	190 Hudson Street	Property Damage Only	Single-unit truck (2-axle, 6-tire)	Dry	Daylight	Single vehicle crash	Aqueduct
Northborough	2019	190 Hudson Street	Property Damage Only	Single-unit truck (2-axle, 6-tire)	Dry	Daylight	Single vehicle crash	Aqueduct
Northborough	2019	190 Hudson Street	Property Damage Only	Single-unit truck (2-axle, 6-tire)	Dry	Daylight	Head-on	Aqueduct
Oxford	2017	Main Street Rte 12 N / Industrial Park West	Property Damage Only	Truck/trailer	Dry	Daylight	Single vehicle crash	Railroad bridge overpass
Spencer	2013	Lyford Road	Not reported	Single-unit truck (2-axle, 6-tire)	Dry	Daylight	Single vehicle crash	CSX railroad overpass
Sutton	2011	Providence Road / Route 122	Property Damage Only	Not reported	Dry	Dark - roadway not lighted	Angle	P&W Railroad overpass
Sutton	2015	Providence Road / Route 122	Property Damage Only	Truck/Trailer	Wet	Daylight	Single vehicle crash	P&W Railroad overpass
Westborough	2011	East Main Street (Route 30)	Property Damage Only	Tractor-semi trailer	Dry	Daylight	Single vehicle crash	
Westborough	2011	East Main Street (Route 30)	Property Damage Only	Truck/Trailer	Dry	Daylight	Single vehicle crash	
Westborough	2012	East Main Street (Route 30)	Non-fatal injury	Single-unit truck (3-or-more-axles)	Dry	Dark - roadway not lighted	Single vehicle crash	
Westborough	2012	East Main Street (Route 30)	Property Damage Only	Truck/Trailer	Dry	Daylight	Single vehicle crash	
Westborough	2013	East Main Street (Route 30)	Non-fatal injury	Passenger car	Snow	Daylight	Single vehicle crash	
Westborough	2014	East Main Street (Route 30)	Non-fatal injury	Truck/Trailer; Passenger Car	Dry	Daylight	Rear-end	
Westborough	2015	East Main Street (Route 30)	Property Damage Only	Tractor-semi trailer	Snow	Dark-lighted roadway	Single vehicle crash	
Westborough	2015	East Main Street (Route 30)	Property Damage Only	Tractor-semi trailer	Dry	Daylight	Single vehicle crash	
Westborough	2016	East Main Street (Route 30)	Property Damage Only	Tractor-semi trailer	Dry	Daylight	Single vehicle crash	
Westborough	2017	East Main Street (Route 30)	Property Damage Only	Tractor/semi-trailer	Dry	Daylight	Single vehicle crash	Railroad bridge
Westborough	2017	East Main Street (Route 30)	Property Damage Only	Tractor/semi-trailer	Dry	Daylight	Single vehicle crash	Railroad bridge
Westborough	2018	East Main Street (Route 30)	Property Damage Only	Truck/Trailer	Wet	Daylight	Single vehicle crash	Railroad bridge
Westborough	2018	East Main Street (Route 30)	Property Damage Only	Single-unit truck (2-axle, 6-tire)	Dry	Daylight	Single vehicle crash	Railroad bridge
Westborough	2018	East Main Street (Route 30)	Property Damage Only	Tractor-semi trailer	Dry	Dark-lighted roadway	Single vehicle crash	Railroad bridge
Westborough	2018	East Main Street (Route 30)	Property Damage Only	Tractor-semi trailer	Dry	Dark-lighted roadway	Single vehicle crash	Railroad bridge
Westborough	2019	East Main Street (Route 30)	Property Damage Only	Tractor-semi trailer	Dry	Daylight	Single vehicle crash	Railroad bridge

