National Coalition on Truck Parking



This document summarizes the activities undertaken by members of the National Coalition on Truck Parking Working Groups. The Working Groups met to develop products that highlight best practices related to parking capacity, technology and data, funding, finance and regulations, and State, regional, and local government coordination. The activities and products developed by the Working Groups are described in the report.

April 2019



Notice

This document is disseminated under the sponsorship of the U.S. Department of Transportation in the interest of information exchange.

The U.S. Government assumes no liability for the use of the information contained in this document.

The U.S. Government does not endorse products or manufacturers. Trademarks or manufacturers' names appear in this report only because they are considered essential to the objective of the document.

Quality Assurance Statement

The Federal Highway Administration (FHWA) provides high-quality information to serve government, industry, and the public in a manner that promotes public understanding. Standards and policies are used to ensure and maximize the quality, objectivity, utility, and integrity of its information. The FHWA periodically reviews quality issues and adjusts its programs and processes to ensure continuous quality improvement.

The examples in this report show innovative solutions for truck parking applied in a range of situations. Suitability in other situations will depend on applicable Federal laws, State standards, and site-specific considerations. This document is disseminated under the sponsorship of the U.S. Department of Transportation in the interest of information exchange. The U.S. Government assumes no liability for the use of the information contained in this document. This report does not constitute a standard, specification, or regulation. It is guidance only and does not create any requirements other than those stipulated in statute or regulation.

Front cover photo: Rene Rauschenberger. (*Untitled*). 2013.

TABLE OF CONTENTS

Executive Summary	1
National Coalition on Truck Parking Working Groups	1
Working Group Products and Future Research	2
Section 1: Introduction	4
Jason's Law	5
National Coalition on Truck Parking	6
Section 2: Working Group Products	9
Product Summaries	10
Section 3: Summary, Future Research, and Next Steps	14
Future Research	15
Jason's Law Survey 2018	17
Conclusion and Next Steps	17
Section 4: Acknowledgment of Key Contributors	18
Appendix A: National Coalition on Truck Parking Meeting Notes Links	19

LIST OF FIGURES

Figure 1: List of Products and Future Research Priorities	3
Figure 2: Photo of parked trucks	4
Figure 3: Timeline of the National Coalition on Truck Parking	6
Figure 4: Timeline of National Coalition on Truck Parking Working Group Activities	7
Figure 5: Trucks at a truck stop.	9
Figure 6: One of the rest areas converted to truck parking by the Missouri DOT	. 10
Figure 7: A dynamic messaging sign used to display the number of available parking spaces at rest areas in Michigan.	. 11
Figure 8: Aerial image of truck parking constructed by Wyoming DOT off of I-80	. 12
Figure 9: Front Cover of <i>The Importance of Considering Truck Parking in Local Planning and Zoning</i> brochure.	. 13
Figure 10: Photo of a semi-trailer truck at a loading dock.	. 14
Figure 11: Future Research Priorities	. 15
Figure 12: Other Research Ideas	. 16

LIST OF ABBREVIATIONS

American Association of State Highway Transportation Officials	AASHTO
American Planning Association.	APA
Application Program Interface	API
American Trucking Associations	ATA
American Transportation Research Institute	ATRI
Congestion Mitigation and Air Quality	CMAQ
Commercial Vehicle Safety Alliance	CVSA
Diesel Emissions Reduction Act.	DERA
Dynamic Message Signs	DMS
Department of Transportation	DOT
Electronic Logging Device	ELD
Fixing America's Surface Transportation Act	FAST Act
Federal Highway Administration	FHWA
Idle Reduction Technologies.	IRT
Intelligent Transportation Systems	ITS
Moving Ahead for Progress in the 21st Century	MAP-21
Metropolitan Planning Organization.	MPO
Manual on Uniform Traffic Control Devices.	MUTCD
National Association of Truck Stop Operators	NATSO
Not in My Backyard	NIMBY
Owner-Operator Independent Driver Association	OOIDA
Public-Private Partnership	P3
Right-of-Way	ROW
Truck Stop Electrification	TSE
U.S. Department of Transportation	USDOT
Vehicle Miles Traveled	VMT

EXECUTIVE SUMMARY

The U.S. Department of Transportation (USDOT) and several stakeholder organizations established the National Coalition on Truck Parking in August 2015 as a response to a documented need for truck parking solutions. Stakeholders engaged in the Coalition represent the trucking industry, commercial vehicle safety officials, State departments of transportation (DOTs), and commercial truck stop owners and operators. During the Coalition's kickoff meeting, the following topics were identified as areas of concern or opportunity:

- Parking Capacity
- Technology/Data
- Funding and Finance
- Community Education / Coordination with Regional and Local Governments

The Coalition also committed to holding meetings around the country to get input from key stakeholders on approaches to solve the nation's truck parking problem. After those meetings were completed in 2016, the National Coalition on Truck Parking members recognized the need for an additional forum to discuss these ideas and committed to convening Working Groups around each of the topic areas.

