CAPITAL REGION Transportation Council

CAPITAL REGION TRUCK PARKING STUDY

Final Report

January 29, 2024

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This report was funded in part through grant[s] from the Federal Highway Administration, U.S. Department of Transportation. The views and opinions of the agency expressed herein do not necessarily state or reflect those of the U. S. Department of Transportation.

The recommendations in this study are conceptual in nature and do not commit NYSDOT, the New York State Thruway Authority, or other named entities to the proposed project(s).

The concepts presented in this report may need to be investigated in more detail before any funding commitment is made. Additional engineering or follow-up work will be based upon funding availability.

Introduction

The roots of the current challenges related to truck parking and excessive demand on parking capacity in highway rest areas and privately-owned truck stops can be traced back to the dramatic increase of trucking resulting from the Federal deregulation of the trucking industry in the 1980s. Truck volumes have grown substantially over time, driven by population growth and consumer spending patterns in the U.S. economy. Supply chain management practices have also become refined over time, with the aim of reducing inventory costs through a "just-in-time" inventory control model that forces the trucking industry to closely coordinate its deliveries with its customers.

Since that time, truck parking activity has been heavily influenced by safety considerations and the need for adequate rest for commercial drivers under Federal regulations. Hours-of-service (HOS) rules established under the Federal Motor Carrier Safety Administration (FMCSA) have undergone a number of changes over the years, starting with a landmark minimum continuous rest requirement in the early 2000s that has since been refined and adjusted as industry conditions and traffic safety research have been updated over time. The most recent changes in these HOS rules, which were made effective on September 29th of 2020, provided drivers with some additional flexibility in meeting the mandatory 10-hour sleeper berth rest requirement by allowing this period to be divided into two periods as long as one of them was at least seven continuous hours long. The impact of these FMCSA HOS rules has become more transparent in recent years since the FMCSA has mandated the use of electronic logging devices (ELDs) in the interstate trucking industry; these devices provide for a level of enforcement of these rules beyond the traditional paper logs used in the past.

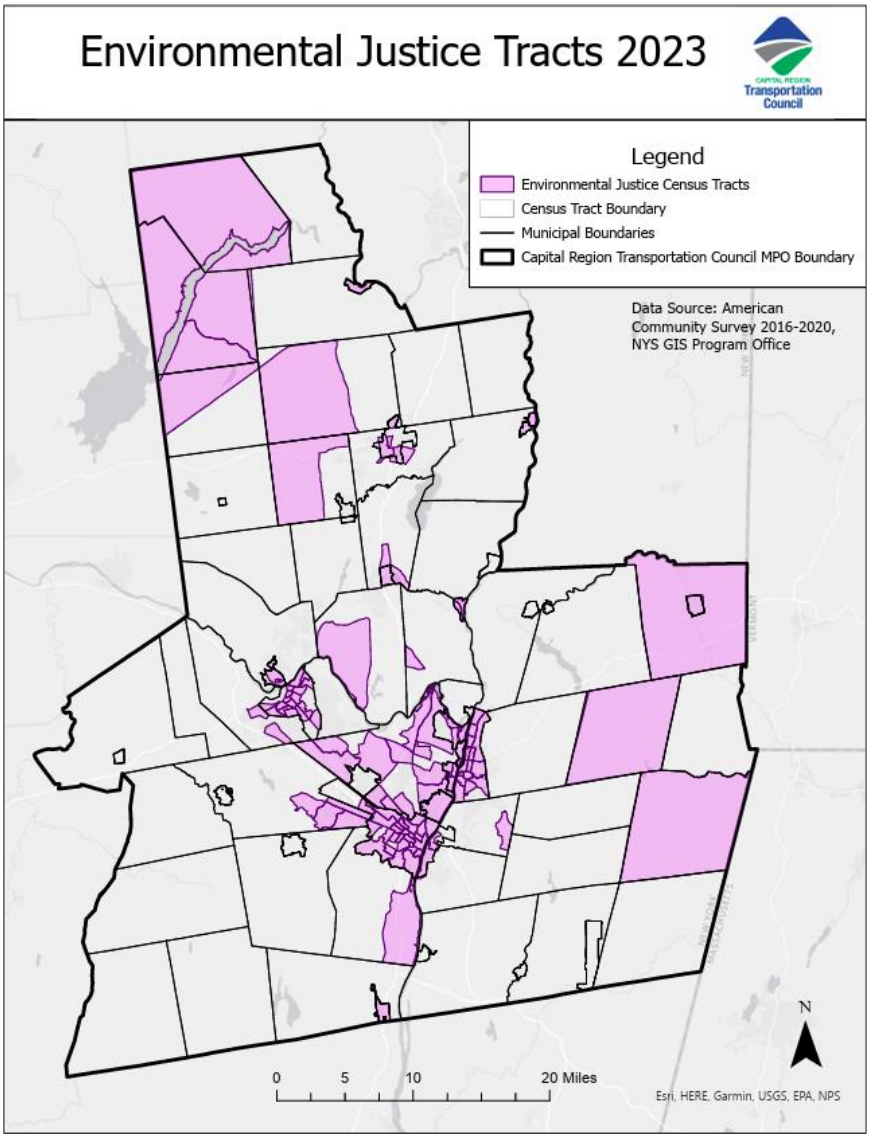
In addition to the regulatory and operational aspect of truck parking tied to Federal highway safety enforcement efforts and trucking industry operations, the economics of land use have come to play a major role in limiting the development of new truck parking capacity in regions where it is often needed most – namely, in metropolitan areas where off-highway truck stops rarely represent a "highest and best use" in the real estate market, and where highway rest areas and truck stops are seen as land uses with negative community impacts. Real estate costs, community concerns, and lengthy development approval processes are seen by the truck stop industry as some of the primary impediments to building new truck parking capacity. Over time, growing metropolitan areas across the U.S. have seen a rapid increase in industrial development related to warehousing and distribution. In recent years this has accelerated with the advances in e-commerce and the growth of "last-mile" deliveries from fulfillment centers to customer locations. Considerations for staging needs for trucks making deliveries to these distribution centers are often not included in the development approval process, and as a result much of the parking activity related to staging takes place in truck stops, highway rest areas, and even on local streets.

Underlying all of these contributing factors driving the truck parking challenge are the overall concerns related to safety and security. These include the following three elements that guide

the activities of the USDOT, state transportation industries, the trucking industry, and the public at large:

- The risks associated with drowsy drivers operating heavy vehicles (trucks and buses) on the highway system; this is the focus of FMCSA hours of service rules.
- The risk of having trucks parked on highway shoulders and interchange ramps where they are fixed objects within an area designed to be a clear zone; this is a major area of concern for state and local transportation departments.
- The safety of the truck driver and the security of the cargo while the truck is parked for extended rest periods; this is the focus of Jason's Law (MAP-21 Section 1401) at the Federal level.

The Regional Truck Parking Study (RTPS) collected truck parking supply and demand data, identified areas of concern in the Capital Region, and provides several options to mitigate overnight truck parking capacity issues. Further study is required to determine site specific recommendations in the areas of concern. At that stage consideration for environmental features and environmental justice communities must be assessed. Appendix A contains the Transportation Council's scan of environmental features in the region. The Transportation Council has conducted an Environmental Justice/Title VI Analysis; the designated Environmental Justice tracts are shown in the figure on the following page.



Public, Industry & Stakeholder Outreach

The technical work for this study has been accompanied by a parallel outreach effort involving a Study Advisory Committee (SAC), periodic presentations and briefings to the Transportation Council's Freight Advisory Committee (FAC), and other outreach elements described below. The project website with interactive mapping for public input on emerging conditions related to truck parking will be active for approximately 18-24 months from September 1, 2023 (this item is described later in this report as part of Recommendation #9).

In addition to staff members of the Capital Region Transportation Council, the SAC included invited representatives of the following organizations:

- USDOT/FHWA (Resource Center & New York Division)
- New York State Department of Transportation (Central Office & Region 1)

- New York State Thruway Authority
- New York State Police
- Trucking Association of New York
- Capital District Regional Planning Commission
- Port of Albany
- Albany County
- Schenectady County
- City of Saratoga Springs
- City of Schenectady
- Town of Bethlehem
- Town of Colonie
- Town of East Greenbush
- Town of Princetown
- Town of Rotterdam
- Town of Wilton
- Owner-Operator Independent Drivers Association (OOIDA)
- Golub Corporation

The SAC met periodically during the course of the study at key milestones to review the progress of the project, provide input on the data and findings documented in this report, and to conduct technical reviews of key deliverables, including the Existing Conditions Assessment, Literature Review, the Technical Memorandum on Recommendations, and this Final Report. Formal presentations at the SAC meetings of 4/11/2022, 10/13/2022 and 7/20/2023 are included as **Appendices B1** through **B3** of this report.

In addition to the SAC reviews and input, regular presentations and briefings were given to the MPO's Freight Advisory Committee (FAC). Starting with the May/June 2022 meeting, an update on the status of the project was provided to the FAC at its regular quarterly meetings throughout the duration of the project. Formal presentations were made at the 8/17/2022 and 2/15/2023 FAC meetings (see **Appendices C1** and **C2**). As there is a sizable overlap of members in the SAC and the FAC, the FAC presentations offered an additional opportunity to solicit input from key public and private sector representatives from around the Capital Region on technical matters related to the project. The February 2023 meeting was a particularly important session because the attendees provided valuable input on several key project deliverables, including the elements of the Truck Parking Toolkit and the related recommendations that are described in detail later in this report.

Additional outreach sessions for focused feedback from key stakeholders included a public transportation agency meeting with NYSDOT and the New York State Thruway Authority, a group discussion with municipal planners for input on the industrial land use and zoning aspects of truck parking, and a meeting with the neighboring Adirondack Glens Falls Transportation Council (A/GFTC) to discuss truck parking issues at the north end of the Capital Region and potential future needs along the I-87 corridor to the north. Lastly, a presentation to the Transportation Council's Planning Committee was made in August 2023 to provide Committee

members with a summary of data, findings and study recommendations. This presentation is included as **Appendix D** of this report.

The RTPS project team also presented this project in two external venues for the New York State Association of Metropolitan Planning Organizations (NYSAMPO). The project was showcased in the poster session for the annual NYSAMPO Conference in Syracuse in May 2023, and was presented to the organization's Freight Work Group at its October 25, 2023 meeting. The project poster and accompanying speaker narrative are included as **Appendices E1** and **E2**, respectively. **Appendix E3** is the October 2023 Freight Work Group presentation.

To allow stakeholders and community members to provide input on the Draft Regional Truck Parking Study report, the Transportation Council held a 25-day public review period from January 4, 2024, to January 29, 2024. Two (2) substantive comments were received and addressed; the first to remove the word 'accelerated' from the description of the New York State Thruway's cashless toll system project (p. 29), the second to clarify the geographic scope of Recommendation #2 (p. 36).

Truck Parking Toolkit

One of the most important products developed for this study was a companion informational resource to provide guidance to policy makers, planners and public officials on the complex issues that contribute to truck parking challenges at the regional and local level and provide context-sensitive solutions to specific problems at appropriate geographic scales. The solutions included in this Truck Parking Toolkit, which is incorporated as **Appendix F** of the RTPS report, serve as the foundation for the recommendations of this study that are discussed in detail later in this report.

Literature Review

A review of relevant reports, studies and other documents was conducted during the course of this study effort. It is intended to serve as a broad review of historical, recent, and ongoing efforts to address truck parking challenges at various geographic scales, from regional and state studies up to major USDOT efforts. The body of work in truck parking studies and reports has grown considerably over the years, particularly after many of the problems associated with truck parking became increasingly visible with the growth of truck volumes and refinements to the FMCSA hours of service rules for commercial drivers that have been made over the years. The review was not intended to be a comprehensive review of all these studies and initiatives, but was designed to be a selective review of relevant documents that have metrics, recommendations and/or policies that are applicable to the Capital Region and to the outcomes of this study.

Important takeaways from this Literature Review include the following:

- The national efforts related to Jason's Law provide valuable context for the issue of truck parking and key metrics for measuring and documenting parking demand and solutions. The new state freight plan requirements established in the Infrastructure Investment and Jobs Act (IIJA) of 2021 extend the periodic reporting on truck parking matters from the USDOT to the individual states.
- The establishment of the National Coalition on Truck Parking (NCTP) was one of the early action items that grew out of the Jason's Law Survey publication in 2015. This group continues to be a valuable resource for reviewing, assessing and measuring potential solutions to truck parking problems.
- Some key elements of the CDTC Regional Freight and Goods Movement Plan (2016) are directly applicable to the outcomes of this truck parking study. In particular, the linkages between land use and freight transportation activity and the planning toolbox for freight-intensive land uses contained in the study will be the foundation of some key recommendations for addressing parking in the context of truck staging at industrial sites.
- The *Truck Parking Development Handbook* published by the USDOT/FHWA in 2022 should serve as an important foundation and guidance document for local practitioners in the Transportation Council region to incorporate truck parking needs into the land use approval process. Some of its contents will be the basis of the key elements of the Truck Parking Toolkit developed in this study.

The literature review is documented in detail in the separate RTPS report: *Regional Truck Parking Study: Literature Review*.

Baseline Data Collection

This study is built on a solid foundation of data that covers the core highway network of the Capital Region, secondary routes that serve key freight generators, and all of the major publicly accessible truck parking facilities used for parking related to mandatory rest periods and staging for local deliveries. Key components of the data collection effort include the following:

- Base mapping of roadways and geographic boundaries
- An inventory of major truck parking facilities
- Peak overnight parking activity at truck parking facilities in the Capital Region
- Documentation of highway shoulder and interchange ramp parking
- Multi-day temporal profiles of truck parking at eight sample locations in the region
- Geographic profiles of "next stop" locations for trucks parked in the Capital Region

Study Area

The study area includes the following:

- The four counties that comprise the core of the Capital Region MPO jurisdictional area: Albany, Rensselaer, Saratoga (except for the Town of Moreau and the Village South Glens

Falls, which lie within the adjoining MPO region for the Adirondack-Glens Falls Transportation Council) and Schenectady Counties.

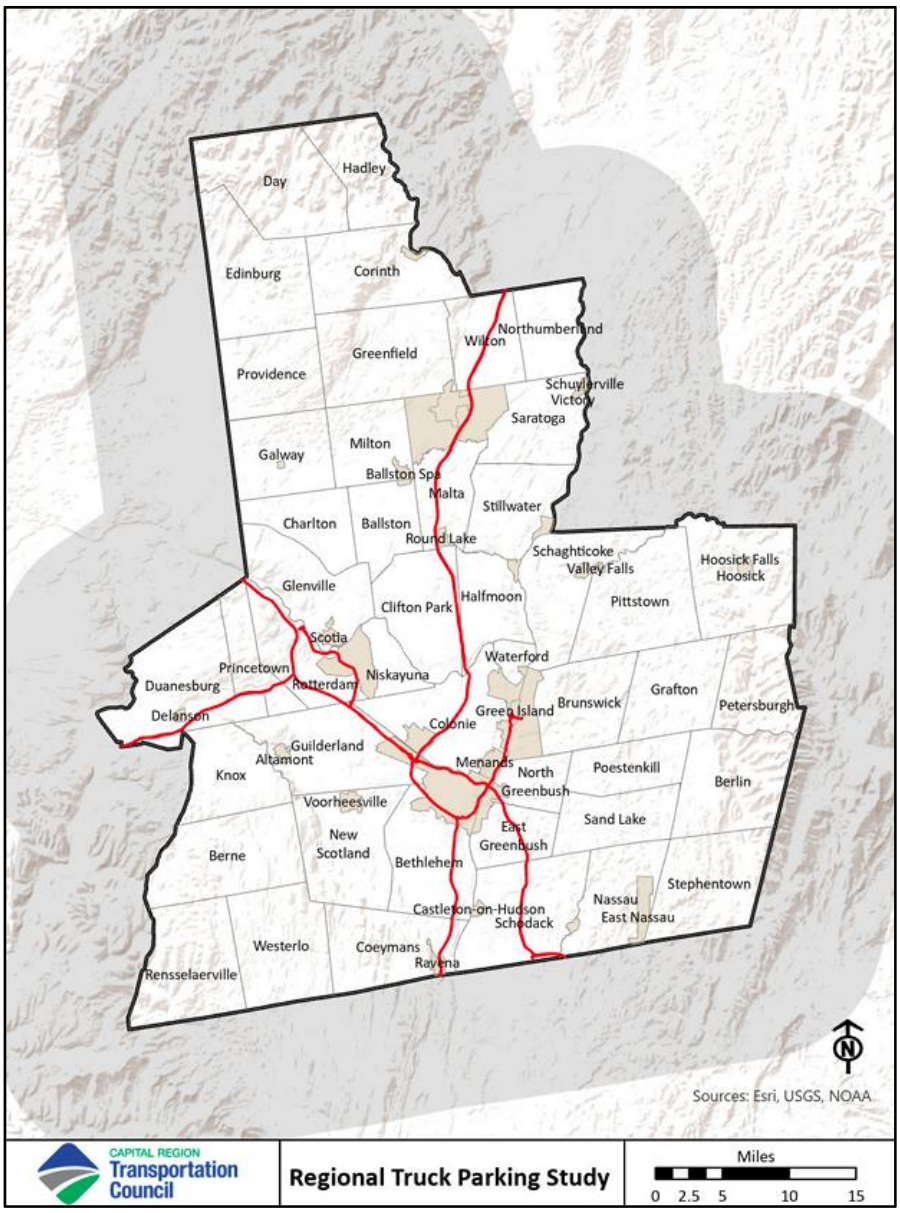
- Portions of New York counties situated within a ten-mile buffer surrounding this core area, including Columbia, Fulton, Greene, Montgomery, Schoharie, Warren & Washington Counties.
- Adjoining areas of northwestern Massachusetts and southwestern Vermont that lie within this ten-mile buffer.

The core highway network of this study area includes Interstates 87, 88, 90, 787 and 890. Interchange 24 of the New York State Thruway marks the point where the roadway transitions from I-87 (south of Albany) to I-90 (west of Albany). These roadways comprise the major roadways in the Capital Region Freight Priority Network.

The Freight Priority Network (FPN) provides a logical system of routes that facilitate efficient and safe truck mobility within, to, and from the region. The primary function of FPN designation is to bring roads that carry critical freight and goods movements to the forefront in freight-related investment decisions. Further, FPN designation is intended to engage local jurisdictions in operating, maintaining, and designing FPN roads to adhere to these specifications to promote safe/reliable infrastructure and efficient movement. For example, projects affecting FPN routes receive acknowledgment for being part of the major freight system when planning and programming investments.

The Transportation Council designated the original FPN in the late 1990s based on professional knowledge of regional freight movement patterns and routes. The original FPN simply designated a facility as a freight route, without any further gradation of route type or purpose. The Regional Freight Plan (2016) built on that existing FPN to create specific designation criteria for a hierarchy of three route types:

- **Major Routes** serve as the backbone of the FPN. These roads, mainly Interstate highways and key regional arterials, are generally designed, operated, and constructed to accommodate significant truck volumes.
- **Minor Routes** are regional and local roadways that provide mobility between major industrial and logistics origins and destinations and the Major Routes.
- **Connectors** provide access between Major and Minor Routes and individual destinations or small clusters of logistics activities. Connector roads are generally designed and operated to accommodate periodic truck movements to shippers, receivers and/or urban centers.



Beyond the core highway network in the Capital Region and ten-mile buffer area, the data collection program for this study included several additional areas and roadway links:

- The easternmost segment of I-90 along the border between New York and Massachusetts, extending ten miles into Massachusetts to include the eastbound and westbound Lee Service Plazas on the Massachusetts Turnpike.
- The short section of the New York State Thruway (I-90) extending west of the ten-mile buffer to Fultonville, to include all of the truck stops around Interchange 28 in this study.
- The designated FPN Connectors in the Capital Region.
- Select principal arterials in the Capital Region that serve regional truck traffic and/or provide connections to key industrial areas. These include the Berkshire Extension of the

Thruway, Route NY-32 between US-9 and the Selkirk area, Route US-20 from I-90 to the southern edge of Rensselaer County, and Route NY-7 from I-87 through Troy and the Town of Brunswick.

The FPN Connectors and principal arterials included in the data collection program are shown below.

FPN Connectors

Select Principal Arterials

Peak Overnight Parking – Truck Parking Facilities

The first phase of the data collection process involved an overnight count of trucks parked at various truck parking facilities in the Capital Region. The inventory of truck parking facilities across the region includes the following:

- Highway rest areas and welcome centers under the jurisdiction of NYSDOT or other public authorities;
- New York State Thruway service areas;
- Other roadside turnouts with limited or no travel amenities;
- Private truck stops, gas stations, and other retail locations; and
- Other informal parking locations identified in third-party resources such as truck stop directories or TruckerPath® parking location data.

An initial screening of the locations in the Capital Region identified 35 parking facilities. Three of these were screened out after field observations indicated that the facilities were either closed or were not conducive to oversize vehicle parking. These three included the Schodack Park & Ride on US-20 near I-90, the Delmar Park & Ride on Route NY-32, and the commercial area of Bennington Station in Vermont.

Peak counts were conducted at the remaining 32 locations during typical Monday-Tuesday and Tuesday-Wednesday overnight periods in the spring of 2021. These were supplemented with secondary observations in the fall of 2021 to determine if there were any substantial changes in truck parking activity at these locations. All counts were conducted between 12:00 Midnight and 5:00 AM.

Details of the peak overnight parking utilization at the 32 locations are shown in **Table 1** and are included in the summary at the end of this section.

Table 1: Truck Parking Facilities – Current Conditions

#	Facility Name	Type	Latitude	Longitude	Parking Capacity	Util.	%
1	Guilderland Service Area	Service Area	42.743763	-73.918616	56	71	127%
2	Exit 11 Truck Stop	Truck Stop	42.93724	-73.807049	28	9	32%
3	Pattersonville Service Area	Service Area	42.896918	-74.097103	49	49	100%
4	Love's #611	Truck Stop	42.362855	-73.429883	58	64	110%
5	Ambest Canaan	Truck Stop	42.361198	-73.427565	75	78	104%
6	Wilton Travel Plaza	Truck Stop	43.170186	-73.71516	112	128	114%
7	TA Fultonville #209	Truck Stop	42.948839	-74.362811	121	86	71%
8	Onvo Fultonville	Truck Stop	42.947298	-74.358065	52	10	19%
9	Clifton Park Rest Area	Rest Area	42.876179	-73.776312	28	25	89%
10	Adirondacks Welcome Center	Rest Area	43.272963	-73.673913	18	11	61%
11	Glens Falls (South) Rest Area	Rest Area	43.274273	-73.676968	12	12	100%
12	21B Travel Plaza	Truck Stop	42.396627	-73.826243	38	15	39%
13	New Baltimore Service Area (NB)	Service Area	42.428257	-73.806954	15	19	127%
14	New Baltimore Service Area (SB)	Service Area	42.427935	-73.805403	13	17	131%
15	Pilot #146	Truck Stop	42.497945	-73.674558	35	44	126%
16	US-20 Rest Area – MA	Rest Area	42.444811	-73.375029	1	0	0%
17	I-90 WB Rest Area	Rest Area	42.506341	-73.687064	14	10	71%
18	NYST SB Parking Area (Albany)	Rest Area	42.594226	-73.786046	13	9	69%
19	Petrol 9W	Gas Station	42.60932	-73.788576	13	0	0%
20	Mikey Mart Sunoco	Gas Station	42.854085	-73.343561	14	5	36%
21	Pittstown Sunoco	Gas Station	42.846423	-73.468938	3	1	33%
22	Plaza 23 Truck Stop	Truck Stop	42.634556	-73.755373	45	31	69%
23	Albany Port District	Truck Stop	42.627584	-73.7572	1	4	400%
24	Pilot #494	Truck Stop	42.781417	-74.028846	68	79	116%
25	Pilot #1317	Truck Stop	42.946912	-74.35576	55	78	142%
26	Lee Service Plaza EB – MA	Service Area	42.296852	-73.275043	9	21	233%
27	Lee Service Plaza WB – MA	Service Area	42.298454	-73.274554	5	27	540%
28	Mohawk Service Plaza	Service Area	42.914747	-74.162408	16	27	169%
29	Bennington Welcome Center – VT	Rest Area	42.904975	-73.203759	12	7	58%
30	Exxon Minit Mart	Gas Station	43.238784	-73.686647	8	8	100%
31	I-90 EB Parking Area – MA	Rest Area	42.326163	-73.363962	6	6	100%
32	Duanesburg Diner	Truck Stop	42.762121	-74.134467	10	2	20%
	TOTALS				**1,003**	**953**	**95%**

Key relevant information about the peak overnight parking utilization data is as follows:

- Truck parking capacity was established through an on-site inspection of striped parking layouts at each facility and cross-checked against aerial photography. For facilities that do not have striped parking lots, the capacity was determined by: (1) reviewing company or agency websites where parking capacity is posted, or and (2) estimating parking capacity

using a general conversion factor of 15 spaces per acre of parking area. For roadside parking areas where trucks park front-to-back along curbs, the parking capacity was computed based on one parking space for every 80 linear feet of curb.

- Small facilities with no amenities and limited area for parking were assigned a nominal capacity of 1. The same applies to any location that was documented as a single "facility" but covers an area around a major freight terminal. This would apply to the Albany Port District, which encompasses an area of several blocks around the port facilities and is comprised mainly of trucks parking on public streets and in vacant lots.
- It was determined that for private truck stops with paved lots and clearly marked spaces, the parking capacity figures posted on the websites of these companies are not accurate. These discrepancies were noted in the observations, and the actual parking capacity was used in Table 1.
- The New Baltimore Service Area is a single facility on the New York State Thruway, located south of Albany on I-87 at approximate milepost 127. For the purpose of this study, the northbound and southbound parking areas are documented as two separate parking areas, as vehicles entering from the northbound and southbound directions park in separate lots and can only return to the roadway in one direction of travel (this is a feature of the entry/exit toll collection system on the Thruway and the prohibition on U-turns).
- A number of facilities that are seemingly under-utilized are private truck stops where parking is available on a permit-only basis, or for a parking fee. Examples of this include the 21B Travel Plaza adjacent to Interchange 21B of the Thruway and the Onvo location in Fultonville.
- Some of the major national truck stop chains now designate a portion (up to 20%) of their truck parking spaces for reservation-based, paid parking. Two of the three Pilot locations in the Capital Region (Pilot #146 and Pilot #494 in Table 1) operate in this manner. In the various locations across the Capital Region where paid truck parking arrangements are in place, it has been observed that some of the fee-based parking spaces are being used for tractor and/or trailer storage instead of traditional truck parking.
- The combined truck parking facilities across the Capital Region are currently filled nearly to their aggregate capacity during peak overnight periods, with 953 out of 1,003 spaces filled during the data collection period. For the region as a whole, the available parking capacity is sufficient to meet the peak truck parking needs. However, there are some areas of the region where parking demand exceeds the available capacity. These areas include:
  - the easternmost section of I-90 from the Schodack area to the Massachusetts state line, and along the western section of the Massachusetts Turnpike;
  - most Thruway service areas;
  - the Rotterdam area around Interchange 25A of the Thruway and the northernmost segment of I-88 (this will be discussed in more detail in the Ramps/Shoulders section below); and

- I-87 at the northern end of the study area, which is primarily a function of the limited opportunities for truck parking north of the Capital Region through the Adirondack Mountains.

Peak Overnight Parking – Ramps/Shoulders

Concurrently with the peak overnight utilization counts at the various facilities, trucks parked outside designated parking facilities along highway shoulders and interchange ramps in the study area were observed and documented. This data collection task was supplemented with additional observations in June 2022 when the longer days allowed for photographs to be taken in the light of the early morning. This type of informal truck parking activity is commonly seen in areas where demand exceeds the available capacity in parking facilities. It is also a major safety concern for truck drivers and motorists in general, as these trucks are fixed objects in a shoulder area that was designed as a clear zone for safety reasons.

On the major limited-access highways in the Capital Region, informal parking of this kind was only observed in sparse numbers in several areas. These included both roadway directions on the segment of I-90 from Schodack to the Massachusetts state line (discussed in the previous section of this report), the eastbound side of the Thruway between Interchange 28 (Fultonville) and Interchange 27 (Amsterdam), and the southbound side of the Thruway between Interchanges 23 (I-787) and 22 (Selkirk).

The most problematic locations for shoulder parking in the study area are not on limited-access highways, but on secondary roads that are situated in areas where they are close to existing truck stops that are filled beyond their capacity and/or are access routes to major industrial areas. Concentrations of shoulder parking were regularly observed in the following two areas of the region:

- Route NY-22 in Canaan, alongside the Love's Travel Center and Onvo truck stop. These two truck stops are located just north of Exit B3 on I-90, the last interchange on I-90 before the Massachusetts state line. The truck stops are filled beyond their capacity during peak overnight periods. The heavy parking activity in this area reflects the high volume of long-haul truck traffic along the I-90 corridor, coupled with the limited truck parking capacity in the service areas along the Massachusetts Turnpike in the western part of that state.
- Route NY-7 in Duanesburg, adjacent to the Pilot Travel Center and Exit 25 on I-88. The heavy concentration of truck parking in this area is a convergence of three factors: (1) the demand for parking that exceeds the available capacity at the Pilot location; (2) the strategic location of this area at the last interchange on I-88 before it terminates at the New York State Thruway; and (3) staging activity in the overnight and early morning hours for trucks making deliveries at the Rotterdam Industrial Park to the north.

In both locations, the roadways are conducive to informal shoulder parking because of the wide shoulders and low traffic volumes on a secondary road.

Examples of trucks parked along the roadway shoulders in these two areas are shown in the photos on the following page.

Route NY-22 in Canaan

Route NY-7 in Duanesburg

72-Hour Parking Profiles

The data collection tasks outlined previously represent a snapshot of truck parking activity in the Capital Region during peak overnight periods. This data was supplemented with a more comprehensive profile of parking activity at a sample set of locations in the study area. The plan for this task was to identify a set of six to eight parking facilities around the study area that would be representative of the region as a whole. GPS-based truck location data compiled by the American Transportation Research Institute (ATRI) were used for this effort. ATRI maintains a national database of GPS data from the onboard tracking systems of trucks in the fleets of many of the member trucking firms of the American Trucking Associations (ATA). The ATA compiles and archives this data for research purposes, with the data scrubbed to eliminate identifying characteristics of individual trucks and protect the confidentiality of the trucking firms' records.

For this temporal analysis of parking activity, a set of sample locations was identified that represents a broad cross-section of the Capital Region. The sample locations included all three major types of facilities (highway rest areas, Thruway service plazas, and off-highway truck stops) and covered the major highway corridors around the region to the north (I-87/Northway), east (I-90), south (I-87/Thruway) and west (I-90/Thruway). A total of ten parking facilities were included in the eight sample locations (areas) used for this analysis. Two of the areas included multiple facilities, as a single contiguous geo-fenced area was defined for each of these areas that incorporated multiple contiguous parking sites. These sample areas were defined for this analysis:

Area 1: Route NY-22 north of I-90 in Canaan (includes the Love's Travel Center and Onvo truck stop, along with the shoulders of NY-22 between them)
Area 2: New Baltimore Service Area (Thruway/I-87 NB and SB)
Area 3: Clifton Park Rest Area (I-87 NB)
Area 4: Wilton Travel Plaza
Area 5: Glens Falls/Queensbury Rest Area (I-87 SB)
Area 6: Guilderland Service Area (Thruway/I-90 EB)
Area 7: Pattersonville Service Area (Thruway/I-90 WB)
Area 8: TravelCenters of America (TA) Fultonville Truck Stop

The sample locations were delineated in GIS with a "geo-fence" to establish boundaries where trucks entered and exited throughout a 72-hour period that extended from 12:00 noon on a Monday through 12:00 noon on a Thursday. Any truck that entered the geo-fenced area and remained stationary for a minimum of 30 consecutive minutes was identified as a "parked truck." For each of the sample locations, and for the aggregated weighted compilation of all the sample locations, a profile of parking activity for these parked trucks was developed. These profiles included the following:

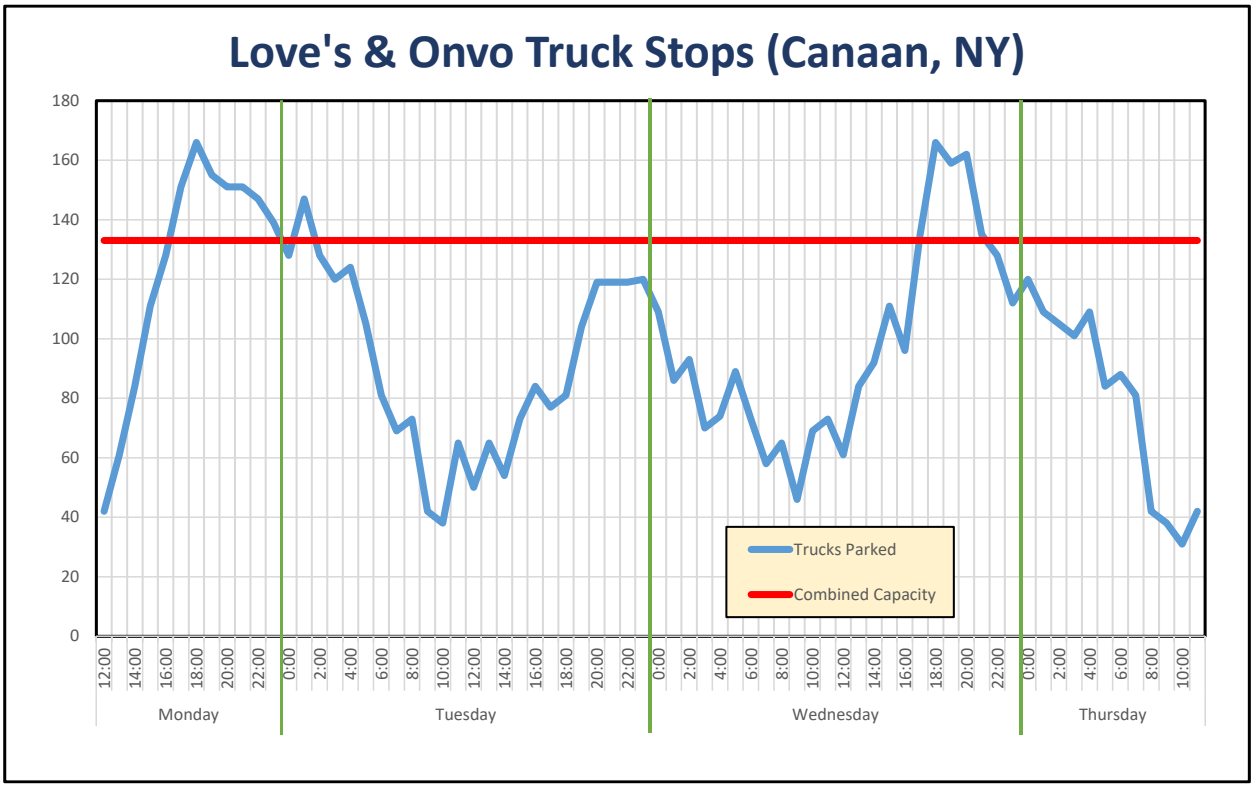
- Parking occupancy in 15-minute intervals – expanded from the sample data set using an adjustment factor based on the actual peak overnight counts from the facility data collected separately.

- Parking duration in the following increments:
  - 30 minutes to 1 hour
  - 1 to 2 hours
  - 2 to 3 hours
  - 3 to 7 hours
  - 7 to 10 hours
  - 10+ hours
- Next stops for each parked truck in the sample – to develop a geographic profile that can be used to estimate long-haul "through" trips vs. local deliveries in the Capital Region and surrounding counties.

ATRI data from the period of October 18th through 21st of 2021 was used for seven of the eight areas sampled in this analysis. The New Baltimore Service Area was undergoing a major reconstruction during this week, so data from a comparable Monday-Thursday period in 2019 (October 21st through 24th) was used for Area 2.

A detailed compilation of data for each of the eight sample areas, and for the combined aggregated regional data for these areas, is provided in the following sections.

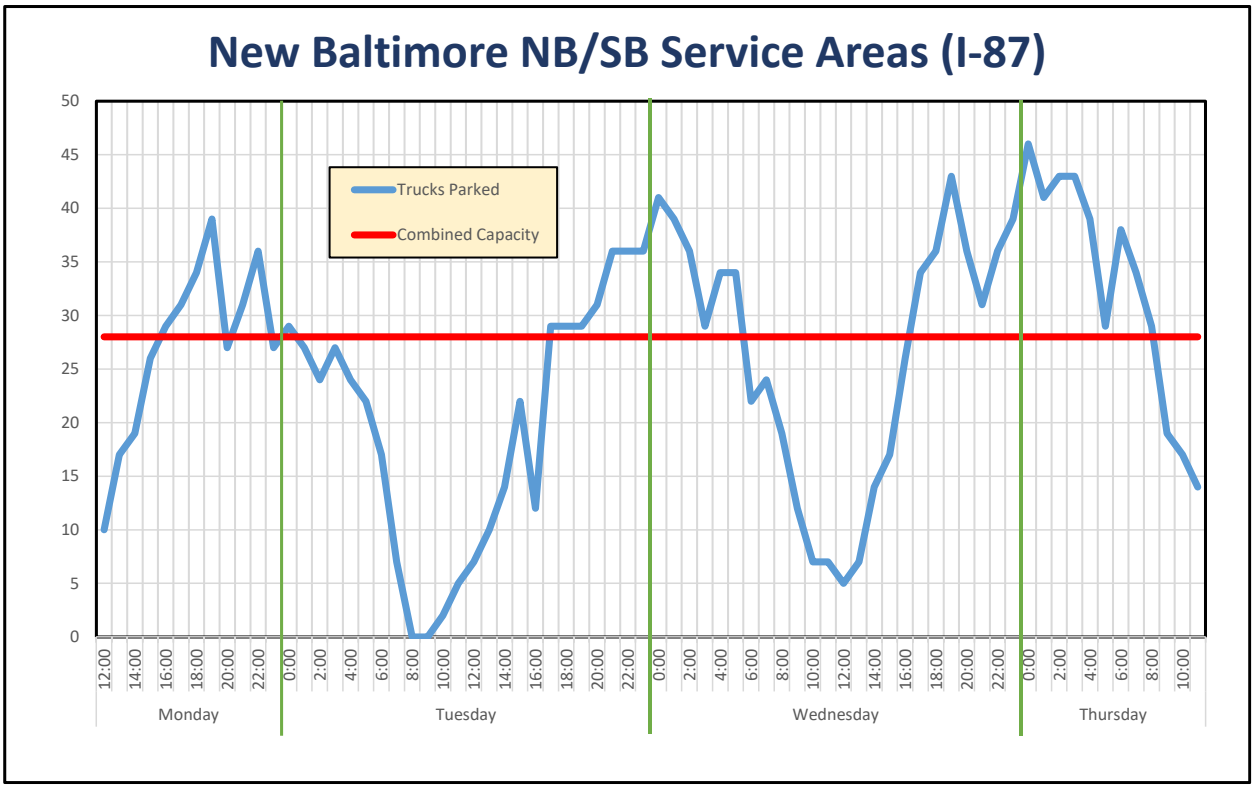
Area 1: Route NY-22 North of I-90 in Canaan



Duration (Hours)	October 18 -21	MON	TUE	WED	THU
	0.5-1	18	27	34	16
	1-2	9	14	11	6
	2-3	3	0	0	1
	3-7	3	7	1	1
	7-10	4	9	4	1
	10+	48	37	52	6
	TOTAL	**85**	**94**	**102**	**31**

NEXT STOP	PCT.
Study Area Counties	6.5%
Study Area Border Counties	8.4%
Other New York Counties	23.4%
New England	35.3%
New Jersey / Pennsylvania	9.0%
Canada	4.6%
Other	12.8%

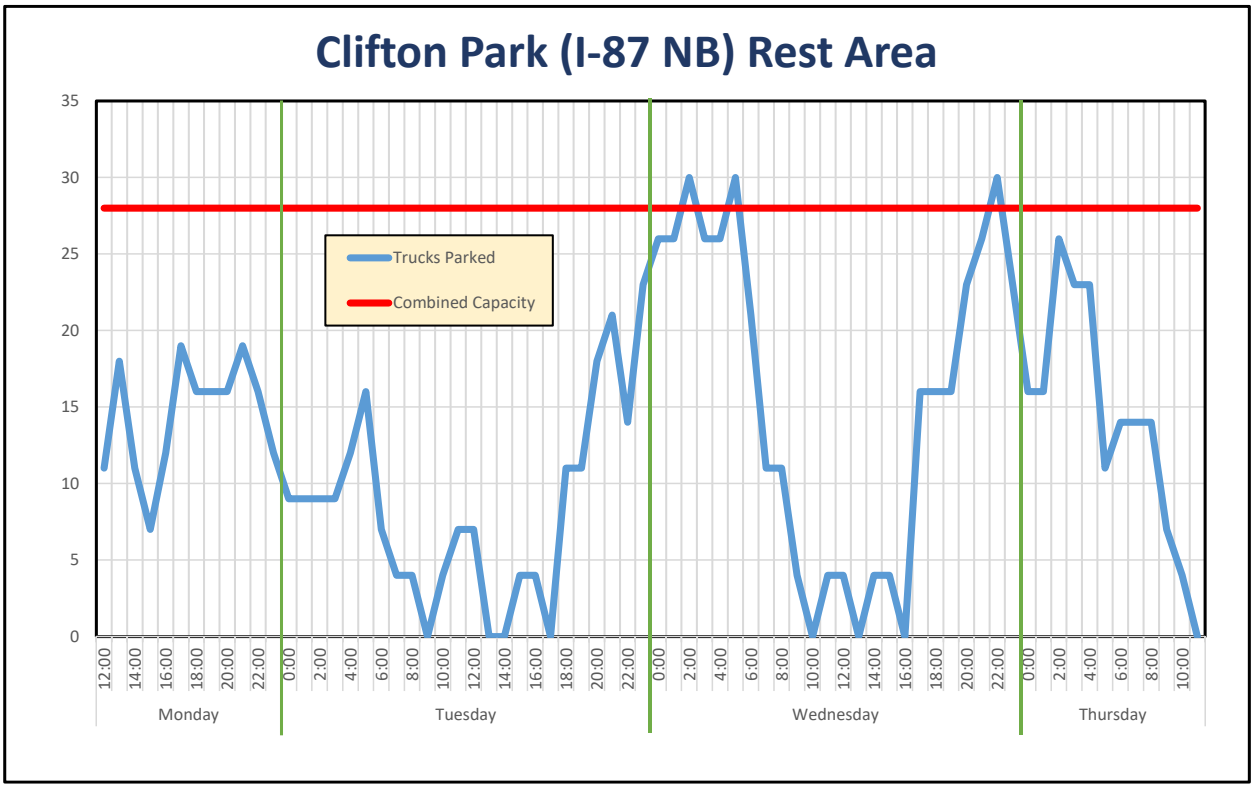
Area 2: New Baltimore Service Area (Thruway/I-87 NB and SB)



Duration (Hours)	October 21 -24	MON	TUE	WED	THU
	0.5-1	7	12	11	9
	1-2	2	4	2	2
	2-3	2	0	2	1
	3-7	1	2	2	0
	7-10	2	2	3	1
	10+	13	15	19	4
	TOTAL	**27**	**35**	**39**	**17**

NEXT STOP	PCT.
Study Area Counties	11.8%
Study Area Border Counties	16.3%
Other New York Counties	18.3%
New England	9.8%
New Jersey / Pennsylvania	31.4%
Canada	1.3%
Other	11.1%

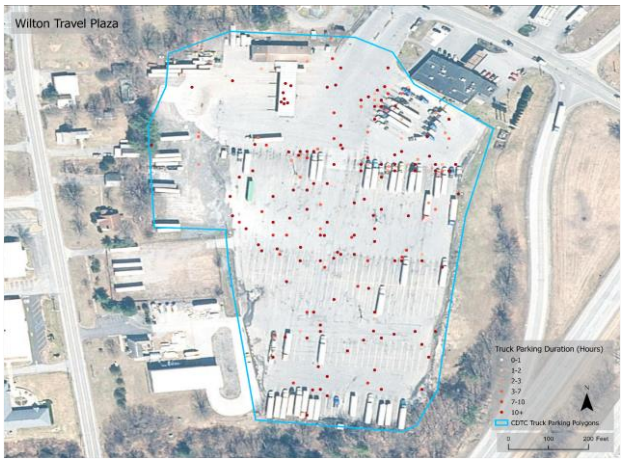
Area 3: Clifton Park Rest Area (I-87 NB)