Table 6
Overhead Railroad Bridge Crashes

City/Town	Year	Crash Location	Crash Severity	Vehicle Configuration	Road Surface Condition	Ambient Lighting	Manner of Collision	Overpass
Westborough	2019	East Main Street (Route 30)	Property Damage Only	Tractor-semi trailer	Dry	Daylight	Single vehicle crash	Railroad bridge
Westborough	2019	East Main Street (Route 30)	Non-fatal injury	Tractor-semi trailer	Dry	Dawn	Single vehicle crash	Railroad bridge
Worcester	2011	103 Madison Street / Route 122	Property Damage Only	Unknown heavy truck, cannot classify	Dry	Dark - lighted roadway	Single vehicle crash	Railroad overpass
Worcester	2011	111 Webster Street / Route 12	Property Damage Only	Tractor/semi-trailer	Dry	Daylight	Single vehicle crash	CSX railroad overpass
Worcester	2011	111 Webster Street / Route 12	Property Damage Only	Tractor/semi-trailer	Not reported	Daylight	Single vehicle crash	CSX railroad overpass
Worcester	2011	112 Webster Street / Route 12	Property Damage Only	Tractor/semi-trailer	Dry	Daylight	Single vehicle crash	
Worcester	2011	44 Hammond Street	Property Damage Only	Unknown heavy truck, cannot classify; Light truck with only four tires	Wet	Daylight	Not reported	Railroad overpass
Worcester	2011	638 Cambridge Street	Property Damage Only	Truck/trailer	Wet	Daylight	Single vehicle crash	P&W Railroad overpass
Worcester	2011	640 Cambridge Street	Property Damage Only	Truck/trailer	Dry	Dark - lighted roadway	Single vehicle crash	P&W Railroad overpass
Worcester	2011	Cambridge Street	Property Damage Only	Single-unit truck (2-axle, 6-tire)	Wet	Daylight	Head-on	P&W Railroad overpass
Worcester	2012	1 Green Street	Property Damage Only	Truck/trailer	Dry	Daylight	Single vehicle crash	
Worcester	2012	103 Madison Street / Route 122	Property Damage Only	Tractor/semi-trailer	Dry	Daylight	Single vehicle crash	Railroad overpass
Worcester	2012	111 Webster Street / Route 12	Property Damage Only	Tractor/semi-trailer	Dry	Daylight	Single vehicle crash	P&W Railroad overpass
Worcester	2012	477 Sunderland Road	Property Damage Only	Tractor/semi-trailer	Dry	Daylight	Single vehicle crash	CSX railroad overpass
Worcester	2012	640 Cambridge Street	Property Damage Only	Single-unit truck (2-axle, 6-tire)	Dry	Daylight	Head-on	Railroad overpass
Worcester	2012	640 Cambridge Street	Property Damage Only	Tractor/semi-trailer	Dry	Dark - lighted roadway	Head-on	
Worcester	2012	640 Cambridge Street	Property Damage Only	Tractor/semi-trailer	Dry	Dark - lighted roadway	Single vehicle crash	
Worcester	2012	640 Cambridge Street	Property Damage Only	Unknown heavy truck, cannot classify	Dry	Daylight	Single vehicle crash	Railroad overpass
Worcester	2012	643 Cambridge Street	Property Damage Only	Tractor/semi-trailer	Dry	Dark - lighted roadway	Single vehicle crash	P&W Railroad overpass
Worcester	2012	75 Hammond Street	Property Damage Only	Tractor/semi-trailer	Dry	Daylight	Single vehicle crash	
Worcester	2012	89 Southwest Cutoff	Property Damage Only	Single-unit truck (3-or-more axles)	Dry	Daylight	Single vehicle crash	
Worcester	2012	97 Webster Street / Route 12	Property Damage Only	Tractor/semi-trailer	Dry	Daylight	Single vehicle crash	Railroad overpass
Worcester	2012	99 Madison Street / Route 122	Property Damage Only	Tractor/semi-trailer	Dry	Daylight	Single vehicle crash	
Worcester	2012	Cambridge Street	Property Damage Only	Tractor/semi-trailer	Dry	Dark - lighted roadway	Single vehicle crash	
Worcester	2012	Cambridge Street	Property Damage Only	Truck/trailer	Dry	Daylight	Head-on	Railroad overpass
Worcester	2013	111 Webster Street / Route 12	Not Reported	Tractor/semi-trailer	Dry	Daylight	Not reported	
Worcester	2013	632 Cambridge Street	Property Damage Only	Tractor/semi-trailer	Dry	Daylight	Single vehicle crash	
Worcester	2013	640 Cambridge Street	Property Damage Only	Tractor/semi-trailer	Wet	Daylight	Single vehicle crash	
Worcester	2013	654 Cambridge Street	Property Damage Only	Tractor/semi-trailer	Wet	Dusk	Single vehicle crash	
Worcester	2013	97 Webster Street	Property Damage Only	Tractor/semi-trailer	Dry	Daylight	Single vehicle crash	
Worcester	2014	495 Sunderland Road	Property Damage Only	Tractor/semi-trailer	Dry	Dawn	Single vehicle crash	
Worcester	2014	557 Cambridge Street	Property Damage Only	Truck/trailer	Dry	Dawn	Single vehicle crash	
Worcester	2014	640 Cambridge Street	Property Damage Only	Tractor/semi-trailer	Dry	Daylight	Single vehicle crash	P&W Railroad overpass
Worcester	2014	640 Cambridge Street	Property Damage Only	Tractor/semi-trailer	Dry	Daylight	Head-on	
Worcester	2014	643 Cambridge Street	Not Reported	Truck/trailer	Dry	Dark - lighted roadway	Single vehicle crash	
Worcester	2015	72 Hammond Street	Property Damage Only	Tractor/semi-trailer	Dry	Daylight	Single vehicle crash	Railroad overpass
Worcester	2015	Webster Street / Route 12	Property Damage Only	Tractor/semi-trailer	Dry	Daylight	Single vehicle crash	CSX railroad overpass
Worcester	2016	100 Webster Street	Property Damage Only	Tractor/semi-trailer	Dry	Daylight	Single vehicle crash	Railroad overpass
Worcester	2016	105 Madison Street	Property Damage Only	Truck tractor (bobtail)	Wet	Daylight	Single vehicle crash	
Worcester	2016	487 Sunderland Road	Property Damage Only	Truck tractor (bobtail)	Wet	Daylight	Single vehicle crash	Railroad overpass
Worcester	2016	487 Sunderland Road	Property Damage Only	Truck tractor (bobtail)	Wet	Daylight	Single vehicle crash	Railroad overpass
Worcester	2016	81 Hammond Street	Property Damage Only	Truck/trailer	Dry	Daylight	Single vehicle crash	Railroad overpass
Worcester	2017	81 Hammond Street	Property Damage Only	Tractor/semi-trailer	Dry	Daylight	Single vehicle crash	CSX Railroad bridge
Worcester	2017	477 Sunderland Road	Property Damage Only	Tractor/semi-trailer	Wet	Dark - lighted roadway	Head-on	Keolis Railroad bridge
Worcester	2017	Green Street / Temple Street	Property Damage Only	Single-unit truck (2-axle, 6-tire)	Dry	Daylight	Unknown	CSX Overhead railroad bridge
Worcester	2017	Kansas Street	Property Damage Only	Tractor/semi-trailer; Passenger car	Dry	Dusk	Single vehicle crash	Overhead bridge
Worcester	2018	640 Cambridge Street	Property Damage Only	Tractor/semi-trailer	Dry	Daylight	Single vehicle crash	Railroad overpass
Worcester	2018	640 Cambridge Street	Property Damage Only	Tractor/semi-trailer	Dry	Daylight	Single vehicle crash	Railroad overpass
Worcester	2018	Green Street / Francis J. McGrath Blvd	Property Damage Only	Tractor/semi-trailer	Dry	Daylight	Single vehicle crash	Railroad overpass
Worcester	2018	640 Cambridge Street	Property Damage Only	Tractor/semi-trailer	Dry	Daylight	Single vehicle crash	Railroad overpass
Worcester	2018	Webster Street / Freemon Street	Property Damage Only	Tractor/semi-trailer	Dry	Daylight	Single vehicle crash	Railroad overpass
Worcester	2018	640 Cambridge Street	Property Damage Only	Tractor/semi-trailer	Dry	Daylight	Single vehicle crash	Railroad overpass
Worcester	2019	640 Cambridge Street	Property Damage Only	Unknown heavy truck, cannot classify	Wet	Daylight	Single vehicle crash	Railroad overpass

Table 6
Overhead Railroad Bridge Crashes

City/Town	Year	Crash Location	Crash Severity	Vehicle Configuration	Road Surface Condition	Ambient Lighting	Manner of Collision	Overpass
Worcester	2019	Southbridge Street / Southgate Street	Property Damage Only	Single-unit truck (3-or-more axles)	Dry	Daylight	Single vehicle crash	Railroad overpass
Worcester	2019	Webster Street / Freemon Street	Property Damage Only	Tractor/semi-trailer	Dry	Daylight	Single vehicle crash	Railroad overpass
Worcester	2019	75 Hammond Street	Property Damage Only	Single-unit truck (2-axle, 6-tire)	Dry	Daylight	Single vehicle crash	Railroad overpass
Worcester	2019	640 Cambridge Street	Property Damage Only	Tractor/semi-trailer	Dry	Daylight	Single vehicle crash	Railroad overpass
Worcester	2019	75 Hammond Street	Property Damage Only	Tractor/semi-trailer	Dry	Daylight	Single vehicle crash	Railroad overpass
Worcester	2019	640 Cambridge Street	Property Damage Only	Single-unit truck (2-axle, 6-tire)	Dry	Daylight	Single vehicle crash	Railroad overpass

G. Northborough Post Occupancy Study

The CMRPC has conducted on behalf of the Town of Northborough a Post Occupancy Study of a recently developed site now known as 330/350 Bartlett Street in Northborough, MA. The Facility is an approximately 690 KSF warehousing complex of two buildings now being used by Amazon as a middle-mile sorting facility. Prior to the commencement of work on the post occupancy study the Facility had been deemed occupied by the Town of Northborough. The CMRPC utilized a memorandum obtained from the Town of Northborough dated 2/1/15 from VHB, the consultant firm that completed the traffic study to The Gutierrez Company, the developer of the Facility. This memo served as the official traffic impact study for the land permit application of the development at 330/350 Bartlett Street.