NATIONAL COALITION ON TRUCK PARKING WORKING GROUPS

The National Coalition on Truck Parking Working Groups were created to share best practices and create products to disseminate information on truck parking issues and solutions. The Working Group topics include:

PARKING CAPACITY



TECHNOLOGY AND DATA



FUNDING, FINANCE, AND REGULATIONS



STATE, REGIONAL, AND LOCAL GOVERNMENT COORDINATION



The Working Groups were formed from various stakeholders that participated in the 2017 annual meeting of the National Coalition on Truck Parking. Each Working Group had a champion to lead the generation of ideas from the participants. The Working Group meetings were used to identify priority areas to research, brainstormed noteworthy practices for truck parking and refine the final products. The champions were integral in narrowing down the Working Groups' ideas and providing input on the final products.

WORKING GROUP PRODUCTS AND FUTURE RESEARCH

Figure 1 lists the products created by each of the Working Groups and their future research priorities. Working Group members could not address each proposed research idea in the scope of this effort. Additional research areas for the National Coalition on Truck Parking were identified by Working Group members and core partners after the products were developed. Figure 1 reflects the top priorities discussed by the members.

FHWA is working to continue to advance research on truck parking. In addition to future tuck parking research, FHWA is conducting an updated Jason's Law survey in 2018, as required by Moving Ahead for Progress in the 21st Century (MAP-21) Section 1401(c)(3). FHWA will publish an updated Jason's Law Survey and Comparative Assessment subsequently. Outcomes of the Jason's Law survey and future research ideas identified by the National Coalition on Truck Parking Working Groups may influence the future direction of truck parking research undertaken by FHWA.

Figure 1: List of Products and Future Research Priorities

Working Groups	Products	Future Research Priorities	
Parking Capacity	 Creative Uses of the Right-of-Way (ROW) and Adjacent Areas Involving Shippers/Receivers to Address Truck Parking Capacity Considerations for Maintaining Low-Cost Truck Parking Facilities 	 Explore contractual relationship between truck stops and fleets for fuel purchases. Consider how to implement staging in urban and suburban zones. Hold a peer exchange with international partners and stakeholders to discuss parking capacity. 	
Technology and Data	 Truck Parking App Survey Results Best Practices for Truck Parking Availability Detection and Information Dissemination Technology and Data Research Needs Webinar 	 Research data standards and application program interfaces (API) for smart phone applications and promote common standards. Research and promote common, functional standards across information systems including: Apps Dynamic message signs (DMS) and other roadside signs mentioned in the Manual on Uniform Traffic Control Devices (MUTCD) In the cab Data transmission Intelligent transportation systems (ITS) 	
Funding, Finance and Regulations	 Public-Private Partnership (P3) Examples and Considerations Emissions Reduction Grant Programs Fact Sheet 	 Use truck parking fees as a revenue source for private and public parking. Provide tax incentives for the private sector to build new parking capacity. Track the amount of money being spent and types of projects being developed by States for truck parking projects. 	
State, Regional and Local Government Coordination	 Notable Examples for Including Truck Parking in State and Metropolitan Planning Organization (MPO) Freight Plans How to Improve Truck Parking in Your Region Brochure The Importance of Considering Truck Parking in Local Zoning Codes Parking and Staging Requirements in Local Zoning Talking Freight Webinar: Best Practices in Industry and Government Coordination for Developing Truck Parking Solutions 	 Work with the American Planning Association (APA) to develop a guide for city, county, and regional governments on truck parking. Consider developing a webinar to accompany this. Write an article for APA's Zoning Practice or Planning magazine about zoning considerations for truck parking. Continue to develop resources regarding local zoning and land use authorities directed to city engineers and planners. Develop zoning template language and design guidelines for truck stops and truck parking lots that includes requirements for minimum acreage, site design, lighting, setbacks/buffers, landscaping, security, and other aspects. Differentiate requirements by area type (rural vs. suburban vs. urban) or roadway type (arterial vs. collector). Hold an interstate Peer Exchange on truck parking solutions. 	