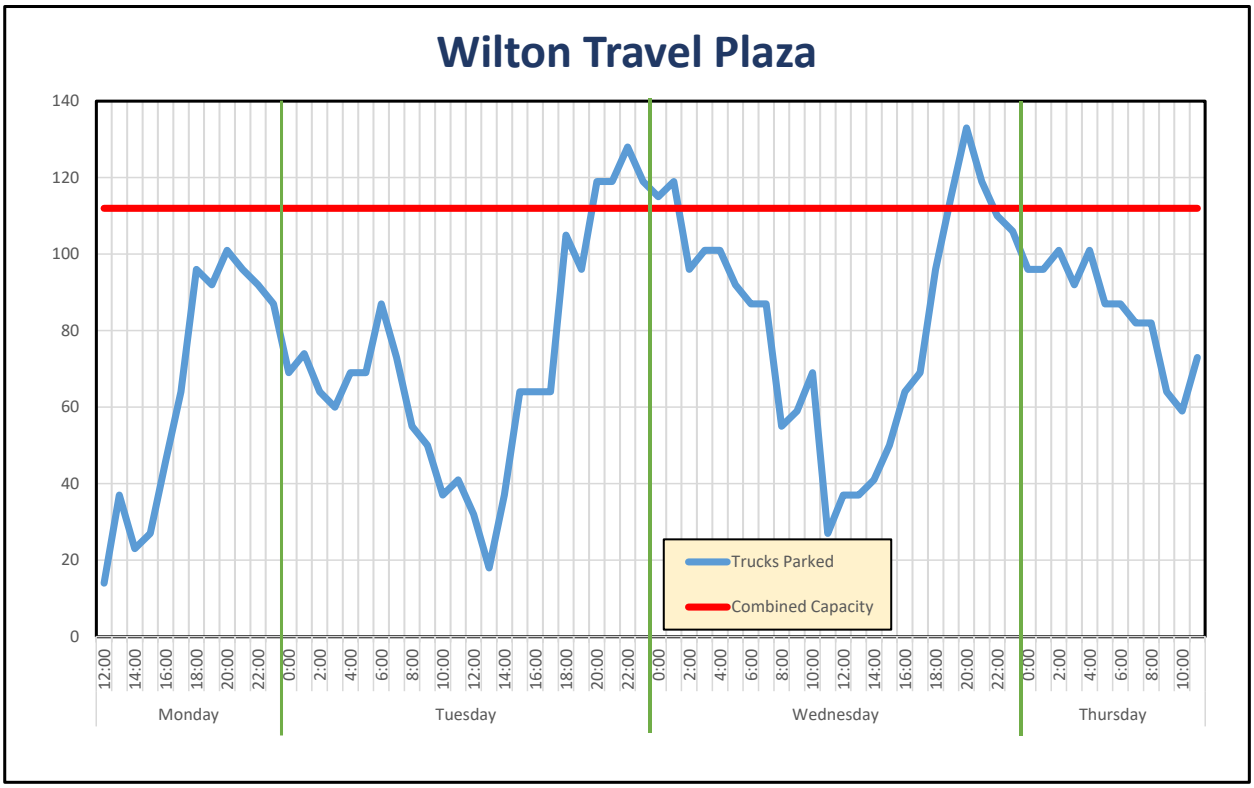


Duration (Hours)	October 18 -21	MON	TUE	WED	THU
	0.5-1	2	4	5	1
	1-2	1	1	1	1
	2-3	0	0	1	1
	3-7	1	1	1	2
	7-10	1	0	2	0
	10+	3	6	4	0
	TOTAL	**8**	**12**	**14**	**5**

NEXT STOP	PCT.
Study Area Counties	16.7%
Study Area Border Counties	11.9%
Other New York Counties	21.4%
New England	4.8%
New Jersey / Pennsylvania	2.4%
Canada	38.1%
Other	4.7%

Area 4: Wilton Travel Plaza

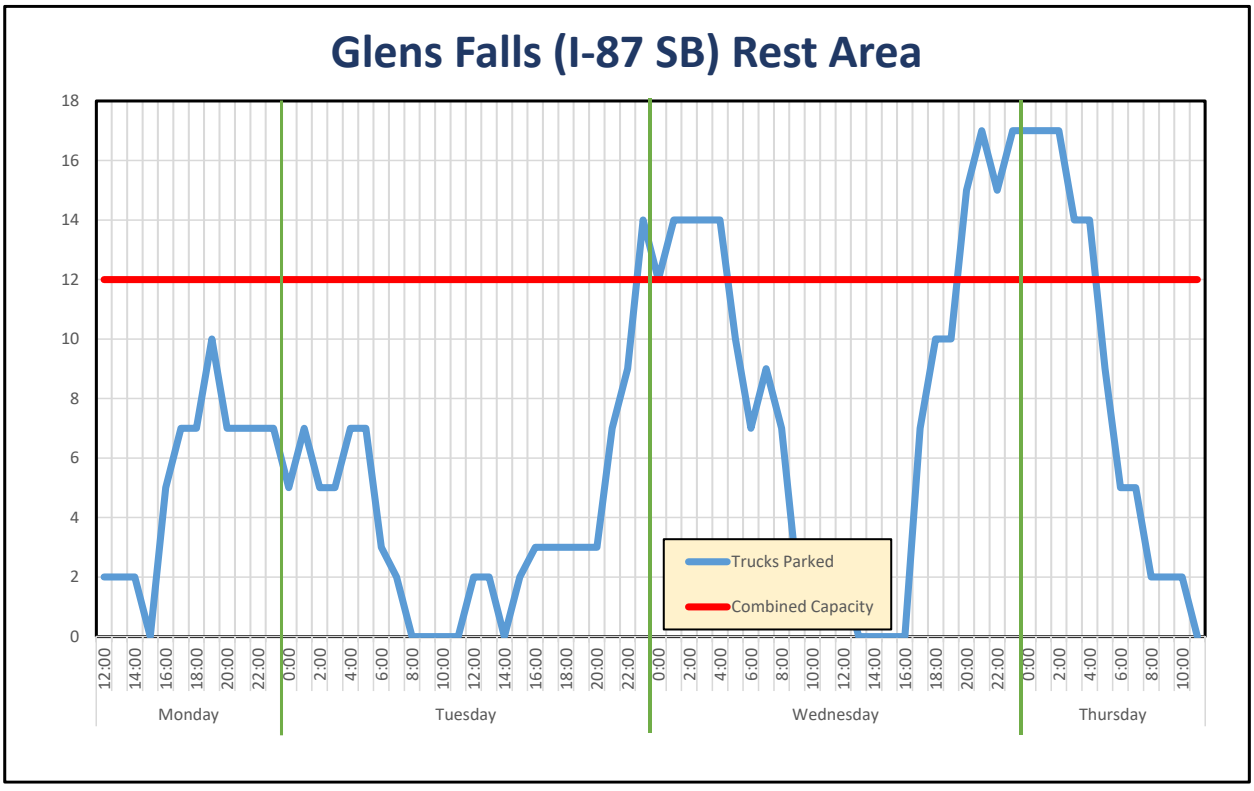




Duration (Hours)	October 18 -21	MON	TUE	WED	THU
	0.5-1	2	7	17	9
	1-2	1	4	2	3
	2-3	2	3	1	1
	3-7	2	6	4	3
	7-10	3	7	7	2
	10+	28	36	31	3
	TOTAL	**38**	**63**	**62**	**21**

NEXT STOP	PCT.
Study Area Counties	18.2%
Study Area Border Counties	4.9%
Other New York Counties	15.8%
New England	13.8%
New Jersey / Pennsylvania	14.8%
Canada	17.2%
Other	15.3%

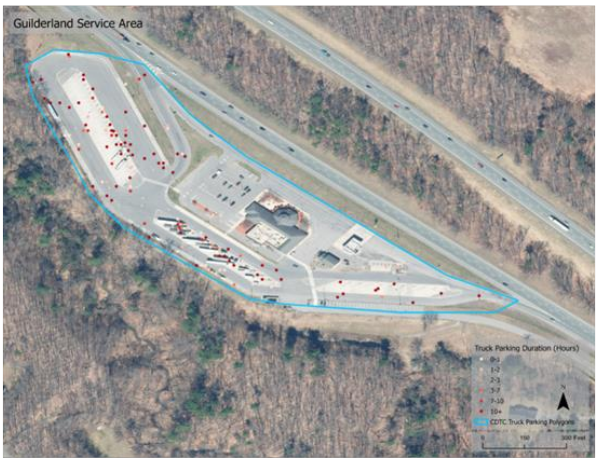
Area 5: Glens Falls/Queensbury Rest Area (I-87 SB)

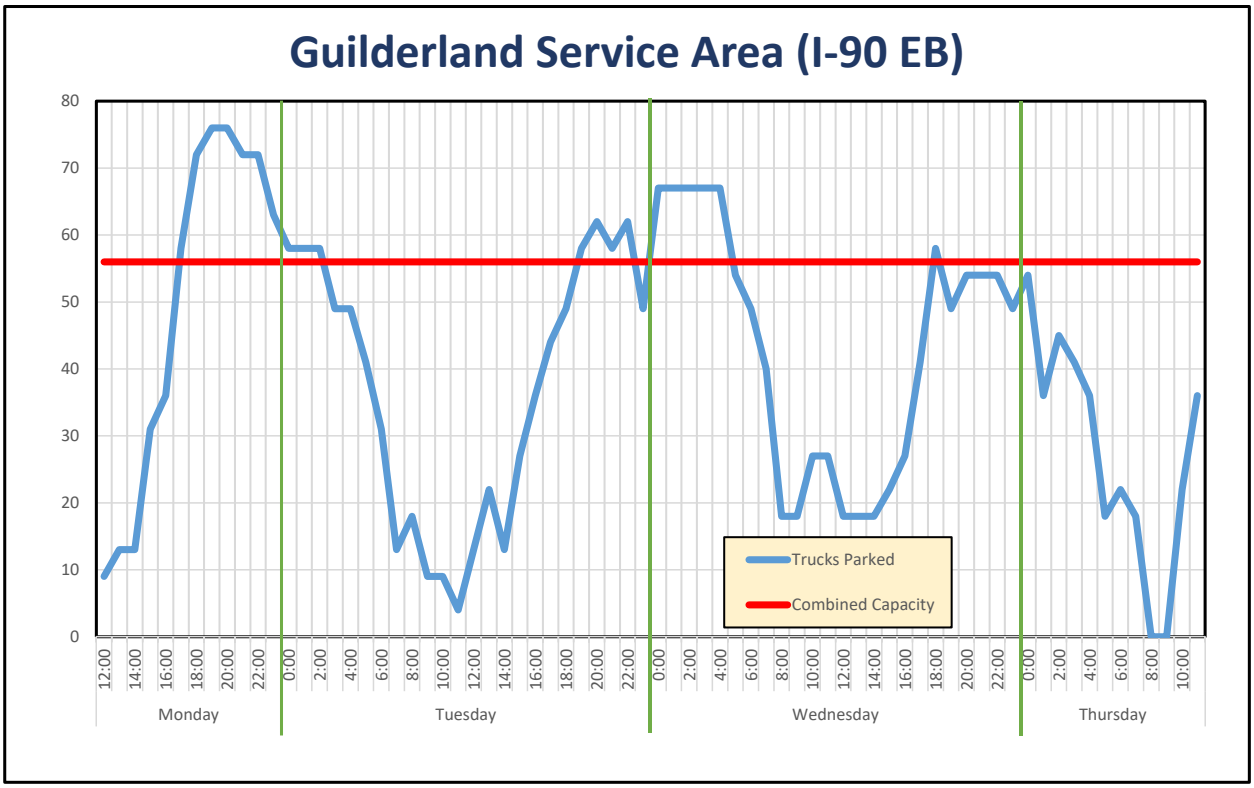


Duration (Hours)	October 18 -21	MON	TUE	WED	THU
	0.5-1	3	1	4	3
	1-2	0	1	0	0
	2-3	0	0	0	1
	3-7	0	0	1	0
	7-10	0	0	3	1
	10+	3	5	5	2
	TOTAL	**6**	**7**	**13**	**7**

NEXT STOP	PCT.
Study Area Counties	12.5%
Study Area Border Counties	3.1%
Other New York Counties	15.6%
New England	12.5%
New Jersey / Pennsylvania	43.8%
Canada	3.1%
Other	9.4%

Area 6: Guilderland Service Area (Thruway/I-90 EB)

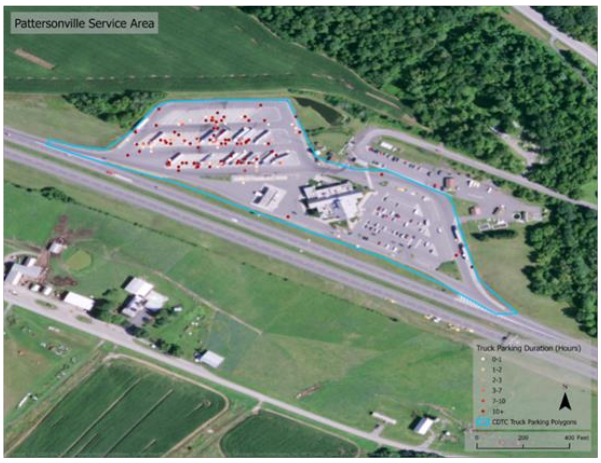


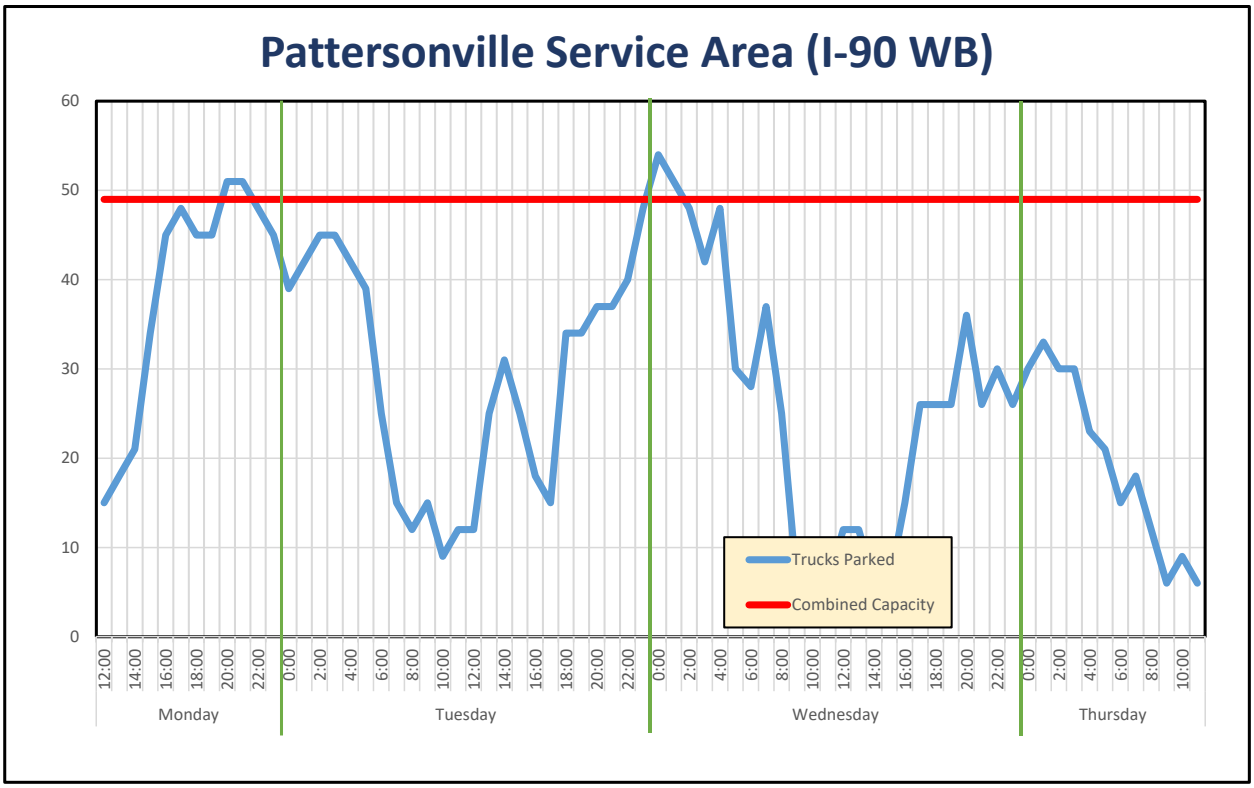


Duration (Hours)	October 18 -21	MON	TUE	WED	THU
	0.5-1	5	9	12	5
	1-2	2	2	3	1
	2-3	0	0	0	0
	3-7	2	0	3	0
	7-10	2	3	1	1
	10+	17	16	10	2
	TOTAL	**28**	**30**	**29**	**9**

NEXT STOP	PCT.
Study Area Counties	10.7%
Study Area Border Counties	6.9%
Other New York Counties	6.1%
New England	53.4%
New Jersey / Pennsylvania	13.7%
Canada	5.3%
Other	3.9%

Area 7: Pattersonville Service Area (Thruway/I-90 WB)

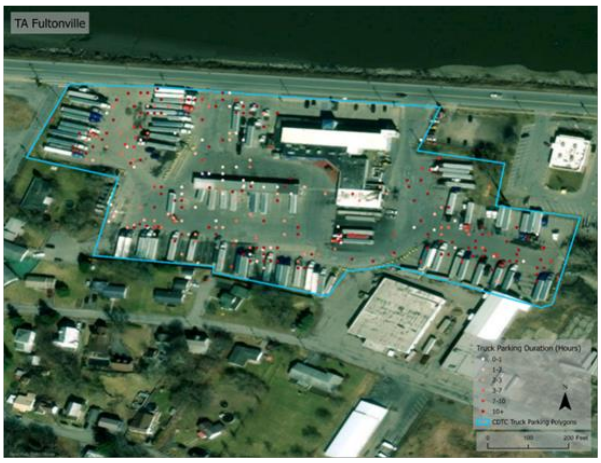


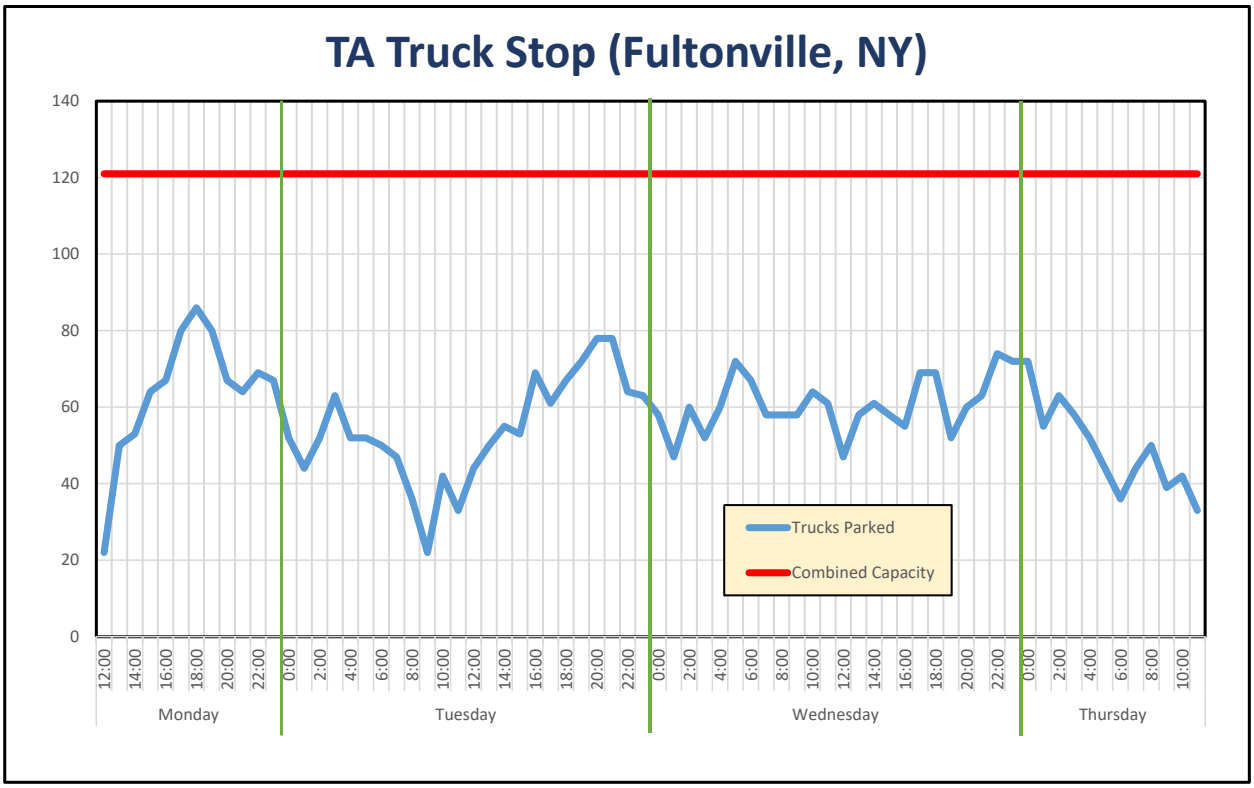


Duration (Hours)	October 18 -21	MON	TUE	WED	THU
	0.5-1	11	14	9	7
	1-2	1	3	3	2
	2-3	3	0	0	0
	3-7	0	0	1	1
	7-10	2	5	2	1
	10+	19	15	11	0
	TOTAL	**36**	**37**	**26**	**11**

NEXT STOP	PCT.
Study Area Counties	2.2%
Study Area Border Counties	7.3%
Other New York Counties	48.2%
New England	0.7%
New Jersey / Pennsylvania	5.8%
Canada	13.1%
Other	22.7%

Area 8: TravelCenters of America (TA) Fultonville Truck Stop

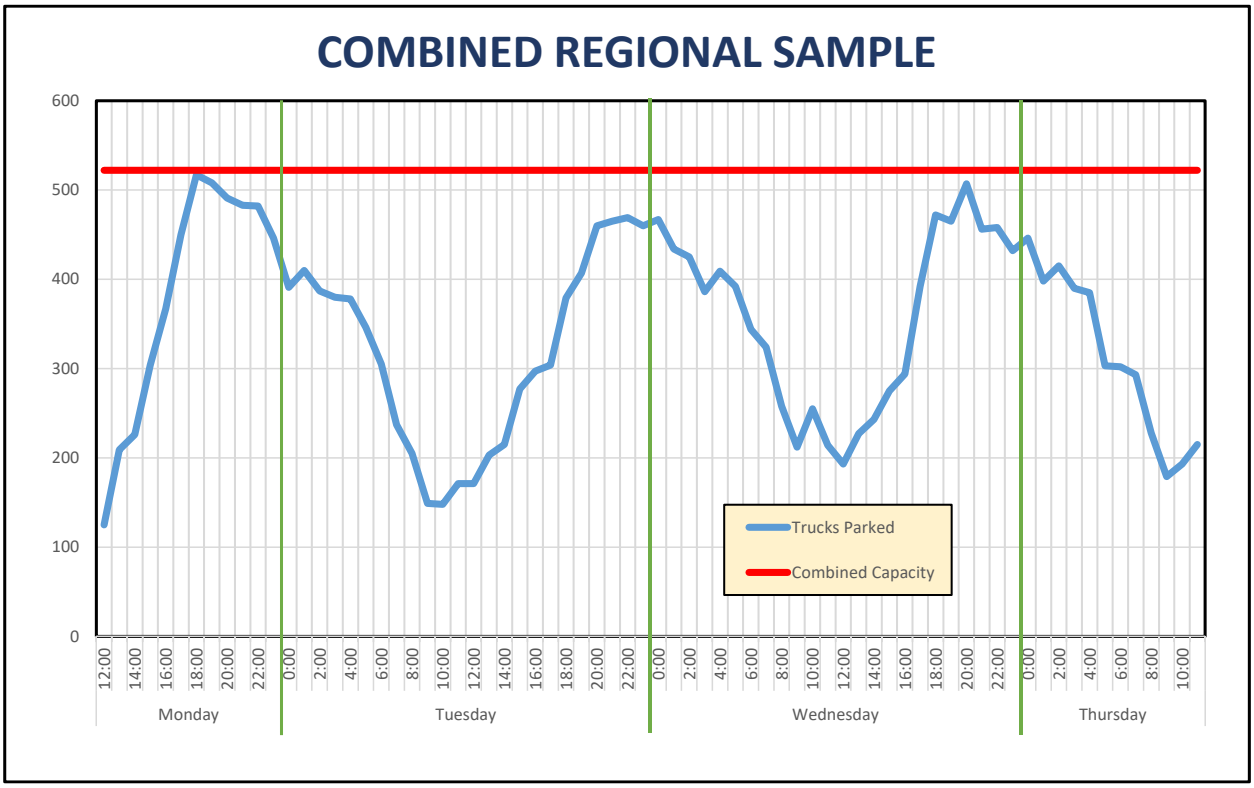




Duration (Hours)	October 18 -21	MON	TUE	WED	THU
	0.5-1	10	15	15	5
	1-2	7	6	11	3
	2-3	4	6	2	3
	3-7	8	8	8	2
	7-10	4	9	9	2
	10+	28	33	27	8
	TOTAL	**61**	**77**	**72**	**23**

NEXT STOP	PCT.
Study Area Counties	19.5%
Study Area Border Counties	29.3%
Other New York Counties	31.7%
New England	12.2%
New Jersey / Pennsylvania	7.3%
Canada	0.0%
Other	0.0%

72-Hour Profiles: Combined Regional Sample



NEXT STOP	PCT.
Study Area Counties	9.8%
Study Area Border Counties	13.6%
Other New York Counties	23.0%
New England	21.0%
New Jersey / Pennsylvania	13.2%
Canada	7.4%
Other	12.0%

New York State Thruway Tandem Trailer Lots

Long combination vehicles (LCVs) under certain configurations are permitted to operate on the New York State Thruway, up to a maximum size of two (tandem) 48-foot trailers. Since these vehicles cannot operate on most local roads in New York and most surrounding states, the Thruway Authority maintains a set of tandem trailer lots at most interchanges that are used to combine or separate trailers for trips off the Thruway. Most of these lots operate 24 hours a

day with minimal restrictions on access, though some of them are limited by time of day or for "makeup only" or "breakup only" activities.[1]

Some changes in the operation of these lots have been made in recent years. Most of these changes were adopted due to interchange operations with the implementation of all-electronic tolling on the Thruway during the COVID pandemic in 2020. Of particular note in the Capital Region are the following:

- The lot at Interchange 23 (I-787 in Albany) has been closed permanently.
- The tandem lot at Interchange 24 (I-87/Northway) is a "breakup only" lot that is only accessible to trucks exiting the Thruway. No direct access to eastbound I-90 is permitted for single tractor-trailer combinations exiting the lot, due to the elimination of the toll plaza and the short weaving section along the roadway between the Thruway mainline and the I-87/I-90 split.
- The lot at Interchange 25 is a "makeup only" lot located on the northbound side of the roadway where I-88 terminates before joining the Thruway mainline.

While these facilities are owned and operated by the NYSTA and are designed for truck access and the storage of trailers for up to twelve hours at a time, the NYSTA has no current plans to consider any of these locations for additional truck parking.

Summary of Baseline Data

The data collection program conducted for this Truck Parking Study provides a comprehensive picture of parking activity across the Capital Region of upstate New York. The peak overnight parking utilization counts, supplemented with the 72-hour truck parking profiles at the eight sample locations, will serve as a solid foundation for the study's recommendations to address current and future truck parking needs across the region.

Important findings from the data collection program include the following:

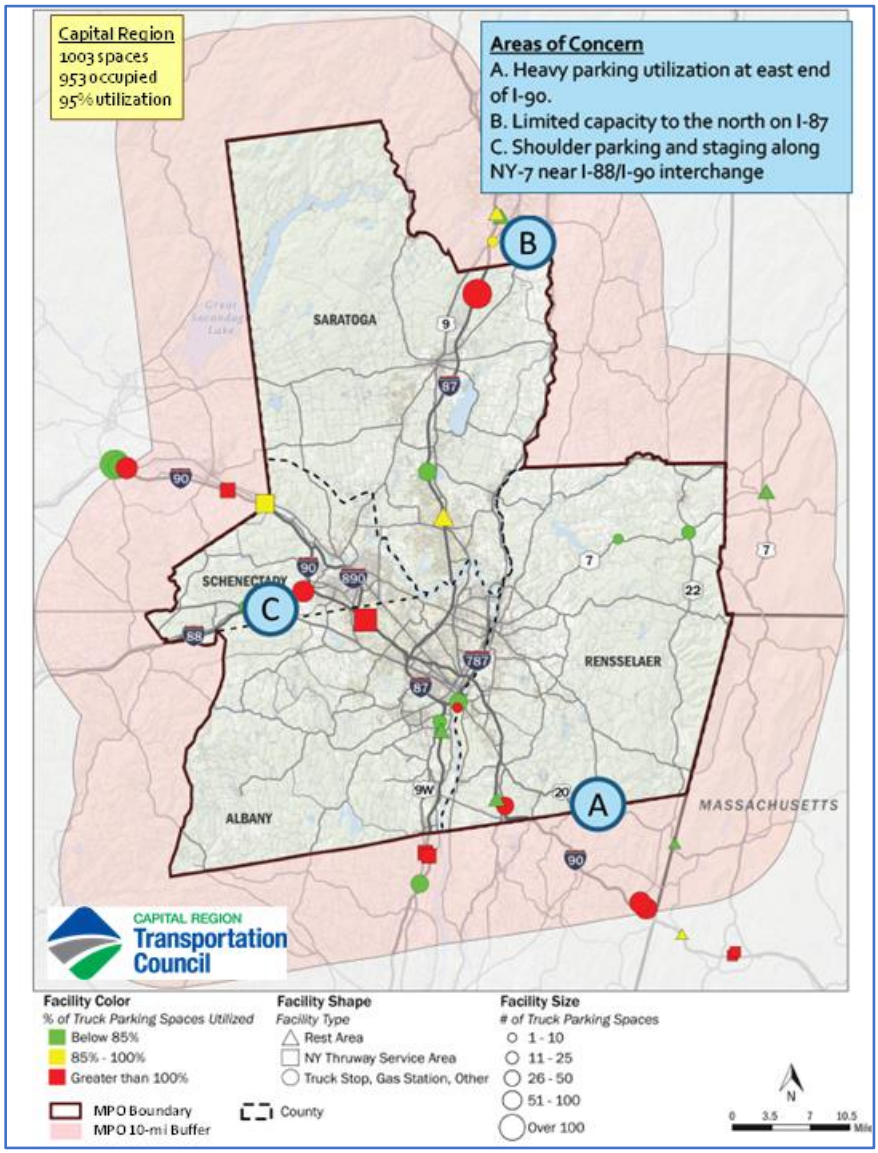
1. There are 32 truck parking facilities in the Capital Region that serve as truck parking locations.
2. Data collected at these facilities indicate that while the region as a whole has sufficient parking capacity to meet its current needs, most of the 32 facilities are operating near or above their capacity during peak overnight periods.
3. Some of the under-utilized facilities in the region are private truck stops where parking is available on a permit-only basis, or for a parking fee.

[1] Tanden trailer lots are locations where two tandem trailers can be assembled for tractor-trailer combinations entering the New York State Thruway or broken down into two separate trailers after these trucks exit the New York State Thruway. Most of these lots accommodate both operations. A "makeup only" area is a location where only the first activity is permitted, while a "breakup only" area is one where only the second is permitted.

4. Reserved parking and fee-based parking are becoming more commonplace at truck stops in many areas of the U.S. Two of the three Pilot Travel Center locations in the Capital Region have some spaces designated for reserved, paid parking.
5. Across the Capital Region approximately 95% of the spaces in the 32 facilities are occupied during peak overnight periods, which typically occur between midnight and 5:00 AM. The aggregated peak parking utilization for the eight sample areas where the 72-hour temporal distribution of parking activity was developed closely reflects this 95% peak utilization rate.
6. Truck parking on highway shoulders and interchange ramps is not a major issue on limited-access highways in the study area, but this informal parking activity has been observed on secondary roads such as Route NY-22 in Canaan and Route NY-7 in Duanesburg.
7. Most of the parking facilities in the study area provide access to bathroom facilities for truck drivers. Exceptions include small wayside parking areas with limited capacity and retail sites (e.g., convenience stores) that may not be open 24 hours a day.
8. Trucks tend to park for extended periods of time across the region. For trucks that stopped for a minimum of 30 minutes, the median parking duration exceeded 10 hours at all eight of the sample areas where 72-hour parking profiles were developed.
9. Most of the trucks parked in the study area are traveling to destinations outside the Capital Region. However, a significant number of them are making their next stop within the Capital Region and its surrounding counties. This figure ranges from 9.5% at the Pattersonville Service Area on the westbound Thruway (I-90) to nearly 40% at the TravelCenters of America truck stop in Fultonville.
10. Recent and ongoing industrial development activity just outside the Capital Region is likely to have accompanying truck parking activity for staging inside the Region. Target, Dollar General and Beech-Nut, for example, have large distribution centers located along Route NY-5S just west of Amsterdam in Montgomery County that handle substantial volumes of truck traffic. The Dollar General has dedicated parking spaces on site for staging trucks, while the others do not. The Johnstown Industrial Park in Fulton County is home to sizable facilities for several major industries, including Walmart and Benjamin Moore.
11. The areas in the Capital Region where truck parking activity is currently a concern due to parking demand that exceeds available capacity include the following:
    - the eastern section of I-90 from Schodack to the Massachusetts state line and onto the Massachusetts Turnpike;
    - the junction of the Thruway and I-88 in the Rotterdam area, and along Route NY-7 from Duanesburg to the Rotterdam Industrial Park; and
    - the I-87 corridor at the northern end of the study area, where the Wilton Travel Plaza is the last major truck parking facility between Albany and the Plattsburgh area more than 150 miles to the north.

A truck parking profile for the Capital District and a summary of the key findings is illustrated on the following page.

Capital Region Truck Parking Profile and Summary



Analysis of Future Conditions

Future truck parking activity in the Capital Region would be determined by a range of factors, including overall truck volumes on the regional roadway network, new development of freight-intensive land uses, and trip origins and destinations for trucks traveling through the region. For this study, a broad region-wide estimate for the 2030 and 2035 horizon years was developed based on available data related to truck freight volumes, origins/destinations, and future forecasts. These estimates were applied uniformly across all of the facilities documented in Table 1 to determine the projected latent parking demand for the future horizon years. This represents an unconstrained estimate of future parking demand absent any changes such as different truck routing and trip planning, modified rest/sleep schedules by time of day,

diversion to alternate parking locations based on availability of spaces, and potential future changes in parking capacity related to new facilities, new industrial development with on-site truck staging spaces, or the establishment of parking fees at existing facilities.

The model used for calculating future truck parking demand across the region for the 2030 horizon year is based on the following calculations:[2]

$$DT_{2030} = DS_{2030} + DL_{2030}$$

$$DS_{2030} = DS_{Baseline} \times (1 + GFS_{2030})$$

$$DL_{2030} = DL_{Baseline} \times (1 + GFL_{2030})$$

Where:

DT_{2030} = Total Parking Demand for 2030 by Facility

$DS_{Baseline}$ = Current Parking Demand for Staging Trucks (23.4% of the total demand, based on the regional "Next Stop" share documented in the previous section)

DS_{2030} = Parking Demand for Staging Trucks for 2030

$DL_{Baseline}$ = Current Parking Demand for Long-Haul Trucks (76.6% of the total demand)

DL_{2030} = Parking Demand for Long-Haul Trucks for 2030

GFS_{2030} = Growth Factor for Staging Trucks, 2022-2030

GFL_{2030} = Growth Factor for Long-Haul Trucks, 2022-2030

This breakdown of truck parking activity between staging and long-haul trucks is possible because the "Next Stop" data collected for this effort serves as a reasonable estimate of trucks that are parked in the region that are making their next stop within the study area and its environs. For the purpose of this study, any truck that is making its next stop within the "Study Area Counties" or the "Study Area Border Counties" as described in the previous section is considered to be a "staging" stop. This breakdown of parking types is also possible because of the availability of external data for baseline and future horizon years that can be used to make reasonable estimates of local vs. long-haul trips to and through the region.

The USDOT/Bureau of Transportation Statistics (BTS) Freight Analysis Framework (FAF) database is a summary of freight transportation activity by state and metropolitan area, with measures of tonnage, value, and ton-miles by mode, origin/destination, and commodity type. FAF Version 5.5.1 contains estimates of these figures for a 2017 Base Year, a Preliminary Estimate for 2022, and forecast years for 2023 through 2050.

The Albany, New York metropolitan area has its own defined FAF zone in FAF5.5.1.[3] The growth rates for trucks destined for the Capital Region for the 2030 and 2035 horizon years were based

[2] Identical calculations were done for the 2035 horizon year, with the "2030" subscript substituted by "2035" in all the calculation descriptions.

[3] The Albany FAF zone is defined under the BTS 2017 Commodity Flow Survey. This does not match the Capital Region MPO boundaries or the study area for this effort, but the growth rates contained in FAF are reasonable estimates of future truck activity for the region.

on the estimated growth in inbound truck tonnage from all other FAF zones. These growth factors are used to estimate future demand related to "Staging Trucks" in the calculations described above.

For long-haul truck traffic through the region, similar growth factors were developed using an aggregate of state-level FAF data for truck tonnage to and from New England, the rest of New York, and other neighboring states including New Jersey, Pennsylvania and Ohio for the 2030 and 2035 horizon years. While these figures do not precisely represent future truck flows on the major highways in the Capital Region, they are reasonable estimates of future changes in overall long-haul truck traffic throughout the Northeastern U.S.

Based on the FAF data tabulations described above, the growth factors used to estimate future truck parking demand across the Capital Region were as follows:

GFS_{2030} = Growth Factor for Staging Trucks (2022-2030) = **9.0%**

GFS_{2035} = Growth Factor for Staging Trucks (2022-2035) = **14.1%**

GFL_{2030} = Growth Factor for Long-Haul Trucks (2022-2030) = **15.5%**

GFL_{2035} = Growth Factor for Long-Haul Trucks (2022-2035) = **22.6%**

These growth factors were applied to the Baseline Utilization figures for each of the 32 facilities documented in Table 1 to compute projected future parking demand on a facility-by-facility basis for the 2030 and 2035 horizon years. A summary of these results is presented in **Table 2**. Any figures over 100% in the table represent locations where parking demand exceeds the available capacity for the baseline and/or one or both future horizon years.

While the facility-by-facility projections represent an unconstrained estimate of truck parking demand that is subject to a range of unknown factors, the estimates of overall parking demand in the region for the 2030 and 2035 horizon years are important considerations for this study. In the absence of any changes in trucking operations or new parking capacity, the aggregate parking demand in the region is expected to exceed the available capacity by 2030 and will continue to grow beyond that.

Important findings from this analysis include the following:

1. Eighteen of the 32 truck parking facilities in the Capital Region are projected to operate above their capacity during peak overnight hours by 2035. Most (13) of these are already operating with peak utilization rates above 100% today.
2. Parking facilities at the east end of I-90 in both New York State and Massachusetts consistently show the highest utilization rates. This is partly a function of the small size of many of these facilities (the eastbound and westbound Lee Service Plazas on the MassPike, for example).
3. Most of the large facilities in the region are projected to be operating above 100% of their capacity by 2035. These include the Wilton Travel Plaza (estimated 112 spaces), the Ambest (now Onvo) in Canaan (estimated 75 spaces) and Pilot #494 in Duanesburg (68 spaces).

4. There is projected to be some excess parking capacity available in a number of facilities that provide truck parking under fee-based arrangements. These include the Onvo facility in Fultonville, the 21B Travel Plaza off the New York State Thruway, and the Plaza 23 Truck Stop in the Albany port area.
5. Because long-haul truck travel through the region is projected to grow at a higher rate than truck trips destined for the Capital Region, the "Staging" share of peak overnight truck parking in the region is projected to decline slightly from 23.4% of the total parking demand today to 22.1% by 2035.

Table 2: Truck Parking Facilities – Future Conditions

#	Facility Name	Parking Capacity	Util.	%	2030	%	2035	%
1	Guilderland Service Area	56	71	127%	81	145%	86	154%
2	Exit 11 Truck Stop	28	9	32%	10	36%	10	36%
3	Pattersonville Service Area	49	49	100%	55	112%	59	120%
4	Love's #611	58	64	110%	73	126%	77	133%
5	Ambest Canaan	75	78	104%	89	119%	94	125%
6	Wilton Travel Plaza	112	128	114%	146	130%	154	138%
7	TA Fultonville #209	121	86	71%	98	81%	104	86%
8	Onvo Fultonville	52	10	19%	12	23%	12	23%
9	Clifton Park Rest Area	28	25	89%	28	100%	30	107%
10	Adirondacks Welcome Center	18	11	61%	13	72%	13	72%
11	Glens Falls (South) Rest Area	12	12	100%	14	117%	14	117%
12	21B Travel Plaza	38	15	39%	17	45%	18	47%
13	New Baltimore Service Area (NB)	15	19	127%	22	147%	23	153%
14	New Baltimore Service Area (SB)	13	17	131%	19	146%	21	162%
15	Pilot #146	35	44	126%	50	143%	53	151%
16	US-20 Rest Area – MA	1	0	0%	0	0%	0	0%
17	I-90 WB Rest Area	14	10	71%	12	86%	12	86%
18	NYST SB Parking Area (Albany)	13	9	69%	10	77%	10	77%
19	Petrol 9W	13	0	0%	0	0%	0	0%
20	Mikey Mart Sunoco	14	5	36%	5	36%	6	43%
21	Pittstown Sunoco	3	1	33%	1	33%	1	33%
22	Plaza 23 Truck Stop	45	31	69%	35	78%	37	82%
23	Albany Port District	1	4	400%	5	500%	5	500%
24	Pilot #494	68	79	116%	90	132%	95	140%
25	Pilot #1317	55	78	142%	89	162%	94	171%
26	Lee Service Plaza EB – MA	9	21	233%	24	267%	26	289%
27	Lee Service Plaza WB – MA	5	27	540%	31	620%	32	640%
28	Mohawk Service Plaza	16	27	169%	31	194%	32	200%
29	Bennington Welcome Center – VT	12	7	58%	8	67%	9	75%
30	Exxon Minit Mart	8	8	100%	9	113%	10	125%
31	I-90 EB Parking Area – MA	6	6	100%	7	117%	8	133%
32	Duanesburg Diner	10	2	20%	3	30%	3	30%
	TOTALS	**1,003**	**953**	**95%**	**1,087**	**108%**	**1,148**	**114%**

Recommendations: A Nine-Point Strategy

Truck parking is a complex challenge involving a number of public organizations and private sector industries, all of which should be part of the solution. While an MPO is rarely well positioned to serve as a direct implementation partner for solutions to this problem, the Capital Region Transportation Council can serve as a focal point for stakeholder outreach related to the efforts to implement the recommendations described below. The ultimate goal of this strategy is to eliminate unsafe truck parking practices, to help promote practices that support the efficient movement of freight by truck, to assist in facilitating new and expanded facilities, and to develop innovative ways to foster partnerships to address this problem. The elements of the nine-point strategy are documented in the following sections, followed by a detailed implementation plan as presented in **Table 3**.

Recommendation #1 – Seek Opportunities to Expand Truck Parking along the I-90 Corridor East of the Hudson River

As discussed previously in this report, the I-90 corridor between Albany and the Massachusetts state line is one of the primary areas of concern for truck parking in the Capital Region. Most of the truck parking facilities along this corridor are operating above 100% of their designated capacity during peak overnight periods. Symptoms of this problem can be seen along Route NY-22 in Canaan, just north of I-90. The two truck stops along this road – Love's and Ambest/Onvo – are filled beyond their capacity during overnight hours on a typical weeknight. Overflow parking takes place along the shoulders of NY-22 adjacent to these two truck stops, presenting a safety concern for passing motorists as well as the accelerated deterioration of pavement along the shoulders where the hard paved surface meets the landscaped roadside area.

This problem is exacerbated by the limited availability of truck parking along I-90 to the east in Massachusetts. The eastbound and westbound service plazas on the Massachusetts Turnpike in the Lee area are located approximately 8.5 miles from the state line. These two locations have fewer than 15 designated truck parking spaces between them, and they accommodate substantially more parked trucks outside marked spaces during peak overnight hours.

More than 35% of the trucks parked in the Love's and Ambest/Onvo truck stops and along the adjoining roadway shoulders make their next stop in New England after departing from this location.

<u>Recommendation</u>

Conduct a corridor-wide study along I-90 to determine the feasibility of expanding existing truck parking facilities or developing new facilities. This effort should be concentrated in the corridor extending from the interchange of I-90 and the New York State Thruway Berkshire Extension in the west to the eastbound and westbound Blandford Service Plazas on the Massachusetts Turnpike (approximate milepost 29). The development of new facilities should be focused on locations outside the right-of-way, so as to allow for dual-directional access

along I-90. Public-private partnerships (P3s) involving existing or future commercial establishments along this corridor should be considered.