The CMRPC Post Occupancy Study compared data collected prior to the development of the Facility used for the permit application, the projected post occupancy conditions laid out in the traffic memo and the conditions observed by the CMRPC after occupancy.

What is a Post Occupancy Study?

A post occupancy study is an assessment conducted after a particular development has been occupied to determine if the projected traffic patterns at the time of permitting as summarized in the traffic impact study were accurate when compared to the actual traffic patterns after project completion and occupation. This type of study is helpful to determine if appropriate projection figures had been used during the planning and permitting process based on the realized traffic patterns at a given site after occupation.

Crash Rate

The number of crashes in the most recent five years, combined with the weekday peak hour traffic volumes and observed traffic data, were used to calculate crash rates for study area intersections. The calculation of intersection crash rate is an effective tool to measure and compare the relative safety of an intersection to other similar intersections. The resulting crash rate is expressed in million entering vehicles (MEV). This is indicative of how many crashes occur at a particular intersection for every million vehicles that pass through. The Massachusetts state average for unsignalized intersections is 0.57. The average crash rate for an unsignalized intersection in MassDOT District 3, where Northborough is located, is 0.61. This current crash rate is down from when VHB did their crash analysis, which had the District 3 crash rate at 0.66.

VHB calculated crash rates for the following intersections: Bartlett and Lyman (0.72), Bartlett and Cedar Hill (0.29), and Bartlett and 330/350 Bartlett Driveway (0) from 2008 to 2012 show in below table.

CMRPC was able to calculate the crash rate for the Bartlett Street and Lyman Street intersection (0.51) over a five-year period (2017-2021). Additionally, the crash rate at 330/350 Bartlett Street remained 0.00 as there were no reported crashes that occurred at this location.

This lowering of the crash rate can be attributed to the number of crashes occurring in a 5-period going from 15 to 7 crashes. In the late winter and early Spring of 2020, the COVID-19 pandemic significantly reduced traffic volumes statewide.

Intersection Crash Rate		
Study	**VHB (2008-2012)**	**CMRPC (2017-2021)**
District 3	**0.66**	**0.61**
Bartlett and Lyman	**0.72**	**0.51**
330/350 Bartlett	**0.00**	**0.00**

Results from the MassDOT crash database shows that the intersection of Lyman Street at Bartlett Street exceeds the District 3 average crash rate values.

Conclusion

Based on the data collected post occupancy it appears that the current conditions at the facility located at 330/350 Bartlett Street are in line or better than the projections made in the earlier VHB Traffic Impact Study used during the land permit application process. It was projected that the facility would generate 2,490 trips per weekday, however the data shows that 2,207 trips where actually associated with the facility. The conducted Tuning Movement Counts show that the Level of Service at the intersection has improved or remained the same as during the initial data collection in 2014. This is in comparison to projections of Level of Service grades of "F" associated with long periods of delay.

The vehicle crash rate at the intersection of 330/350 Bartlett Street and Lyman Street was unchanged from the Traffic Impact Study with a rate of 0.00 per MEV. The vehicle crash rate at the intersection of Lyman Street and Bartlett Street has gone down from 0.72 per MEV reported in the Traffic Impact Study. Part of the earlier land permit application for the site prohibited commercial vehicles accessing or leaving the site from utilizing Bartlett Street to the West of the facility. Observations in the field suggest that this condition is not being fully adhered to. There is a small percentage of heavy commercial vehicles making prohibited turning movements to enter and exit the facility, however, it is unclear if they are making "local deliveries" which would preclude them from this restriction.

H. I-495/I-90 Interchange Project Overview

For years, the I-495/I-90 Interchange has experienced traffic demands exceeding its capacity. On an average day, over 100,000 vehicles travel on both I-90 and I-495, with about 75,000 vehicles traveling through the interchange, including approximately half of all trucking entering eastern Massachusetts. The deficient geometry concentrates movements through the former toll plaza area, resulting in queuing onto the interstate mainlines and crash rates twice the statewide average. Through this project, we will improve the movement of people and goods through the area - today and into the future.

Project Background

MassDOT completed the environmental process for the project and chose a preferred alternative that meets the purpose and need with the help of public input. The work will be completed in an extremely sensitive environmental resource area.

Important project elements and modifications include:

- Complete replacement of the interchange
- Elimination of the old toll booth area and weaving areas created by the current design
- Improved ramp spacing, acceleration and deceleration lanes and elimination of weaving movements
- A new I-495 bridge over I-90
- New I-495 and I-90 bridges over the MBTA/CSX/Amtrak lines
- An auxiliary lane from I-495 Northbound to Route 9
- A new Fruit Street Bridge
- A new I-495 NB bridge over Flanders Road
- Restoration and mitigation of Environmental Resource areas

The project includes a Noise Control Plan that will establish baseline sound levels throughout the project area. Quarterly noise monitoring will be conducted to ensure that construction noise remains in compliance.

Status

The project was advertised under MassDOT's Design-Build Program and awarded to the Joint Venture of BHD-O&G-AETNA I-495/I-90 JV (referred to as the JV) in April 2022.

Crews will be placing temporary construction barriers in the shoulder on I-495 and I-90 to support preliminary construction activities along these roadways. Work will take place overnight Monday through Friday, 9 PM – 5 AM, November 28 through December 19, 2022.

After the barriers are installed, the total number of travel lanes on either highway will remain the same. All ramps within the interchange will be open at all times.

Construction activities are weather dependent and subject to change without notice.

Traffic and Staging Considerations

The project will involve complete replacement of the interchange. To avoid traffic impacts, the project will:

- Maintain 3 lanes on mainlines, except for short-term closures during approved off-peak hours
- Maintain all ramp connections between I-90 and I-495, including along temporary alignments
- Maintain proper signage and markings
- Provide temporary roadway lighting along ramps for safe nighttime travel
- Provision of safe construction access/egress
- Maintain resident and local business access/egress

Project Schedule

We will implement an extensive outreach program due to the strategic location and regional importance of the I-495/I-95 interchange. The impacts of the project will be experienced by stakeholders immediately adjacent to the interchange, in nearby communities, as well as travelers who live, work and conduct commerce in the region. Dynamic, diverse and far-reaching engagement strategies will be implemented for this project.