SECTION 1: INTRODUCTION

The United States has seen significant growth in trucking activity in recent decades due to several factors, such as overall economic growth and the deregulation of the trucking industry in the early 1980s. Truck travel in the United States reached 287 billion miles in 2016, an increase of 2.9% from 2015. Vehicle Miles Traveled (VMT) for combination trucks is projected to grow at an average annual rate of 1.6% over the next 30 years and VMT for single-unit trucks is projected to grow at an average rate of 1.8% over the next 20 years. With the projected growth of truck traffic, the demand for truck parking will continue to outpace the supply of public and private parking facilities.

The development and expansion of truck parking is complicated by the fact that truck parking needs and services are impacted by both the private and public sectors. The privately-run trucking industry conducts business on public roadways and is subject to a regulatory process overseen by government agencies. Many of the truck parking spaces in the U.S. are located off the Interstate Highway System, at truck stops operated as private business establishments, although some States are taking steps to provide truck parking on State-owned land. The public and private sectors, including private industries such as shippers/receivers, motor carriers, and truck stop owners, can have competing financial interests



Figure 2: Photo of parked trucks. Source: Stock photo provided on pxhere.com (creator, title, and date not provided).

that limit the amount of funding available for truck parking facilities.

An insufficient supply of truck parking can result in drivers parking in unsafe or illegal locations, such as on the shoulder of the road, exit ramps, or vacant lots, if they are unable to locate an official or available parking spot. This decreases safety for both the truck drivers and other vehicles on the road. Additionally, it can force truck drivers to park further away from their next pickup or delivery location, which increases the likelihood those drivers will need to travel during congested peak driving times and potentially miss a scheduled delivery window.

The USDOT and several State and regional government agencies have conducted various studies of truck parking demand and capacity constraints. The <u>Study of the Adequacy of Truck Parking Facilities</u>, conducted in 2002 by FHWA, and the <u>Commercial Motor Vehicle Parking Shortage report</u>, published by FHWA in May 2012 documented these issues on a national basis. These studies reflect a consensus that truck parking demand exceeds the available supply in many public rest areas and private truck stops across the nation.

https://www.fhwa.dot.gov/policyinformation/tables/vmt/vmt_forecast_sum.pdf



JASON'S LAW

Section 1401 of MAP-21 (PL 112-141), also known as "Jason's Law," became effective on October 1, 2012. Jason's Law was established to provide a "national priority on addressing the shortage of long-term parking for commercial motor vehicles on the National Highway System to improve the safety of motorized and non-motorized users and for commercial motor vehicle operators." Jason's Law required the USDOT to conduct a survey and comparative assessment in consultation with relevant State motor carrier representatives to:

- Evaluate the capability of the State to provide adequate parking and rest facilities for commercial motor vehicles engaged in interstate transportation;
- Assess the volume of commercial motor vehicle traffic in the State; and
- Develop a system of metrics to measure the adequacy of commercial motor vehicle parking facilities in the State.

FHWA first developed and administered a survey for Jason's Law in 2014. This first Jason's Law survey identified the following conclusions:

- Truck parking capacity is a problem in all States, with the greatest problems more evident on major freight corridors and in large metropolitan areas.
- Consistent, continued measurement is important to provide data to understand dynamic truck parking needs and whether the situation is improving.
- Truck parking analysis is an important component of State and MPO freight plans, as well as regional and corridor-based freight planning.
- There is a need to understand the supply chains of key industries and commodities to, from, and through their State to better anticipate and plan for the parking needs.
- Local regulations and zoning often create challenges for development of truck parking facilities due to local resistance to externalities of truck stops.
- Public and private sector coordination is critical to address long-term truck parking needs.

FHWA released a <u>report</u> on the first Jason's Law findings and metrics in 2015.

MAP-21 section 1401(c)(3) called for periodic updates to the Jason's Law survey. Therefore, FHWA is undertaking an updated Jason's Law survey in 2018. More information on the goals of the 2018 survey is included in Section 3.