Implementing Partner(s): New York State Department of Transportation (NYSDOT), Massachusetts Department of Transportation (MassDOT), New York State Thruway Authority (NYSTA), municipal governments (as applicable), private travel center developers (depending on location).

Recommendation #2 – Seek Opportunities to Expand Truck Parking along the Eastern Portion of I-88

There is limited truck parking capacity available along the eastern end of the I-88 corridor. The nearest NYSDOT rest areas on I-88 are in the Worcester area, more than 40 miles to the west. Exit 25 is the easternmost interchange on I-88 before the highway terminates at the New York State Thruway (I-90). The Pilot Travel Center on Route NY-7 adjacent to Exit 25 is routinely filled beyond its capacity during peak periods, and overflow truck parking can be frequently observed along the shoulders of NY-7 in the vicinity of this truck stop.

Recommendation

Work with NYSDOT, municipal governments in the area and potential private developers to identify opportunities to develop new truck parking capacity along the eastern portion of I-88.

Implementing Partner(s): Local municipal governments, New York State Department of Transportation (NYSDOT), and private developers.

Recommendation #3 – Potential New Truck Parking Capacity and Driver Services at New York State Thruway Service Areas

New York State Thruway service plazas in the study are heavily used during peak overnight periods. Since the NYSTA is exempt from the Federal statutory restrictions on commercial sales and services on the Interstate Highway System, these service plazas represent an opportunity to build parking expansion initiatives into a business model that already serves the trucking industry. In addition, the location of truck parking spaces at full-service rest facilities like these service areas is a preferred arrangement for long-haul truckers who can avail themselves of products and services that are not available at traditional highway rest areas.

Recommendation

Review ongoing and long-term plans for NYSTA service area modernization projects, and identify opportunities to expand truck parking capacity at heavily used facilities. The Mohawk Service Area on I-90 Eastbound is listed under Phase 2 of the ongoing modernization program, and this is the service area on I-90 in the study area with the fewest spaces on site. The changes that have been made at the Guilderland Service Area around 2010 can serve as a guide for a truck parking expansion project at a service area. The service area originally had eleven marked

truck parking stalls directly behind the building housing the retail services and traveler amenities. It was expanded to accommodate more than 40 additional spaces by adding new rows of parking stalls adjacent to the access ramp to the service area from the eastbound Thruway and alongside the fuel pump area near the return ramp to the highway.

As the ongoing modernization program is currently in progress and many Phase 1 sites have already been completed, this recommendation should be implemented through a coordinated effort with outside funding partners such as the FHWA or other funding agencies as part of a regional initiative.

Aside from the parking capacity expansion options described here, the NYSTA should also consider developing a pilot concept at a major service area that incorporates truck driver amenities such as showers, laundry facilities and a driver lounge into an existing or expanded building. This concept would be similar to the facility constructed at the Vince Lombardi Service Area on the New Jersey Turnpike around 2004. This type of resource would typically only be suitable for large truck parking facilities that attract sufficient users to support the on-site amenities, so it would ideally be developed in conjunction with a potential parking expansion project where the total on-site parking capacity exceeds a suitable threshold.

Implementing Partner(s): NYSTA, Empire State Thruway Partners, NYSDOT (for potential Federal funding options).

Recommendation #4 – Expand Truck Parking Capacity at Existing Interstate Highway Rest Areas, as Needed and Feasible

Most of the public rest areas on the Interstate Highway System outside the Thruway appear to have sufficient spaces to accommodate the current parking demand during peak overnight periods. These facilities are not ideal for extended truck parking because of the limited amenities on site, but NYSDOT regulations allow trucks to park for up to ten consecutive hours to match the mandatory rest period established under Federal Motor Carrier Safety Administration driver hours of service rules.

Recommendation

Truck parking capacity, utilization and other operating characteristics are now required elements of statewide freight studies under Federal Law. Truck parking utilization should be monitored periodically at all Interstate Highway System rest areas, at a minimum of every four years in coordination with the update cycle for the New York State Freight Transportation Plan. Recreational vehicle and non-commercial trailer usage of parking spaces should be included in this monitoring, to determine if there is a potential need for additional truck, bus and/or RV parking at any site. If so, the feasibility of parking expansion should be addressed in future modernization and rehabilitation projects at these rest areas.

Implementing Partner(s): NYSDOT.

Recommendation #5 – Develop Formal Municipal Guidance for Incorporating Truck Parking and Staging into Industrial Site Approvals

About 25% of the trucks parked during peak overnight periods in the Capital Region are making their next stop in the Capital Region and its surrounding counties. These trucks are typically parked during overnight or early morning hours while waiting to make a delivery to a local customer. This type of staging is a sizable component of truck parking activity in most U.S. metro areas. Addressing this parking need in the context of the development process for industrial properties is an effective way to deal with truck parking capacity constraints in highway rest areas and private truck stops. Incorporating truck parking stalls in new industrial sites also helps enhance the efficiency of a supply chain by allowing trucks to stage for these deliveries at their final destination rather than several miles away.

Recommendation

Develop a guidance document for municipalities to incorporate truck parking provisions in zoning codes and site plan approval processes for industrial development. This guidance should expand upon the four key elements of "Truck Parking Tool #5: Address Truck Staging Needs in Zoning for Industrial Sites" in the companion **Truck Parking Toolkit** developed by the Capital Region Transportation Council:

- Incorporate parking/staging studies for trucks in traffic impact assessments for industrial land uses.
- Implement zoning requirements for truck parking spaces at industrial sites, using standard zoning metrics such as spaces per thousand square feet of gross floor area or spaces per loading dock door.
- Implement zoning provisions that require developers to incorporate driver amenities within an industrial building.
- Explore options for a zoning requirement for industrial properties to allow long-term parking for drivers making deliveries to the site to park for sufficient duration of time to meet FMCSA rest requirements.

This effort should include outreach to neighbors outside the Capital Region Transportation Council MPO region where large-scale industrial development projects are under consideration or in the pipeline. This would be particularly applicable to the west, where there are large new industrial development sites and existing industrial parks in Montgomery and Fulton Counties.

Implementing Partner(s): Capital Region Transportation Council: Freight Advisory Committee, municipal governments, New York State Economic Development Council (NYSEDC), Industrial Development Agencies (as applicable).

Recommendation #6 – Conduct Pilot Study for Truck Electrification/Idle Reduction Technology in Capital Region

With the increased national focus on fuel efficiency and the reduction of fossil fuel use, battery-powered trucks and charging options will be important elements of future truck parking facilities. The Capital Region has the resources to test the implementation of these technologies under a range of weather and operating conditions and for multiple types of users (long-haul trucks, local deliveries, staging at customer locations, etc.). These technologies have implications for some of the other recommendations in this study, particularly as they impact site designs and truck parking layouts for parking expansion projects.

Recommendation

Conduct a pilot study to assess the feasibility of incorporating vehicle electrification in truck parking facilities. This study should include considerations for two types of electrification needs that can be addressed together or separately: (1) on-site recharging of EV batteries (for vehicles up to Class 8 tractors), and (2) truck idling elimination through a "shore power" concept. The pilot study should be conducted at an existing truck parking facility or at a facility that can be used to test prototypes in an environment that is similar to a truck stop or rest area. It should address critical factors in the implementation and adaptation of these technologies, including the following:

- Site design considerations (e.g., the physical space required for circulation, parking and hardware)
- Electrification needs, including power availability and installation costs
- Business models for covering the cost of developing and maintaining the hardware and providing the electricity (public vs. private, with considerations for the Federal restrictions on rest area commercialization)
- Feasibility of implementing electrification technologies at shipper/receiver locations in addition to truck stops
- Technology options for battery charging, idle elimination and/or both
- Battery charging time and implications for supply chain efficiency under FMCSA hours of service rules
- Safety considerations for vehicles charging with a driver in a sleeper berth

Implementing Partner(s): NYSDOT (for testing facility and/or securing Federal funding), NYSTA (as applicable), private truck stop facility owner (as applicable), private shipper/warehouse owner (as applicable), Capital District Clean Communities

Recommendation #7 – Explore Options for New/Expanded Truck Parking in the Vicinity of Exits 16 and/or 17 of the Adirondack Northway (I-87)

The I-87 corridor north of the Capital Region is an area of concern for truck parking due to several factors, including the limited availability of truck parking along I-87 through the Adirondack Mountains and the development of large distribution centers in this area. The Wilton Travel Plaza on Ballard Road at Exit 16 is the largest truck parking facility in the Capital Region, and it is heavily used during overnight peak parking periods.

Recommendation

In coordination with the municipal site development guidelines described in Recommendation #5 and the emergency parking options described for Recommendation #8, explore options for meeting the current and future truck parking needs along the I-87 corridor north of Albany. Options could include one or more of the following: (1) development of new private retail sites with sizable truck parking capacity, (2) new or expanded truck parking capacity in the vicinity of the Wilton Travel Plaza, and/or (3) on-site truck parking and staging areas in conjunction with industrial site development projects.

Implementing Partner(s): Private industrial developers, municipal governments, NYSDOT (to ensure that future truck parking needs at existing rest areas are addressed)

Recommendation #8 – Develop Emergency Truck Parking Plan for the Capital Region

Weather-related travel disruptions are common in winter months in upstate New York. Emergency parking plans are effective tools to deal with disruptive events such as major traffic incidents or inclement weather. These events present truck drivers with a combination of two challenges: the need for parking at an unexpected time in a driver's schedule, and an unusually heavy demand on parking facilities that may already be operating at or beyond their capacity during normal peak periods.

Public and private sector stakeholders can effectively address these challenges by developing contingency plans for disruptions that include truck detour routes (in the event of road closures) and temporary emergency parking arrangements at non-traditional locations.

Recommendation

Develop an emergency truck parking plan for the Capital Region and its surrounding highway network. This plan should build upon existing emergency operations plans in place at the state or municipal levels, and include provisions for truck detours and sites for ad hoc truck parking under road closures or other travel disruptions. Potential locations for emergency truck parking could include sites with large paved areas that are typically lightly used or closed during weather-related travel disruptions. Major sports venues, commuter park & ride lots,

fairgrounds parking areas, and unused parking lots at large shopping centers are usually well suited for this purpose.

Implementing Partner(s): NYSDOT, New York State Police, New York Office of Emergency Management, municipal governments, facility owners/operators (as needed)

Recommendation #9 – Ongoing Public and Stakeholder Outreach

Truck parking issues in the Capital Region are likely to change over time as trucking volumes grow, the trucking industry adopts new practices to address capacity constraints as they arise, and the needs of shippers change. The Capital Region Transportation Council is well positioned to serve as a facilitator for public and stakeholder outreach efforts in the future. To that end, periodic updates for the MPO, its standing committees (particularly the Freight Advisory Committee), private industry stakeholders, and the public at large would be a valuable component of the agency's freight planning efforts. This effort can be closely coordinated with the needs of NYSDOT as it goes through future periodic updates of the statewide freight plan under the four-year planning cycle now required under Federal law.

Recommendation

Conduct periodic reviews of public and stakeholder input through the website address listed below. This domain will be active for approximately two years from the date of the publication of this draft report. Coordinate planning and data collection updates with NYSDOT as part of future statewide freight planning updates on a four-year cycle.

CDTCTruckParking.org

Implementing Partner(s): Capital Region Transportation Council, NYSDOT

Table 3: Implementation Plan

No.	Recommendation	Implementation Horizon *	Primary Implementing Partner(s)	Estimated Cost **	Potential Funding Sources
1	Seek Opportunities to Expand Truck Parking along the I-90 Corridor East of the Hudson River	Medium-Long	NYSDOT, MassDOT, NYSTA	High	- Surface Transportation Block Grant Program (STBG) - National Highway Freight Program (NHFP) - Highway Safety Improvement Program (HSIP) - National Highway Performance Program (NHPP) - INFRA Grants (formerly FASTLane) - BUILD Grants (formerly TIGER) - *Private Capital*
2	Seek Opportunities to Expand Truck Parking in the Vicinity of the I-90/I-88 Interchange in Schenectady County	Medium-Long	NYSDOT; municipal governments of Duanesburg, Princetown and/or Rotterdam	High	See Recommendation #1
3	Potential New Truck Parking Capacity and Driver Services at New York State Thruway Service Areas	Long	NYSTA, Empire State Thruway Partners	High	*Private Capital* (through existing P3)
4	Expand Truck Parking Capacity at Existing Interstate Highway Rest Areas, as Needed and Feasible	Medium-Long	NYSDOT	Medium	STBG, NHFP, HSIP, NHPP, INFRA, BUILD
5	Develop Formal Municipal Guidance for Incorporating Truck Parking and Staging into Industrial Site Approvals	Short	Capital Region Transportation Council (Freight Advisory Committee)	Low	Internal agency operations
6	Conduct Pilot Study for Truck Electrification/Idle Reduction Technology in Capital Region	Short-Medium	Capital District Clean Communities, NYSDOT, NYSTA (if applicable)	Medium-High	- Congestion Mitigation and Air Quality Improvement Program (CMAQ) - National Electric Vehicle Infrastructure (NEVI) Formula Program - Community and Fueling Infrastructure (CFI) Grant Program
7	Explore Options for New/Expanded Truck Parking in the Vicinity of Exits 16 and/or 17 of the Adirondack Northway (I-87)	Medium-Long	Private industrial developers; municipal government (Wilton)	High	See Recommendation #1
8	Develop Emergency Truck Parking Plan for the Capital Region	Short	NYSDOT, New York State Police, New York Office of Emergency Management	Low	Internal agency operations
9	Ongoing Public and Stakeholder Outreach	Short	Capital Region Transportation Council, NYSDOT	Low	Internal agency operations

* Short = 0-2 years; Medium = 2-5 years; Long = 5+ years
** Low = $0 to $1M; Medium = $1M to $5M; High = $5M+

CAPITAL REGION Transportation Council

CAPITAL REGION TRUCK PARKING STUDY

Final Report

Appendix A: Environmental Mitigation

Appendix B1: SAC Meeting #1 Presentation

Appendix B2: SAC Meeting #2 Presentation

Appendix B3: SAC Meeting #3 Presentation

Appendix C1: Freight Advisory Committee Briefing #1

Appendix C2: Freight Advisory Committee Briefing #2

Appendix D: Planning Committee Presentation

Appendix E1: NYSAMPO Poster

Appendix E2: NYSAMPO Poster Narrative

Appendix E3: NYSAMPO Freight Working Group Presentation

Appendix F: Truck Parking Toolkit

January 29, 2024

CAPITAL REGION Transportation Council

APPENDIX A

ENVIRONMENTAL MITIGATION

Environmental Mitigation

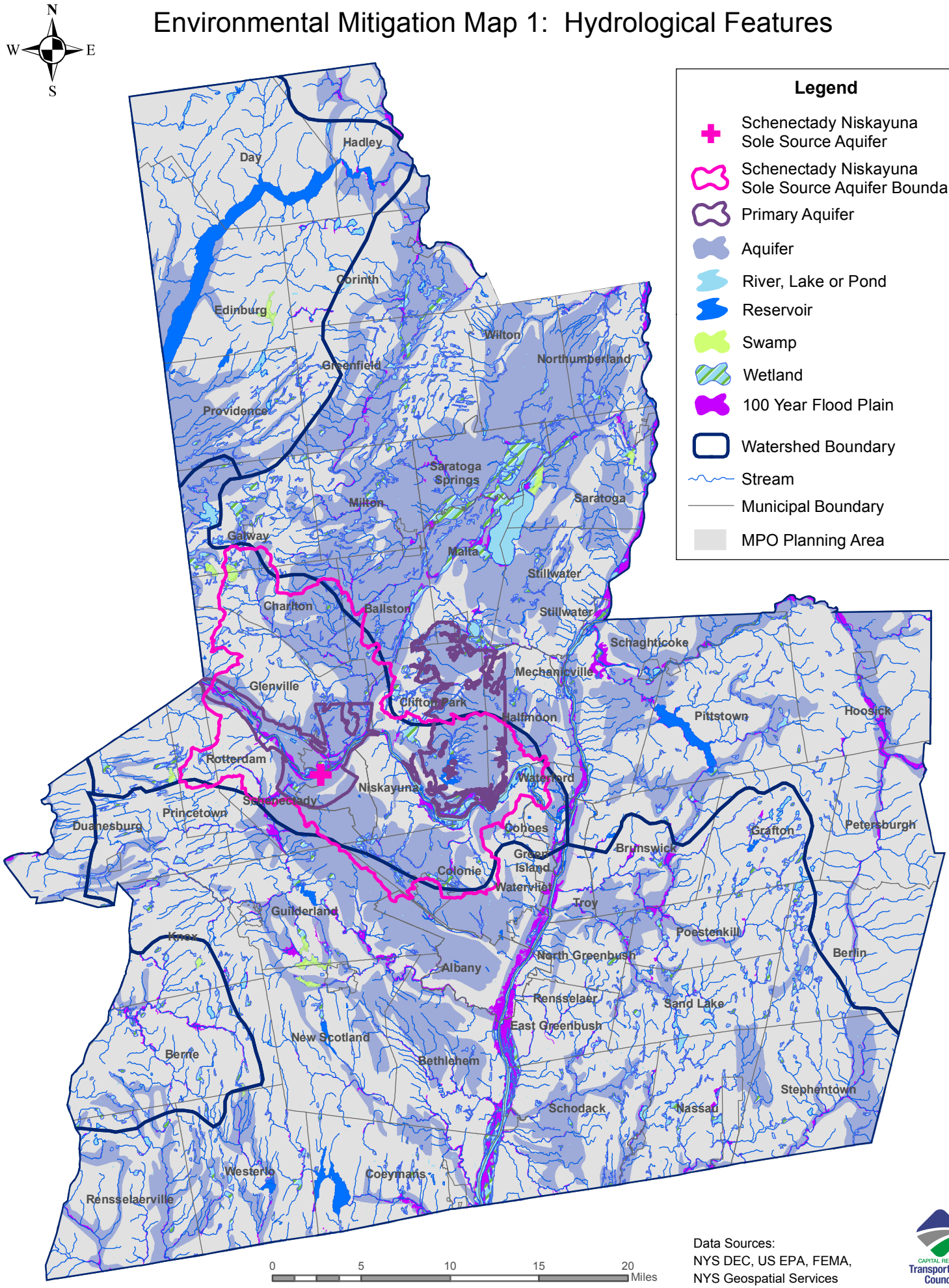
The Capital Region Transportation Council's (Transportation Council) regional transportation plan encourages smart growth as well as investment and development in urban areas as a method to protect natural resources. Smart growth policies also help to protect rural character and open space, and protect quality of life in the Capital Region. The Transportation Council has undertaken a review of natural and cultural resource mapping, and for the development of the Regional Transportation Plan, consults with federal, state and local agencies on environmental issues as an important part of the environmental mitigation process, as required by the FAST Act. In addition, the Transportation Council conducts scans of environmental systems related to candidate transportation projects for federal funds and documents the environmental systems present in the study areas for Linkage Program planning initiatives and other regional studies.

The following features are mapped at the project and regional level to screen for potential impacts:

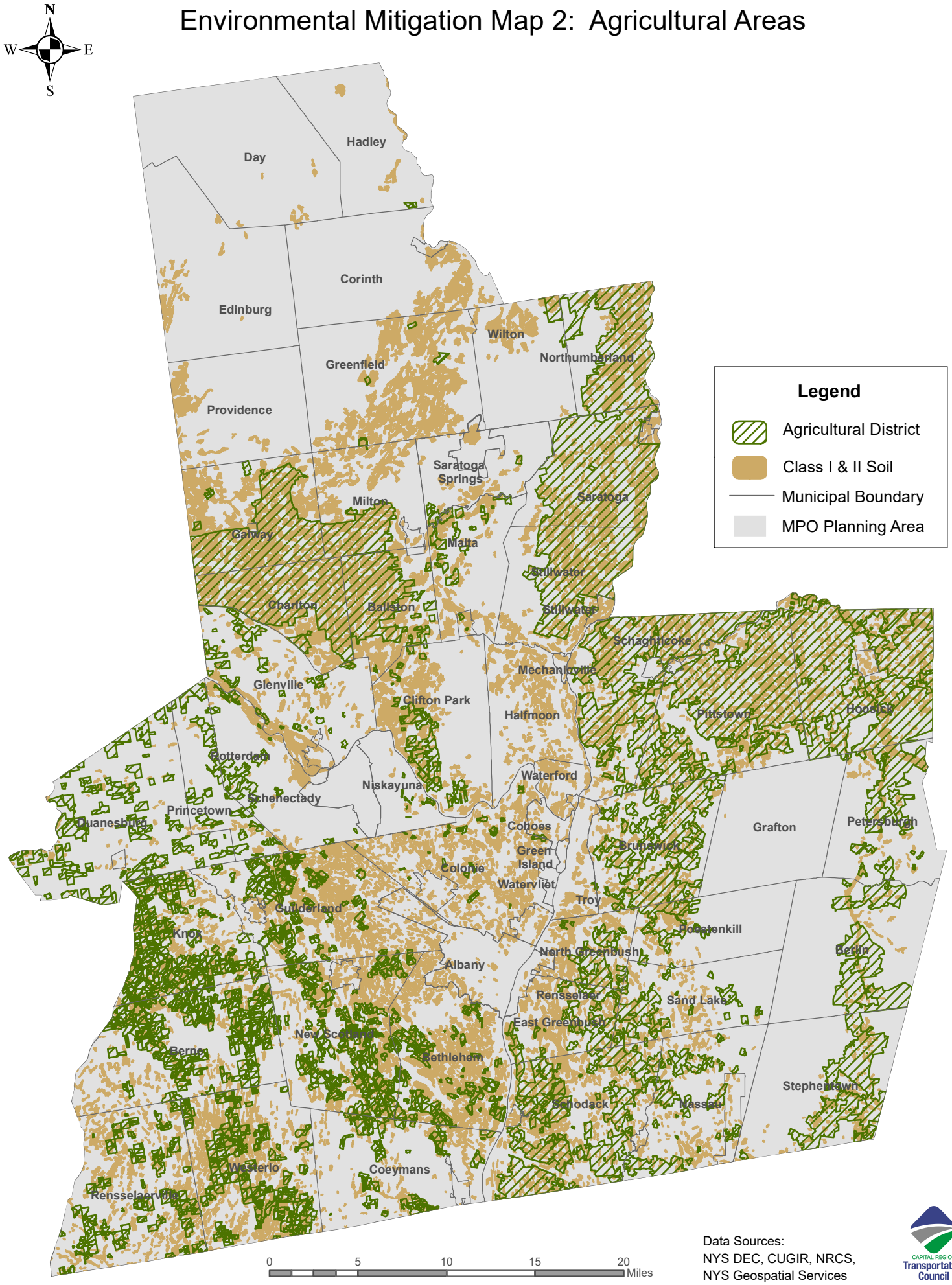
- sole source aquifers
- aquifers
- reservoirs
- water features (streams, lakes, rivers, ponds, and swamps)
- wetlands
- watersheds
- 100-year flood plains
- 500-year flood plains
- rare animal populations
- rare plant populations
- significant ecological sites
- significant ecological communities
- state historic sites
- national historic sites
- national historic register districts
- national historic register properties
- federal parks and lands
- state parks and forests
- state unique areas
- state wildlife management areas
- county forests and preserves
- municipal parks and lands
- land trust sites
- NYS DEC lands
- Adirondack Park
- agricultural districts
- NY Protected Lands
- natural community habitats
- rare plant habitats
- Class I & II soils

The five regional level maps of natural and cultural resources are included below:

Environmental Mitigation Map 1: Hydrological Features



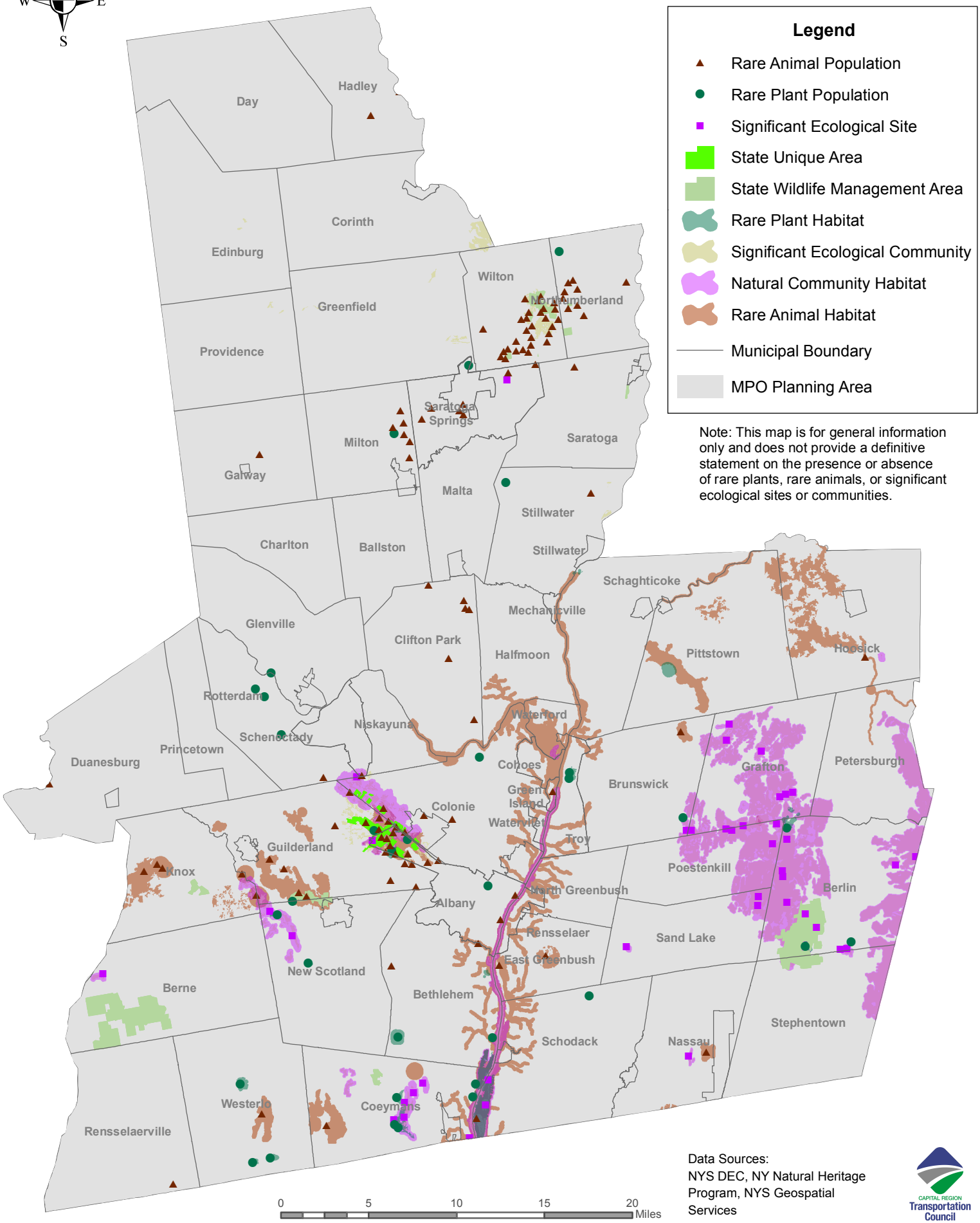
Environmental Mitigation Map 2: Agricultural Areas



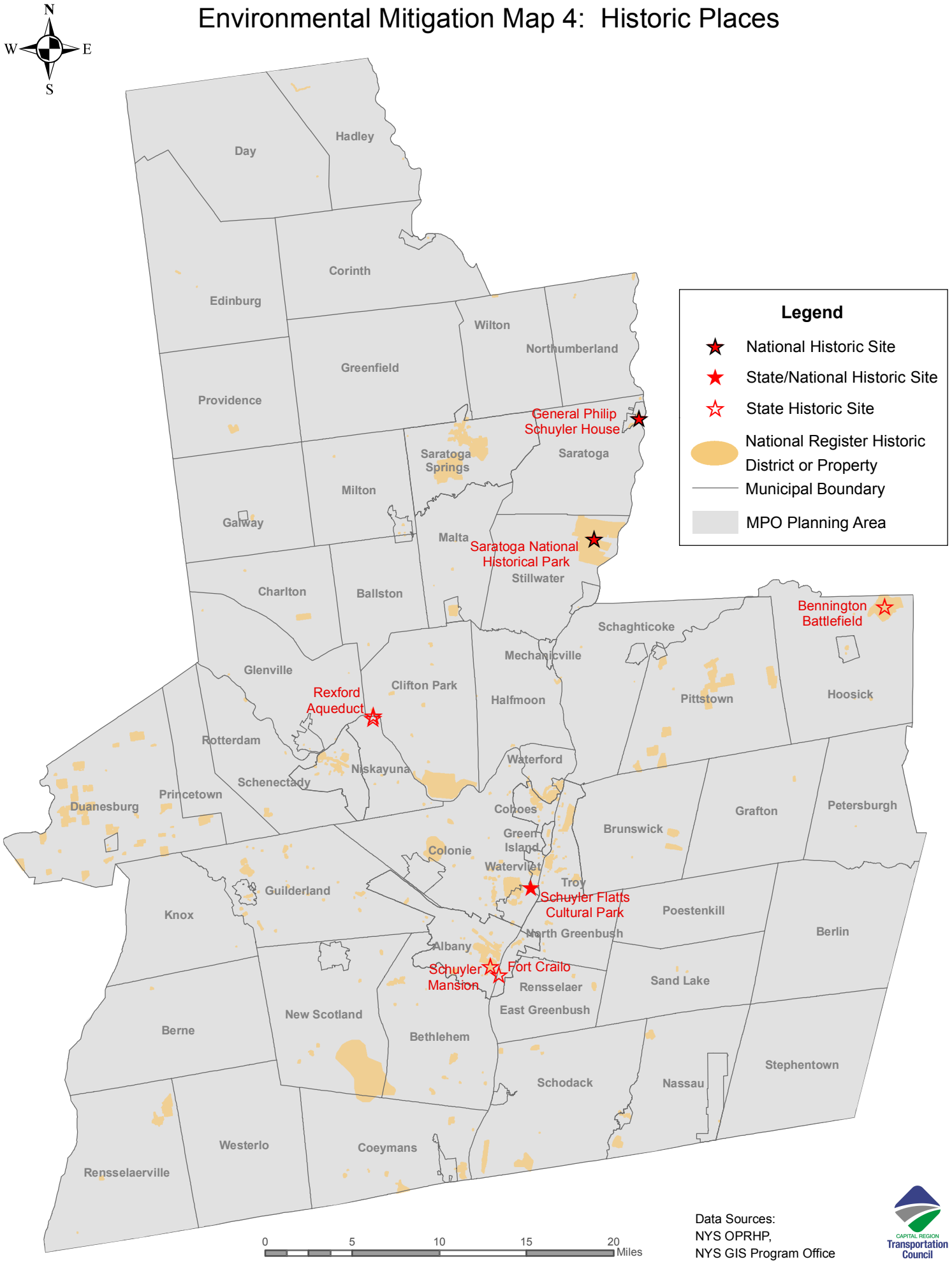
Data Sources:
NYS DEC, CUGIR, NRCS,
NYS Geospatial Services

CAPITAL REGION Transportation Council

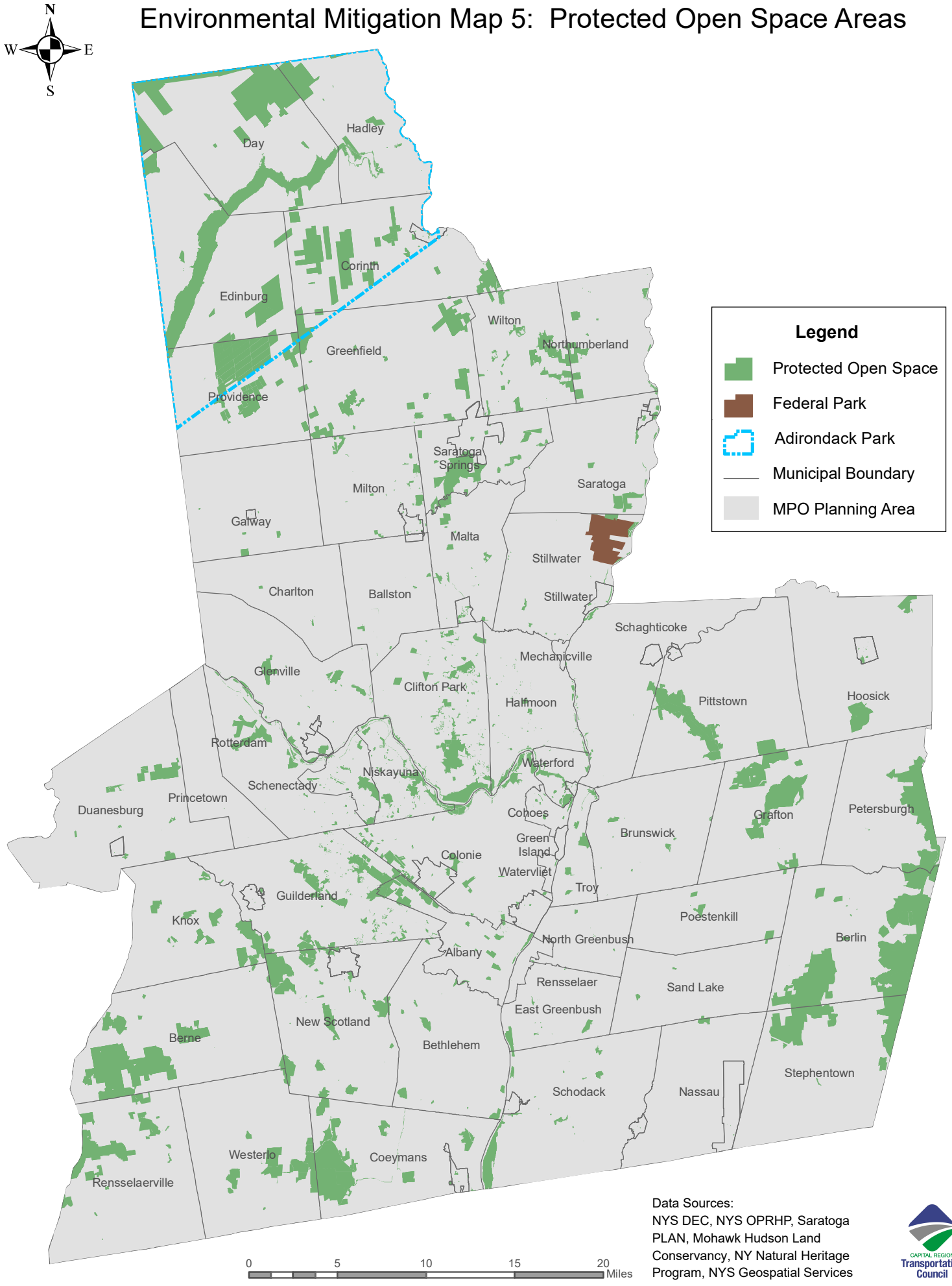
Environmental Mitigation Map 3: Natural Habitats



Environmental Mitigation Map 4: Historic Places



Environmental Mitigation Map 5: Protected Open Space Areas



Data Sources:
NYS DEC, NYS OPRHP, Saratoga PLAN, Mohawk Hudson Land Conservancy, NY Natural Heritage Program, NYS Geospatial Services

CAPITAL REGION Transportation Council

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APPENDIX B1

SAC MEETING #1 PRESENTATION

Study Advisory Committee Meeting #1

CDTC
Capital District Transportation Committee

CDTC Regional Truck Parking Study

April 11, 2022

Gannett Fleming
Excellence Delivered As Promised

ROCKLAND PLANNING

Meeting Agenda

1. Introductions
2. SAC Membership: Roles & Responsibilities
3. Study Goals & Objectives
4. Discussion of Truck Parking Issues
5. Literature Review
6. Public Participation Plan (PPP)
7. Existing Conditions

Introductions

- **Chris Bauer, CDTC – Project Manager**
- **Tom Phelan, Gannett Fleming – Consultant Lead**

Please introduce yourself and provide the group with the following:

- Name
- Affiliation/Organization, including your role
- Interest and connection to issues associated with truck parking and/or freight transportation

Study Advisory Committee (SAC)

- Public and private sector stakeholders involved in various aspects of transportation planning and operations, trucking, and land use planning.
- Five SAC meetings over the course of the study, tied to key milestones. Invitation to one public input session.
- CDTC is soliciting input from the SAC on the study process and deliverables. The project will last about one year.
- For subsequent meetings as work progresses, SAC members will be provided materials for review and input in advance of each meeting.
- **We want your input and ideas!**

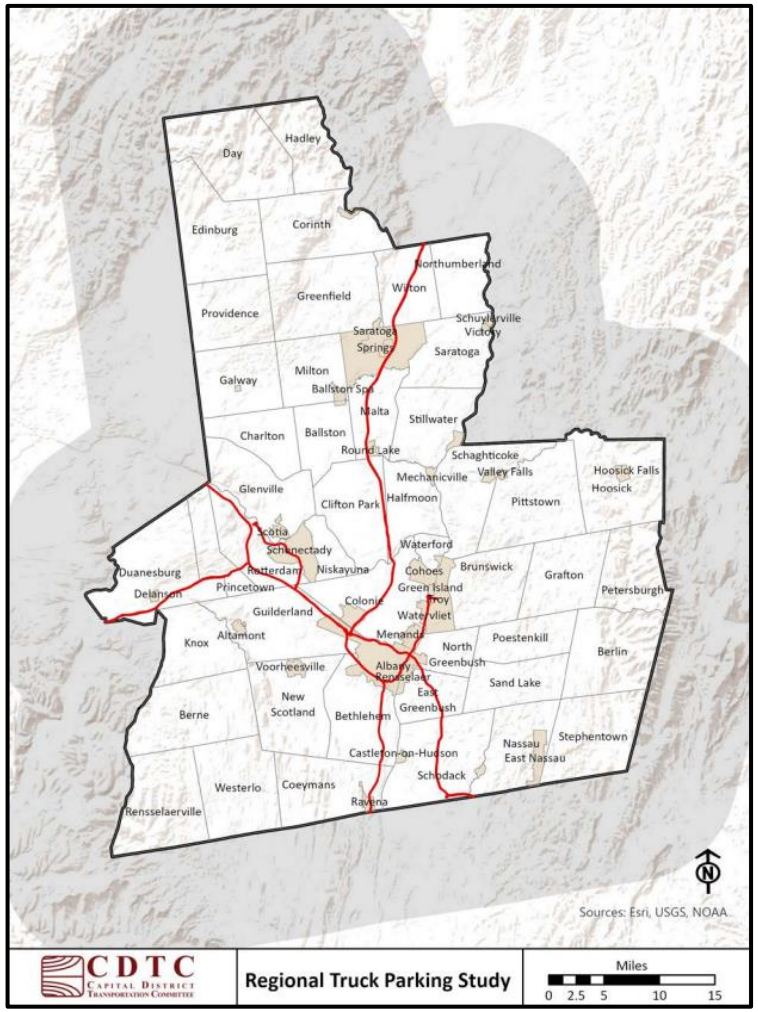
Objectives and Study Area

Study Objectives

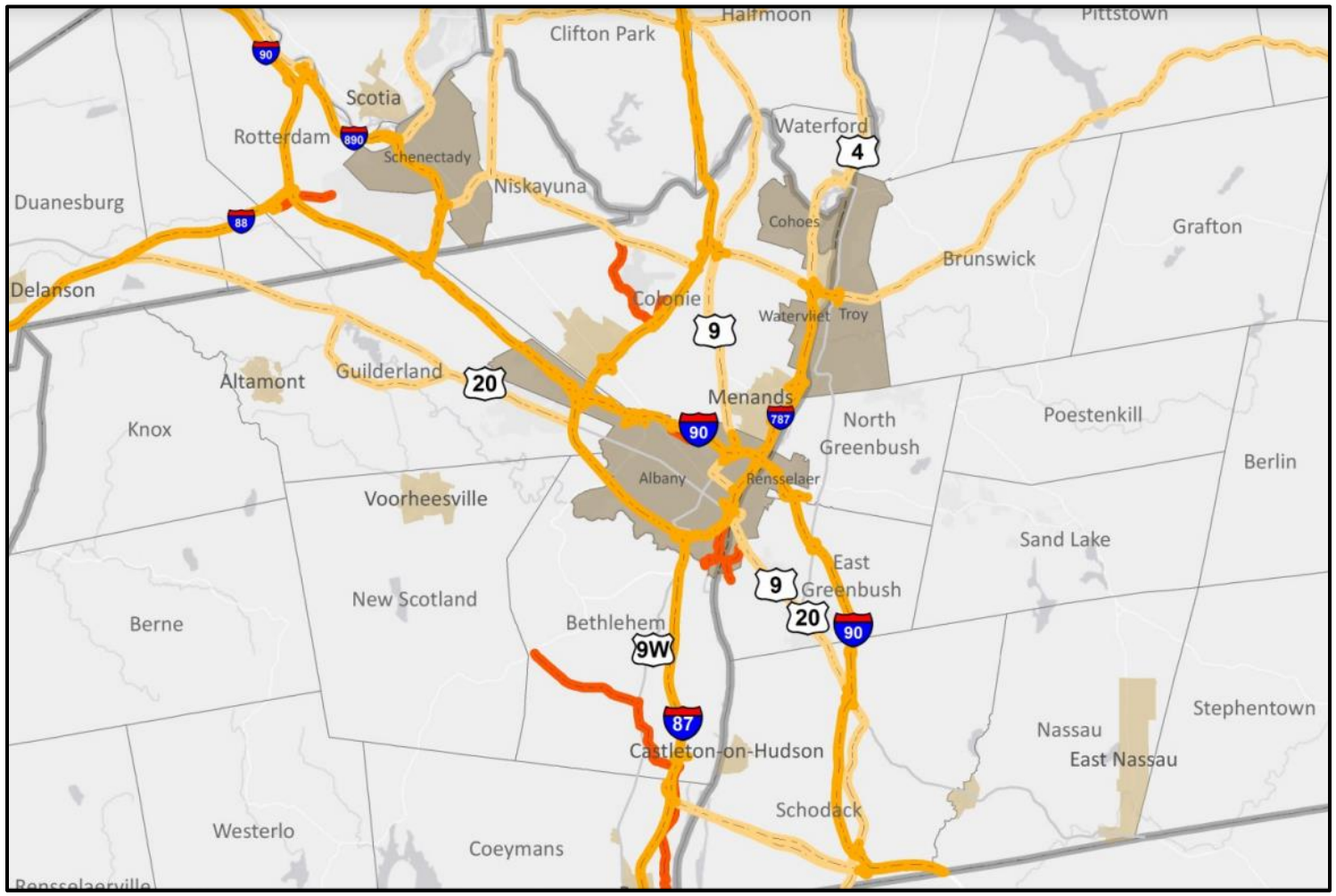
- Document public and private truck parking supply and demand in the region.
- Identify negative impacts of truck parking (or the lack of adequate parking) on the trucking industry and local communities.
- Identify major factors and trends affecting overnight truck parking.
- Develop a truck parking toolkit that incorporates local policy, zoning, site review/design, and other land use considerations.
- Provide recommendations to improve truck parking conditions in the region.