Project design is taking place between May 2022 and December 2024. As designs are completed and reviewed, construction will begin. There are 5 stages of construction:

- **Stage 0**: October 2022 to April 2023, Enable work including fiber relocation and temporary Ramp ES/SE.
- **Stage 1**: December 2022 to September 2024, Complete future I-495 NB in median, Fruit Street and Ramps ES & WN.
- **Stage 2**: June 2024 to May 2026, Complete future I-495 SB, Ramps WS &SE.
- **Stage 3/3b**: April 2025 to April 2027, Complete Ramp NE, NW, SW & EN.
- **Stage 4**: August 2026 to June 2027, Complete I-90 widening, remove former loop ramps and complete environmental mitigation areas.

4. Highway Freight Accommodation Assessment Study Series

The *Highway Freight Accommodation Assessment* study series initiated by staff, intended to eventually address all the CMRPC transportation planning subregions, has been completed in both the North and West subregions. As shown below, this Progress Report includes overviews of each study as well as the listings of suggested improvement options compiled, both overall and community-based. Beyond addressing the continued accommodation of trucking activities in the respective subregions, the range of improvement options were crafted to benefit all roadway users. (The *Highway Freight Accommodation Assessment* study series is anticipated to continue in 2022 with a focus on the Southwest transportation planning subregion.)

A. North Subregion Study

The CMMPO's Endorsed 2020 Unified Planning Work Program (UPWP) Freight Planning work activity indicates the compilation of a *Highway Freight Accommodation Assessment Study: Highway Trucking on State Numbered Routes*. This study is the first in a planned series of subregional *Highway Freight Accommodation Assessment* studies. This trucking-centric study focuses on the region's federal-aid highway network in the North transportation planning subregion. The North subregion includes seven (7) host communities: Barre, Holden, Oakham, Paxton, Princeton, Rutland, and West Boylston.

All eligible for federal-aid improvement funding, the following ten (10) state-numbered routes in the North subregion are the focus of this study effort:

1. Route 12
2. Route 32
3. Route 62
4. Route 67
5. Route 68
6. Route 110
7. Route 122
8. Route 122A
9. Route 140
10. Route 148

Major topics addressed in the *Accommodation Assessment Study* include a subregional trucking amenities overview, host community bylaws affecting local trucking operations, federal-aid highway network traffic volumes & truck percentages, a range of Management Systems (MS) data & analysis, Performance-Based Planning & Programming (PBPP) considerations, subregional Environmental Consultation maps and local Municipal Vulnerability Preparedness (MVP) Plan findings. In addition, the regional Travel Demand Model, that includes calibration refinements for improved consideration of heavy vehicles, was utilized to identify "hot spots" of trucking activity.

Based on this broad range of data, observations and corresponding analysis, a summary of findings table is presented. The *Highway Freight Accommodation Assessment Study* concludes with a series of suggested recommendations for both MassDOT and host community

consideration. These include both local policy suggestions as well as options for roadway and bridge improvements. Some improvement projects may have the potential to utilize future year TIP funding available to the CMMPO to assist state or local implementation. Suggested projects are intended to help assure the continued flow of highway freight throughout the greater planning region while mitigating identified local impacts.

Suggestion Improvement Options

Based on the previous summary of findings section, a number of suggested improvement options have been compiled for consideration by both MassDOT and the seven (7) host communities in the North subregion. The following **Figure 24** shows the suggested priority infrastructure improvements for each of the towns. Those highway segments on the federal-aid network are eligible for potential future-year funding through the CMMPO's Transportation Improvement Program (TIP). Other applicable funding sources also have the potential to be applied, such as various grant opportunities and state-provided Chapter 90 funds.

North Subregion-Wide Improvement Options:

- In the spirit of Jason's Law, contemplate revised local policy and strongly consider truck parking-friendly bylaws at key commercial and/or industrial locations in each of the host communities.
- Potential improvement of truck turning radii at major intersections, limited box widening where necessary, the installation of truck climbing lanes on steep grades as well as the elimination of identified hazardous highway curves.
- Check and optimize signal timing & phasing at high-volume signalized intersections.
- Address HSIP identified locations in Rutland at Route 122 & Pleasantdale Road and in West Boylston at Route 12 & Franklin Street.
- Maintain all pavement to a condition of "Good" or above. Especially on established Critical Freight Corridors.
- Address all structurally deficient (SD) bridges. Address those bridges with posted weight limits associated with reduced load-carrying capabilities.
- Numerous culverts need attention in the North transportation planning subregion. As such, commence corridor-wide and/or town-wide culvert assessment programs that can allow for the future targeted replacement of key vulnerable drainage system components. (The CMRPC transportation staff is available to discuss this program further.)
- Improve/repair the hazardous dams located in the North subregion.

North Subregion Host Community Improvement Options:

Barre

- Improve the very poor pavement segment on Route 67, between Quinn Road and the New Braintree town line. Also, consider improving the poor segments on other federal-aid eligible roads.
- Improve the structurally deficient bridges on Route 32 (Main Street over canal and Ware canal) and Route 62 (Hubbardston Road over Canesto Brook).
- Consider improving all high and significant hazard dams in the community, specifically those near Route 32 and Route 122.
- Consider any nearby locally-identified hazards and vulnerable critical infrastructure that could be potentially impacted by the suggested improvement options.

Holden

- Check and optimize the traffic signal timing & phasing at the Route 31 & Route 122A intersection.
- Improve the poor pavement segment on Route 122A, south of Shrewsbury Street.
- Improve the structurally deficient bridge on Route 31 (over the Genesee & Wyoming Inc. P&W Railroad).
- Consider improving the Management Systems data integration analysis identified Tier 2 priority segments on Route 122A (between Kendall Road & Shrewsbury Street) and one other segment on Route 31 (between Union Street & Main Street).
- Consider improving all high and significant hazard dams in the community, specifically near Route 122A.
- Consider any nearby locally-identified hazards and vulnerable critical infrastructure that could be potentially impacted by the suggested improvement options.

Oakham

- Improve the structurally deficient short span bridge on Route 122 (over Muddy Pond Brook).
- Consider improving the significant hazard dams near Route 148.
- Consider any nearby locally-identified hazards and vulnerable critical infrastructure that could be potentially impacted by the suggested improvement options.

Paxton

- Improve the very poor pavement segments on Route 31, between Grove Street and Holden town line (already improved through a TIP project completed in 2020) and Route 31/56, between Richards Avenue and Route 122.

