

Truck Parking Toolkit



An Informational Publication of the



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.

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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)



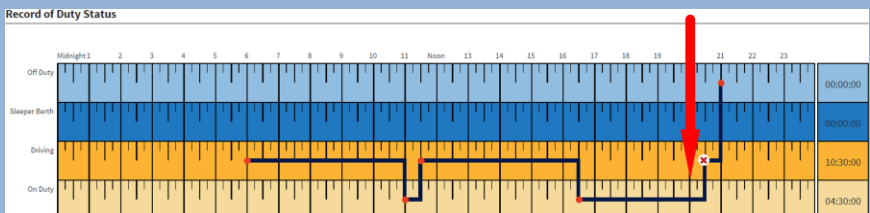
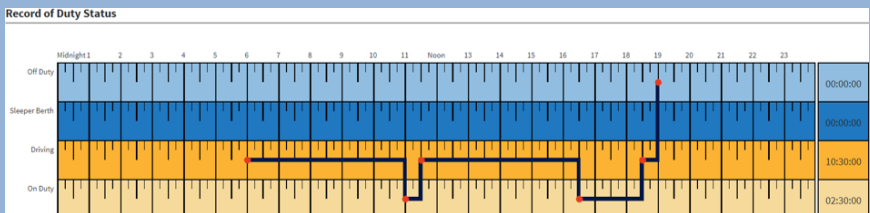
“An inadequate supply of truck parking spaces can result in negative consequences. Tired truck drivers may continue to drive because they have difficulty finding a place to park for rest. Truck drivers may choose to park at unsafe locations, such as on the shoulder of the road, exit ramps, or vacant 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.



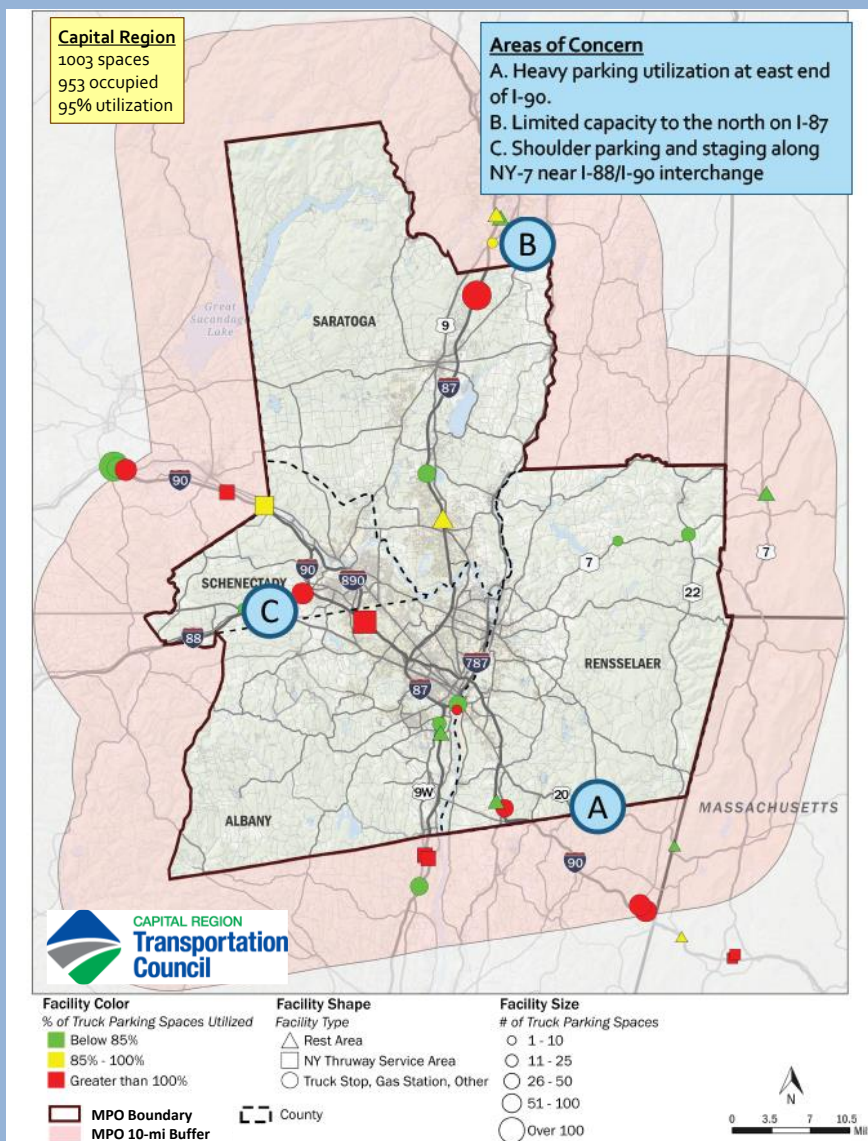
Truck Parking in the Capital Region

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.



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