Study Area

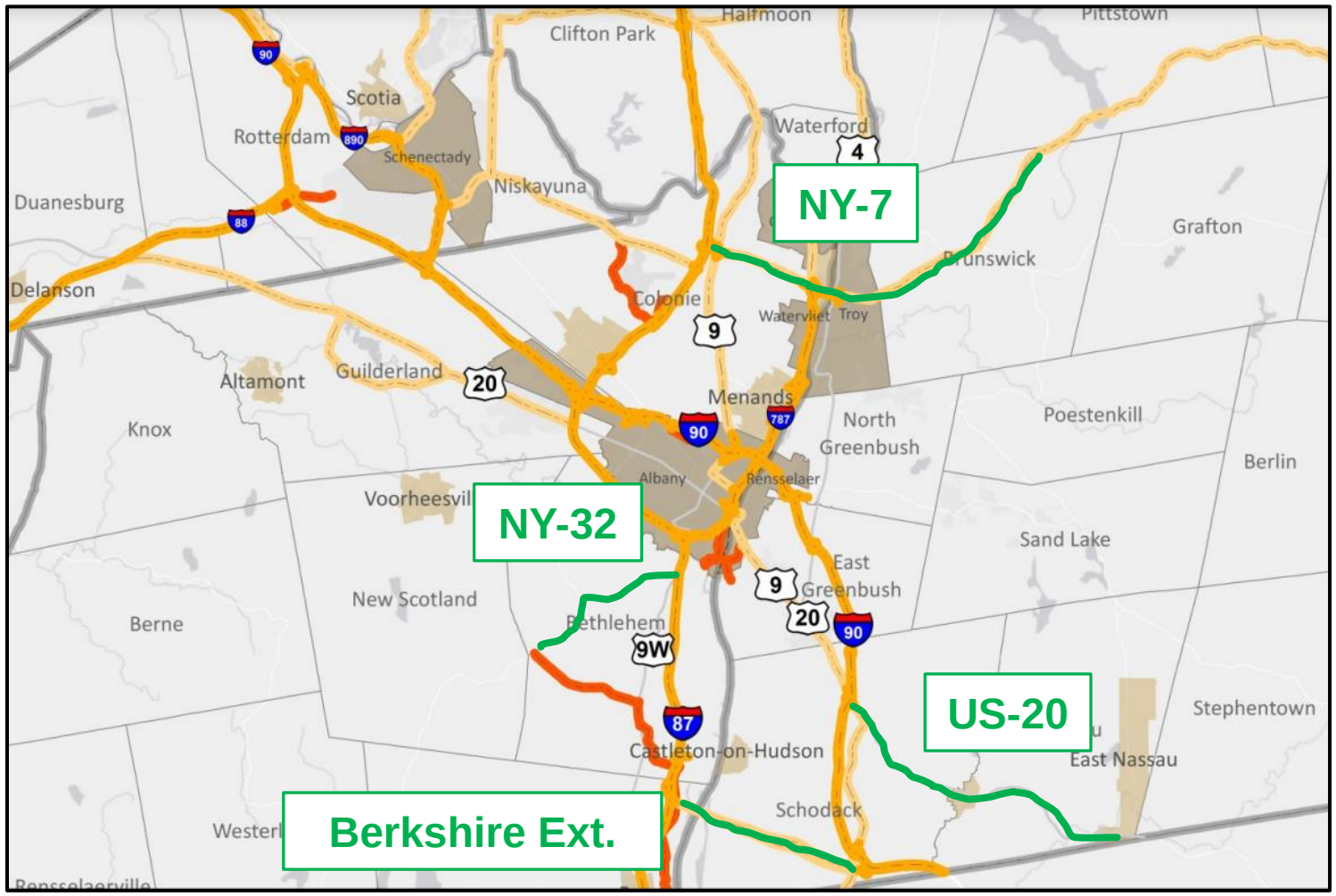
- Albany, Rensselaer, Saratoga, and Schenectady Counties
- Ten-mile buffer surrounding these counties
- Core highway network includes Interstates 87, 88, 90, 787 and 890
- These roadways comprise the major roadways in the CDTC Freight Priority Network (FPN).



FPN Connectors



Select Principal Arterials



Truck Parking: Background

Regulatory Points

Federal regulations under the Federal Motor Carrier Safety Administration (FMCSA) and state highway safety regulations are aimed at addressing two key risks related to commercial vehicle operations:

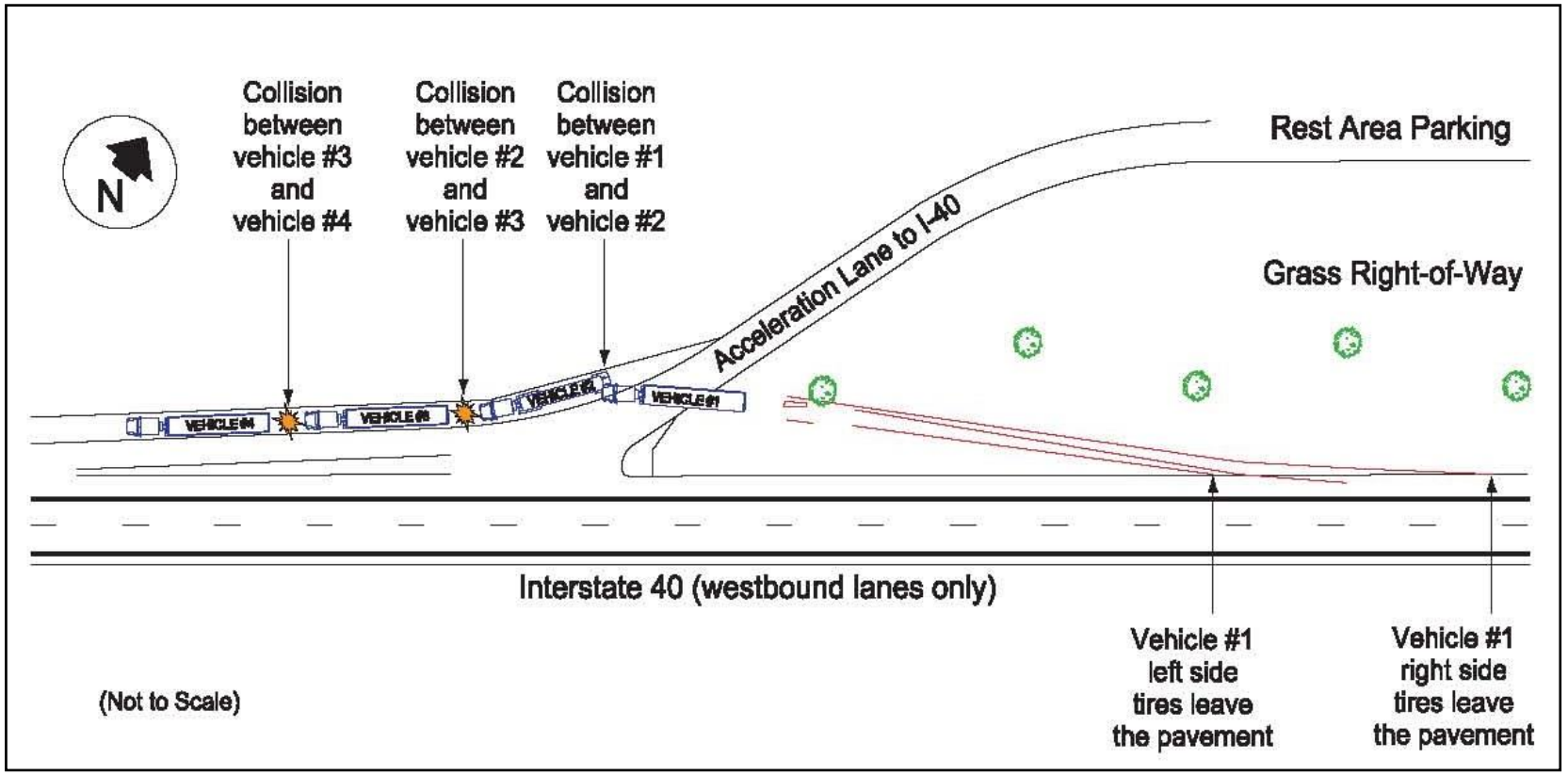
- The risks associated with drowsy drivers operating heavy vehicles (trucks and buses) on the highway system; and
- The risk of having trucks parked on highway shoulders and interchange ramps where they are fixed objects within an area designed to be a clear zone.

Key Milestones (National)

- 2000 – NTSB Highway Rest Areas report
- 2002-05 – FMCSA Hours of Service (HOS) rule changes
- Late 2000s – State DOTs and MPOs evaluate overflowing rest areas and ramp/shoulder parking
- 2012 – Jason's Law (MAP-21 Section 1401)
- 2015 – Jason's Law initial survey completed
- 2017 – FMCSA electronic logging device (ELD) mandate
- 2018 – Jason's Law survey update
- 2021 – Infrastructure Bill: New requirements to incorporate truck parking in statewide freight plans

WB I-40 in Jackson, TN: 6/3/99

WB I-40 in Jackson, TN: 6/3/99



Public Sector Roles & Challenges

- What is the public sector's role?
- Safety issues associated with parking on shoulders and interchange ramps
- Federal law restricting commercialization of highway rest areas (23 U.S. Code 111)
- Cost and regulatory process to construct new truck stops
- FMCSA rest periods for long-haul truckers vs. local needs for short-term staging in warehouse/industrial areas

Truck Parking Activity Types

- **Long-term parking** to meet FMCSA long-term rest requirements – 4 to 10+ hours.
- **Short term parking** to meet driver needs and FMCSA short-term rest requirements – generally up to 30 minutes.
- **Staging** for local deliveries – can vary widely from less than one hour to 10+ hours if done in conjunction with FMCSA rest requirements.
- **Emergency parking** under travel disruptions (weather, roadway incidents, etc.) – usually addressed outside conventional parking facilities.

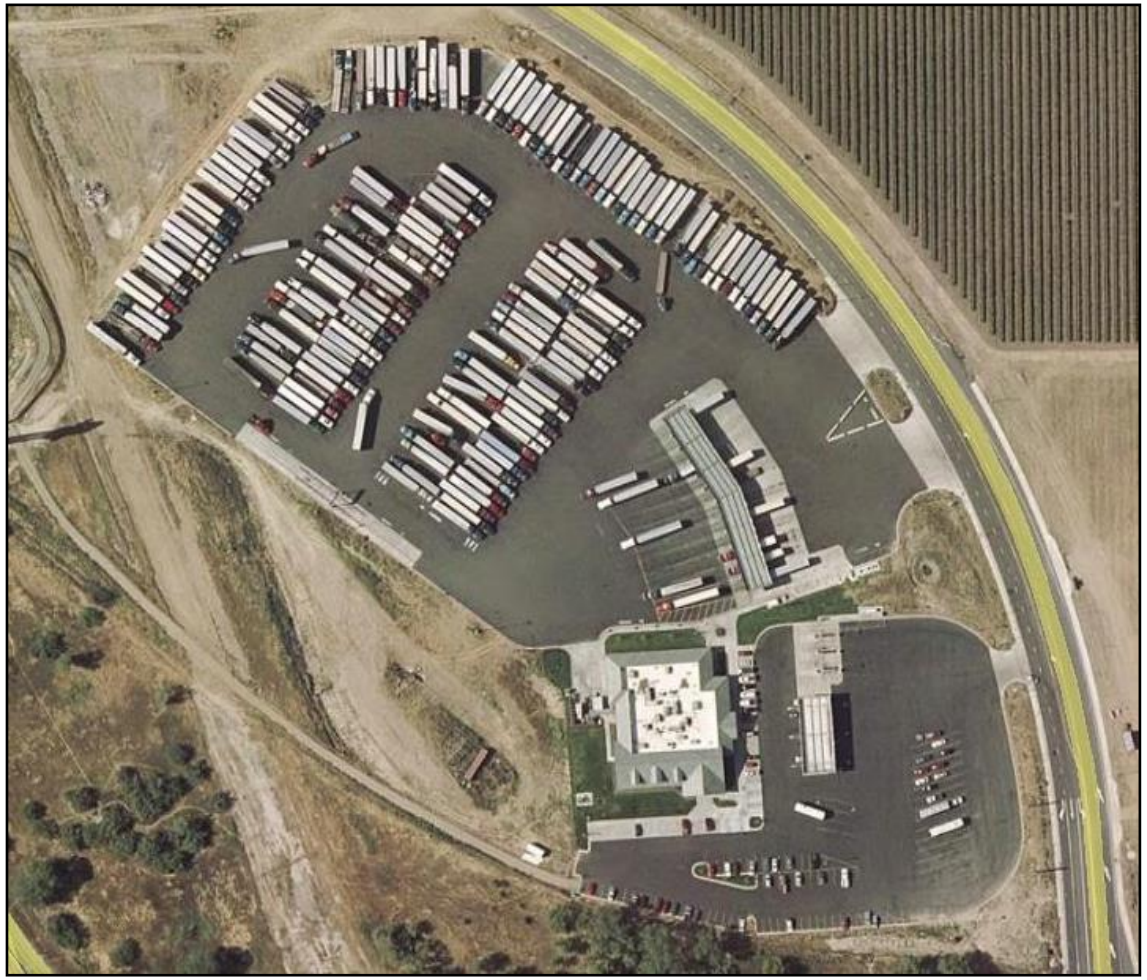
Key Hours of Service Rules

- Maximum 11-hour driving limit after a minimum rest period of 10 consecutive hours.
- Maximum 14-hour on-duty limit after a minimum rest period of 10 consecutive hours.
- Mandatory 30-minute break after driving for 8 cumulative hours.
- Maximum 60 hours on duty in a 7-day period or 70 hours on duty in an 8-day period. The driver may restart the 7-day or 8-day period after being off-duty for 34 or more consecutive hours.
- Drivers can split the required 10-hour off-duty period into two periods, provided one is at least 7 hours long and the other at least 2 hours long.

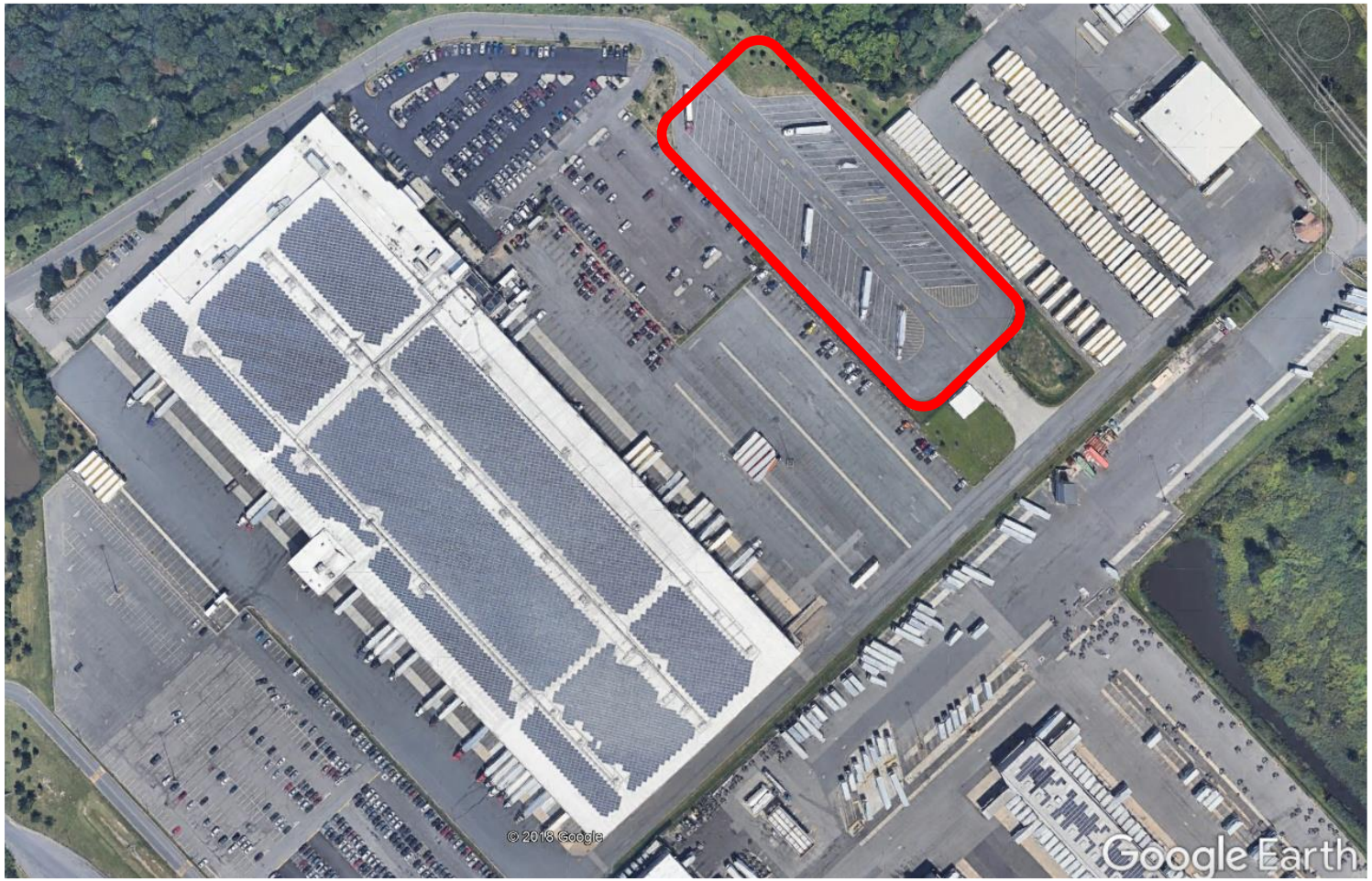
Facility Type: Rest Area

Facility Type: Service Area

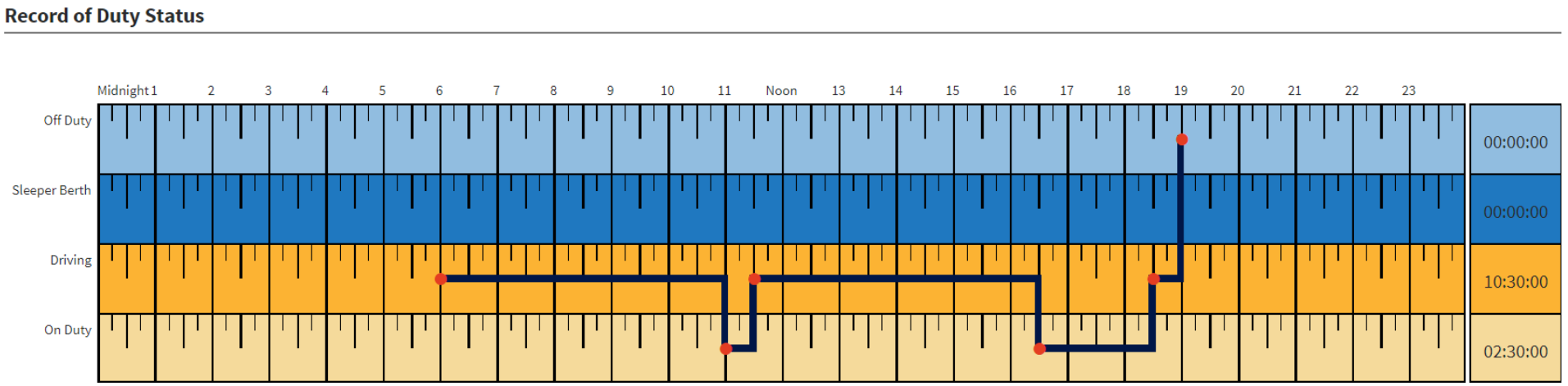
Facility Type: Truck Stop



Facility Type: Industrial Site

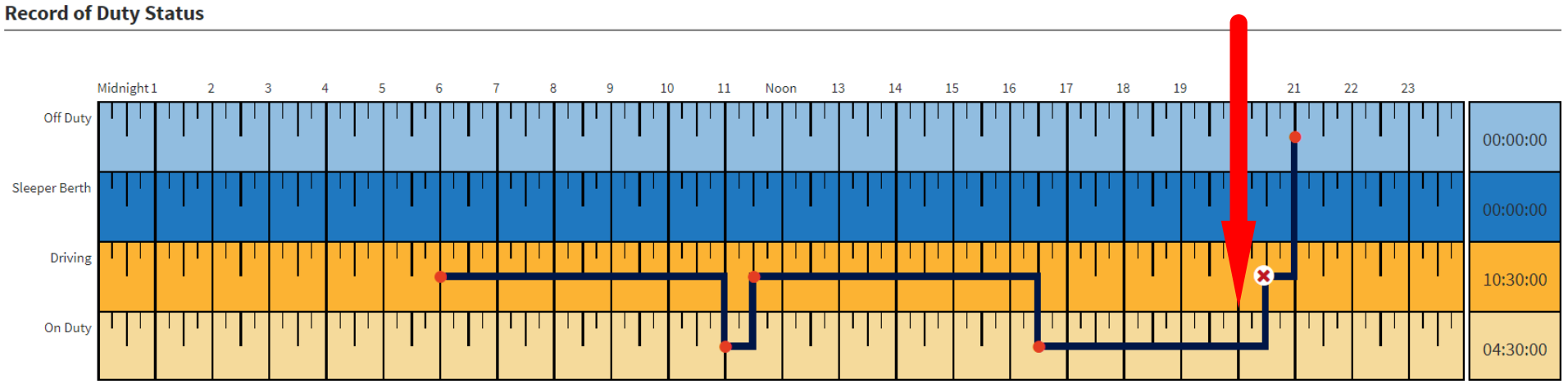


Optimized Driving



Scenario 1: Driver travels for 10 hours with 30-minute break after Hour 5. If customer takes 2 hours to unload, driver can spend 30 minutes looking for a parking space and complete the day in 13 hours.

Supply Chain Constraints



Scenario 2: Driver travels for 10 hours with 30-minute break after Hour 5. If customer takes **4 hours** to unload, the driver runs out of hours under the 14-hour duty window while still parked at the loading dock. **This driver will usually cut the driving day short several hours early to avoid this scenario.**

Literature Review

Short List of Resources

- New York State DOT Freight Transportation Plan (2019)
- CDTC Regional Freight Plan (2016)
- USDOT/FHWA Jason's Law Truck Parking Survey & Assessment (2015) and Update (2019)
- National Coalition on Truck Parking (NCTP) working group reports and other resources
- FHWA Model Development For National Assessment of Commercial Vehicle Parking (2002)
- AASHTO rest area design guidelines

Short List of Resources (cont'd)

- Report to Congress: Commercial Motor Vehicle Parking Shortage (2012)
- Relevant studies from other state DOTs and MPOs
- Trucking industry publications and research efforts (e.g., ATRI reports)
- Best practices under review or adoption in other jurisdictions
- Zoning ordinances that address truck parking in industrial land use planning.
- FHWA Truck Parking Development Handbook *(under development now)*

Public Participation Plan (PPP)

Public Participation

CDTC Public Participation Goal

Establish a thorough, inclusive process that uses creative approaches to offer the public continuous opportunities to shape the region's transportation system.

PPP Elements

- Project website (compliant with ADA and Web Content Accessibility Guidelines)
- Interactive mapping for public participation and problem identification
- Public open-style public input session(s)
- Focused stakeholder meetings (5 to 7) and one-on-one interviews with key stakeholders
- CDTC standing committee engagement:
  - Freight Advisory Committee (FAC)
  - Equity Advisory Committee

Existing Conditions

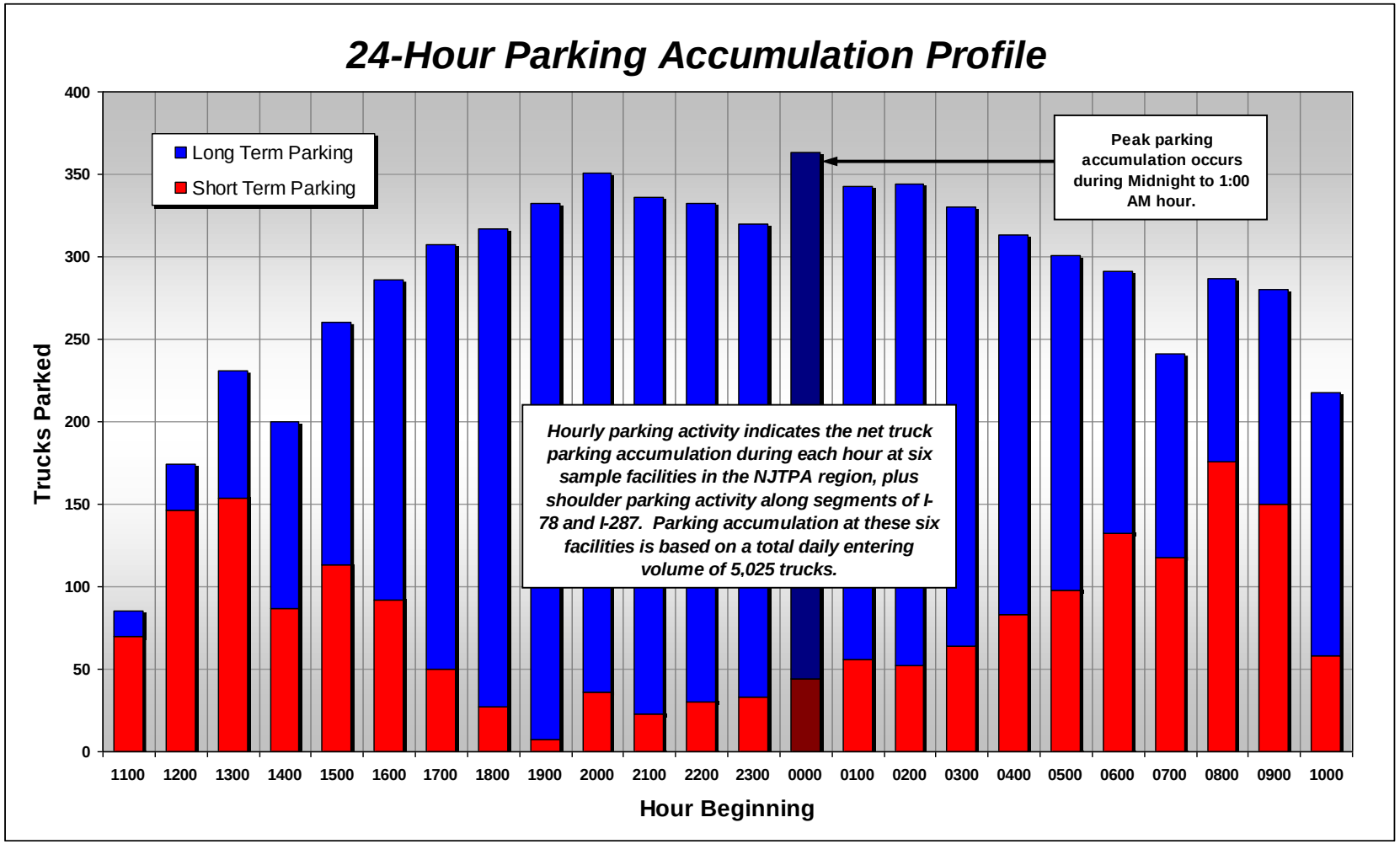
Approach

- Document roadway network and operating conditions – traffic volumes, truck volumes, congestion, etc.
- Identify major freight infrastructure and facilities, including freight generators.
- Identify additional transportation network considerations – transit network, bike/ped corridors, traffic safety issues, etc.
- Develop inventory of major truck parking facilities, including public rest areas, NYS Thruway service areas, private truck stops, and other minor facilities – use resources such as trucking industry and publications and TruckerPath® to identify “unofficial” sites.

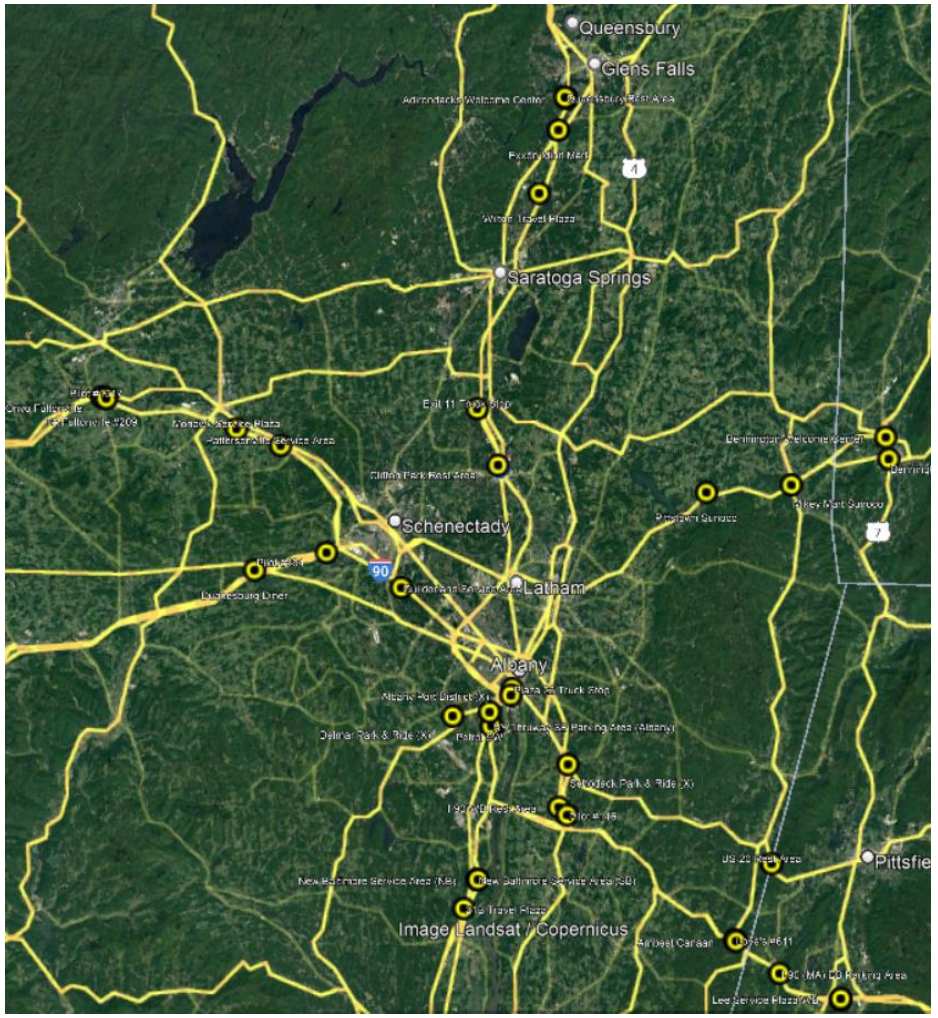
Approach (cont'd)

- Document peak overnight utilization at all parking facilities.
- Document parking activity along highway shoulders and interchange ramps on Freight Priority Network (FPN).
- Identify additional areas of overnight parking activity along FPN Connectors.
- Use ATRI GPS data to normalize peak data over multiple weekdays, calculate parking duration for key locations, develop 24-hour parking profiles for the region, and identify origin/destination profiles for parking activity (i.e., determine staging for local deliveries vs. long-haul parking stops).

Sample 24-Hour Profile



Preliminary Information



- 30+ facilities identified and documented.
- I-90 facilities generally larger and more heavily used than I-87 corridor.
- Paid parking in place at some truck stops.
- Parking along I-90 corridor in southeastern study area seems to be heavily influenced by limited capacity in Mass.

Preliminary Info (cont'd)

- Some capacity expansion in I-90 corridor over the last 10+ years, including new Pilot in Fultonville and parking spaces added at the Guilderland Service Area.
- Minimal observed shoulder/ramp parking along major FPN network highways.
- Initial review of connectors underway – e.g., parking observed along NY-7 in Rotterdam area.
- Trailer storage in truck stops and RV/boat parking in rest areas impacts availability of spaces for trucks.
- "Small trailer" parking observed in truck spaces at some facilities.

Study Advisory Committee Meeting #1

CDTC
Capital District Transportation Committee

CDTC Regional Truck Parking Study

April 11, 2022

Gannett Fleming
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APPENDIX B2

SAC MEETING #2 PRESENTATION

Study Advisory Committee Meeting #2

CDTC
Capital District Transportation Committee

CDTC Regional Truck Parking Study

October 13, 2022

Gannett Fleming
Excellence Delivered As Promised

ROCKLAND PLANNING

Meeting Agenda

1. Welcome/Introductions
2. Public & Stakeholder Engagement Plan (PSEP)
3. Literature Review
4. Existing Conditions
5. Developing News on the Truck Parking Front
6. Toolkit Elements (General)

Public & Stakeholder Engagement Plan (PSEP)

- CDTC standing committee engagement:
  - Freight Advisory Committee (FAC)
  - Equity Advisory Committee (tentatively scheduled for 11/14)
- Targeted stakeholder outreach during November
- SAC Meetings (#2 of 5)
- Public outreach sessions

Targeted Stakeholder Outreach

Audience	Representative Stakeholders	Key message/issues/questions
Stakeholder Group A1	NYSDOT	Rest area issues and truck-related impacts on capital and operating costs
Stakeholder Group A2	New York State Thruway Authority	Service area issues, tandem trailer drop-off areas, and truck-related impacts on capital and operating costs
Stakeholder Group B1	Municipal Governments	Truck-intensive land uses and industrial zoning ordinance issues
Stakeholder Group B2	Industrial/Economic Development Authorities (IDAs)	Decision-making factors in industrial development and truck parking implications
Stakeholder Group C1	Trucking firms	Truck parking and staging needs
Stakeholder Group C2	Truck drivers (through OOIDA)	Truck parking and staging needs
Stakeholder Group D	The general public	The commitment to inform the public and to engage the public, answer questions, etc.

Literature Review

- Relevant Federal, State and MPO reports
- Infrastructure Investment and Jobs Act (2021) provisions
  - New requirements for state freight plans (Section 21104)
- Key NY State and CDTC resources:
  - NYSDOT Freight Transportation Plan
  - CDTC Regional Freight Plan (2016)
  - New Visions 2050 Freight White Paper
- Upper Macungie Twp. (PA) zoning code amendment (2017)
- FHWA Truck Parking Development Handbook (2022)

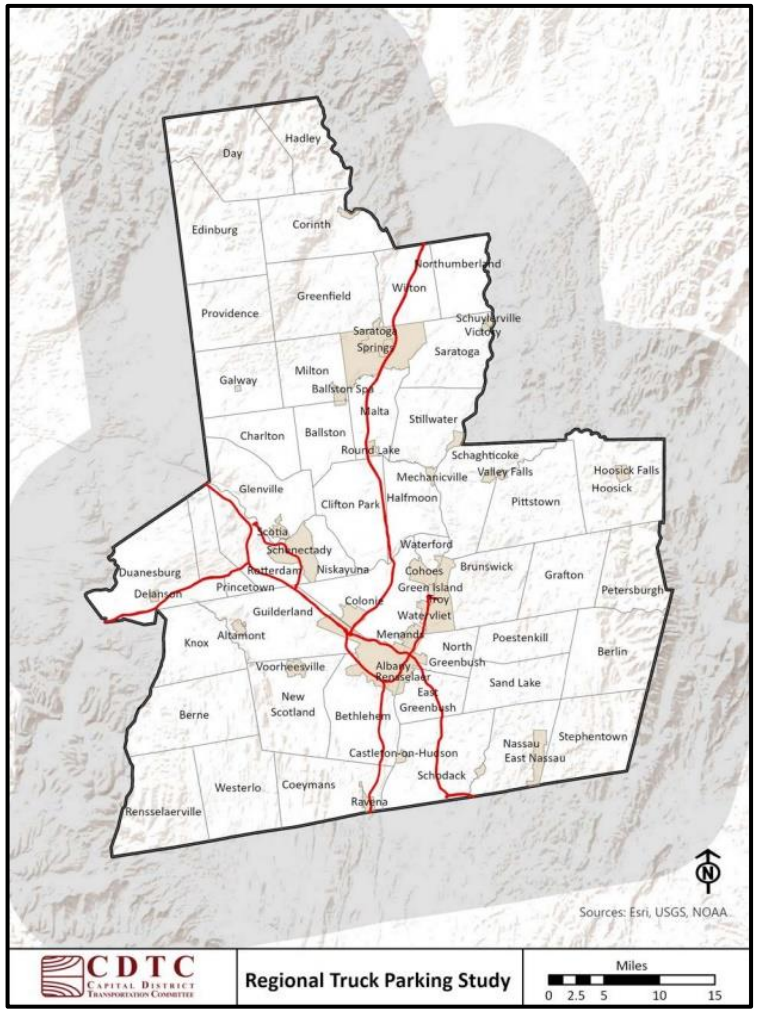
FHWA Truck Parking Handbook

- Quantifying truck parking needs, benefits, and costs
- National perspective
- Measuring truck parking demand at various geographic scales
- Land use & zoning: best practices
- Site development and design considerations
- Geometric design guidelines
- Safety and security features of parking facilities
- *Truck Parking Demand Estimation Tool* (pending)

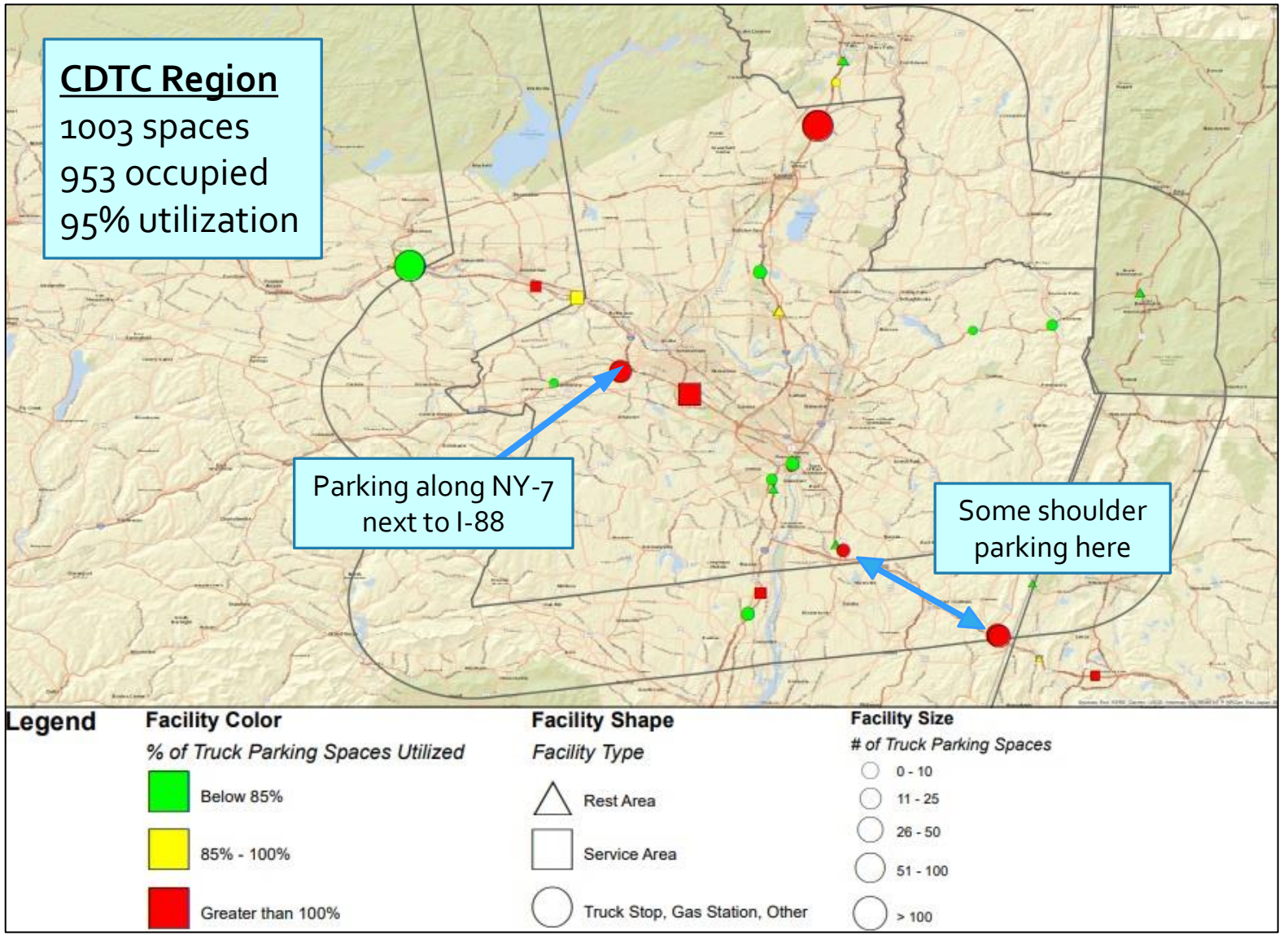
Existing Conditions

Study Area

- Albany, Rensselaer, Saratoga, and Schenectady Counties
- Ten-mile buffer surrounding these counties
- Core highway network includes Interstates 87, 88, 90, 787 and 890
- These roadways comprise the major roadways in the CDTC Freight Priority Network (FPN).