- Consider improving the Management Systems data integration analysis identified Tier 2 priority segments on Route 31 [between Grove Street & Holden town line (already improved through a TIP project completed in 2020)] and Route 122 (between Davis Hill Road & West Street).
- Consider improving all high and significant hazard dams in the community, specifically near Route 31.
- Consider any nearby locally-identified hazards and vulnerable critical infrastructure that could be potentially impacted by the suggested improvement options.

Princeton

- Improve the poor pavement segments on Route 62, between Goodnow Road & Calamint Hill Road and on Route 140, between Route 31 & Sterling town line.
- Improve the structurally deficient short span bridges on Route 31 (over Wachusett Brook) and Route 140 (over Keyes Brook).
- Consider improving the significant hazard dams near Route 31 and Route 140.
- Consider any nearby locally-identified hazards and vulnerable critical infrastructure that could be potentially impacted by the suggested improvement options.

Rutland

- Improve the poor pavement segments on Route 56, between Sassawanna Road & Moulton Mill Road.
- HSIP identified improvements warranted at Route 122 & Pleasantdale Road.
- Consider improving the Management Systems data integration analysis identified Tier 2 priority segment on Route 56 (between Main Street & Prescott Street).
- Consider improving all high hazard dams in the community, specifically near Route 56.
- Consider any nearby locally-identified hazards and vulnerable critical infrastructure that could be potentially impacted by the suggested improvement options.

West Boylston

- Check and optimize the traffic signal timing & phasing at the Route 12 & Route 140 & Central Street intersection.
- HSIP identified improvements warranted at Route 12 & Franklin Street.
- Improve the poor pavement segments on the northern segment of Route 12, near the Sterling town line.
- Consider improving the Management Systems data integration analysis identified Tier 2 priority segments on Route 12 (between Worcester city line & Woodland Street and between Wal-Mart Plaza and between Lancaster Street) and Route 140 (between Church Street & Maple Street).

- Consider any nearby locally-identified hazards and vulnerable critical infrastructure that could be potentially impacted by the suggested improvement options.

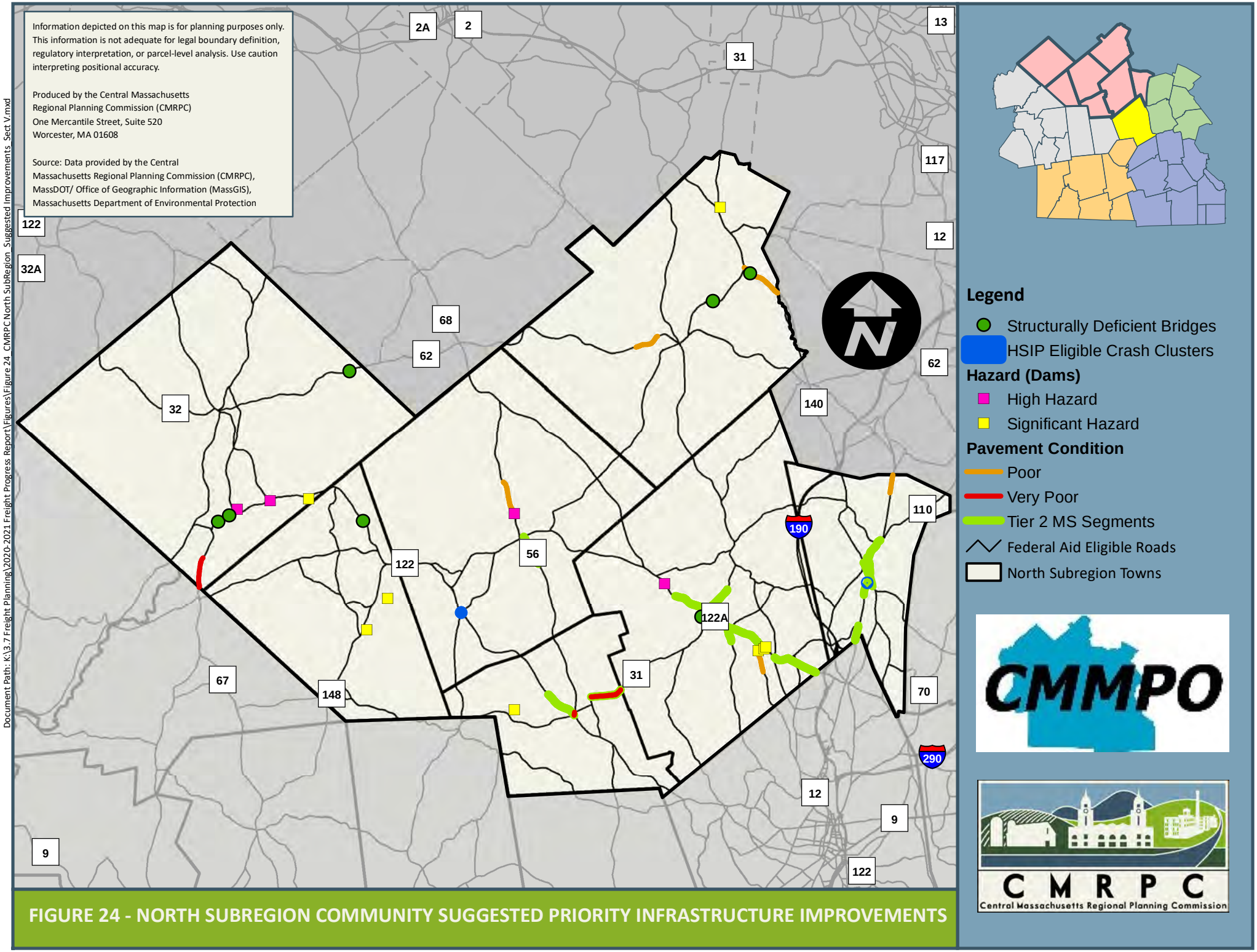


FIGURE 24 - NORTH SUBREGION COMMUNITY SUGGESTED PRIORITY INFRASTRUCTURE IMPROVEMENTS

B. West Subregion Study

The CMMPO's Endorsed 2021 UPWP Freight Planning work activity indicates the compilation of a *Highway Freight Accommodation Assessment Study: Highway Trucking on State Numbered Routes*. This study is the second in a planned series of subregional *Highway Freight Accommodation Assessment* studies. This trucking-centric study focuses on the region's federal-aid highway network in the West transportation planning subregion. The West subregion includes nine (9) host communities: Brookfield, East Brookfield, Hardwick, Leicester, New Braintree, North Brookfield, Spencer, Warren, and West Brookfield.