Jason's Law

The Jason's Law provision is named in honor of Mr. Jason Rivenburg, a truck driver who was attacked and murdered on March 4, 2009, while sleeping in his truck at an abandoned gas station near a delivery location that was not yet open for the day. He had been unable to find a dedicated truck parking facility and learned about the abandoned gas station from other truckers. Since Jason's death, his widow, Ms. Hope Rivenburg, has become a nationally known advocate for solutions for the national truck parking problem. Her efforts, along with those of family members, friends, and trucking industry representatives, were instrumental in developing the legislation that led to Jason's Law, to document the problem of truck parking and support solutions on a national level.



Jason's Law helps promote a comprehensive set of programs, efforts, and research to improve truck parking and provide States and MPOs with resources to identify parking needs and to encourage improvements and investments. Jason's Law has served as the catalyst for much of the truck parking work undertaken by FHWA.

NATIONAL COALITION ON TRUCK PARKING

Upon publication of the first Jason's Law findings, a public announcement of the results was held on August 21, 2015, at the USDOT in Washington, D.C. This event also highlighted the agency's commitment to addressing truck parking issues in collaboration with various public and private sector stakeholder groups. At the August 2015 event, USDOT announced the formation of the National Coalition on Truck Parking and "a call for action for a national dialogue on trucking needs and strategies for immediate, near-term and long-term solutions."

The National Coalition on Truck Parking brings together stakeholders from the trucking industry, commercial vehicle safety officials, State DOTs, MPOs, and commercial truck stop owners and operators. The Coalition advances safe truck parking by:

- Collaborating nationally and among regions to identify opportunities and solutions for truck parking needs;
- Sharing information on data and new analyses developed by stakeholders to understand needs and trends in truck parking;
- Encouraging partnerships among stakeholders to implement solutions, and;
- Identifying opportunities to use existing and new programs to support truck parking implementation.

KICK-OFF MEETING AND REGIONAL MEETINGS

The Coalition held a kickoff meeting at the USDOT in November 2015 where participants identified four topic areas as areas of concern or opportunity. These topic areas included:

- Parking Capacity
- Technology/Data
- Funding and Finance (including Regulatory/Policy issues).
- Community Education / Coordination with Regional and Local Governments.

At the kickoff meeting, the Coalition also committed to convening four meetings around the country to get input from stakeholders on creative and innovative approaches to solve the nation's truck parking problem. FHWA and the American Association of State Highway Transportation Officials (AASHTO) led the planning and execution of the meetings.

Timeline of the National Coalition on Truck Parking			
Established	August 2015		
Kickoff Meeting	November 2015		
Regional Meetings	June – October 2015		
Second Annual Meeting	December 2016		
Third Annual Meeting	October 2017		
Working Group	November 2017 – August		
Meetings	2018		
Fourth Annual Meeting	December 2018		

Figure 3: Timeline of the National Coalition on Truck Parking

SECOND ANNUAL MEETING

The second annual meeting of the National Coalition on Truck Parking was held at the USDOT in December 2016. The purpose of this meeting was to provide the broader Coalition with an update on the work that had been conducted over the prior year, with a focus on the results of the four regional meetings. At the meeting, the Coalition determined they would convene Working Groups for each of the four topic areas to discuss implementation strategies and best practices in truck parking. FHWA later led the formation of these Working Groups.

THIRD ANNUAL MEETING

The third annual meeting of the National Coalition on Truck Parking took place via web conference in October 2017. The National Coalition on Truck Parking 2015-2016 Activity Report was discussed and stakeholders heard about cross-cutting truck parking initiatives in Kansas/Mid America Association of Transportation Officials (MAASTO), Virginia, and Washington State. This meeting concluded with the strategy for convening the Working Groups.

NATIONAL COALITION ON TRUCK PARKING WORKING GROUPS

The National Coalition on Truck Parking Working Groups were created to share best practices and create products to disseminate information on truck parking issues related to priorities identified during regional meetings in 2016.

Various stakeholders that represented much of the membership of the National Coalition on Truck Parking made up the Working Groups. Each Working Group ended up consisting of about 48 to 60 people.

FHWA identified a champion for each Working Group from those who volunteered. The champion's role was to lead the Working Group to generate ideas from the participants. Champions represented government, research, advocacy groups, and private industry. The champions were integral in narrowing the focus of the Working Groups' research, moderating the meetings, and providing input on the final products.

Each Working Group met four times via web conference.

The first Working Group meetings were held in November 2017. During the first meetings, Working Groups identified priority areas to research and types of documents or deliverables that could be developed that would help advance the priority areas identified.