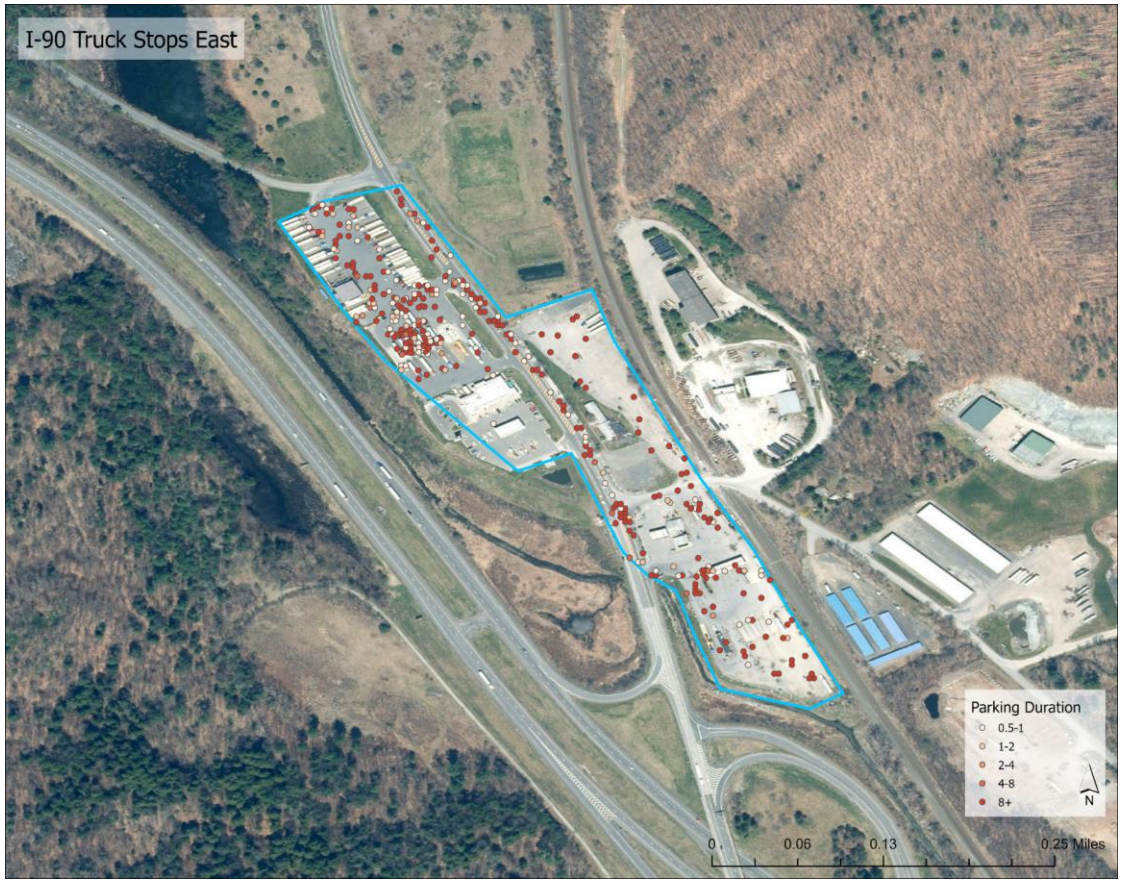
Parking Facility Utilization



Route NY-22 in Canaan

Route NY-7 in Duanesburg Area

Area 1: I-90 Truck Stops (Canaan)



Unique Trucks Per Hour				
Hour	18-Oct	19-Oct	20-Oct	21-Oct
0	-	37	31	31
1	-	37	26	30
2	-	34	26	28
3	-	35	24	30
4	-	36	24	31
5	-	29	28	29
6	-	26	21	28
7	-	24	16	30
8	-	27	22	17
9	-	15	20	18
10	-	19	21	16
11	-	25	28	18
12	20	21	22	-
13	20	23	33	-
14	29	25	31	-
15	41	28	37	-
16	38	30	37	-
17	44	26	41	-
18	45	22	46	-
19	44	28	46	-
20	42	32	45	-
21	42	38	37	-
22	39	36	37	-
23	35	31	32	-

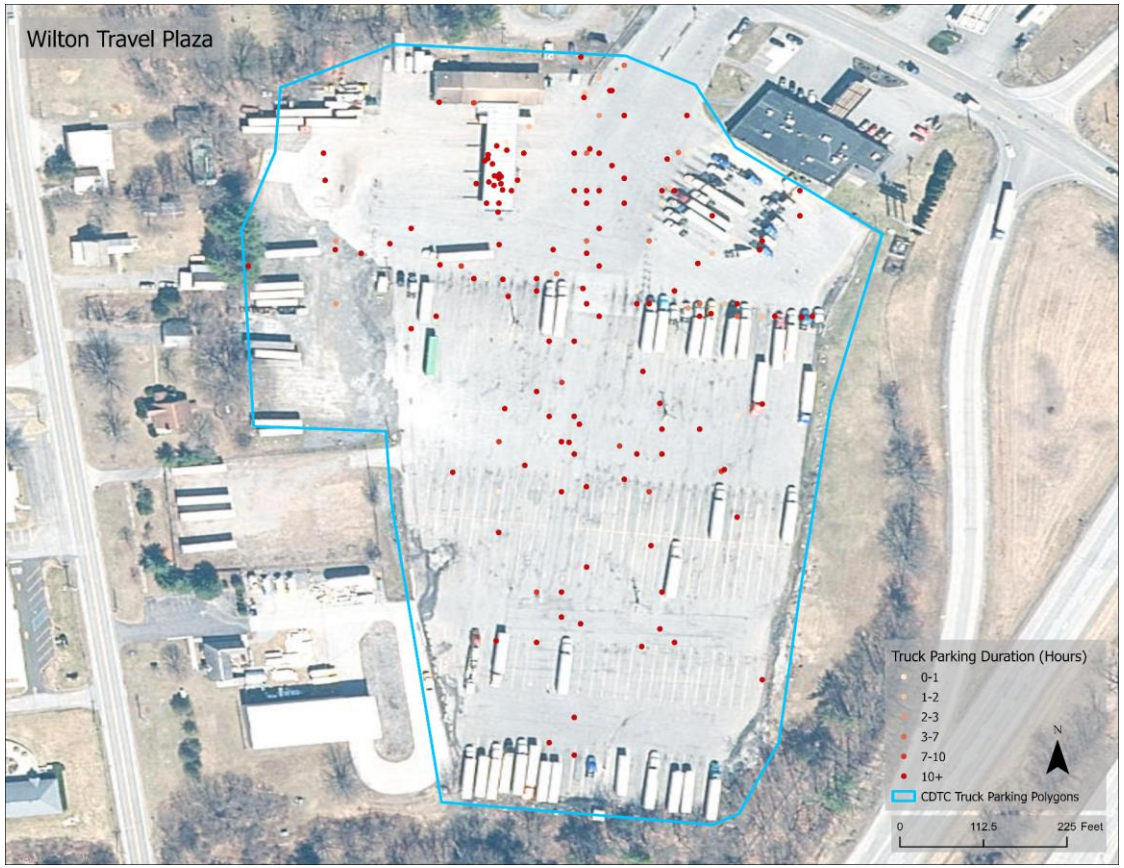
Area 2: New Baltimore (2019)

Unique Trucks Per Hour				
Hour	18-Oct	19-Oct	20-Oct	21-Oct
0	-	10	16	19
1	-	10	14	16
2	-	8	13	16
3	-	9	10	16
4	-	9	12	14
5	-	8	13	14
6	-	12	13	19
7	-	7	14	16
8	-	2	10	13
9	-	2	9	9
10	-	5	6	11
11	-	6	5	9
12	4	6	3	-
13	7	6	5	-
14	9	7	8	-
15	11	13	9	-
16	10	9	12	-
17	12	13	12	-
18	13	13	14	-
19	14	13	17	-
20	9	13	14	-
21	11	15	11	-
22	13	15	13	-
23	11	13	15	-

Area 3: I-87 NB (Clifton Park)

Unique Trucks Per Hour				
Hour	18-Oct	19-Oct	20-Oct	21-Oct
0	-	1	6	3
1	-	1	6	3
2	-	1	7	6
3	-	1	6	5
4	-	2	6	6
5	-	3	7	4
6	-	2	6	4
7	-	1	4	4
8	-	1	6	4
9	-	1	2	2
10	-	2	3	1
11	-	3	4	0
12	3	2	5	-
13	5	0	0	-
14	3	0	1	-
15	2	2	3	-
16	3	1	0	-
17	4	0	3	-
18	3	3	4	-
19	3	3	3	-
20	4	5	5	-
21	4	6	6	-
22	3	4	7	-
23	2	5	5	-

Area 4: Wilton Travel Plaza

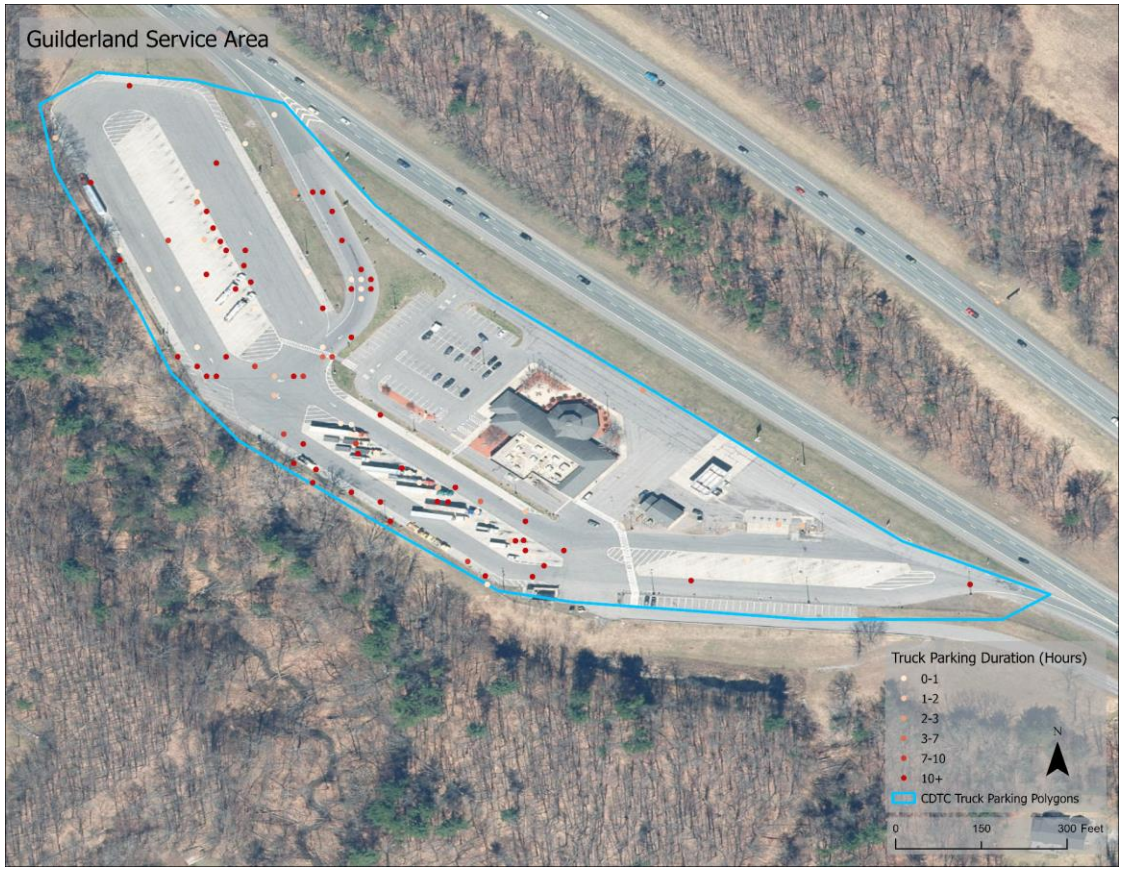


Unique Trucks Per Hour				
Hour	18-Oct	19-Oct	20-Oct	21-Oct
0	-	15	24	20
1	-	16	26	20
2	-	13	21	21
3	-	13	22	20
4	-	14	20	21
5	-	14	19	19
6	-	20	19	20
7	-	18	20	20
8	-	14	14	21
9	-	14	14	16
10	-	9	14	17
11	-	11	6	22
12	3	7	10	-
13	8	10	9	-
14	7	9	10	-
15	8	13	13	-
16	9	14	14	-
17	13	17	15	-
18	21	25	19	-
19	20	22	24	-
20	20	26	28	-
21	20	26	26	-
22	19	28	25	-
23	18	25	23	-

Area 5: I-87 SB (Glens Falls)

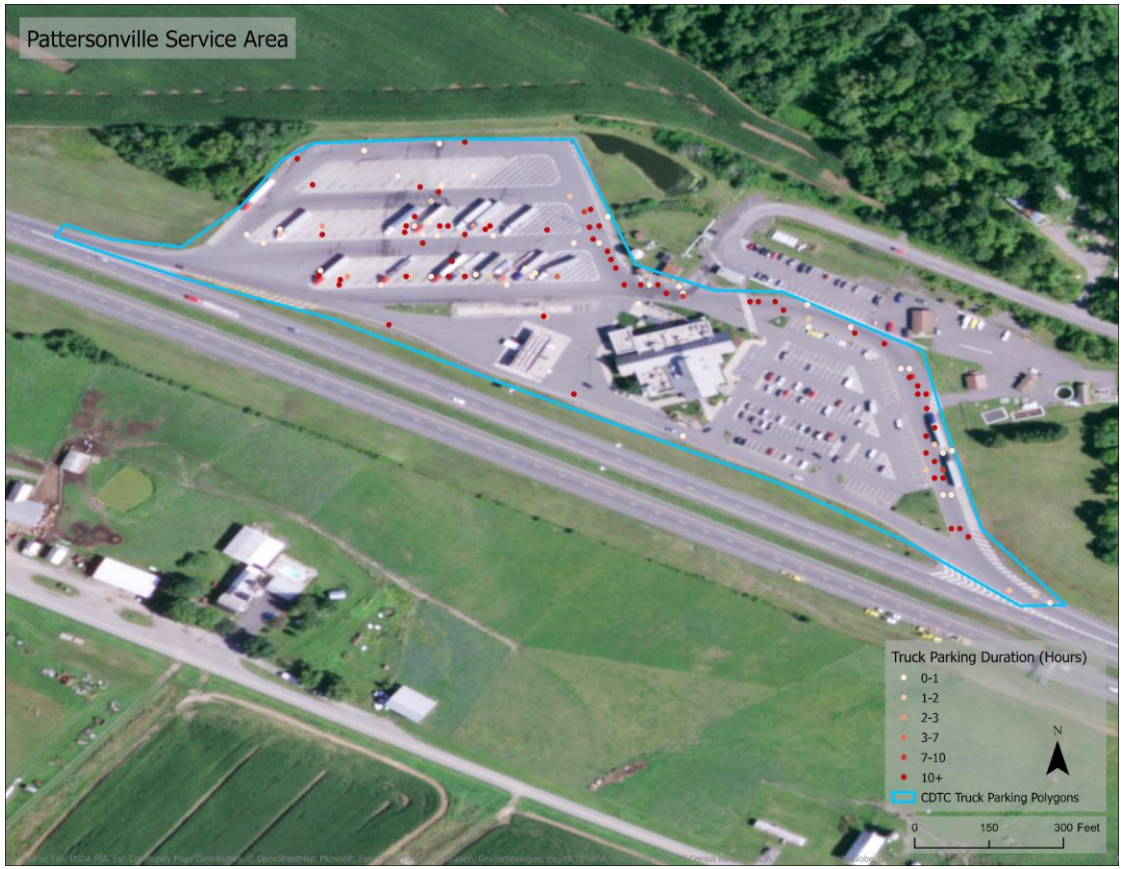
Unique Trucks Per Hour				
Hour	18-Oct	19-Oct	20-Oct	21-Oct
0	-	0	5	7
1	-	1	5	7
2	-	0	5	7
3	-	0	5	5
4	-	1	5	5
5	-	1	3	5
6	-	2	4	3
7	-	1	5	3
8	-	0	4	1
9	-	0	1	2
10	-	0	1	1
11	-	0	1	0
12	1	1	2	-
13	1	1	1	-
14	1	1	0	-
15	0	3	0	-
16	1	4	0	-
17	1	2	2	-
18	3	2	3	-
19	1	2	3	-
20	1	2	7	-
21	1	4	7	-
22	1	5	7	-
23	0	6	8	-

Area 6: Guilderland Service Area



Unique Trucks Per Hour				
Hour	18-Oct	19-Oct	20-Oct	21-Oct
0	-	12	14	11
1	-	12	14	7
2	-	12	14	9
3	-	10	15	8
4	-	11	14	7
5	-	8	11	5
6	-	7	11	6
7	-	3	9	4
8	-	4	4	1
9	-	3	5	6
10	-	2	6	9
11	-	2	8	0
12	4	3	6	-
13	5	7	6	-
14	3	3	5	-
15	9	8	5	-
16	8	10	7	-
17	12	11	8	-
18	15	12	12	-
19	16	13	12	-
20	16	14	11	-
21	16	13	12	-
22	16	14	12	-
23	13	10	11	-

Area 7: Pattersonville Service Area



Unique Trucks Per Hour				
Hour	18-Oct	19-Oct	20-Oct	21-Oct
0	-	11	16	8
1	-	12	15	11
2	-	13	14	9
3	-	13	12	7
4	-	12	14	5
5	-	11	10	8
6	-	9	12	5
7	-	5	14	8
8	-	4	10	6
9	-	5	3	3
10	-	3	3	3
11	-	4	3	3
12	7	4	6	-
13	7	9	3	-
14	7	11	3	-
15	12	9	2	-
16	14	6	6	-
17	16	5	9	-
18	15	12	8	-
19	14	13	8	-
20	17	14	10	-
21	15	13	7	-
22	14	15	7	-
23	13	14	7	-

Area 8A: Fultonville Onvo/Pilot

Area 8B: TA Fultonville

Unique Trucks Per Hour				
Hour	18-Oct	19-Oct	20-Oct	21-Oct
0	-	18	20	25
1	-	16	18	23
2	-	21	19	24
3	-	24	18	23
4	-	19	20	19
5	-	19	27	19
6	-	19	28	15
7	-	21	24	19
8	-	16	25	23
9	-	17	24	19
10	-	20	29	18
11	-	16	27	14
12	12	19	22	-
13	20	23	27	-
14	25	24	25	-
15	26	25	26	-
16	27	31	27	-
17	30	25	26	-
18	33	31	25	-
19	30	32	22	-
20	25	32	21	-
21	25	30	23	-
22	27	22	25	-
23	25	22	26	-

Developing News

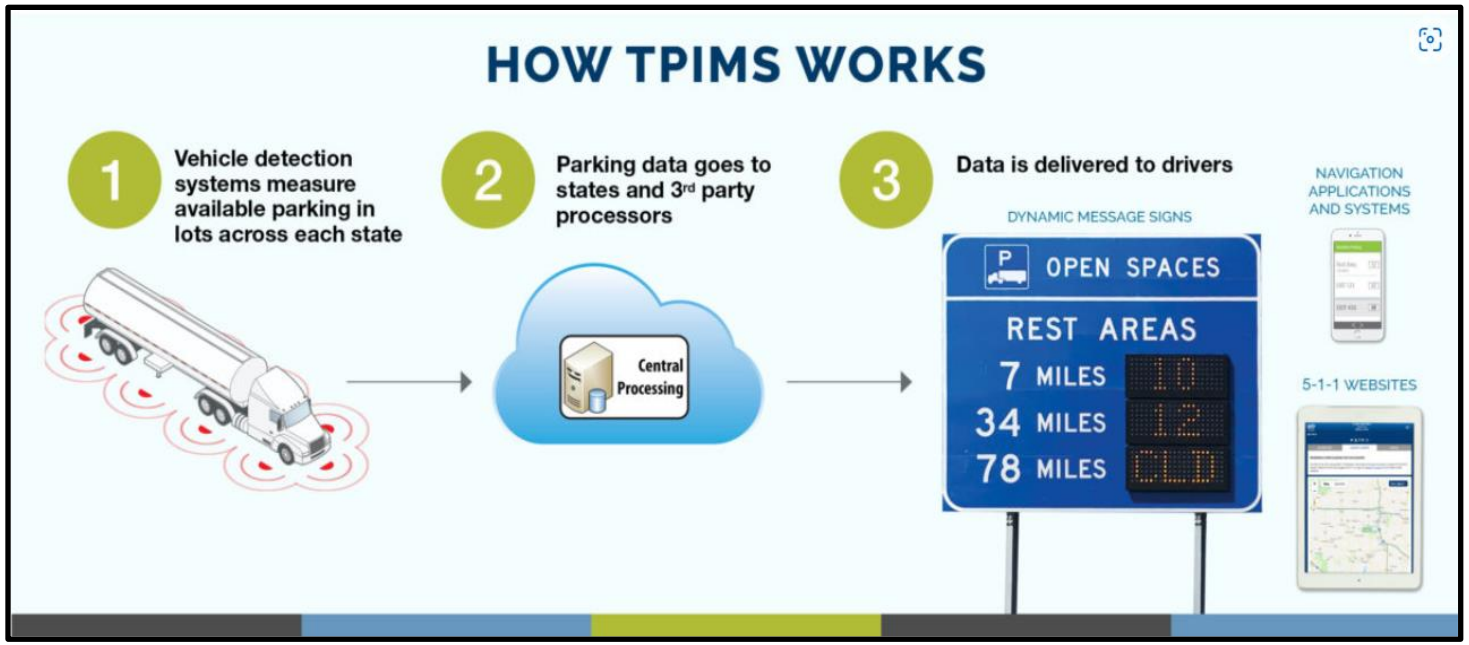
- IIJA requirements for state freight plans: must now include an assessment of truck parking facilities.
- FHWA Truck Parking Development Handbook released in September 2022.
- Updated USDOT/FHWA Memorandum: Eligibility of Title 23 and Title 49 Federal Funds for Commercial Motor Vehicle Parking (9/20/2022).
- Recent and pending Transportation Research Board (TRB) research initiatives related to truck parking facilities as critical supply chain elements.
- Growing interest in truck parking implications of land uses.

Preliminary Truck Parking Toolkit Elements

Problem Type #1

SYMPTOMS: (1) Trucks parked outside designated parking areas; (2) some parking facilities operating over 100% capacity; and (3) excess capacity at nearby facilities.

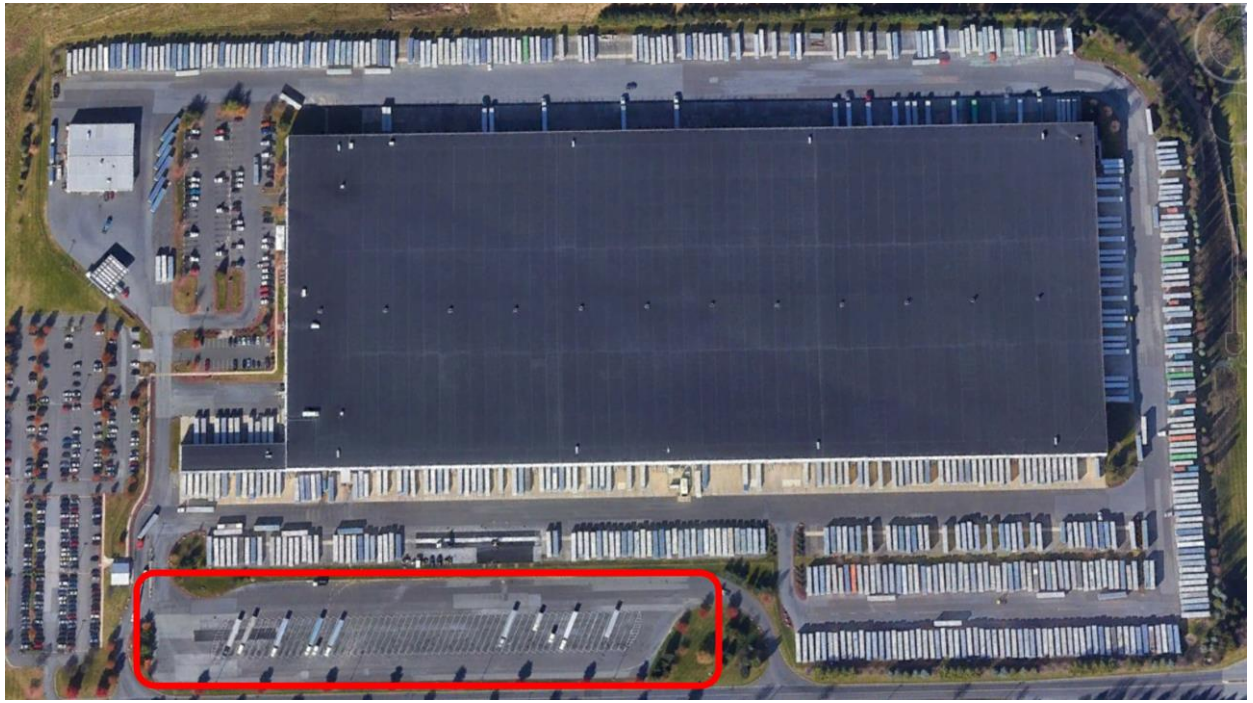
SOLUTION: Truck Parking Information Management System (TPIMS)



Problem Type #2

SYMPTOMS: (1) Trucks parked outside designated parking areas and (2) parking facilities operating over 100% capacity; and (3) substantial parking activity for trucks staging for loads.

SOLUTION: Incorporate truck staging areas in industrial land use regulations.



Problem Type #3

SYMPTOM: Heavy surges of truck parking demand during emergencies, weather-related disruptions, etc.

SOLUTION: Develop emergency operations plans that include truck parking in locations that can accommodate large numbers of trucks on those occasions when needed.

Possible options could include:

- Sports venues
- Shopping malls
- Park & ride lots
- Surplus municipal or county properties
- Military facilities with available space outside security checkpoints

Problem Type #4

SYMPTOM: Excessive truck idling, particularly in areas where vulnerable populations and sensitive land uses are affected.

SOLUTION: Idle reduction technology and/or truck stop electrification.

Problem Type #5

SYMPTOM: Truck parking demand exceeds available capacity on a recurring basis along highway corridors and/or sizable geographic regions.

SOLUTION: New truck parking capacity.

Study Advisory Committee Meeting #2

CDTC
Capital District Transportation Committee

CDTC Regional Truck Parking Study

October 13, 2022

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Transportation
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APPENDIX B3

SAC MEETING #3 PRESENTATION

Study Advisory Committee Meeting

CAPITAL REGION Transportation Council

Regional Truck Parking Study

July 20, 2023

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Meeting Agenda

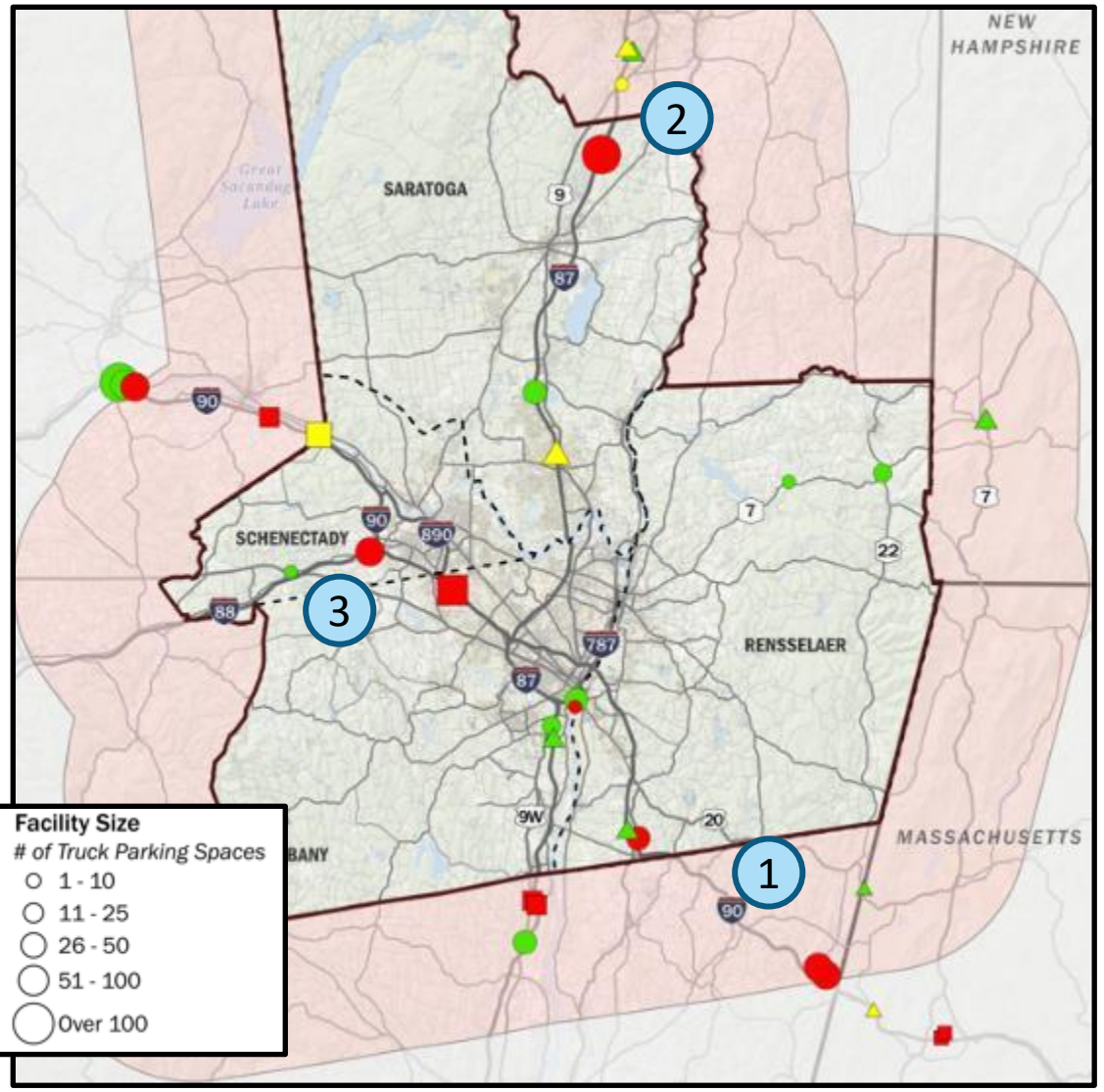
1. Welcome/Introductions
2. Existing Conditions Assessment (Draft Document)
3. Truck Parking Toolkit (Draft Document)
4. Study Recommendations (Draft)
5. Developing News on the Truck Parking Front
6. Additional Project Outreach/Review

Existing Conditions Assessment

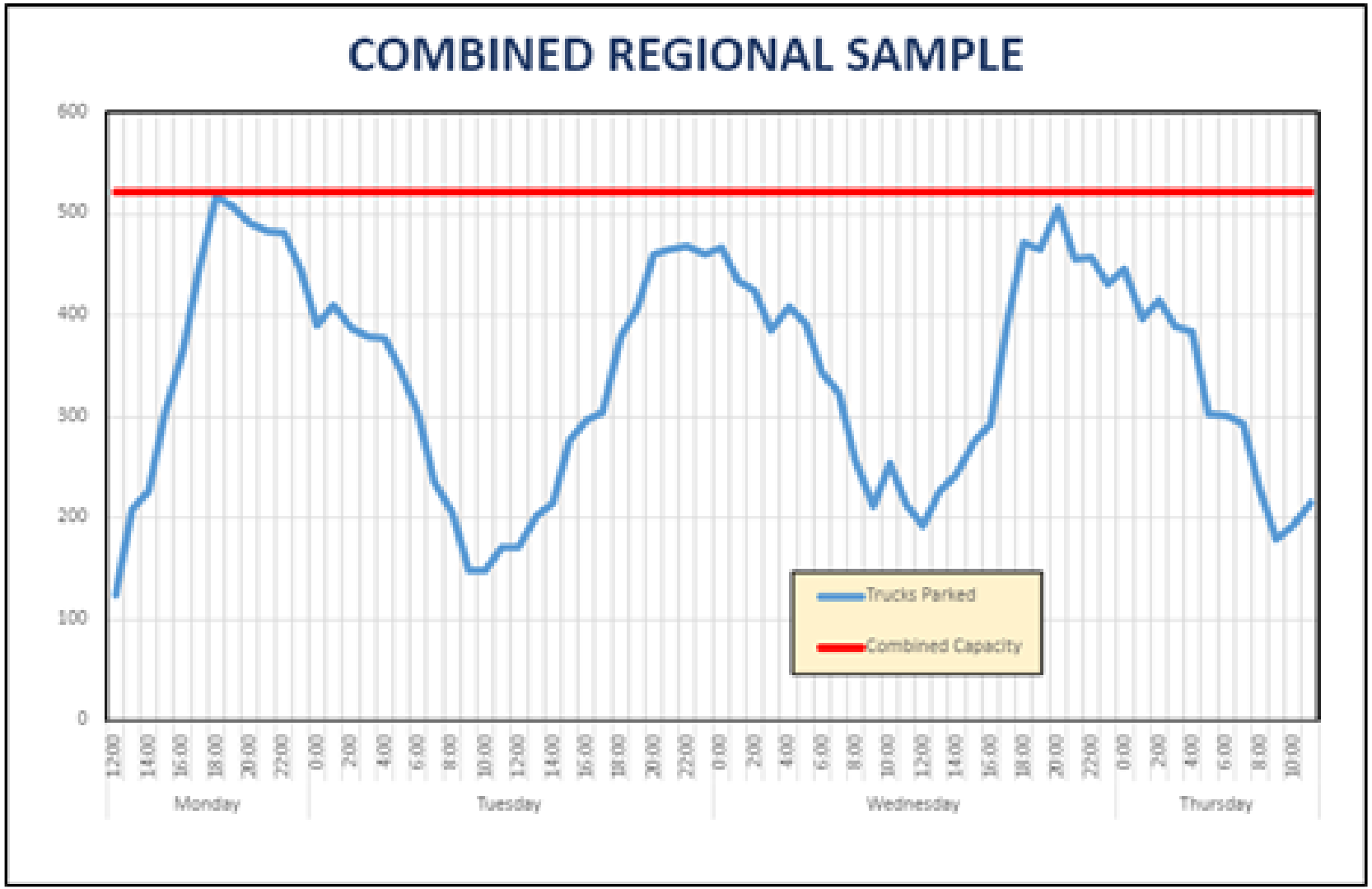
Parking Facility Utilization

CDTC Region
1003 spaces
953 occupied
95% utilization

Areas of Concern
1. Heavy parking utilization at east end of I-90.
2. Limited capacity to the north on I-87
3. Shoulder parking and staging along NY-7 near I-88/I-90 interchange



72-Hour Parking Profile



Next Stop for Parked Trucks

All Areas Combined

Geographic Area	Pct.
Study Area Counties	9.8%
Study Area Border Counties	13.6%
Other New York Counties	23.0%
New England	21.0%
New Jersey / Pennsylvania	13.2%
Canada	7.4%
Other	12.0%

NY-22 (Canaan)

Geographic Area	Pct.
Study Area Counties	6.5%
Study Area Border Counties	8.4%
Other New York Counties	23.4%
New England	35.3%
New Jersey / Pennsylvania	9.0%
Canada	4.6%
Other	12.8%

Overflow Parking on Shoulders

General Findings

- Truck parking facilities in CDTC region are heavily used in general.
- Excessive utilization of facilities is concentrated in several areas:
  - the east end of I-90 in New York, extending into western Mass.
  - the Wilton Travel Plaza along the I-87 corridor north of Albany
  - local parking on NY-7 in Rotterdam area
- Even minimal growth of truck parking demand over time will exacerbate existing challenges and generate new ones.
- Most parking activity is associated with long-haul truck trips.
- About 1 in 4 trucks parked in facilities across the region makes its next stop within the Capital Region and surrounding counties.
- For the region as a whole, parking demand approaches but does not exceed the combined capacity of the facilities.

Truck Parking Toolkit

Tools

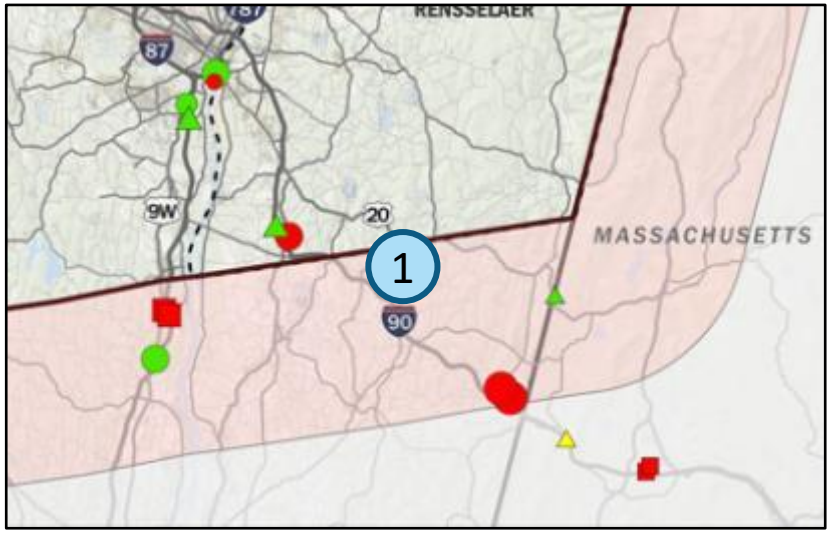
1. Truck Parking Information Management System (TPIMS)
2. Emergency Operations Plans for Truck Parking
3. Redesign Facilities to Improve Safety & Circulation
4. Truck Electrification / Idle Reduction Technology
5. Address Truck Staging Needs in Zoning for Industrial Sites
6. New/Expanded Truck Parking Facilities

Tools

Study Recommendations

Recommendation #1

Seek Opportunities to Expand Truck Parking along the I-90 Corridor East of the Hudson River.



Implementation Partner(s): NYSDOT, MassDOT, NYSTA, municipal governments (as applicable), private travel center developers

Recommendation #2

Seek Opportunities to Expand Truck Parking in the Vicinity of the I-90/I-88 Interchange in Schenectady County.

Implementation Partner(s): Municipal governments of Duanesburg, Princetown and/or Rotterdam; NYSDOT; private developers

Recommendation #3

Potential New Truck Parking Capacity and Driver Services at New York State Thruway Service Areas..

Implementation Partner(s): NYSTA, Empire State Thruway Partners, NYSDOT (for potential Federal funding options).

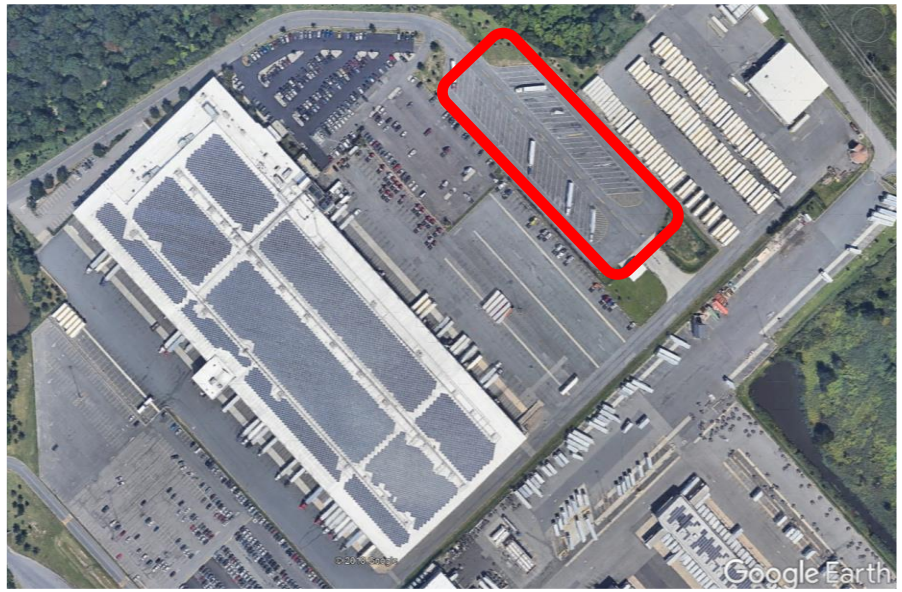
Recommendation #4

Expand Truck Parking Capacity at Existing Interstate Highway Rest Areas, as Needed and Feasible.

Implementation Partner(s): NYSDOT

Recommendation #5

Develop Formal Municipal Guidance for Incorporating Truck Parking and Staging into Industrial Site Approvals.



Implementation Partner(s): Capital Region Transportation Council (FAC), NYSEDC, municipal governments, Industrial Development Agencies

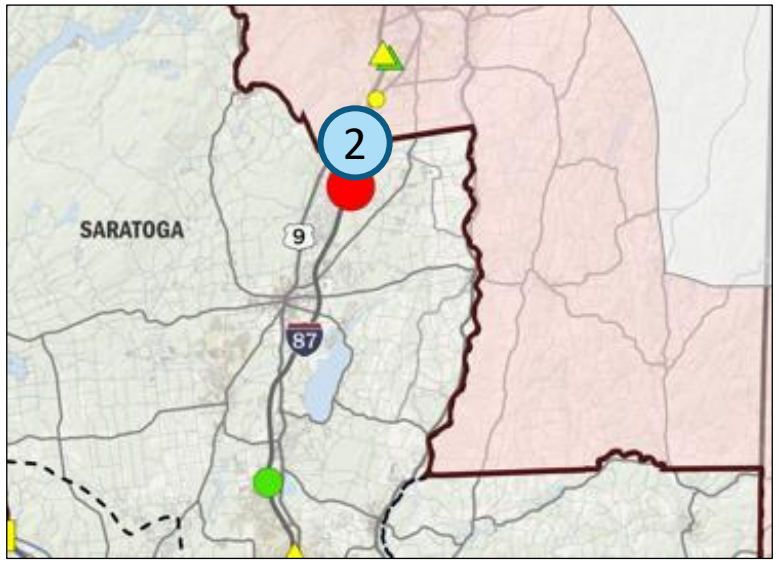
Recommendation #6

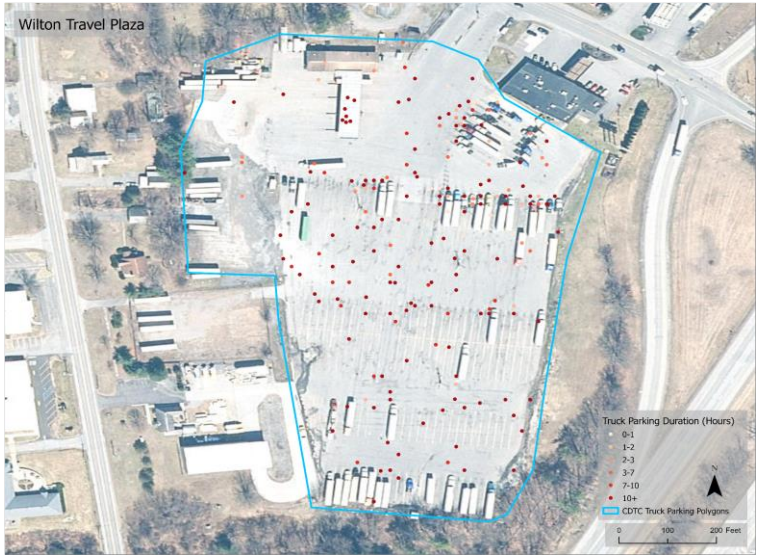
Conduct Pilot Study for Truck Electrification/Idle Reduction Technology in Capital Region.

Implementation Partner(s): NYSDOT, NYSTA, private truck stop owner, private shipper/receiver, Capital District Clean Communities

Recommendation #7

Explore Options for New/Expanded Truck Parking in the Vicinity of Exits 16 and/or 17 of the Adirondack Northway (I-87).





Implementation Partner(s): Private industrial developers, municipal governments, NYSDOT

Recommendation #8

Develop Emergency Truck Parking Plan for Capital Region.

Implementation Partner(s): NYSDOT, New York State Police, New York OEM, municipal governments, facility owners/operators

Developing News

I-70 Bus Crash in Illinois (7/12/23)

Home › 3 dead and 14 injured in crash involving Greyhound bus and commercial vehicles, police say

Local news

3 dead and 14 injured in crash involving Greyhound bus and commercial vehicles, police say

Published on
12 July 2023

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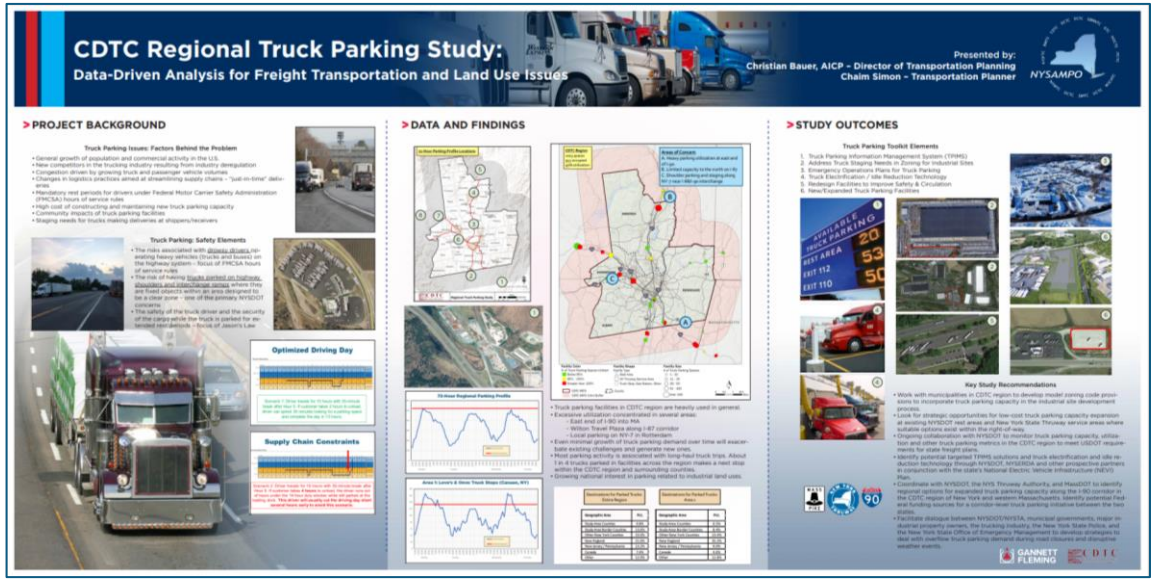
Additional Project Outreach

- NYSAMPO Conference (May 2023)
- Capital Region Transportation Council: Planning Committee (August 2nd, 2023)
- Potential Case Study for FHWA Initiatives



Study Advisory Committee Meeting

CAPITAL REGION Transportation Council

Regional Truck Parking Study

July 20, 2023

Gannett Fleming

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CAPITAL REGION Transportation Council

APPENDIX C1

FREIGHT ADVISORY COMMITTEE BRIEFING #1

Freight Advisory Committee Briefing

CDTC
Capital District Transportation Committee

CDTC Regional Truck Parking Study

August 17, 2022

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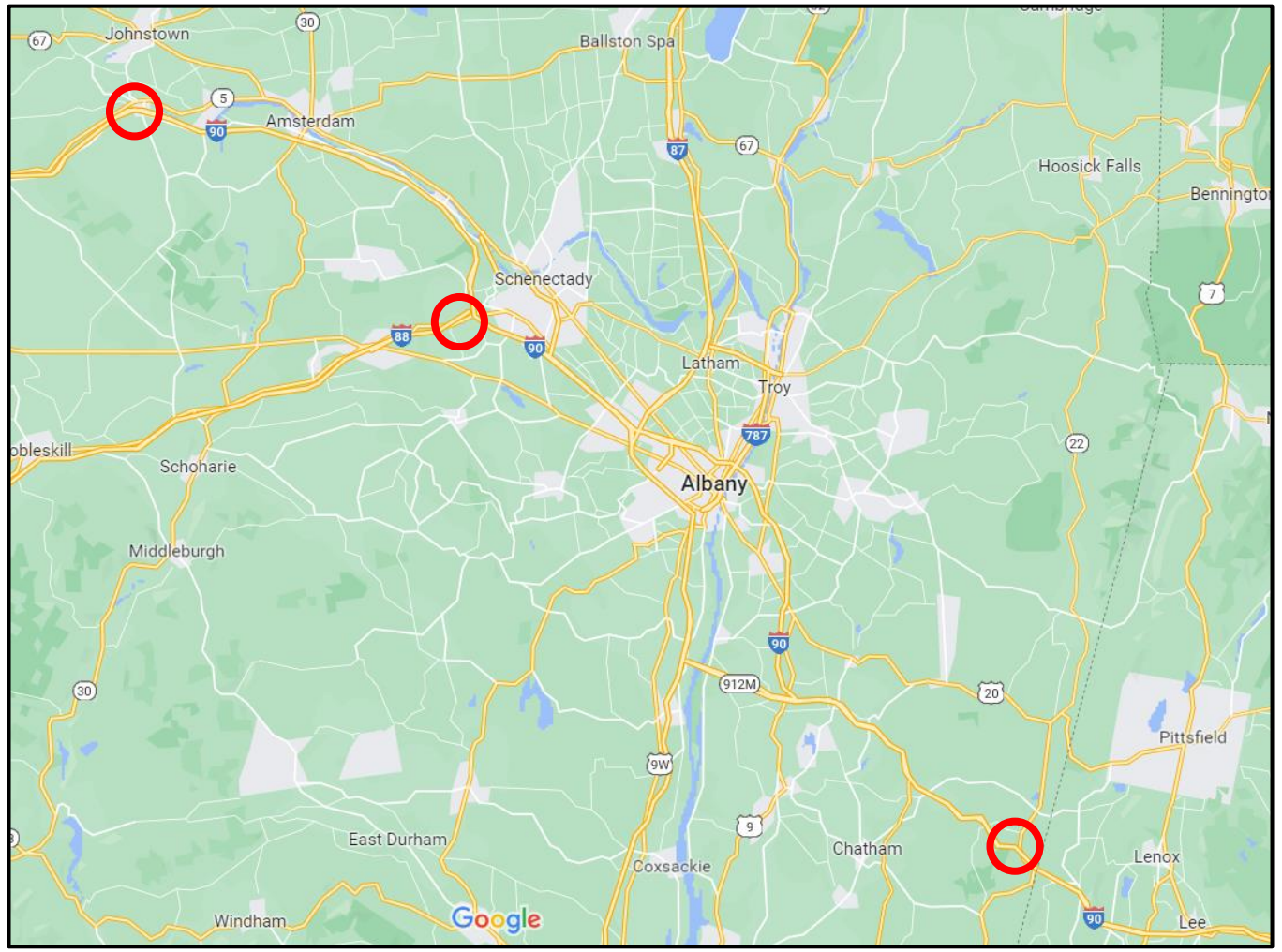
Project Status Update

- Research scan of published reports completed; summary report nearing completion.
- Field data collection completed: 30+ facilities identified and documented; overnight peak period utilization at all facilities, plus week-long profiles at nine sample locations.
- Shoulder parking documented along limited-access roadways and key arterials. Not a major concern on key roads in the CDTC region; localized issues identified.
- Three key areas of heavy truck parking activity identified: Fultonville area along I-90, Route NY-7 in Rotterdam/Duanesburg area, and Route NY-22 in Canaan.