All eligible for federal-aid improvement funding, the following nine (9) State Numbered Routes in the West subregion are the focus of this study effort:

1. Route 9
2. Route 19
3. Route 31
4. Route 32
5. Route 32A
6. Route 49
7. Route 56
8. Route 67
9. Route 148

Major topics addressed in the *Freight Accommodation Assessment Study* include a subregional trucking amenities overview, an inventory of host community bylaws affecting local trucking operations, federal-aid highway network traffic volumes & truck percentages, a range of Management Systems (MS) data & analysis, Performance-Based Planning & Programming (PBPP) considerations, subregional Environmental Consultation maps and local Municipal Vulnerability Preparedness (MVP) Plan findings. In addition, the regional Travel Demand Model, a computerized simulation of the region's multi-modal transportation network, provided future-year volume projections for a range of truck classifications, verifying known highway freight routes as well as identifying "hot spots" of local trucking activity.

Based on this broad range of data, observations and corresponding analysis, a summary of findings table is presented. The *Highway Freight Accommodation Assessment Study* concludes with a series of suggested recommendations for both MassDOT and host community consideration. These include both local policy suggestions as well as options for roadway and bridge improvements. Some identified improvement projects may have the potential to utilize future-year TIP funding available to the CMMPO to assist state or local implementation. Suggested projects are intended to help assure the continued flow of highway freight throughout the greater planning region while mitigating identified local impacts.

Suggestion Improvement Options

Based on the previous Summary of Findings section, a number of suggested improvement options have been compiled for consideration by both MassDOT and the nine (9) host communities in the West planning subregion. The following **Figure 25** shows suggested priority

infrastructure improvements for each of the towns. Highway segments that are on the federal-aid network are eligible for potential future-year project funding through the CMMPO's TIP. Other available funding resources also have the potential to be applied, such as various grant opportunities and state-provided Chapter 90 funds.

West Subregion-Wide Improvement Options:

- In the spirit of Jason's Law, contemplate revised local policy and strongly consider truck parking-friendly bylaws that allow for federally-required driver rest periods for long distance truckers at key commercial and/or industrial locations in each of the host communities.
- Potential improvement of truck turning radii at major intersections, limited box widening where necessary, the installation of truck climbing lanes on steep grades as well as the elimination of hazardous highway curves.
- Check and optimize traffic signal timing & phasing at high-volume signalized intersections.
- Maintain all pavement to a condition of "Good" or above. Pavement condition is especially critical on established Critical Freight Corridors.
- Address all structurally deficient (SD) bridges. Address those bridges with posted weight limits associated with reduced load-carrying capabilities.
- Numerous culverts need attention in the West transportation planning subregion. As such, commence corridor-wide and/or town-wide culvert assessment programs that can allow for the future targeted replacement of key vulnerable drainage system components. *(The CMRPC transportation staff is available to discuss this program further.)*
- Improve/repair the hazardous dams identified in the West subregion, especially those located upstream of State Numbered Routes.

West Subregion Host Community Improvement Options:

Brookfield

- Consider improving the Significant Hazard dam in the community adjacent to Route 148.
- Consider any nearby locally-identified hazards and vulnerable critical infrastructure that could be potentially impacted by the suggested subregion-wide improvement options.

East Brookfield

- Improve the poor pavement segments identified on Route 9 between Cottage Street and Harrington Street and from Brookfield town line to Oakland Drive. The poor

pavement segments will be improved once the Route 9 resurfacing project, currently programmed in FFY 2024 TIP, is completed.

- Consider improving the Management Systems data integration analysis-identified Tier 2 priority segments on Route 9 between North Brookfield Road & Harrington Street.
- Consider improving all Significant Hazard dams in the community, specifically near and upstream of Route 9.
- Improve the structural-deficient bridge on South Pond Road over South Pond. This bridge is also posted for load.
- Consider any nearby locally-identified hazards and vulnerable critical infrastructure that could be potentially impacted by the suggested subregion-wide improvement options.

Hardwick

- Improve the poor pavement observed on Route 32 between Route 32A and New Braintree Road, and other federal-aid eligible roadways.
- Consider any nearby locally-identified hazards and vulnerable critical infrastructure that could be potentially impacted by the suggested subregion-wide improvement options.

Leicester

- Improve the poor pavement segments identified on Route 9 between Auburn Street and the Worcester city line as well as on Route 56, between Stafford Street and the Oxford town line.
- Improve the structurally-deficient bridge on Route 9 over Kettle Brook.
- Consider improving the Management Systems data integration analysis-identified Tier 2 priority segments on Route 9 between Burncoat Street and the Worcester city line.
- Address the 2015-2017 HSIP-identified location at heavily traveled Route 9/Route 56 intersection. After 2017, the intersection was reconstructed with geometry improvements, upgraded traffic signal, and an updated lane configuration.
- Consider improving all High and Significant Hazard dams in the community, specifically near Route 9 and Route 56.
- Consider any nearby locally-identified hazards and vulnerable critical infrastructure that could be potentially impacted by the suggested subregion-wide improvement options.

New Braintree

- Improve the poor pavement segments identified on Route 67 between Ravine Road & Barre Cutoff Road and on other federal-aid eligible roadways.
- Consider improving the one (1) Significant Hazard dam in town located just north of Worcester Road, near the Oakham town line.

- Consider any nearby locally-identified hazards and vulnerable critical infrastructure that could be potentially impacted by the suggested subregion-wide improvement options.

North Brookfield

- Improve the poor pavement segments observed on Route 67 between Bell Road & Mill Road as well as on Route 148, between Birch Hill Road & Donovan Road and other federal-aid eligible roadways.
- Improve the structurally-deficient bridge on Route 67 over Coys Brook. This bridge is also currently posted for load.
- Consider improving all Significant Hazard dams in the community, specifically upstream and/or near Route 148.
- Consider any nearby locally-identified hazards and vulnerable critical infrastructure that could be potentially impacted by the suggested subregion-wide improvement options.