During the second Working Group meetings, which took place in February 2018, members

Timeline of Working Group Activities			
Established	October 2017		
First meetings	November – December		
	2017		
Champion meetings	January 2018		
Second meetings	February 2018		
Third meetings	May 2018		
Fourth meetings	August 2018		
Publish products	December 2018		

Figure 4: Timeline of National Coalition on Truck Parking Working Group Activities

brainstormed examples that could be included in the documents the groups developed. During the third Working Group meetings in May 2018, the Working Group members provided feedback on draft versions of the documents. USDOT revised the documents accordingly, and Working Group members had a final



opportunity to provide feedback on the documents during the fourth Working Group meetings, held in August 2018. During the fourth Working Group meetings, members also discussed the format and content of the National Coalition on Truck Parking annual meeting held in December 2018.

Notes from each Working Group meeting are available at https://ops.fhwa.dot.gov/freight/infrastructure/truck_parking/workinggroups/index.htm. Links to all National Coalition on Truck Parking Working Group meetings are available in Appendix A.

SECTION 2: WORKING GROUP PRODUCTS

The purpose of the products developed by the National Coalition on Truck Parking Working Groups is to provide implementation strategies for various truck parking improvement initiatives identified during the Working Group meetings. The documents are intended to provide accessible examples, guidance, and strategies to stakeholders about how to advance truck parking availability in their communities. The products serve as a way to disseminate information discussed in the Working Group meetings.

The products include case studies, noteworthy practices, survey results, webinars, and brochures, among others. Working Group members sought to create different products catered to a variety of audiences in the public and private freight and trucking industry to support the investigation of a range of truck parking issues.

Over the course of the meetings, members helped refine ideas for the products, contributed examples, and reviewed and commented on drafts. Public and private agencies mentioned in the products verified the information and provided approval to publish the information.



Figure 5: Trucks at a truck stop. Source: Randy Heinetz. When Night Falls on a Truck Stop. 2013. [Adapted]

PARKING CAPACITY WORKING GROUP



The Parking Capacity Working Group focused on developing innovative and low-cost methods to increase the supply of short-term and overnight truck parking and created the following products:

CREATIVE USES OF THE RIGHT-OF-WAY (ROW) AND ADJACENT AREAS

• This product provides examples of successful, low-cost solutions for creating more truck parking by using existing facilities in the ROW or adjacent to the ROW. The document includes case studies from across the country that are categorized by facility types: rest area conversions, parking at weigh stations where additional space is available, parking at tourism centers, and others.

INVOLVING SHIPPERS/RECEIVERS TO ADDRESS TRUCK PARKING CAPACITY

• Truck parking and staging should be considered for facilities that are origins and destinations for trucks, such as ports, intermodal facilities, warehouses, and shippers/receivers, wherever possible. This product provides examples of ways that private companies and shippers/receivers incorporate truck parking in their facilities.

CONSIDERATIONS FOR MAINTAINING LOW-COST TRUCK PARKING FACILITIES

• Truck parking operators can choose several options to minimize maintenance responsibilities and costs at truck parking facilities. This product describes options operators can select to save money.



Figure 6: One of the rest areas converted to truck parking by the Missouri DOT. Source: Google Earth.

TECHNOLOGY AND DATA WORKING GROUP



Technological advances enable access to public and private real-time information on truck parking availability for drivers. There are a variety of systems that measure and disseminate truck parking availability. The Technology and Data Working Group focused on developing innovative ideas for increasing the supply of truck parking by utilizing existing technology and data. The following products were developed by this Working Group:

TRUCK PARKING APP SURVEY RESULTS

• This product provides the results from a survey on truck parking app preferences conducted by the American Transportation Research Institute (ATRI) at the Mid America Trucking Show in Louisville, Kentucky from Thursday, March 22 to Saturday, March 24, 2018.

BEST PRACTICES FOR TRUCK PARKING AVAILABILITY DETECTION AND INFORMATION DISSEMINATION BY STATES

• This product highlights the different kinds of technology used for truck parking availability systems in different States throughout the U.S.

TECHNOLOGY AND DATA RESEARCH NEEDS WEBINAR

- The Working Group held a webinar to review and discuss State-level truck parking studies, activities, and needs. The webinar provided an update on the National Coalition on Truck Parking's activities, discussed high-level stakeholder needs, and provided examples from States on recent truck parking research initiatives.
- A recording of the webinar is available upon request.