Key Areas of Interest



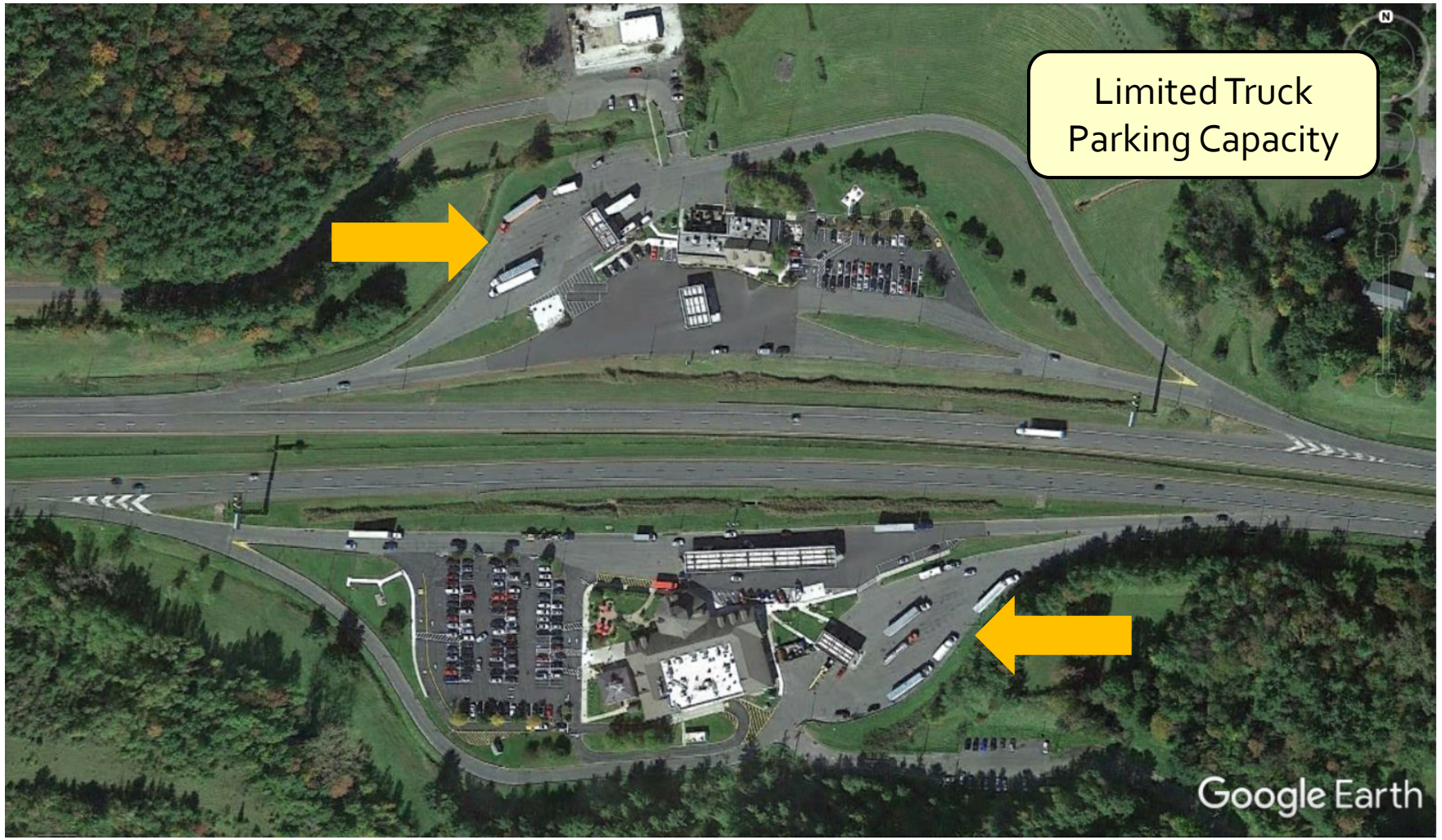
Key Areas of Interest

- Fultonville: Typical long-haul parking activity along major interstate corridor; new truck stop development.
- Rotterdam/Duanesburg: Limited parking capacity along I-88; key interchange of I-90/I-88; staging for industrial sites to the north in Rotterdam; shoulder parking along Route NY-7.
- Canaan: Similar to Fultonville, with added challenge of limited parking capacity to the east along Massachusetts Turnpike.

Route NY-7 in Duanesburg Area

Route NY-22 in Canaan

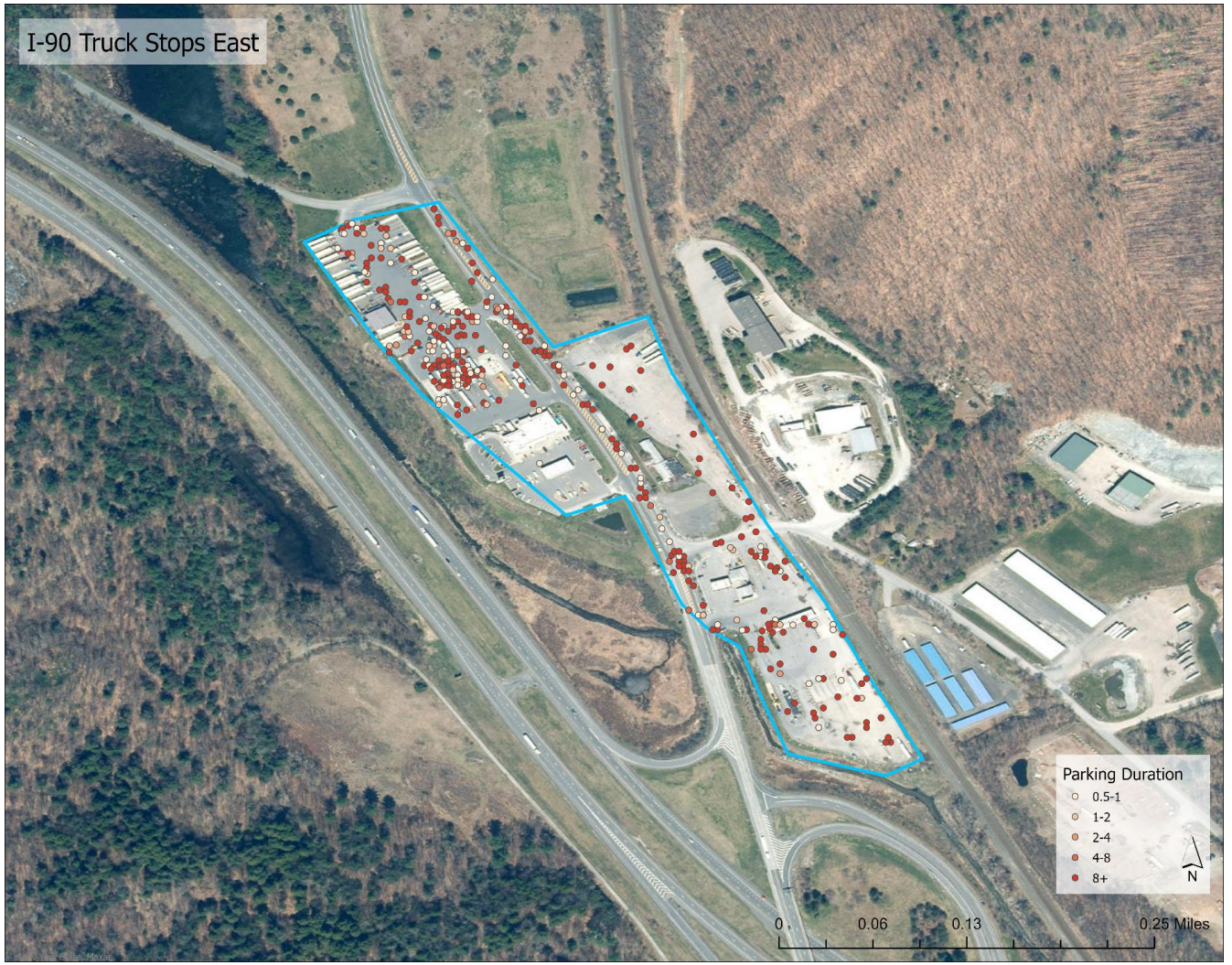
Mass. Tpk. Lee Service Plazas



GPS Data: Canaan Facilities

Unique Trucks Per Hour				
Hour	18-Oct	19-Oct	20-Oct	21-Oct
0	-	37	31	31
1	-	37	26	30
2	-	34	26	28
3	-	35	24	30
4	-	36	24	31
5	-	29	28	29
6	-	26	21	28
7	-	24	16	30
8	-	27	22	17
9	-	15	20	18
10	-	19	21	16
11	-	25	28	18
12	20	21	22	-
13	20	23	33	-
14	29	25	31	-
15	41	28	37	-
16	38	30	37	-
17	44	26	41	-
18	45	22	46	-
19	44	28	46	-
20	42	32	45	-
21	42	38	37	-
22	39	36	37	-
23	35	31	32	-

Duration (Hour)	October 18 -21	Monday	Tuesday	Wednesday	Thursday
	0.5-1	21	27	36	13
	1-2	9	10	10	4
	2-3	2	4	1	2
	3-7	1	4	4	2
	7-10	4	1	4	3
	10+	85	85	66	10
	Sum	122	131	121	34



GPS Data: New Baltimore (2021)

GPS Data: New Baltimore (2019)

Freight Advisory Committee Briefing

CDTC
Capital District Transportation Committee

CDTC Regional Truck Parking Study

August 17, 2022

Gannett Fleming
Excellence Delivered As Promised

ROCKLAND PLANNING

CAPITAL REGION Transportation Council

APPENDIX C2

FREIGHT ADVISORY COMMITTEE BRIEFING #2

Freight Advisory Committee Meeting

CDTC
Capital District Transportation Committee

CDTC Regional Truck Parking Study

February 15, 2023

Gannett Fleming
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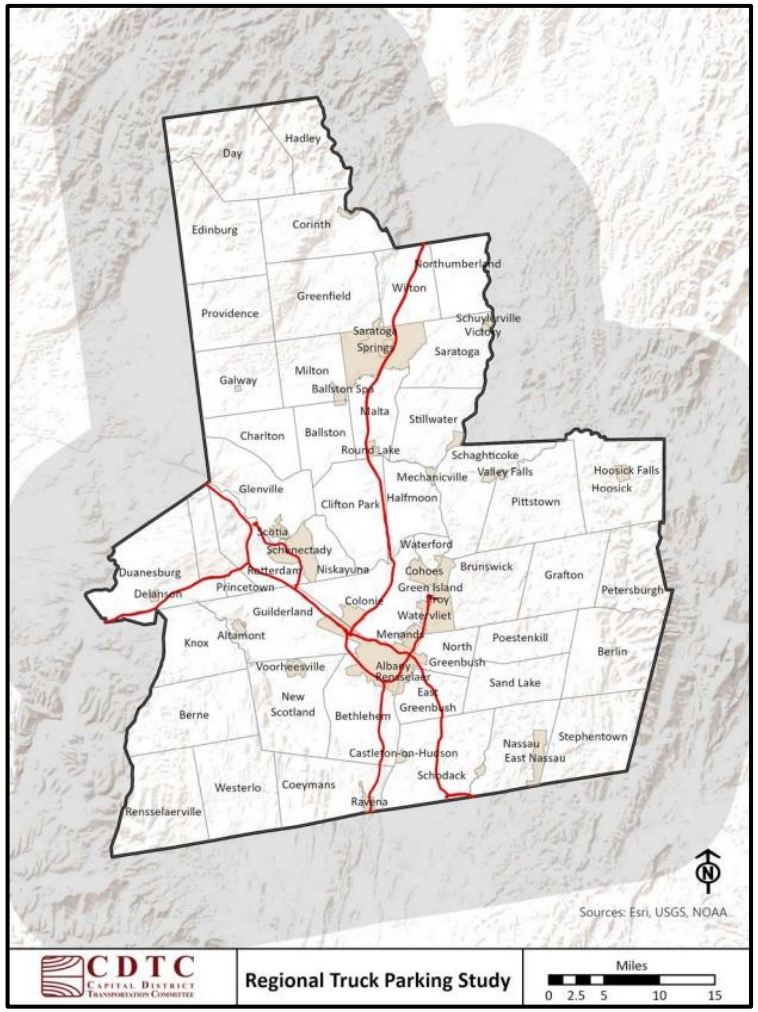
Meeting Agenda

1. Welcome/Introductions
2. Recap of Key Information Items
3. Problem Areas
4. General Findings
5. Truck Parking Toolkit
6. Freight Stakeholder Input

Study Area

- Albany, Rensselaer, Saratoga, and Schenectady Counties
- Ten-mile buffer surrounding these counties
- Adjacent NY counties: Columbia, Fulton, Greene, Montgomery, Schoharie, Warren & Washington
- Core highway network includes Interstates 87, 88, 90, 787 and 890
- These roadways comprise the major roadways in the CDTC Freight Priority Network (FPN).

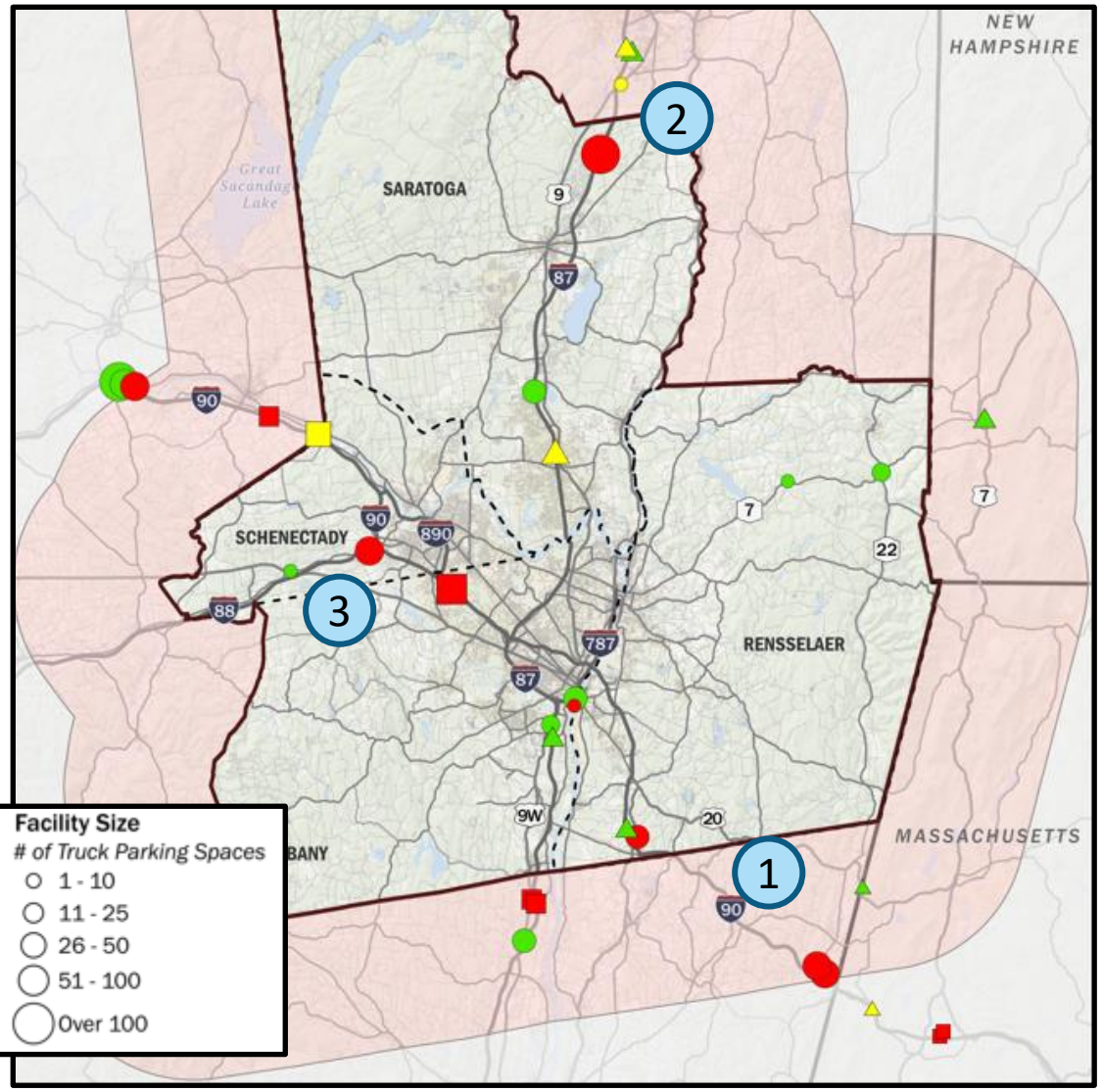


Key Information Items

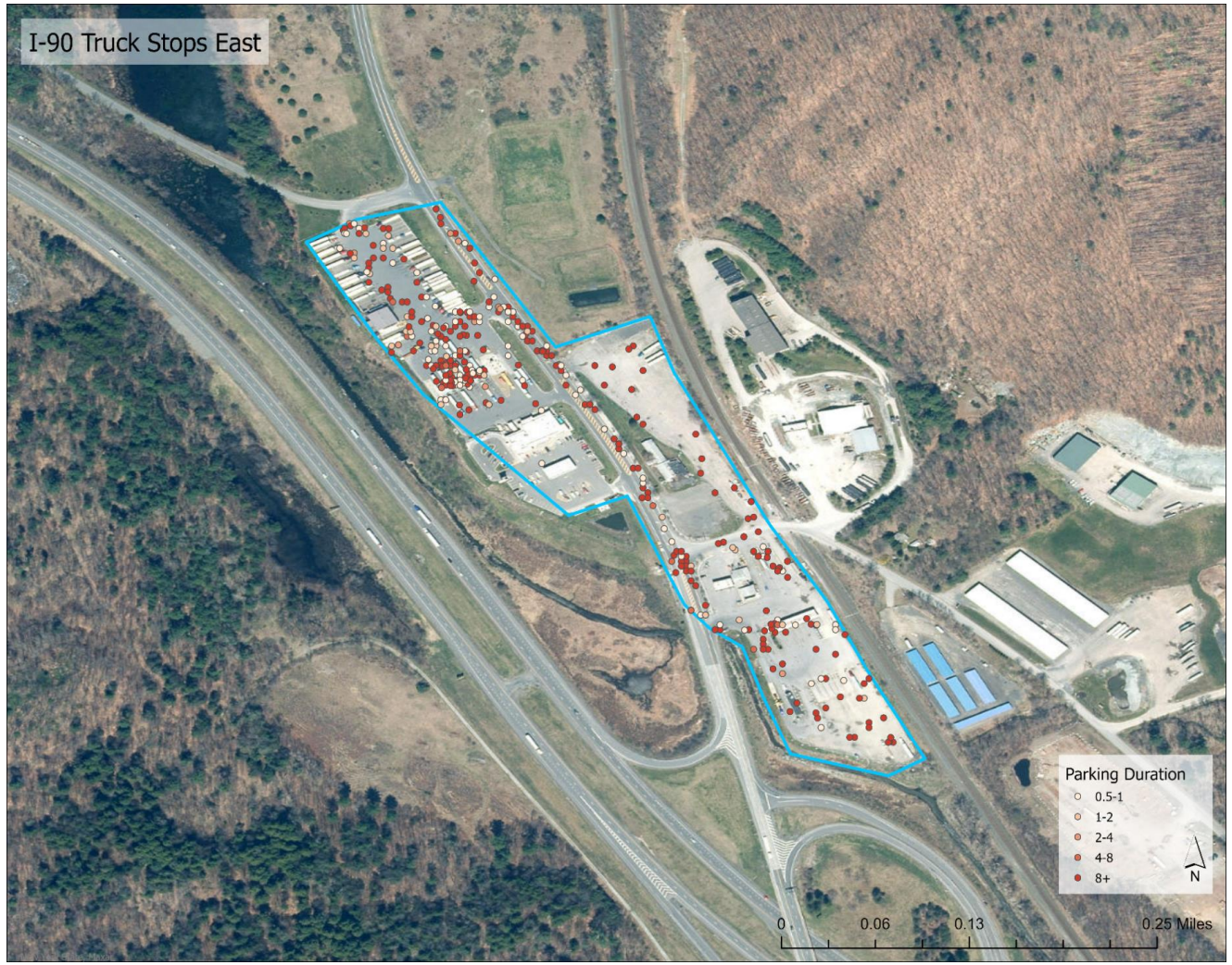
Parking Facility Utilization

CDTC Region
1003 spaces
953 occupied
95% utilization

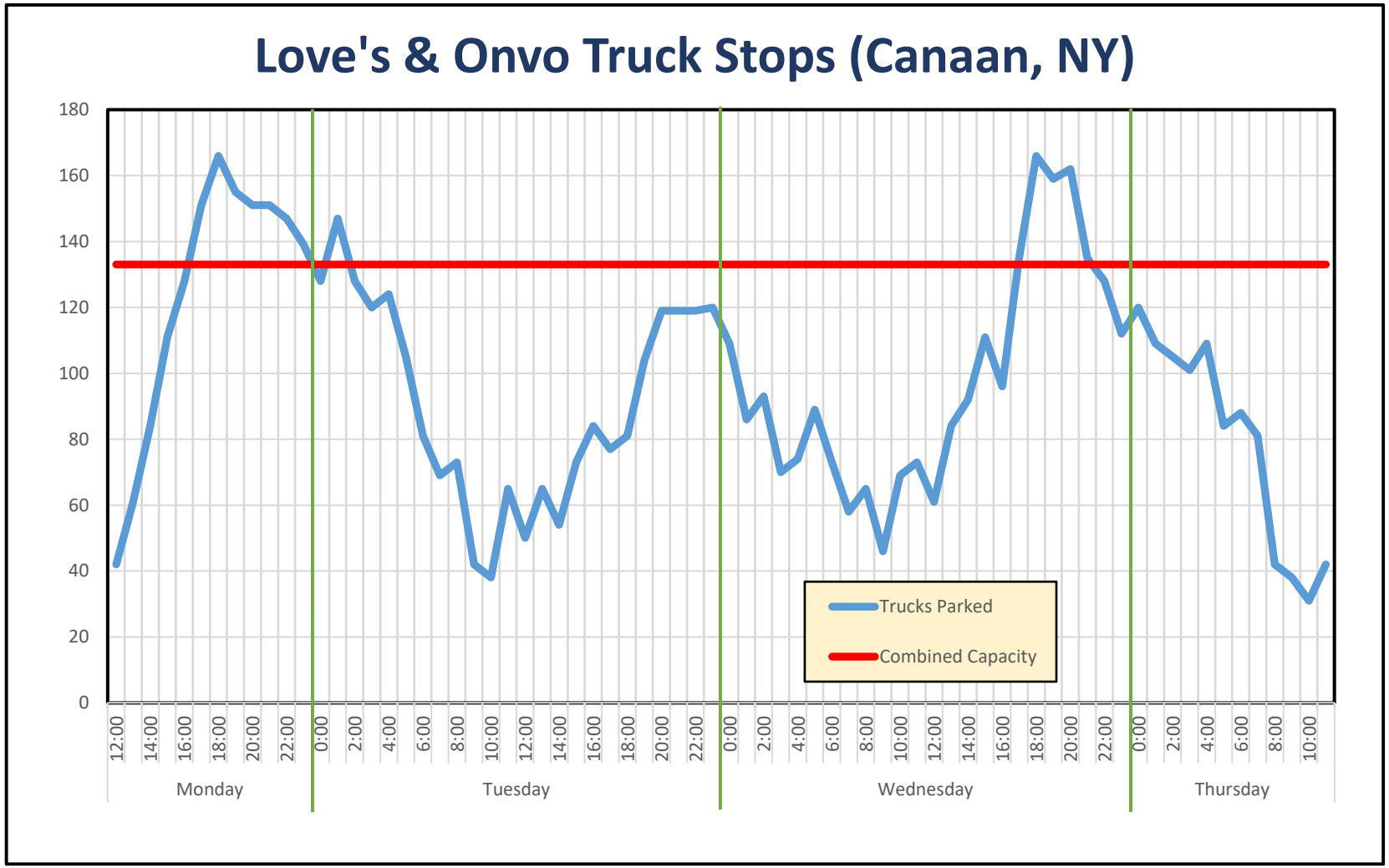
Areas of Concern
1. Heavy parking utilization at east end of I-90.
2. Limited capacity to the north on I-87
3. Shoulder parking and staging along NY-7 near I-88/I-90 interchange



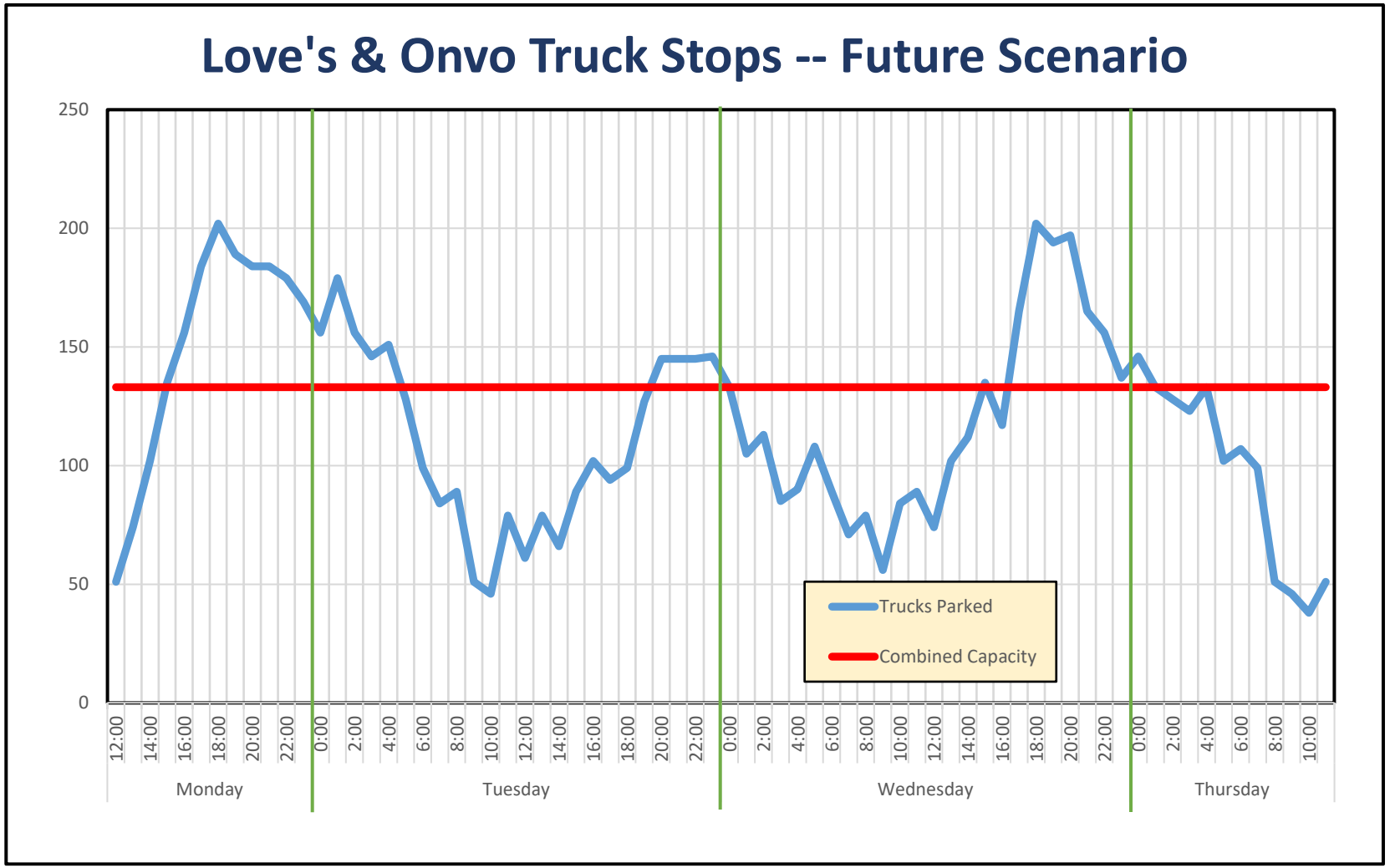
Area 1: I-90 Truck Stops (Canaan)



72-Hour Parking Profile (Base)



2% Growth for 10 Years



Next Stop for Parked Trucks

All Areas Combined

Geographic Area	Pct.
Study Area Counties	9.8%
Study Area Border Counties	13.6%
Other New York Counties	23.0%
New England	21.0%
New Jersey / Pennsylvania	13.2%
Canada	7.4%
Other	12.0%

Area 1: I-90 East

Geographic Area	Pct.
Study Area Counties	6.5%
Study Area Border Counties	8.4%
Other New York Counties	23.4%
New England	35.3%
New Jersey / Pennsylvania	9.0%
Canada	4.6%
Other	12.8%

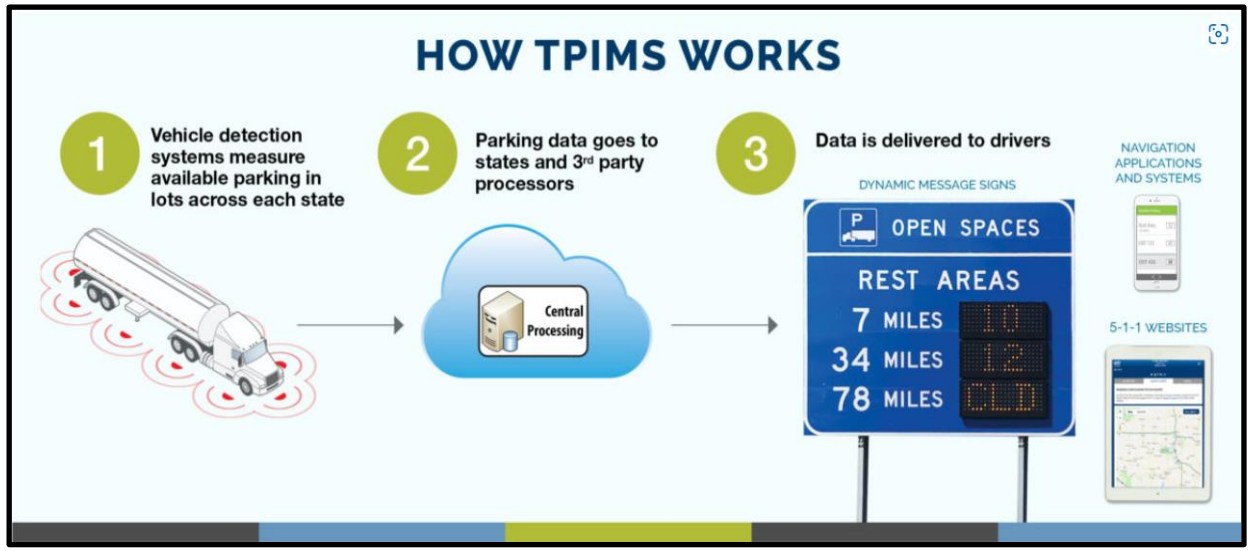
General Findings

- Truck parking facilities in CDTC region are heavily used in general.
- Excessive utilization concentrated in several areas:
  - *East end of I-90 into MA*
  - *Wilton Travel Plaza along I-87 corridor*
  - *Local parking on NY-7 in Rotterdam*
- Even minimal growth of truck parking demand over time will exacerbate existing challenges and generate new ones.
- Most parking activity is associated with long-haul truck trips. About 1 in 4 trucks parked in facilities across the region makes a next stop within the CDTC region and surrounding counties.
- Growing national interest in parking related to industrial land uses.

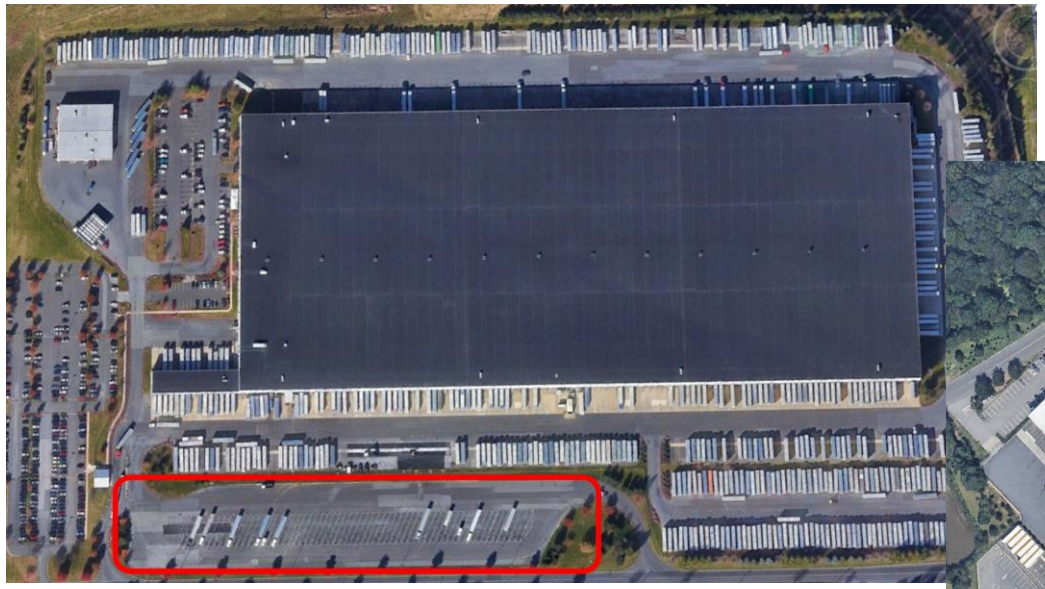
Truck Parking Toolkit

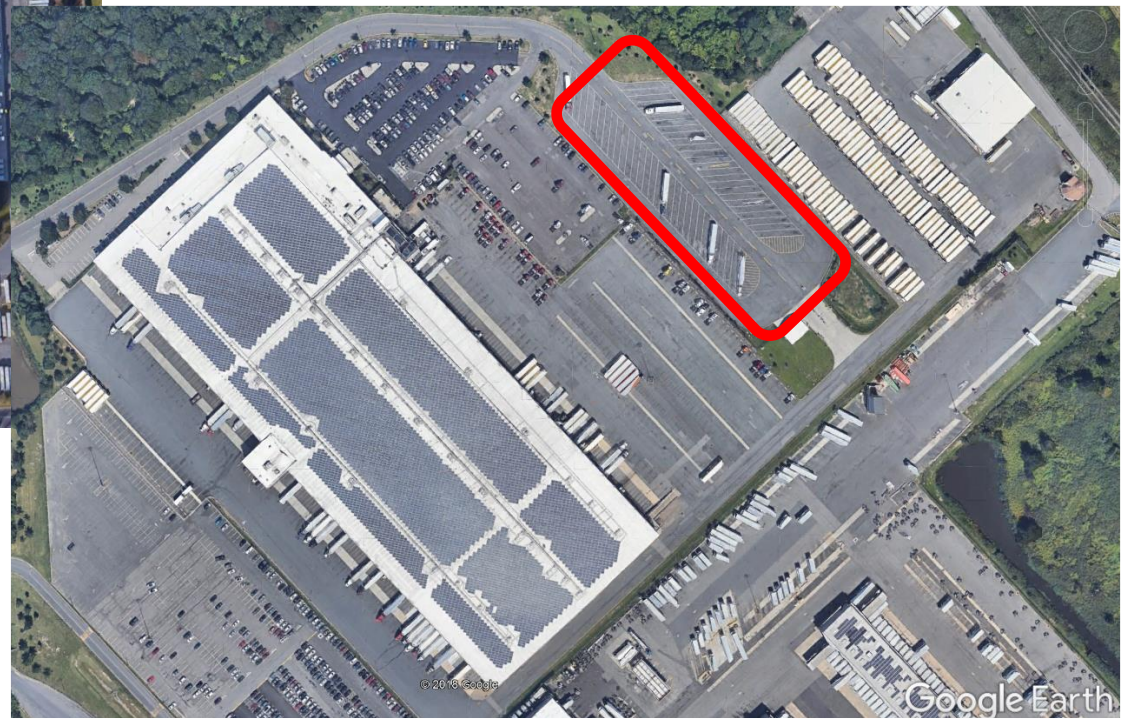
1 – Truck Parking Information Management System (TPIMS)

- Addresses areas where truck parking facilities are heavily used while available capacity exists in nearby facilities.
- Current implementation focus has been on public facilities.
- No clear need for CDTC region.



2 – Address Truck Staging Needs in Zoning for Industrial Sites





Elements of Zoning Solutions

2A – Incorporate parking/staging studies for trucks in traffic impact assessments for industrial land uses.

2B – In conjunction with 2A, implement zoning requirements for on-site or pooled truck parking spaces in industrial areas.

2C – In conjunction with 2A and 2B, include requirements for on-site driver amenities in zoning code provision.

2D – Zoning requirements for industrial properties to allow long-term parking for FMCSA hours of service regulations.

3 – Emergency Operations Plans for Truck Parking

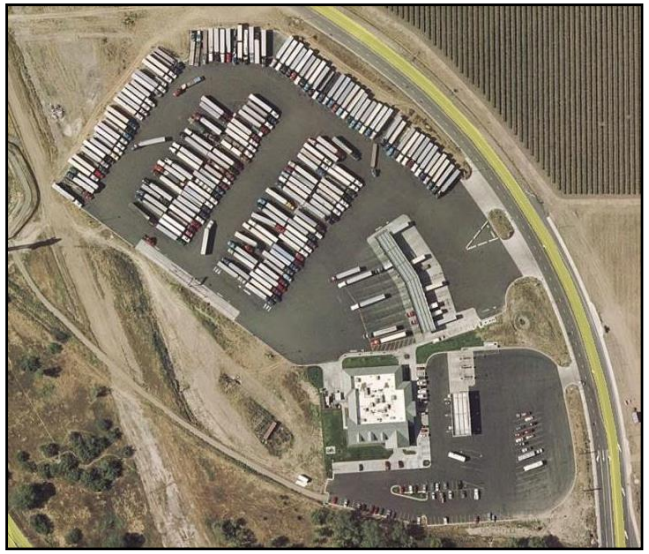
- Addresses heavy surges of truck parking demand during emergencies, weather-related disruptions, etc.
- Include truck parking in locations that can accommodate large numbers of trucks on those occasions when needed.
- Possible options could include:
  - Sports venues
  - Shopping malls
  - Park & ride lots
  - Surplus municipal or county properties
  - Military facilities with available space outside security checkpoints

4 - Idle Reduction Technology

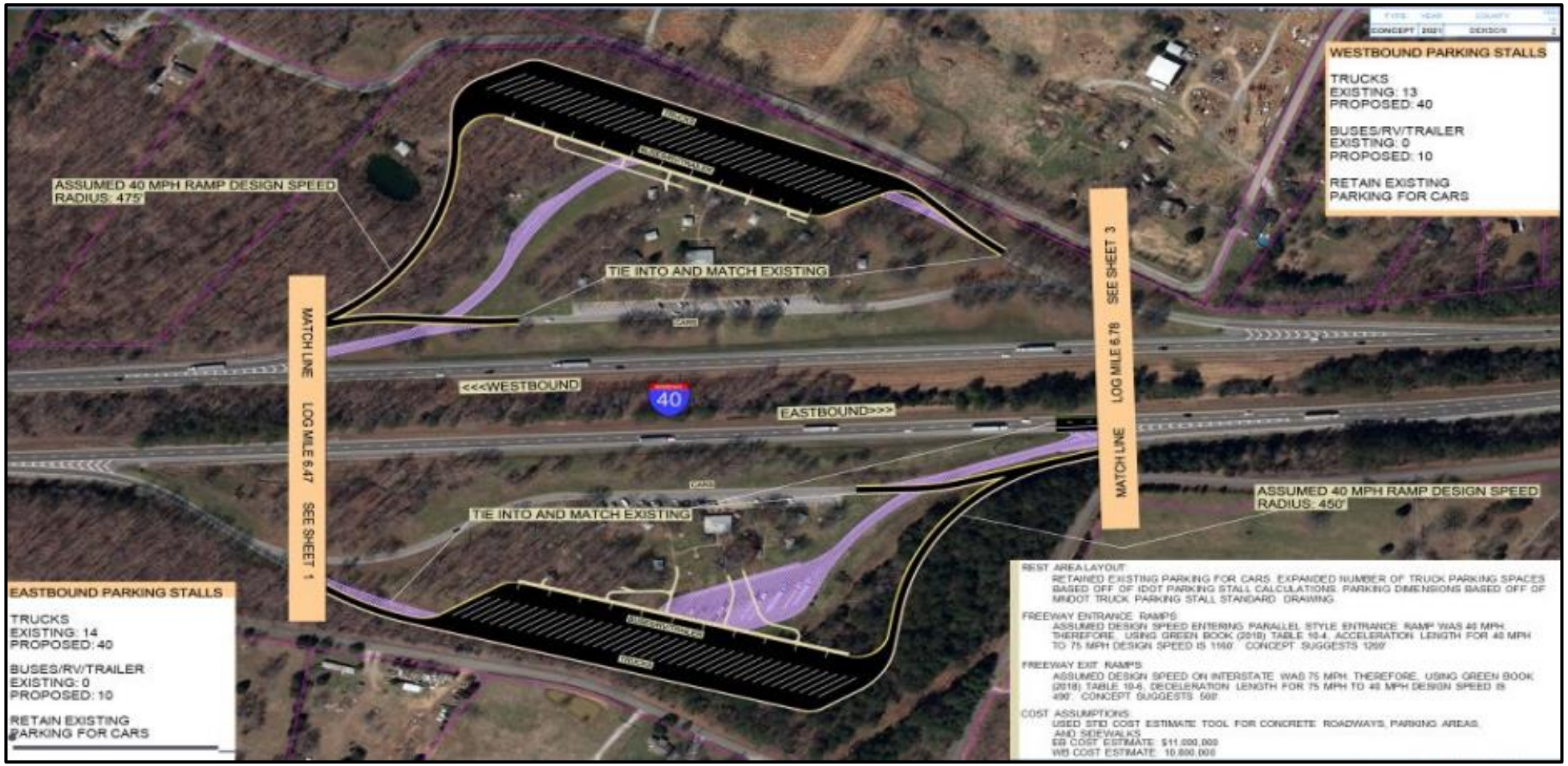
- Particularly important in non-attainment areas under Clean Air Act Amendments of 1970
- Issue is generally separate from supply and demand
- Capital cost considerations
- Potential reduction in truck parking capacity due to space requirements for some technologies.