Spencer

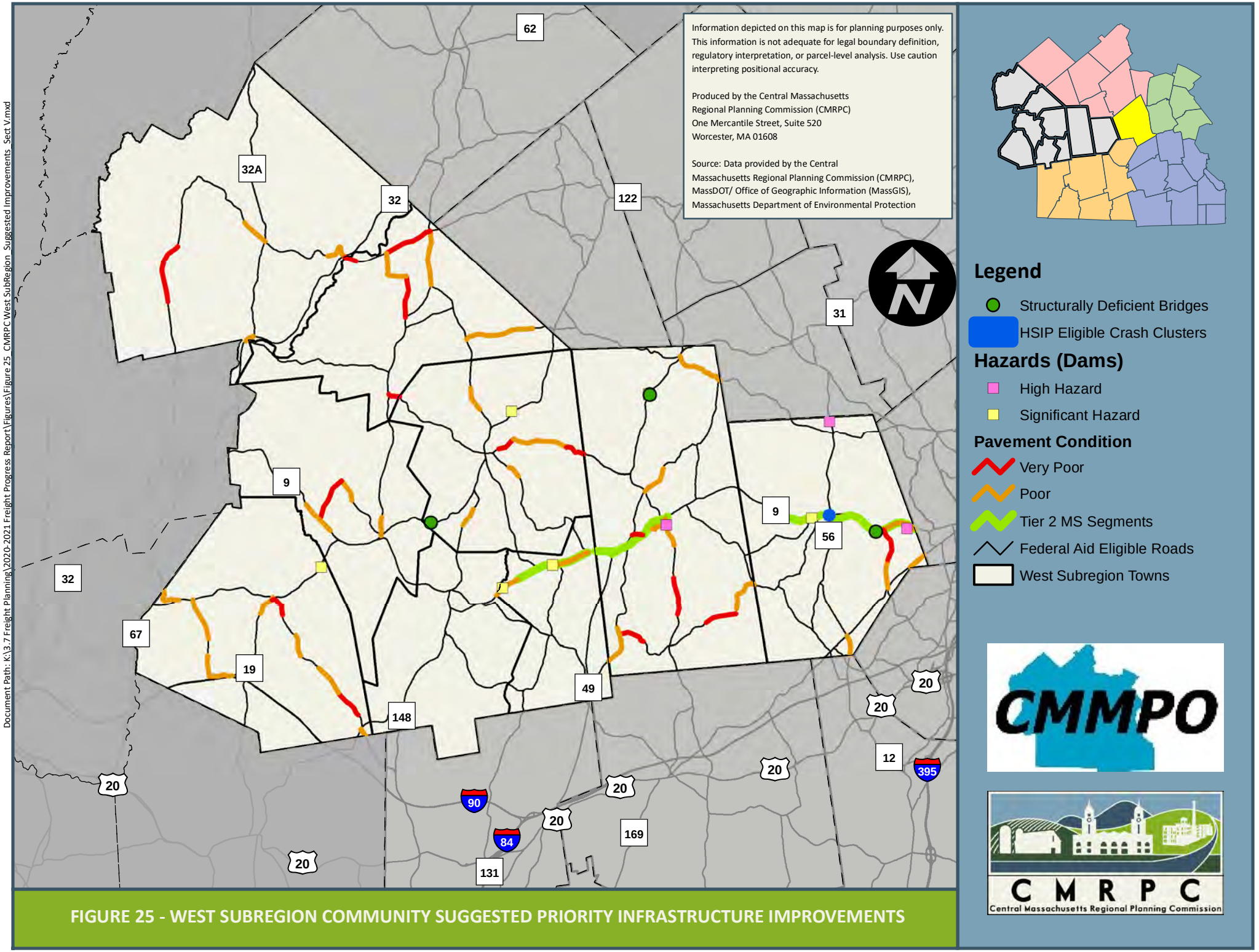
- Improve the poor pavement segments identified on Route 31 between Main Street and Charlton Road as well as the very poor pavement segments observed on Route 31, between East Charlton Road and Sundberg Road.
- Improve the structurally-deficient bridge on Route 31 over the Seven Mile River.
- Consider improving the Management Systems data integration analysis-identified Tier 2 priority segments on Route 9 between East Brookfield town line and Grove Street.
- Consider improving all High and Significant Hazard dams in Spencer, specifically upstream and/or near Route 31.
- Consider any nearby locally-identified hazards and vulnerable critical infrastructure that could be potentially impacted by the suggested subregion-wide improvement options.

Warren

- Improve the poor pavement segments identified on Route 19 between Main Street and Reed Street as well as other federal-aid eligible roadways.
- Consider improving the Significant Hazard dam situated near the combined section of Routes 19 & 67.
- Consider any nearby locally-identified hazards and vulnerable critical infrastructure that could be potentially impacted by the suggested subregion-wide improvement options.

West Brookfield

- Improve the poor pavement segments observed on Route 9 between Old Warren Road and Cutler Road as well as other federal-aid eligible roadways.
- Consider any nearby locally-identified hazards and vulnerable critical infrastructure that could be potentially impacted by the suggested subregion-wide improvement options.



Document Path: K:\3.7 Freight Planning\2020-2021 Freight Progress Report\Figures\Figure 25_CMRPC West SubRegion_Suggested Improvements_Sect V.mxd

FIGURE 25 - WEST SUBREGION COMMUNITY SUGGESTED PRIORITY INFRASTRUCTURE IMPROVEMENTS

VI. Other Freight Planning Activities

This section of the Progress Report summarizes other freight planning activities that the CMMPO staff has undertaken over the last two-year period. It includes a listing of CMMPO staff responses when consulted on MassDOT Rail Canvasses concerning the issuance of building permits adjacent to railroad property. A summary of CMMPO staff training sessions through US DOT's "Talking Freight" webinar series on the topic of multimodal freight planning is then provided. In addition, other general ongoing regional freight planning efforts are listed, including a FHWA-requested update to the federally-required MPO Freight Program Assessment (MPOFPA) questionnaire for the planning region.

1. Consultation: MassDOT Rail Canvass CMMPO Responses Summary

- **September 2020**: Staff responded to a MassDOT "Issuance of a Building Permit Adjacent to Railroad Property" canvass as requested by Carlos Velasquez. The property is located in the town of Westborough adjacent to the MBTA Worcester Line. The owners of an adjacent industrial building plan to increase the height of the roof on an existing structure. Staff indicated "no objection" to the issuance of the building permit, as it will have absolutely no impact on either passenger or freight rail service on the Worcester Line.
- **February 2021**: Staff responded to a MassDOT "Issuance of a Building Permit Adjacent to Railroad Property" canvass as requested by Carlos A. Velasquez. The property is located in the town of Millbury at 0 Canal Street adjacent to an abandoned Penn Central right-of-way. A developer plans to construct a building adjacent to the abandoned right-of-way. Staff indicated "no objection" to the issuance of the building permit, indicating that MassDOT should direct the construction proponent to work with local trail advocates and to be certain not to disturb the preserved right-of-way in any manner during and post-construction period.
- **June 2021**: Staff responded to two (2) MassDOT "Issuance of a Building Permit Adjacent to Railroad Property" canvasses as requested by Carlos Velasquez; Rail Unit One property was located in the city of Worcester adjacent to the Genesee & Wyoming Corp's Providence & Worcester Railroad. The Worcester Housing Authority plans on building a multi-family housing structure on the canvassed site. The other was in Westborough, where a single-family home was being renovated & expanded adjacent to the MBTA's Worcester Commuter Rail line. Staff indicated "no objection" to the issuance of either building permit.