5 – Redesign Facilities to Improve Safety & Circulation

- Two design considerations:
  - back-in vs. pull-through spaces
  - angled vs. perpendicular alignment
- Angled pull-through spaces ideal for safety and circulation
- Back-in spaces typical for private truck stops
- Perpendicular alignment more space efficient



6A – New/Expanded Capacity (Public Rest Area)

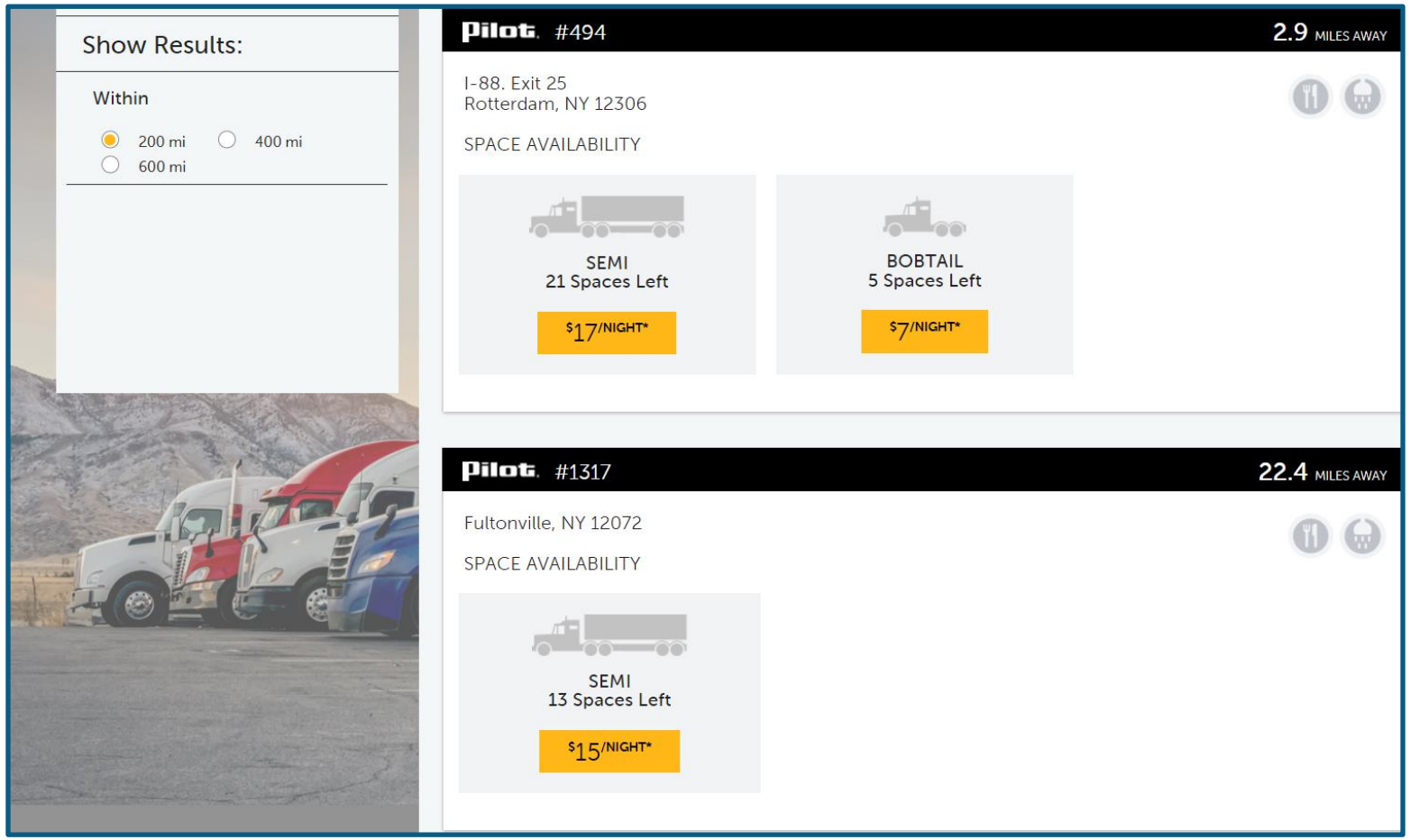


6B – New/Expanded Capacity (Private Facility or P3)

Parking Expansion Considerations

- Public facilities on Interstate Highway System ideally suited for short-term rest.
- Federal statute restricting commercialization of highway rest areas (23 U.S. Code 111) … NYS Thruway facilities grandfathered.
- In current funding environment, highway rest area funding competes with bridges, pavement and other top priorities.
- Private/P3 facilities with commercial services are best suited for long-term parking for FMCSA hours-of-service compliance.
- “Free” parking at off-highway truck stops may limit commercial viability of new/expanded truck parking. What are options for competing land uses?

Fee-Based Truck Parking



FAC Input on Toolkit Elements

ORG. TYPE: _____

No.	Toolkit Element Descriptions	Parking facilities operating over capacity	Trucks parked outside designated facilities	Overfilled parking facilities while others nearby have excess capacity	Trucks parked while staging for deliveries	Heavy surges of truck parking demand during emergencies, weather-related disruptions, etc.	Excessive truck idling, particularly in areas where vulnerable populations and sensitive land uses are affected	Truck driver safety and human comfort issues in facilities or outside designated parking areas	Insufficient parking space size; on-site circulation and/or safety concerns at existing truck parking facilities				CORRELATE PRIORITY TO FEASIBILITY (Unconstrained)	CORRELATE PRIORITY TO FEASIBILITY (Recognizing Funding Limitations)
1	Truck Parking Information Management System (TPIMS) technology	○	○	●		○								
2A	Incorporate parking/staging studies for trucks in traffic impact assessments for industrial land uses	○	○		●		○							
2B	In conjunction with 2A, implement zoning requirements for on-site or pooled truck parking spaces in industrial areas	○	○		●			○	○					
2C	In conjunction with 2A and 2B, include requirements for on-site driver amenities in zoning code provision							●	○					
2D	Zoning requirements for industrial properties to allow long-term parking for FMCSA hours of service regulations	●	●	○	○									
3	Emergency operations planning, including provisions for truck parking in non-traditional locations (shopping malls, park & rides, etc.)					●								
4	Idle reduction technology and/or truck stop electrification	⊗	⊗	⊗			●							
5	Redesign of existing parking facilities to improve safety and circulation	⊗	⊗	⊗				○	●					
6A	New or expanded truck parking capacity (public rest areas)	●	●			○								
6B	New or expanded truck parking capacity (private facilities or P3 arrangements)	●	●			○								
X1														
X2														
X3														
	PRIORITIZE TOP 3 ISSUES OF CONCERN HERE:													

Freight Advisory Committee Meeting

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February 15, 2023

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APPENDIX D

PLANNING COMMITTEE PRESENTATION

Transportation Council Planning Committee

CAPITAL REGION Transportation Council

Regional Truck Parking Study

August 2, 2023

Gannett Fleming

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Background

“Three-Legged Safety Stool”

1. The risks associated with drowsy drivers operating heavy vehicles (trucks and buses) on the highway system – focus of FMCSA hours of service rules
2. The risk of having trucks parked on highway shoulders and interchange ramps where they are fixed objects within an area designed to be a clear zone – one of the primary PennDOT concerns
3. The safety of the truck driver and the security of the cargo while the truck is parked for extended rest periods – focus of Jason’s Law

I-70 Bus Crash in Illinois (7/12/23)

Home › 3 dead and 14 injured in crash involving Greyhound bus and commercial vehicles, police say

Local news

3 dead and 14 injured in crash involving Greyhound bus and commercial vehicles, police say

Published on
12 July 2023

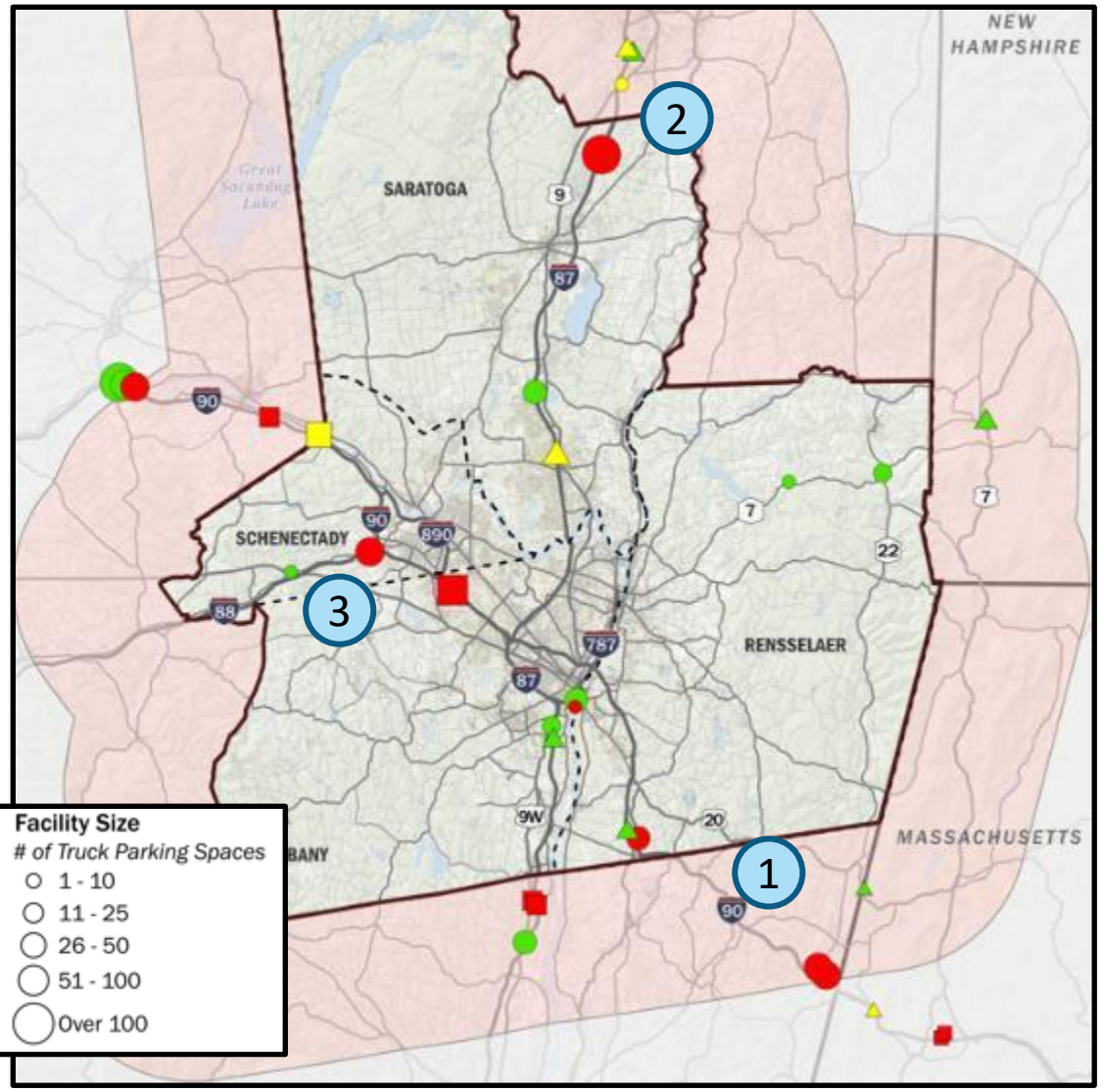
Share this @internewscast.com

Existing Conditions Assessment

Parking Facility Utilization

CDTC Region
1003 spaces
953 occupied
95% utilization

Areas of Concern
1. Heavy parking utilization at east end of I-90.
2. Limited capacity to the north on I-87
3. Shoulder parking and staging along NY-7 near I-88/I-90 interchange



Overflow Parking on Shoulders

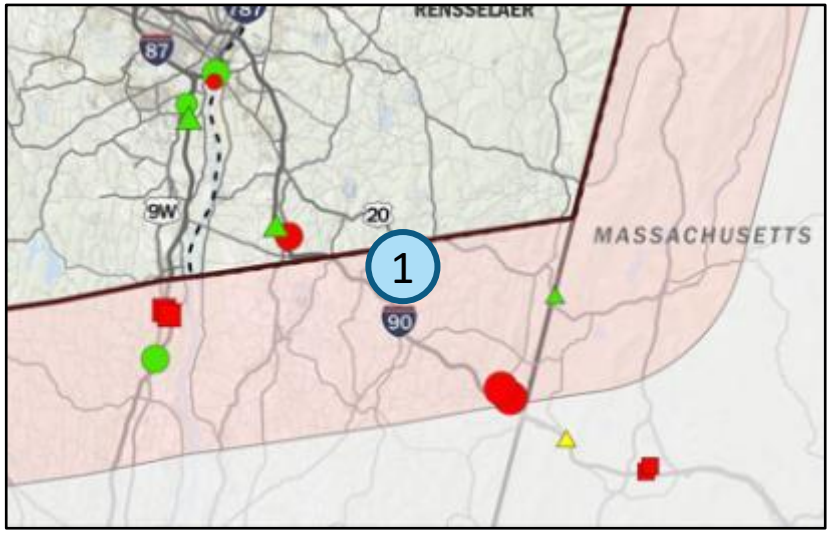
General Findings

- Truck parking facilities in CDTC region are heavily used in general.
- Excessive utilization of facilities is concentrated in several areas:
  - the east end of I-90 in New York, extending into western Mass.
  - the Wilton Travel Plaza along the I-87 corridor north of Albany
  - local parking on NY-7 in Rotterdam area
- Even minimal growth of truck parking demand over time will exacerbate existing challenges and generate new ones.
- Most parking activity is associated with long-haul truck trips.
- About 1 in 4 trucks parked in facilities across the region makes its next stop within the Capital Region and surrounding counties.
- For the region as a whole, parking demand approaches but does not exceed the combined capacity of the facilities.

Study Recommendations

Recommendation #1

Seek Opportunities to Expand Truck Parking along the I-90 Corridor East of the Hudson River.



Implementation Partner(s): NYSDOT, MassDOT, NYSTA, municipal governments (as applicable), private travel center developers

Recommendation #2

Seek Opportunities to Expand Truck Parking in the Vicinity of the I-90/I-88 Interchange in Schenectady County.

Implementation Partner(s): Municipal governments of Duanesburg, Princetown and/or Rotterdam; NYSDOT; private developers

Recommendation #3

Potential New Truck Parking Capacity and Driver Services at New York State Thruway Service Areas..

Implementation Partner(s): NYSTA, Empire State Thruway Partners, NYSDOT (for potential Federal funding options).

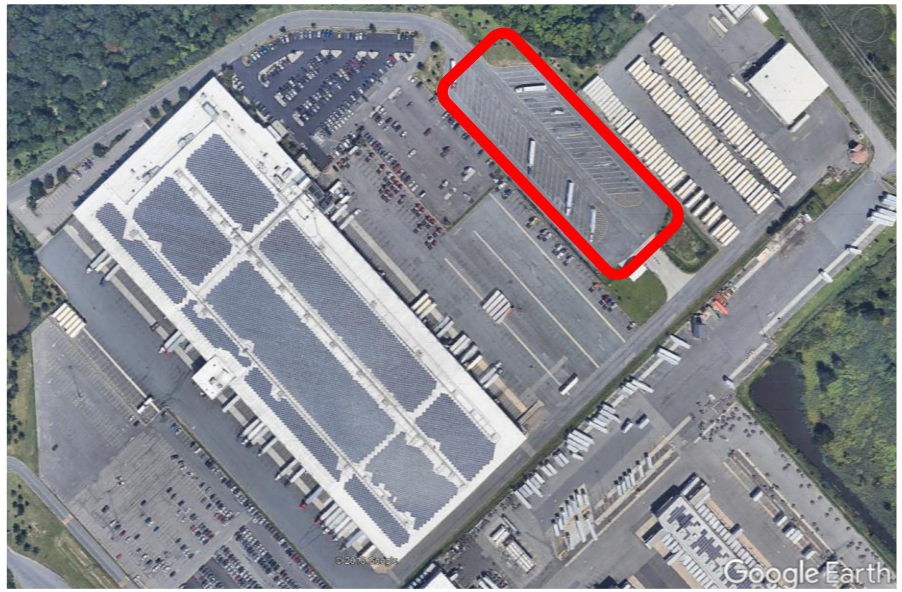
Recommendation #4

Expand Truck Parking Capacity at Existing Interstate Highway Rest Areas, as Needed and Feasible.

Implementation Partner(s): NYSDOT

Recommendation #5

Develop Formal Municipal Guidance for Incorporating Truck Parking and Staging into Industrial Site Approvals.



Implementation Partner(s): Capital Region Transportation Council (FAC), NYSEDC, municipal governments, Industrial Development Agencies

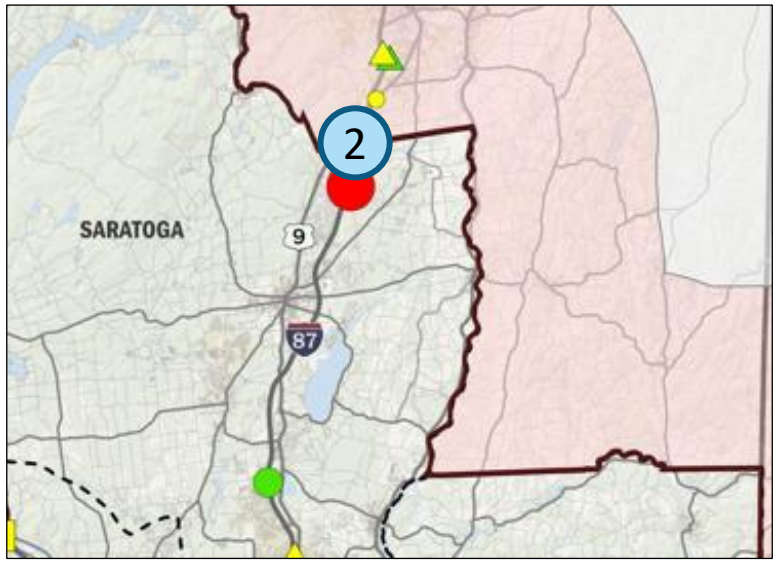
Recommendation #6

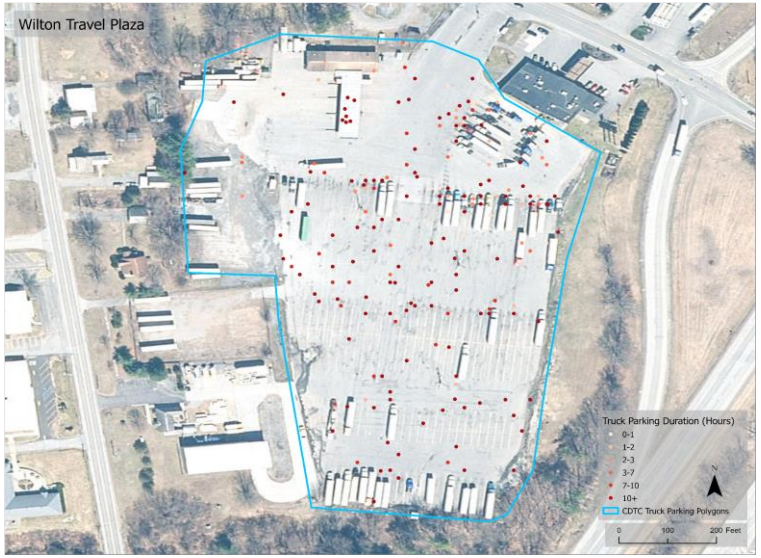
Conduct Pilot Study for Truck Electrification/Idle Reduction Technology in Capital Region.

Implementation Partner(s): NYSDOT, NYSTA, private truck stop owner, private shipper/receiver, Capital District Clean Communities

Recommendation #7

Explore Options for New/Expanded Truck Parking in the Vicinity of Exits 16 and/or 17 of the Adirondack Northway (I-87).





Implementation Partner(s): Private industrial developers, municipal governments, NYSDOT

Recommendation #8

Develop Emergency Truck Parking Plan for Capital Region.

Implementation Partner(s): NYSDOT, New York State Police, New York OEM, municipal governments, facility owners/operators

Transportation Council Planning Committee

CAPITAL REGION Transportation Council

Regional Truck Parking Study

August 2, 2023

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APPENDIX E1

NYSAMPO POSTER

CDTC Regional Truck Parking Study:

Data-Driven Analysis for Freight Transportation and Land Use Issues

Presented by:
Christian Bauer, AICP – Director of Transportation Planning
Chaim Simon – Transportation Planner

> PROJECT BACKGROUND

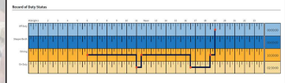
Truck Parking Issues: Factors Behind the Problem

- General growth of population and commercial activity in the U.S.
- New competitors in the trucking industry resulting from industry deregulation
- Congestion driven by growing truck and passenger vehicle volumes
- Changes in logistics practices aimed at streamlining supply chains – "just-in-time" deliveries
- Mandatory rest periods for drivers under Federal Motor Carrier Safety Administration (FMCSA) hours of service rules
- High cost of constructing and maintaining new truck parking capacity
- Community impacts of truck parking facilities
- Staging needs for trucks making deliveries at shippers/receivers

Truck Parking: Safety Elements

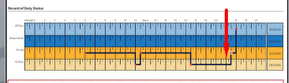
- The risks associated with drowsy drivers operating heavy vehicles (trucks and buses) on the highway system – focus of FMCSA hours of service rules
- The risk of having trucks parked on highway shoulders and interchange ramps where they are fixed objects within an area designed to be a clear zone – one of the primary NYSDOT concerns
- The safety of the truck driver and the security of the cargo while the truck is parked for extended rest periods – focus of Jason's Law

Optimized Driving Day



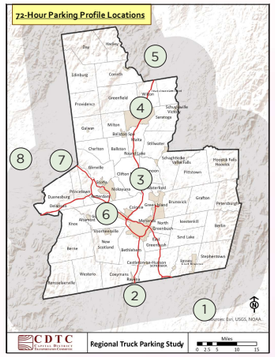
Scenario 1: Driver travels for 10 hours with 30-minute break after Hour 5. If customer takes 2 hours to unload, driver can spend 30 minutes looking for a parking space and complete the day in 13 hours.

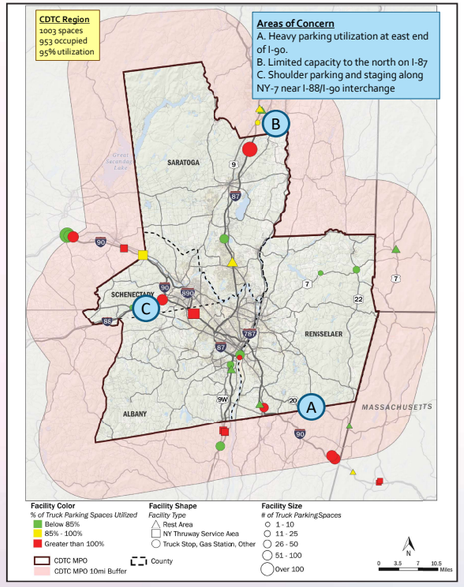
Supply Chain Constraints

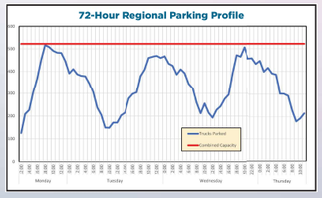


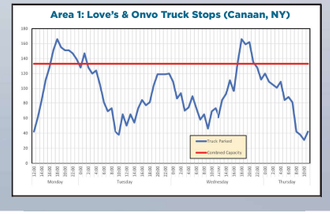
Scenario 2: Driver travels for 10 hours with 30-minute break after Hour 5. If customer takes **4 hours** to unload, the driver runs out of hours under the 14-hour duty window while still parked at the loading dock. **This driver will usually cut the driving day short several hours early to avoid this scenario.**

> DATA AND FINDINGS









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- Excessive utilization concentrated in several areas:
  - East end of I-90 into MA
  - Wilton Travel Plaza along I-87 corridor
  - Local parking on NY-7 in Rotterdam
- Even minimal growth of truck parking demand over time will exacerbate existing challenges and generate new ones.
- Most parking activity is associated with long-haul truck trips. About 1 in 4 trucks parked in facilities across the region makes a next stop within the CDTC region and surrounding counties.
- Growing national interest in parking related to industrial land uses.

Destinations for Parked Trucks: Entire Region

Geographic Area	Pct.
Study Area Counties	9.8%
Study Area Border Counties	13.6%
Other New York Counties	23.0%
New England	21.0%
New Jersey / Pennsylvania	13.2%
Canada	7.4%
Other	12.0%

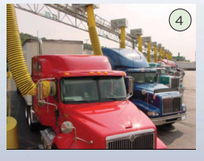
Destinations for Parked Trucks: Area 1

Geographic Area	Pct.
Study Area Counties	6.5%
Study Area Border Counties	8.4%
Other New York Counties	23.4%
New England	35.3%
New Jersey / Pennsylvania	9.0%
Canada	4.6%
Other	12.8%

> STUDY OUTCOMES

Truck Parking Toolkit Elements

1. Truck Parking Information Management System (TPIMS)
2. Address Truck Staging Needs in Zoning for Industrial Sites
3. Emergency Operations Plans for Truck Parking
4. Truck Electrification / Idle Reduction Technology
5. Redesign Facilities to Improve Safety & Circulation
6. New/Expanded Truck Parking Facilities



Key Study Recommendations

- Work with municipalities in CDTC region to develop model zoning code provisions to incorporate truck parking capacity in the industrial site development process.
- Look for strategic opportunities for low-cost truck parking capacity expansion at existing NYSDOT rest areas and New York State Thruway service areas where suitable options exist within the right-of-way.
- Ongoing collaboration with NYSDOT to monitor truck parking capacity, utilization and other truck parking metrics in the CDTC region to meet USDOT requirements for state freight plans.
- Identify potential targeted TPIMS solutions and truck electrification and idle reduction technology through NYSDOT, NYSERDA and other prospective partners in conjunction with the state's National Electric Vehicle Infrastructure (NEVI) Plan.
- Coordinate with NYSDOT, the NYS Thruway Authority, and MassDOT to identify regional options for expanded truck parking capacity along the I-90 corridor in the CDTC region of New York and western Massachusetts. Identify potential Federal funding sources for a corridor-level truck parking initiative between the two states.
- Facilitate dialogue between NYSDOT/NYSTA, municipal governments, major industrial property owners, the trucking industry, the New York State Police, and the New York State Office of Emergency Management to develop strategies to deal with overflow truck parking demand during road closures and disruptive weather events.

GANNETT FLEMING
CDTC Capital District Transportation Committee

CAPITAL REGION Transportation Council

APPENDIX E2

NYSAMPO POSTER NARRATIVE

NYSAMPO Conference 2023 Poster Session

CDTC Regional Truck Parking Study

Narrative Notes

Panel #1

The background material on Panel #1 is generally self-explanatory. The top list contains a number of factors that drive the truck parking problem on a national scale. The second list contains the "three-legged safety stool" that is the basis of all the USDOT efforts in this area:

- Safety impacts of drowsy truck drivers
- Safety impacts of trucks parked on highway shoulders due to limited parking capacity.
- Safety and security of the driver and cargo when the truck is parked.

The two graphics on the bottom right illustrate a particularly challenging issue that has emerged in recent years and is exacerbating supply chain constraints. These represent the on-duty, off-duty, and driving time for a driver under two different scenarios. There are two basic limitations to a driver's day (this is a simplified explanation): A driver who starts a driving shift is subject to two limitations: (1) maximum 11 hours driving); and (2) a maximum of 14 hours on duty (including driving time and on-duty time when not driving such as loading/unloading, pre-trip vehicle inspection, etc.).

The driver logs show a driver going on duty at 6:00 AM and making a day-long trip, arriving at the customer's location at 4:30 PM after 10 hours of driving. If the customer takes two hours to unload the truck, the driver can spend some time finding a parking area nearby to shut down for the night and take the 10-hour continuous rest period required under FMCSA regulations.

However, what is happening in recent years is that the customer often takes far more than two hours to unload the truck. If (as shown in the second graph) the customer takes four hours to unload, then the driver will run out of hours under the 14-hour duty window limit while parked at the loading dock. If the customer does not allow the driver to park there for ten hours, the driver must violate the FMCSA hours of service regulations to find a place to park. To avoid this scenario, many drivers are cutting their days short after 7-8 hours of driving and making their deliveries the next day so they won't run out of hours on a customer's property. This may be a common scenario for eastbound trucks along the I-90 corridor in the CDTC region. They may arrive in the Albany area on a trip to Boston with several hours of permitted driving time left on their clock, but with limited parking capacity in the Boston area and the uncertainty of parking at the customer's location, they are making their final 10+ hour stop here in this area where there are a number of large truck parking facilities available.

Panel #2

Start with the map in the top right corner. This shows all of the truck parking facilities in the CDTC region, with icons organized by facility type (shape) and peak overnight utilization (color). There are quite a few "green" facilities in the area, but most of the largest ones are "red." The yellow box in the top left corner shows the aggregate utilization across the region relative to the available capacity. The region overall is still operating within the available truck parking capacity, but there are three key locations of concern summarized in the blue box.

The peak overnight counts and observations were supplemented by detailed 72-hour profiles at eight locations across the region, as shown in the top left corner. The 72-hour period starts at noon on a

Monday and extends through noon on Thursday, so it includes three consecutive overnight periods. The eight sample locations were selected to cover major roads across the entire region and to ensure a variety of parking facility types. The aerial photo of Area 1 shows how this data was collected using GPS data from ATRI. Each truck that was stopped for a minimum of 30 minutes was identified as a "parked truck" in the ATRI database. The "72-Hour Regional Parking Profile" shows the aggregate utilization and capacity for the parking facilities in all eight areas. This profile closely reflects the 95% utilization data in the yellow box in the top left corner of the regional facility map in the top right corner. This means the two data methods reinforce each other, and we selected a good mix of parking facilities for the 72-hour profiles.

The 72-hour profile for Area 1 – the two truck stops at the far east end of I-90 just west of the Massachusetts state line – shows why this has been identified as a corridor of concern. The parking utilization in this area exceeds the capacity of the two truck stops there for stretches of time for several typical overnight periods. One consequence of this is that there are often a number of trucks parked on shoulders and ramps in this area (see photos in Panel #1 as an example of this).

In addition to the temporal distribution of the parked trucks in this 72-hour profile exercise, the ATRI data was also used to identify the next stop location for each truck that was parked in these areas for the 30-minute minimum. The tables at the bottom of Panel #2 summarize this data. Data for all eight sample areas is shown on the left, while the data for Area 1 is shown on the right. Two items of note here:

- The trucks making their next stops in either the "Study Area Counties" or "Study Area Border Counties" are typically those that are stopping while staging for a local delivery or pick-up. This type of parking activity is closely correlated to industrial land uses in the CDTC region. This is between 20% and 25% of the truck parking activity in the region – not a major problem, but not insignificant.
- Trucks making their next stop in New England represent 21% of the overall total across the region, but more than 35% of the parking activity at the east end of I-90 (Area 1). This is what will drive the multi-state corridor-based solution discussed for Panel #3.

Panel #3

A toolkit of potential solutions for truck parking challenges in the CDTC region (and beyond) is listed and illustrated at the top of the panel. The most relevant and important ones for this region are #2, #3 and #6.

#2 – Incorporating truck parking and staging areas into new industrial site plans for individual properties or as pooled areas to serve collective industrial sites would help alleviate the problem in those areas where staging/waiting trucks occupy rest areas and heavily-used truck stops, and where they park on shoulders in areas where parking demand exceeds the available capacity.

#3 – Parking under emergency conditions is particularly important in this area due to occasional weather events in the winter climate. This is a unique solution because the demand for parking will typically far exceed the available capacity when roads are closed during major incidents, winter storms, etc. Options to address these infrequent (but disruptive) cases could involve non-traditional parking in large paved areas that may be unoccupied during overnight periods or when weather conditions disrupt normal activity – schools, shopping centers, sports venues, fairgrounds, etc.

#6 – New parking capacity is typically an expensive, capital-intensive undertaking. Public-private partnerships between public agencies and private truck stop operators may be a successful model if implemented effectively. The two key locations where this should be explored include:

- The eastern end of I-90 along the NY-MA state line. This should be a multi-state initiative involving NYSDOT, the NYSTA, and their peer agencies in Massachusetts. Much of this problem is driven by the limited available truck parking capacity of the MassPike service areas in western Massachusetts.
- The Wilton Truck Stop in the northern part of the study area is heavily used on a regular basis. This is a feature of the regional geography north of Albany. Limited truck parking facilities along I-87 through the Adirondack Mountains makes this region something of a “last stop” for northbound trucks traveling through the Adirondacks to Plattsburgh, Montreal and beyond. Options for developing new full-service commercial/retail sites along the I-87 corridor between Albany and Plattsburgh should be explored. Smaller NYSDOT rest areas along this corridor are operating efficiently but have limited amenities available for long-haul truck drivers who make mandatory stops for rest and other needs.

CAPITAL REGION Transportation Council

APPENDIX E3

NYSAMPO FREIGHT WORKING GROUP PRESENTATION

NYSAMPO Freight Work Group

CAPITAL REGION Transportation Council

Regional Truck Parking Study

October 25, 2023

Gannett Fleming

Excellence Delivered As Promised

ROCKLAND PLANNING

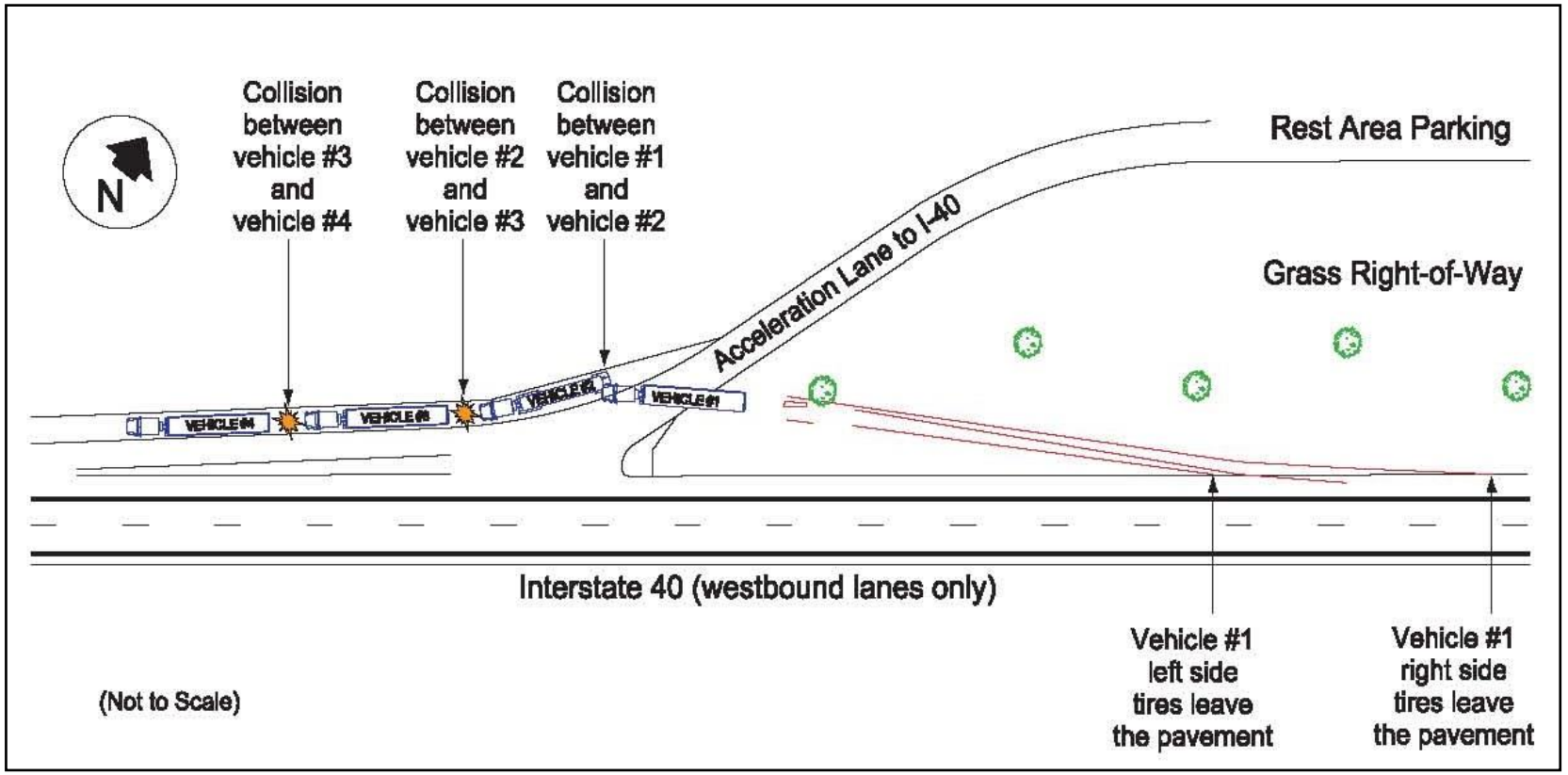
Background

“Three-Legged Safety Stool”

1. The risks associated with drowsy drivers operating heavy vehicles (trucks and buses) on the highway system – focus of FMCSA hours of service rules
2. The risk of having trucks parked on highway shoulders and interchange ramps where they are fixed objects within an area designed to be a clear zone – one of the primary PennDOT concerns
3. The safety of the truck driver and the security of the cargo while the truck is parked for extended rest periods – focus of Jason’s Law

WB I-40 in Jackson, TN: 6/3/99

WB I-40 in Jackson, TN: 6/3/99



Key Milestones (National)

- 2000 – NTSB Highway Rest Areas report
- 2002-05 – FMCSA Hours of Service (HOS) rule changes
- Late 2000s – State DOTs and MPOs evaluate overflowing rest areas and ramp/shoulder parking
- 2012 – Jason's Law (MAP-21 Section 1401)
- 2015 – Jason's Law initial survey completed
- 2017 – FMCSA electronic logging device (ELD) mandate
- 2018 – Jason's Law survey update
- 2021 – Infrastructure Bill: New requirements to incorporate truck parking in statewide freight plans

Public Sector Roles & Challenges

- What is the public sector's role?
- Safety issues associated with parking on shoulders and interchange ramps
- Federal law restricting commercialization of highway rest areas (23 U.S. Code 111)
- Cost and regulatory process to construct new truck stops
- FMCSA rest periods for long-haul truckers vs. local needs for short-term staging in warehouse/industrial areas

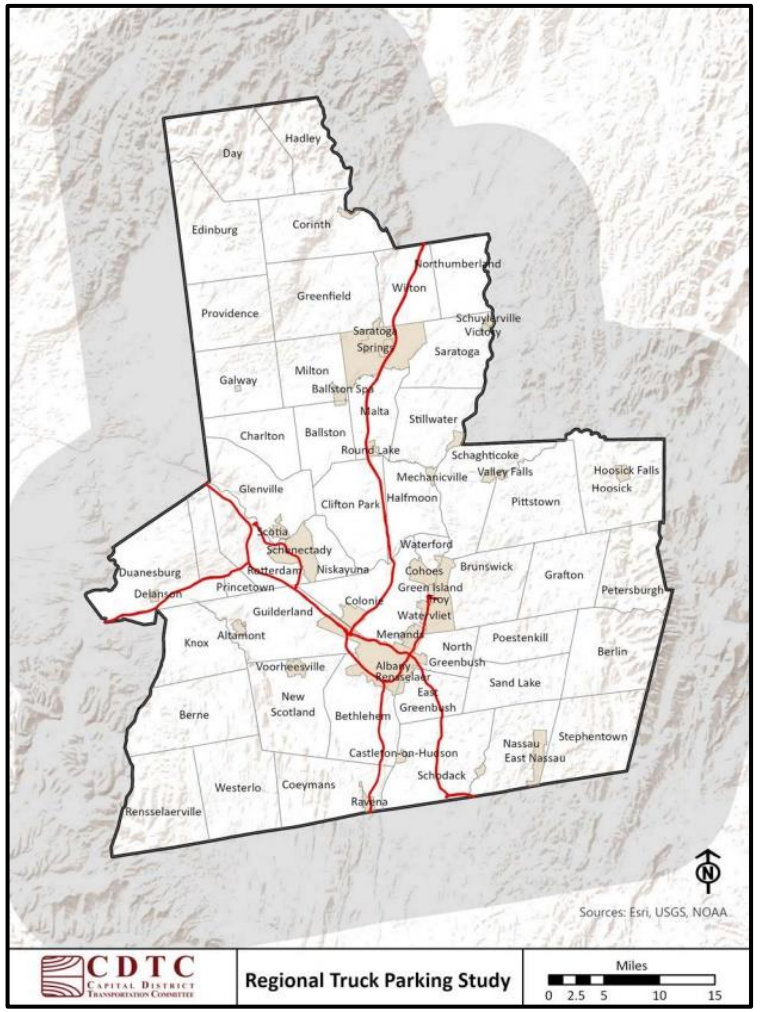
Truck Parking Activity Types

- **Long-term parking** to meet FMCSA long-term rest requirements – 4 to 10+ hours.
- **Short term parking** to meet driver needs and FMCSA short-term rest requirements – generally up to 30 minutes.
- **Staging** for local deliveries – can vary widely from less than one hour to 10+ hours if done in conjunction with FMCSA rest requirements.
- **Emergency parking** under travel disruptions (weather, roadway incidents, etc.) – usually addressed outside conventional parking facilities.

Existing Conditions Assessment

Study Area

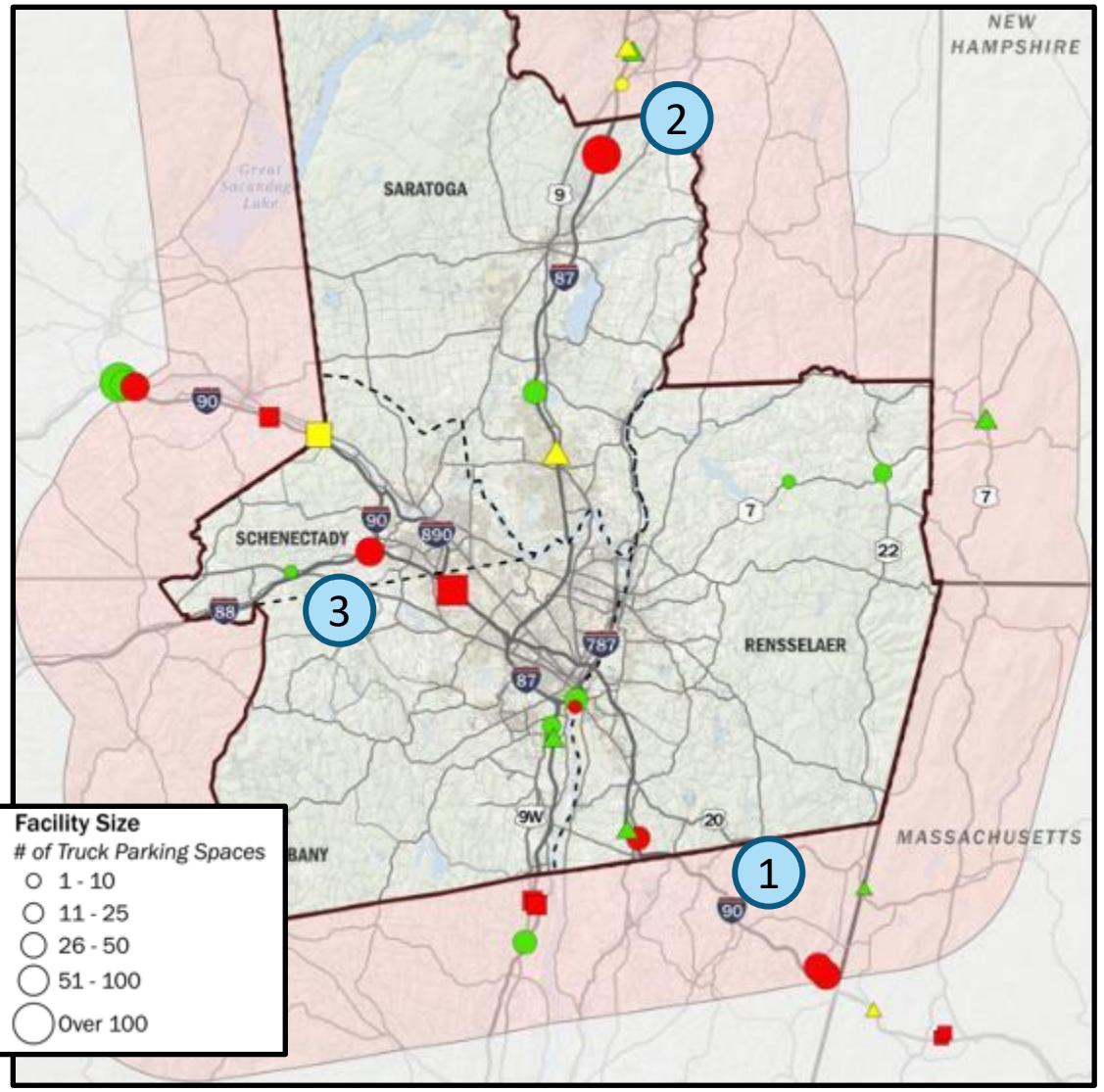
- Albany, Rensselaer, Saratoga, and Schenectady Counties
- Ten-mile buffer surrounding these counties
- Adjacent NY counties: Columbia, Fulton, Greene, Montgomery, Schoharie, Warren & Washington
- Core highway network includes Interstates 87, 88, 90, 787 and 890
- These roadways comprise the major roadways in the CDTC Freight Priority Network (FPN).



Parking Facility Utilization

CDTC Region
1003 spaces
953 occupied
95% utilization

Areas of Concern
1. Heavy parking utilization at east end of I-90.
2. Limited capacity to the north on I-87
3. Shoulder parking and staging along NY-7 near I-88/I-90 interchange

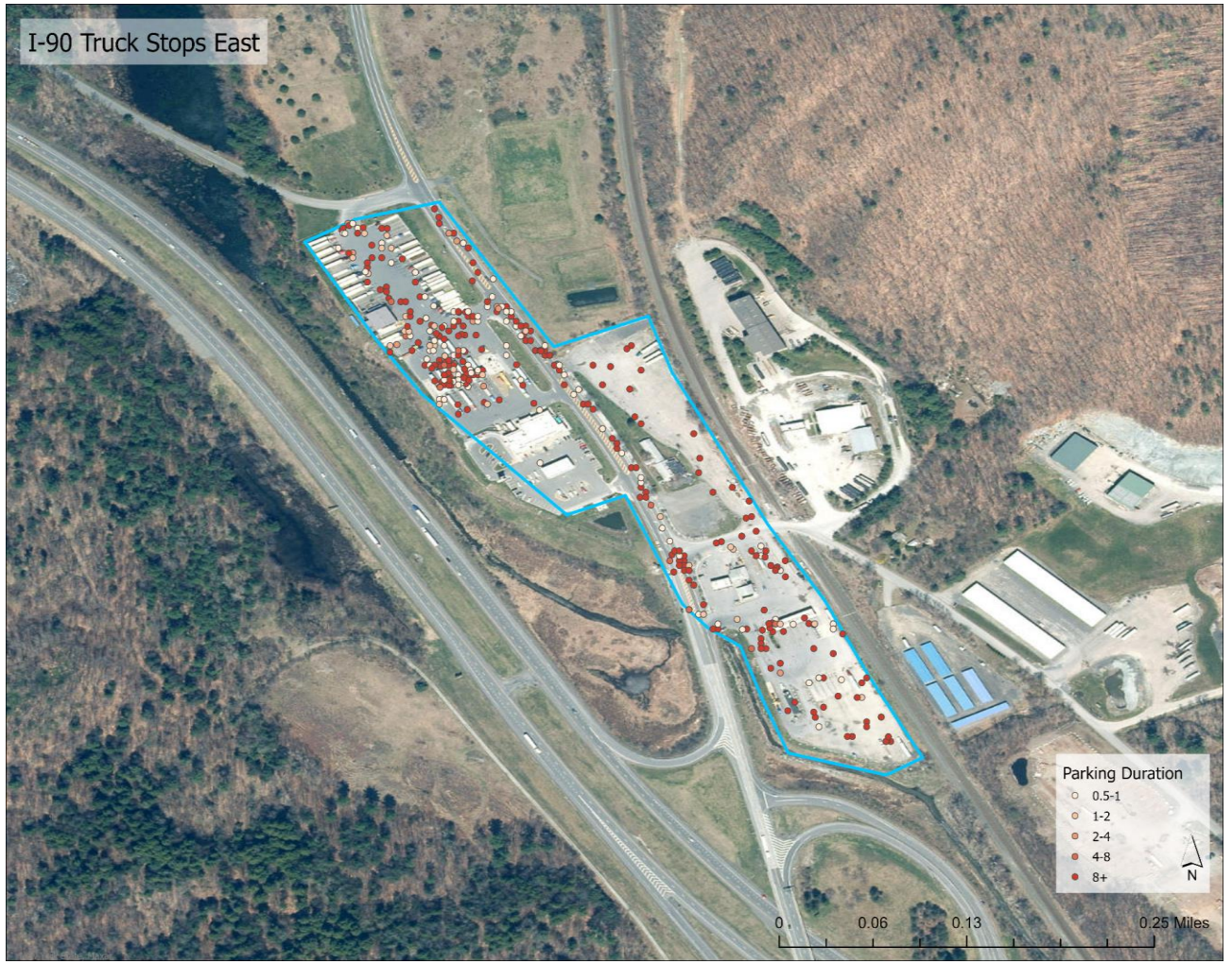


Overflow Parking on Shoulders

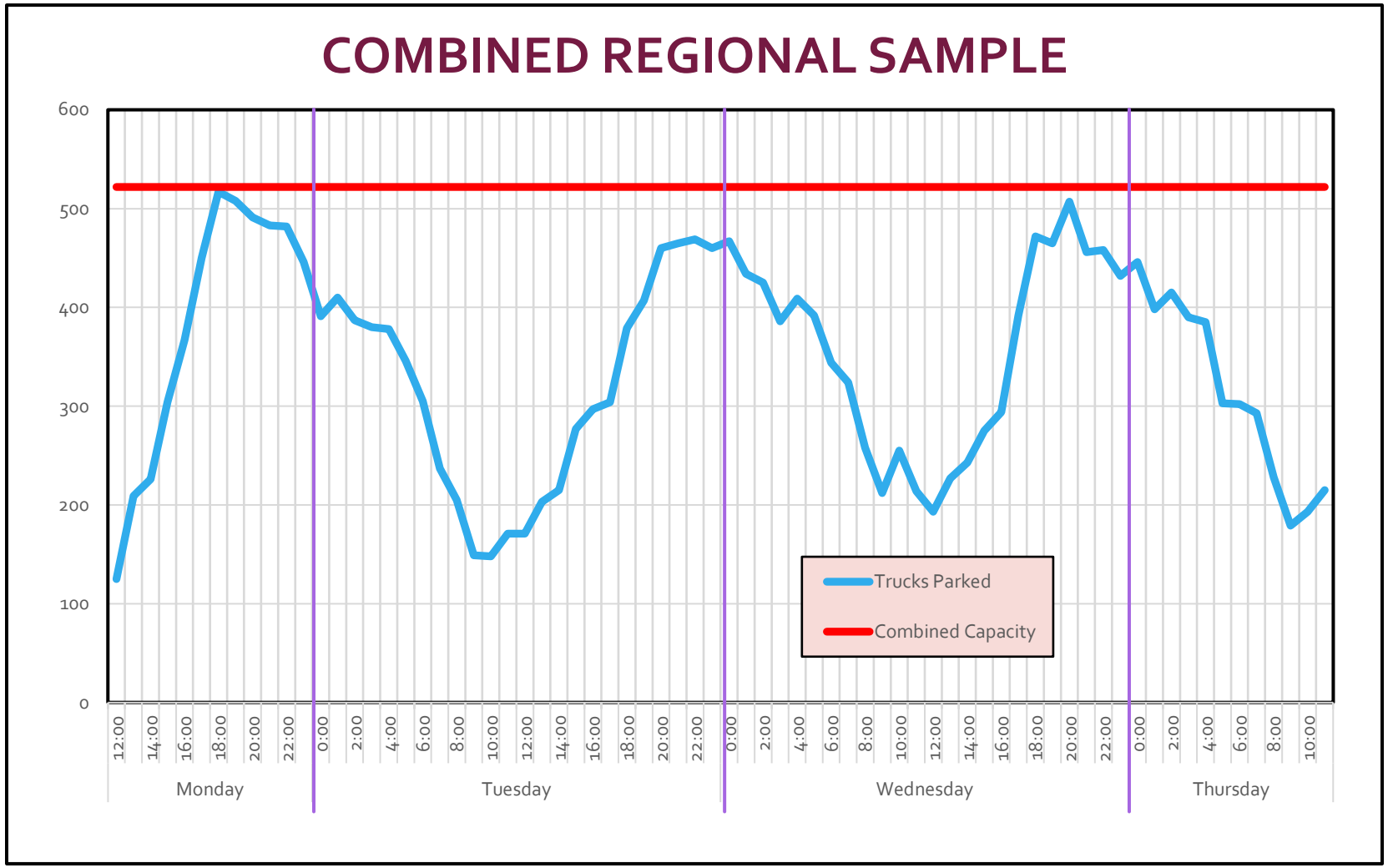
GPS-Based Parking Data (Sample)

Unique Trucks Per Hour				
Hour	18-Oct	19-Oct	20-Oct	21-Oct
0	-	37	31	31
1	-	37	26	30
2	-	34	26	28
3	-	35	24	30
4	-	36	24	31
5	-	29	28	29
6	-	26	21	28
7	-	24	16	30
8	-	27	22	17
9	-	15	20	18
10	-	19	21	16
11	-	25	28	18
12	20	21	22	-
13	20	23	33	-
14	29	25	31	-
15	41	28	37	-
16	38	30	37	-
17	44	26	41	-
18	45	22	46	-
19	44	28	46	-
20	42	32	45	-
21	42	38	37	-
22	39	36	37	-
23	35	31	32	-

Duration (Hour)	October 18 -21	Monday	Tuesday	Wednesday	Thursday
	0.5-1	21	27	36	13
	1-2	9	10	10	4
	2-3	2	4	1	2
	3-7	1	4	4	2
	7-10	4	1	4	3
	10+	85	85	66	10
	Sum	122	131	121	34



72-Hour Parking Profile



Next Stop for Parked Trucks

All Areas Combined

Geographic Area	Pct.
Study Area Counties	9.8%
Study Area Border Counties	13.6%
Other New York Counties	23.0%
New England	21.0%
New Jersey / Pennsylvania	13.2%
Canada	7.4%
Other	12.0%

NY-22 (Canaan)

Geographic Area	Pct.
Study Area Counties	6.5%
Study Area Border Counties	8.4%
Other New York Counties	23.4%
New England	35.3%
New Jersey / Pennsylvania	9.0%
Canada	4.6%
Other	12.8%

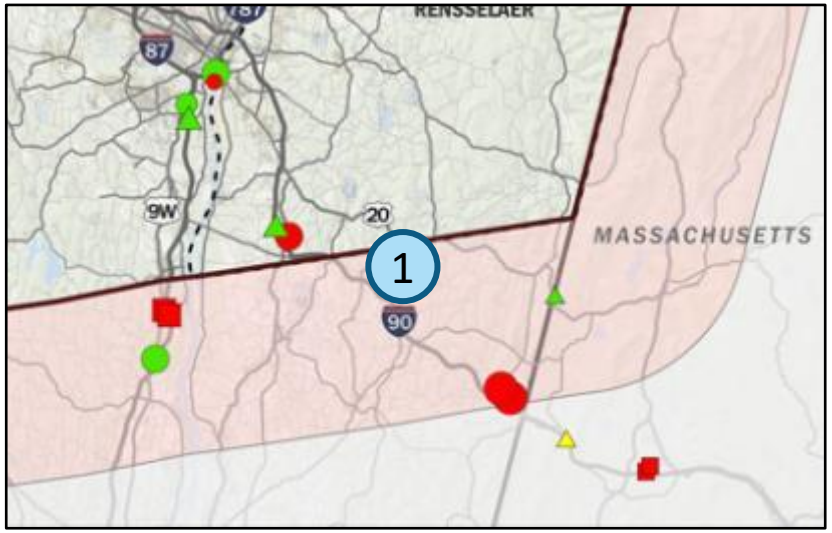
General Findings

- Truck parking facilities in CDTC region are heavily used in general.
- Excessive utilization of facilities is concentrated in several areas:
  - the east end of I-90 in New York, extending into western Mass.
  - the Wilton Travel Plaza along the I-87 corridor north of Albany
  - local parking on NY-7 in Rotterdam area
- Even minimal growth of truck parking demand over time will exacerbate existing challenges and generate new ones.
- Most parking activity is associated with long-haul truck trips.
- About 1 in 4 trucks parked in facilities across the region makes its next stop within the Capital Region and surrounding counties.
- For the region as a whole, parking demand approaches but does not exceed the combined capacity of the facilities.

Study Recommendations

Recommendation #1

Seek Opportunities to Expand Truck Parking along the I-90 Corridor East of the Hudson River.



Implementation Partner(s): NYSDOT, MassDOT, NYSTA, municipal governments (as applicable), private travel center developers

Recommendation #2

Seek Opportunities to Expand Truck Parking in the Vicinity of the I-90/I-88 Interchange in Schenectady County.

Implementation Partner(s): Municipal governments of Duanesburg, Princetown and/or Rotterdam; NYSDOT; private developers

Recommendation #3

Potential New Truck Parking Capacity and Driver Services at New York State Thruway Service Areas..

Implementation Partner(s): NYSTA, Empire State Thruway Partners, NYSDOT (for potential Federal funding options).

Recommendation #4

Expand Truck Parking Capacity at Existing Interstate Highway Rest Areas, as Needed and Feasible.

Implementation Partner(s): NYSDOT

Recommendation #5

Develop Formal Municipal Guidance for Incorporating Truck Parking and Staging into Industrial Site Approvals.

Implementation Partner(s): Capital Region Transportation Council (FAC), NYSEDC, municipal governments, Industrial Development Agencies

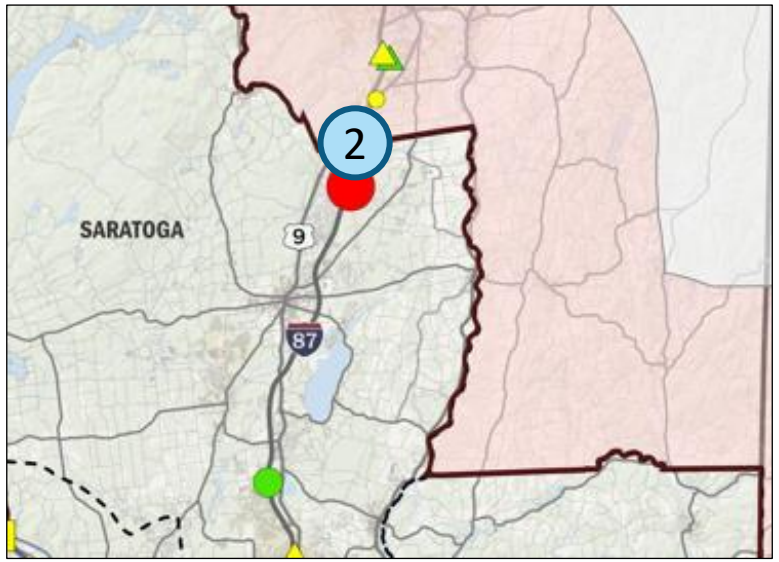
Recommendation #6

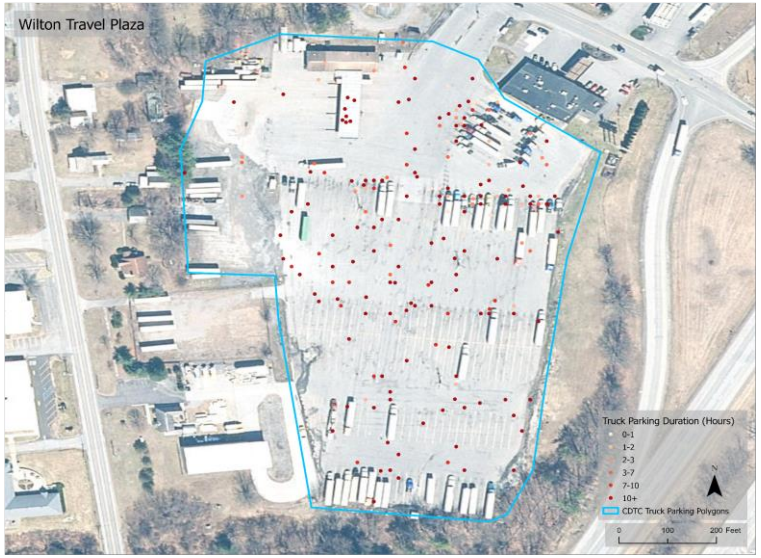
Conduct Pilot Study for Truck Electrification/Idle Reduction Technology in Capital Region.

Implementation Partner(s): NYSDOT, NYSTA, private truck stop owner, private shipper/receiver, Capital District Clean Communities

Recommendation #7

Explore Options for New/Expanded Truck Parking in the Vicinity of Exits 16 and/or 17 of the Adirondack Northway (I-87).





Implementation Partner(s): Private industrial developers, municipal governments, NYSDOT

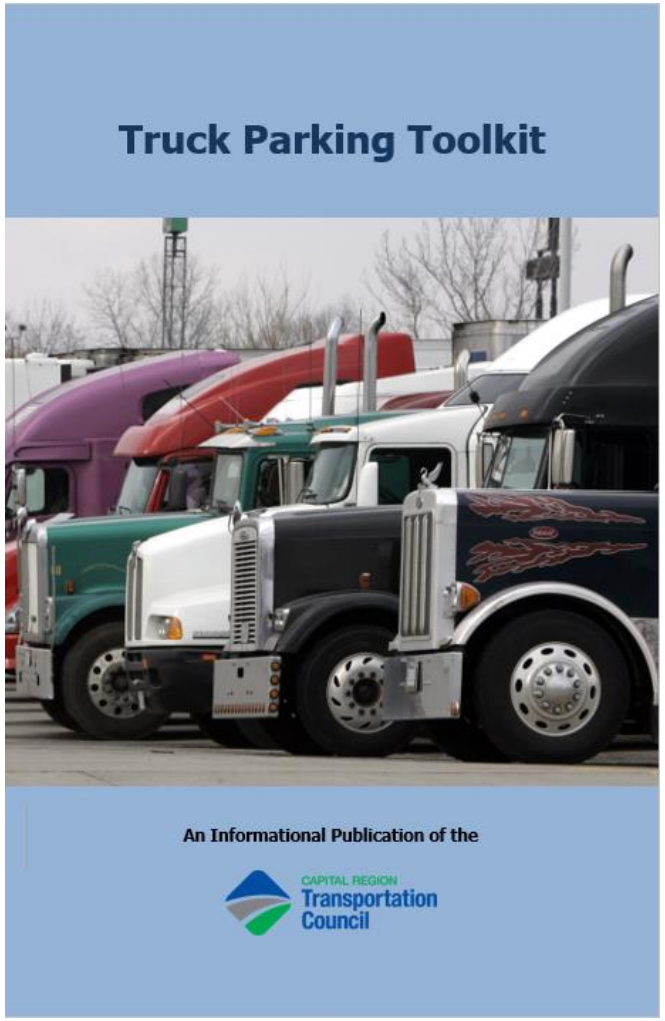
Recommendation #8

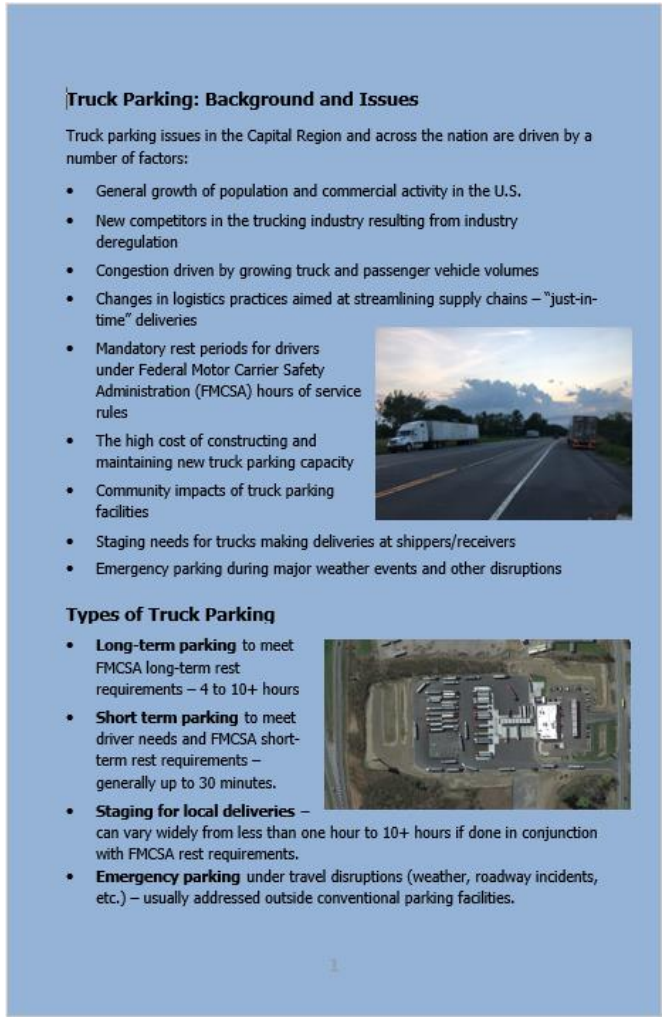
Develop Emergency Truck Parking Plan for Capital Region.

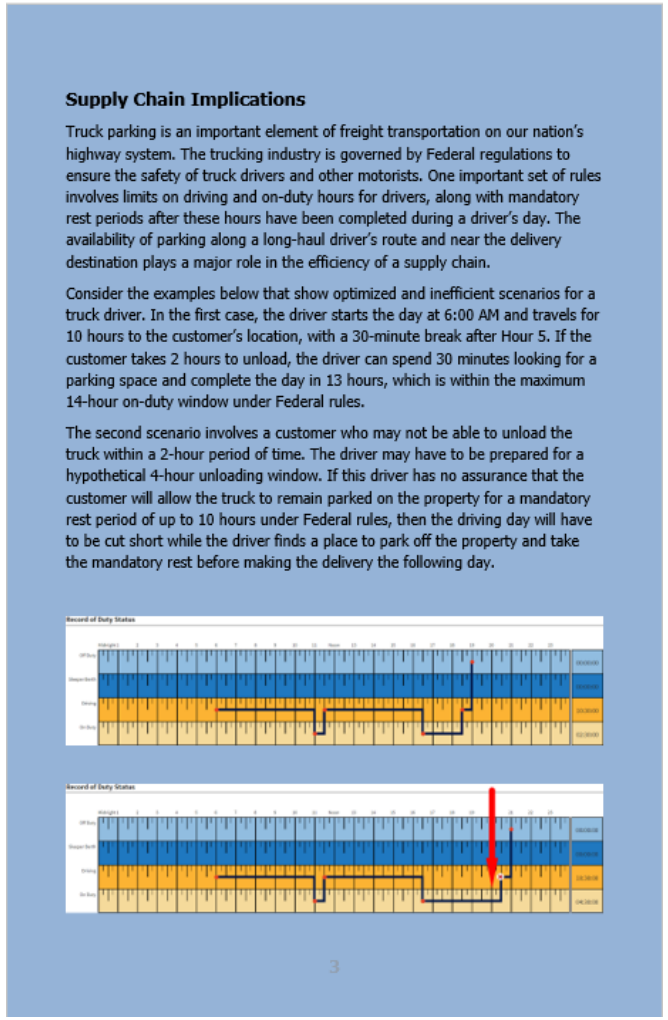
Implementation Partner(s): NYSDOT, New York State Police, New York OEM, municipal governments, facility owners/operators

Additional Items

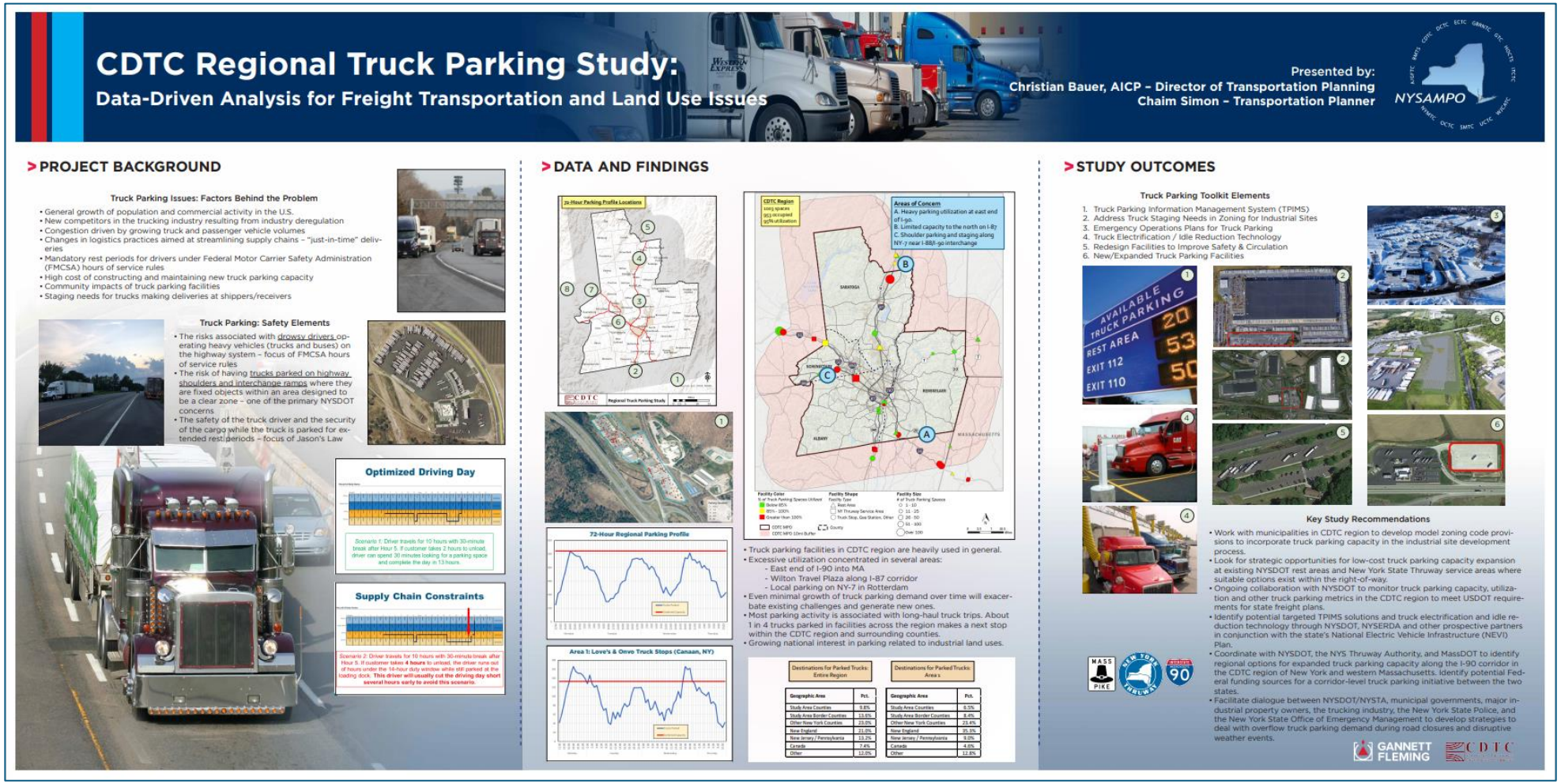
Truck Parking Toolkit







NYSAMPO Conference (May 2023)



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CAPITAL REGION Transportation Council

Regional Truck Parking Study

October 25, 2023

Gannett Fleming

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APPENDIX F

TRUCK PARKING TOOLKIT

Truck Parking Toolkit

An Informational Publication of the

CAPITAL REGION
Transportation
Council

About the Capital Region Transportation Council

The Capital Region Transportation Council is the designated Metropolitan Planning Organization (MPO) for the Albany-Schenectady-Troy and Saratoga Springs metropolitan areas. The Transportation Council's designated planning area includes the counties of Albany, Rensselaer, Saratoga (except the Town of Moreau and the Village South Glens Falls) and Schenectady.

The Transportation Council is also a forum for local elected officials and transportation representatives to share ideas and make decisions about major transportation capital investments. As an MPO, the organization is required under Federal law and is supported with Federal funding through the U.S. Department of Transportation.

Federal funding for transportation projects is authorized by the Transportation Council, which is responsible for an annual Transportation Improvement Program of $100 million. Decisions are guided by the agency's long-range transportation plan.

About this Publication

This publication presents information to local governing bodies, planning boards, and other decision makers for their consideration in land use planning and infrastructure projects for freight transportation and industrial development within their jurisdictions. It is intended to provide (1) background information on the importance of truck parking in the planning process, (2) specific issues related to truck parking in the Capital Region, and (3) recommended best practices to accommodate truck parking needs in infrastructure and land use planning.

This report was funded in part through grants from the Federal Highway Administration and Federal Transit Administration, U.S. Department of Transportation. The views and opinions of the authors expressed herein do not necessarily state or reflect those of the U. S. Department of Transportation.

CAPITAL REGION Transportation Council

December 2023

Truck Parking: Background and Issues

Truck parking issues in the Capital Region and across the nation are driven by a number of factors:

- General growth of population and commercial activity in the U.S.
- New competitors in the trucking industry resulting from industry deregulation
- Congestion driven by growing truck and passenger vehicle volumes
- Changes in logistics practices aimed at streamlining supply chains – "just-in-time" deliveries
- Mandatory rest periods for drivers under Federal Motor Carrier Safety Administration (FMCSA) hours of service rules
- The high cost of constructing and maintaining new truck parking capacity
- Community impacts of truck parking facilities

- Staging needs for trucks making deliveries at shippers/receivers
- Emergency parking during major weather events and other disruptions

Types of Truck Parking

- **Long-term parking** to meet FMCSA long-term rest requirements – 4 to 10+ hours
- **Short term parking** to meet driver needs and FMCSA short-term rest requirements – generally up to 30 minutes.

- **Staging for local deliveries** – can vary widely from less than one hour to 10+ hours if done in conjunction with FMCSA rest requirements.
- **Emergency parking** under travel disruptions (weather, roadway incidents, etc.) – usually addressed outside conventional parking facilities.

Safety Elements Addressed by Adequate Truck Parking

1. The risks associated with drowsy drivers operating heavy vehicles (trucks and buses) on the highway system – focus of Federal Motor Carrier Safety Administration (FMCSA) hours of service rules

2. The risk of having trucks parked on highway shoulders and interchange ramps where they are fixed objects within an area designed to be a clear zone – one of the primary USDOT concerns

3. The safety of the truck driver and the security of the cargo while the truck is parked for extended rest periods – focus of Federal legislation (Jason's Law)

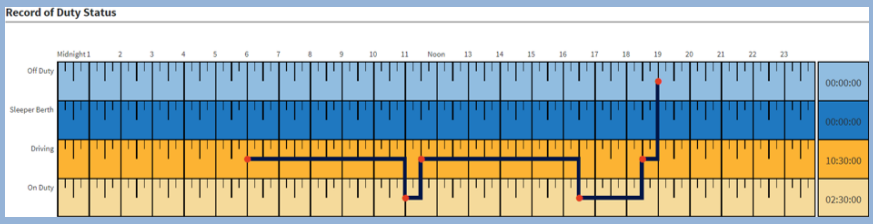
"An inadequate supply of truck parking spaces can result in negative consequences. Tired truck drivers may continue to drive because they have difficulty finding a place to park for rest. Truck drivers may choose to park at unsafe locations, such as on the shoulder of the road, exit ramps, or vacant lots, if they are unable to locate official, available parking." – U.S. Department of Transportation / Federal Highway Administration

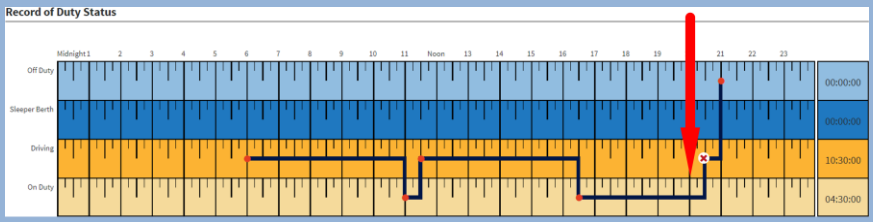
Supply Chain Implications

Truck parking is an important element of freight transportation on our nation's highway system. The trucking industry is governed by Federal regulations to ensure the safety of truck drivers and other motorists. One important set of rules involves limits on driving and on-duty hours for drivers, along with mandatory rest periods after these hours have been completed during a driver's day. The availability of parking along a long-haul driver's route and near the delivery destination plays a major role in the efficiency of a supply chain.

Consider the examples below that show optimized and inefficient scenarios for a truck driver. In the first case, the driver starts the day at 6:00 AM and travels for 10 hours to the customer's location, with a 30-minute break after Hour 5. If the customer takes 2 hours to unload, the driver can spend 30 minutes looking for a parking space and complete the day in 13 hours, which is within the maximum 14-hour on-duty window under Federal rules.

The second scenario involves a customer who may not be able to unload the truck within a 2-hour period of time. The driver may have to be prepared for a hypothetical 4-hour unloading window. If this driver has no assurance that the customer will allow the truck to remain parked on the property for a mandatory rest period of up to 10 hours under Federal rules, then the driving day will have to be cut short while the driver finds a place to park off the property and take the mandatory rest before making the delivery the following day.



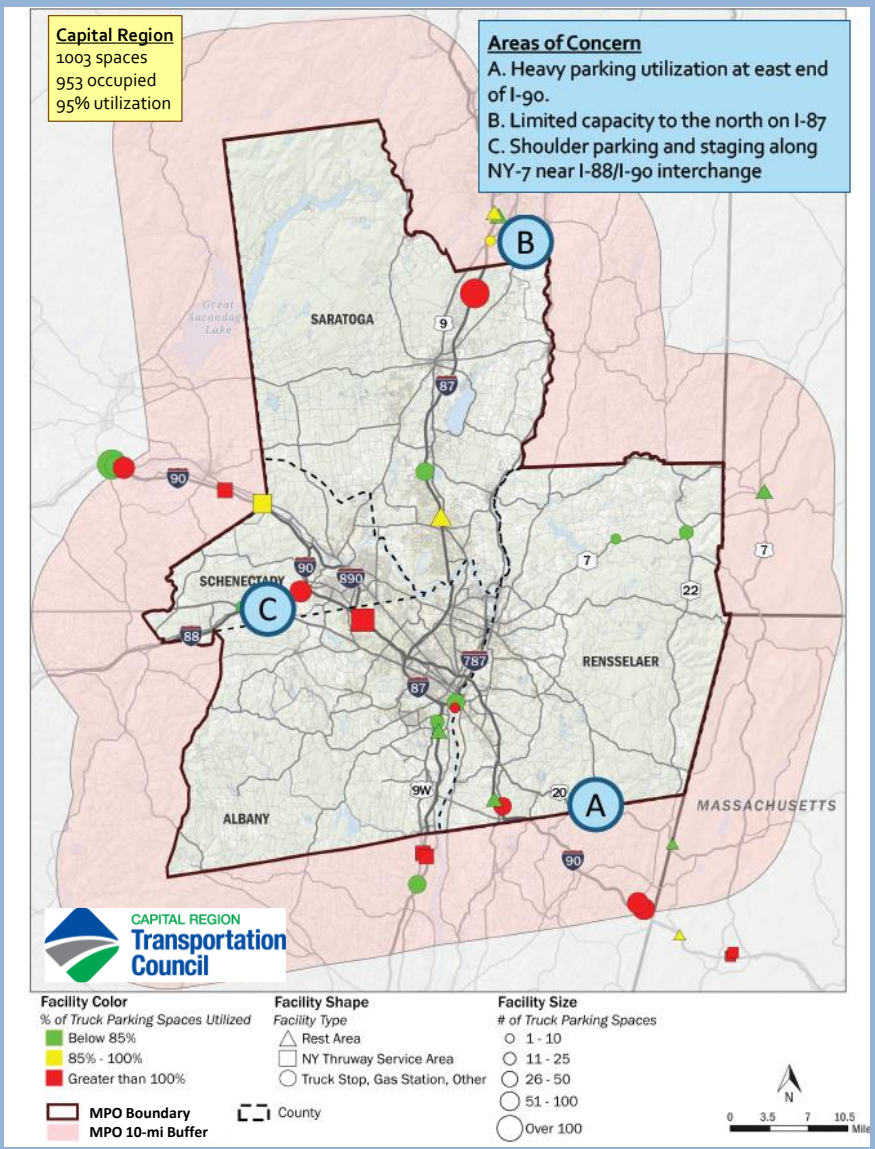


Truck Parking in the Capital Region

Data collected in 2022 indicates that truck parking facilities across the Capital Region are collectively operating close to their designated capacity during peak overnight periods. There is some capacity available in many facilities, but in certain areas of the region there is evidence of excessive parking demand. Key findings from this data include:

- Truck parking facilities in CDTC region are heavily used in general.
- Excessive utilization of facilities is concentrated in several areas:
  - the east end of I-90 in New York, extending into western Massachusetts
  - the Wilton Travel Plaza along the I-87 corridor north of Albany
  - local parking on NY-7 in Rotterdam
- Even minimal growth of truck parking demand over time will exacerbate existing challenges and generate new ones.
- Most parking activity is associated with long-haul truck trips.
- About 1 in 4 trucks parked in facilities across the region makes its next stop within the Capital Region and surrounding counties.
- For the region as a whole, parking demand approaches but does not exceed the combined capacity of the facilities. For the area around the Love's and Onvo truck stops on I-90 in Canaan, however, the demand regularly exceeds the capacity on some nights during the week.

Capital Region: Truck Parking Profile at a Glance



Truck Parking Tool #1: Truck Parking Information Management System (TPIMS)

A Truck Parking Information Management System (TPIMS) provides accurate, real-time information on trucking availability and truckers access to accurate, real-time, readily available information on parking and roadway conditions. It is typically implemented at public rest areas and travel plazas on Interstate highways where the truck parking areas at these facilities are frequently filled during peak periods. Truckers can see the available truck parking spaces at successive parking areas for some distance down the road and plan their stops accordingly. A well-managed TPIMS can improve freight efficiency by reducing delays for drivers searching for available parking areas. Funding for these projects can be obtained through Federal transportation technology grants.

Truck Parking Tool #2: Emergency Operations Plans for Truck Parking

Emergency parking plans are effective tools to deal with disruptive events such as major traffic incidents or inclement weather. Weather-related travel disruptions are common in winter months in regions like upstate New York. These events present truck drivers with a combination of two challenges: the need for parking at an unexpected time in a driver's schedule, and an unusually heavy demand on parking facilities that may already be operating at or beyond their capacity during normal peak periods.

Public and private sector stakeholders can effectively address these challenges by developing contingency plans for disruptions that include truck detour routes (in the event of road closures) and temporary emergency parking arrangements at non-traditional locations. These locations could include sites with large paved areas that would be lightly used or closed during weather-related travel disruptions. Major sports venues, commuter park & ride lots, fairgrounds parking areas, and unused parking lots at large shopping centers are usually well suited for this purpose. This planning process requires close coordination between transportation agencies, municipal governments, the New York State Police and Office of Emergency Management, and property owners.

Truck Parking Tool #3: Redesign Facilities to Improve Safety & Circulation

The design of a truck parking facility must take two important factors into consideration: maximizing the use of the space to provide as many parking spaces as possible, while maintaining efficient traffic circulation and pedestrian safety.

Facilities with angled spaces in a pull-through configuration are typically the most efficient for circulation and safety but can accommodate fewer spaces. Those with parking stalls aligned at a right angle that require trucks to back into and out of the spaces can accommodate more trucks, but at the potential cost of safety and operational efficiency.

The needs for parking capacity and improved circulation should be assessed on a case-by-case basis for existing parking facilities and for the design of new facilities.

Truck Parking Tool #4: Truck Electrification / Idle Reduction Technology

With the increased national focus on fuel efficiency and the reduction of fossil fuel use, truck electrification and idle reduction technology have become attractive amenities for new or redesigned parking areas. Legacy systems include cab-mounted HVAC systems for driver amenities through an overhead gantry system. Newer systems are operated through "shore power" (plug-in) electrical connections that allow a truck's on-board systems to operate without idling the diesel engine.

Financial support for idle reduction projects in the form of grants or rebates may be available through the U.S. Environmental Protection Agency's (EPA) Diesel Emissions Reduction Act (DERA) Program.

Over time, these idle reduction technologies are being enhanced or replaced by the expanded use of battery-powered trucks. Facility design and parking area layouts – for both parking facilities and industrial sites with on-site truck parking and staging areas – should incorporate provisions for on-site battery charging hardware, where feasible.

Truck Parking Tool #5: Address Truck Staging Needs in Zoning for Industrial Sites

About 25% of the trucks parked during peak overnight periods in the Capital Region are making their next stop in the Capital Region and its surrounding counties. These trucks are typically parked during overnight or early morning hours while waiting to make a delivery to a local customer. This type of staging is a sizable component of truck parking activity in most U.S. metro areas. Addressing this parking need in the context of the development process for industrial properties is an effective way to deal with truck parking capacity constraints in highway rest areas and private truck stops. Incorporating truck parking stalls in new industrial sites also helps enhance the efficiency of a supply chain by allowing trucks to stage for these deliveries at their final destination rather than several miles away.

Four potential measures that can help address truck parking and staging needs in the municipal zoning and land use approval process are as follows:

1. Incorporate parking/staging studies for trucks in traffic impact assessments for industrial land uses. This would be comparable to a local parking study for a commercial or mixed-use development in a downtown area, but would cover a larger region and include an assessment of capacity and demand at a variety of facilities such as highway rest areas and private truck stops.

2. In conjunction with Item #1, implement zoning requirements for truck parking spaces at industrial sites, using standard zoning metrics such as spaces per thousand square feet of gross floor area or spaces per loading dock door. These parking requirements could be met either through on-site spaces (see example of new warehouse development with on-site spaces) or in a pooled parking facility in an industrial park that serves as a centralized parking/staging lot for multiple industrial sites.

3. For on-site truck parking spaces, zoning regulations could also include a provision that requires developers to incorporate driver amenities within an industrial building. At a minimum, this would include access to bathroom facilities. Additional amenities could include a driver's lounge and vending machines, microwave oven, and similar features.

4. To address the supply chain uncertainties related to FMCSA hours of service and customer loading and unloading schedules described previously, an effective municipal regulatory tool would be a zoning requirement for industrial properties to allow long-term parking for drivers making deliveries

to the site to park for sufficient duration of time to meet FMCSA rest requirements. This measure will require effective collaboration between municipal officials, property owners, and the trucking industry to ensure that this parking can be done safely and in a non-intrusive manner.

Example 1: Truck Staging Area at Industrial Site

Example 2: Retail Sites in Industrial Park with Truck Parking

Truck Parking Tool #6: New/Expanded Truck Parking Facilities

In areas where demand for truck parking capacity regularly exceeds the available capacity and trucks parked on highway shoulders and interchange ramps present a safety concern to truck drivers and other motorists, opportunities to develop new truck parking facilities or expand existing ones should be considered. This process is typically a costly undertaking, and subject to the limitations tied to the economics of land use. A truck parking space is rarely going to be a "highest and best use" in urban centers and surrounding suburbs.

The development of additional truck parking capacity in a region should be pursued with a number of important considerations in mind:

1. Expanding existing parking facilities is more cost-effective than building new ones. Larger parking facilities usually benefit from economies of scale that reduce unit costs for parking spaces and amenities such as bathroom facilities and commercial services. In addition, beneficial features such as idle reduction or electrification technology may be more cost-effective if implemented at larger scales.

2. The development of new parking capacity at privately owned commercial sites has a financial advantage in the current regulatory environment. Federal law prohibits most commercial services at rest areas on the Interstate Highway System, with exceptions for toll facilities such as the New York State Thruway that existed before the relevant statute was adopted in 1960. Truck parking spaces support commercial establishments at off-highway truck stops, so there may be a business case to support the expansion of parking capacity at these locations.

3. Minimize impacts on surrounding land uses. Truck parking facilities should be as non-intrusive as possible and located away from residential areas and other sensitive land uses. Locating new parking capacity close to major highways and/or in industrial areas has the advantage of placing the parking

spaces close to existing industrial sites that are already designed to accommodate heavy truck traffic.

4. Truck parking can be a good opportunity for creative public-private partnerships (P3s) to develop new capacity. There are potential sources of Federal funding funds for truck parking expansion under recent initiatives such as the Infrastructure Investment & Jobs Act of 2021. These are especially attractive if paired with technology applications such as idle reduction or electrification that are aimed at reducing diesel emissions and other environmental impacts. Under an effective P3 arrangement, public funds could be used to purchase and develop a new parking facility adjacent to an existing off-highway commercial site in an area where real estate costs may make it prohibitive for the operator of the establishment to finance the expansion alone.

5. Truck driver amenities are important. Parking capacity and demand are only two factors in measuring the adequacy of truck parking in a region. For a parking facility to be used effectively and meet its intended purposes to support the trucking industry, the customers it serves, and the economy as a whole, it is critical for it to be comprised of more than just pavement and delineated parking spaces. Parking facilities should be secure, well lit, and provide drivers with access – either on site or at nearby commercial establishments – to amenities such as bathrooms, retail services, and potentially even shower facilities.

Capital Region Truck Parking Toolkit

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