2. Training: US DOT Talking Freight Webinars Series & Others

- Prepared for and viewed the 2/19/20 US DOT February 2020 Talking Freight webinar: "Current FHWA Freight Transportation Research Initiatives". *Staff also downloaded the presentations provided through the webinar.*

  Date: 2/19/20
  Location: At-desk webinar
  Topic: "US DOT February 2020 Talking Freight webinar: "Current FHWA Freight Transportation Research Initiatives"
  Attendance: Staff Rydant

- Prepared for and viewed the 3/18/20 US DOT March 2020 Talking Freight webinar: "A Primer on the Operational Characteristics and Impacts of Precision Scheduled Railroading". *Staff also downloaded the presentations provided through the webinar.*

  Date: 3/18/20
  Location: At-desk webinar
  Topic: US DOT March 2020 Talking Freight webinar: "A Primer on the Operational Characteristics and Impacts of Precision Scheduled Railroading"
  Attendance: Staff Rydant

- Prepared for and viewed the 4/15/20 US DOT March 2020 Talking Freight webinar: "Freight Beyond the City: Approaches to Improving Freight Mobility in the Suburban Context". *Staff also downloaded the presentations provided through the webinar.*

  Date: 4/15/20
  Location: At-desk webinar
  Topic: US DOT April 2020 Talking Freight webinar: "Freight Beyond the City: Approaches to Improving Freight Mobility in the Suburban Context"
  Attendance: Staff Rydant

- Prepared for and viewed the 5/12/20 INRIX & North American Council for Freight Efficiency (NACFE) webinar: "COVID-19's Impact on Freight: Understanding its Effects on Freight Movement, Transportation Networks, and the Global Economy". *Staff also downloaded the presentations provided through the webinar.*

  Date: 5/12/20
  Location: At-desk webinar
  Topic: INRIX & North American Council for Freight Efficiency

(NACFE) webinar: “COVID-19’s Impact on Freight: Understanding its Effects on Freight Movement, Transportation Networks, and the Global Economy”

Attendance: Staff Rydant

- Prepared for and viewed the 5/20/20 US DOT May 2020 Talking Freight webinar: “The Development and Implementation of a Ten County Freight Model (in North Carolina)”. *Staff also downloaded the presentations provided through the webinar.*

  Date: 5/20/20

  Location: At-desk webinar

  Topic: US DOT April 2020 Talking Freight webinar: “The Development And Implementation of a Ten County Freight Model (in North Carolina)”

  Attendance: Staff Rydant

- Prepared for and attended US DOT Talking Freight webinar on 7/15/20 entitled *Examining the Growth of Inland Ports*.

  Date: 7/15/20

  Location: At-desk webinar

  Topic: US DOT July 2020 Talking Freight: “Examining the Growth of Inland Ports”

  Attendance: Staff Rydant

- Prepared for and viewed the 11/18/20 US DOT November 2020 Talking Freight webinar: “Curbside Management and Freight Deliveries”. *Staff also downloaded the presentations provided during the webinar.*

  Date: 11/18/20

  Location: At-desk webinar

  Topic: Talking Freight webinar: “Curbside Management and Freight Deliveries”

  Attendance: Staff Rydant

- Prepared for and viewed the 12/1/20 Volpe-sponsored National Coalition on Truck Parking meeting webinar. *Staff also downloaded and printed the presentation provided for the webinar.*

  Date: 12/1/20

  Location: At-desk webinar

  Topic: Volpe-sponsored National Coalition on Truck Parking meeting

  Attendance: Staff Rydant

- Prepared for and viewed the 12/16/20 Freight Mobility Research Institute (FMRI) webinar: "Modeling Truck Parking on Highways", presented by Dr. Bruce Wang, Professor, Texas A&M University. *Staff also saved images from part of the webinar and later summarized the major topics of discussion. The summary was shared with other transportation staff.*

  Date: 12/16/20
  Location: At-desk webinar
  Topic: Freight Mobility Research Institute (FMRI) webinar: "Modeling Truck Parking on Highways"
  Attendance: Staff Rydant

- Prepared for and attended webinar presented by the Volpe Center on 2/9/21: "The Imperative and Opportunity to Invest in Resilient Infrastructure".

  Date: 2/9/21
  Location: At-desk webinar
  Topic: US DOT Volpe Center Presentation: Dr. Stephen Flynn on "The Imperative and Opportunity to Invest in Resilient Infrastructure"
  Attendance: Staff Rydant

- Prepared for and viewed 4/21/21 "US DOT April 2021 Talking Freight: Rail Freight Growth Opportunities and Challenges". Downloaded all presentations from the webinar for future reference.

  Date: 4/21/21
  Location: At-Desk Webinar
  Topic: "US DOT April 2021 Talking Freight: Rail Freight Growth Opportunities and Challenges"
  Attendance: Staff Rydant

3. Ongoing Efforts

- During 2020 & 2021, as requested, staff continued to provide technical assistance to regional rail freight provider applications for MassDOT's Industrial Rail Access Program (IRAP), US DOT TIGER, FRA and EPA grant funding.

- Prepared for and attended a Zoom virtual meeting held 10/13/21 with FHWA liaison Chris Timmel to review and fill in any blanks or gaps in the most current federally-required MPO Freight Program Assessment (MPOFPA) questionnaire for the planning region. As a result of the meeting, Chris will make any necessary changes and refinements and, subsequently, submit the completed updated MPOFPA to FHWA

headquarters in Washington, D.C. *(Staff requested a copy of the completed questionnaire when available.)*

Date: 10/13/21
Location: Zoom virtual meeting
Topic: MPO Freight Program Assessment (MPOFPA) questionnaire
Attendance: Staff Rydant, FHWA liaison Chris Timmel

- Continued to follow the ongoing activities of CSX, EB&S RR, G&W Inc. (P&W), MC RR, PAR (now CSX), the GU and other greater area rail freight providers (NS/PAS) and intermodal facility operators (ICI/NEAG).
- Continued ongoing review of various freight and passenger related papers, summary documents and handouts-both railroad and trucking related-obtained either through agency subscriptions or general media.
- As appropriate, staff will participate in MassDOT's forthcoming updates to the *Massachusetts State Railroad & Multi-modal Freight Plans.* Further, staff is prepared to participate in efforts to implement the findings of both MassDOT's *East-West Passenger Rail Study* and *Northern Tier Passenger Rail Study*.

Central Massachusetts Regional Planning Commission
Member Communities

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Berlin
Blackstone
Boylston
Brookfield
Charlton
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Dudley
East Brookfield
Grafton
Hardwick
Holden
Hopedale
Leicester
Mendon
Millbury
Millville
New Braintree
North Brookfield
Northborough
Northbridge
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Paxton
Princeton
Rutland
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Southbridge
Spencer
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Central Mass Regional Planning Commission

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