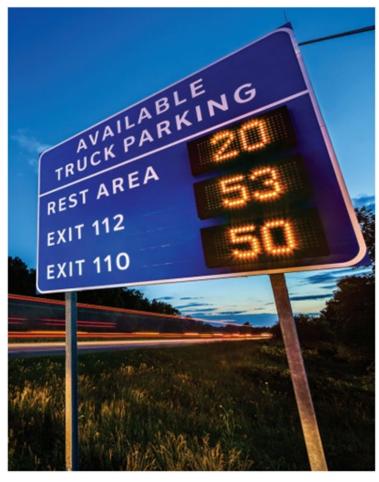


Figure 7: A dynamic messaging sign used to display the number of available parking spaces at rest areas in Michigan. Source: Michigan DOT. (*Untitled*). (No date).



FUNDING, FINANCE, AND REGULATIONS WORKING GROUP



The intent of the Funding, Finance, and Regulations Working Group is to identify innovative ways to fund truck parking that can be an alternative to, or leverage, Federal-aid funding. The group also investigated regulatory flexibilities for innovative truck parking funding, such as public private partnerships. Several innovative ideas were developed into the following products:

PUBLIC-PRIVATE PARTNERSHIPS (P3) EXAMPLES AND CONSIDERATIONS

• This product highlights examples of P3s and considerations to create nontraditional funding agreements to create additional truck parking.

EMISSIONS REDUCTION GRANT PROGRAMS FACT SHEET

• This product provides general information on Congestion Mitigation and Air Quality (CMAQ) and Diesel Emissions Reduction Act (DERA) funding opportunities and examples of Idle Reduction Technologies (IRT) and Truck Stop Electrification (TSE) projects.

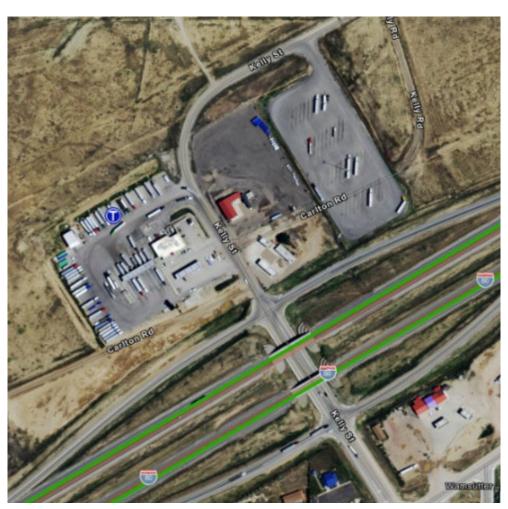


Figure 8: Aerial image of truck parking constructed by Wyoming DOT off of I-80. Wyoming DOT used a Truck Parking Facilities (TPF)

Program grant to construct 43 truck parking spaces. Source: Google Earth.



STATE REGIONAL LOCAL GOVERNMENT COORDINATION WORKING GROUP



The supply of truck parking may be influenced by State, regional, and local government entities in a variety of ways, such as zoning, public participation, and inclusion in planning documents. This Working Group identified several innovative ideas for increasing the supply of truck parking. The group developed these ideas into the following products:

NOTABLE EXAMPLES FOR INCLUDING TRUCK PARKING IN STATE AND METROPOLITAN PLANNING ORGANIZATION (MPO) FREIGHT PLANS

• This product highlights notable examples of States and MPOs that included truck parking in their freight plans.

HOW TO IMPROVE TRUCK PARKING IN YOUR REGION BROCHURE

• This product is a guide for the trucking industry on how to get involved with a MPO – a regional transportation planning agency – to improve truck parking.

THE IMPORTANCE OF CONSIDERING TRUCK PARKING IN LOCAL PLANNING AND ZONING

 This product assists local government planners to help ensure they consider truck parking in community plans and local zoning and development codes.

PARKING AND STAGING REQUIREMENTS IN LOCAL ZONING

• There are several examples of local governments including provisions for truck parking and staging in their land use planning and zoning. These local plans and development regulations address staging, long-term parking, deliveries, and long-term parking for owner/operators near home. This product provides communities examples that they could consider using as a model for their own land use, planning, and zoning regulations to help identify truck parking and staging.

TALKING FREIGHT WEBINAR: BEST PRACTICES IN INDUSTRY AND GOVERNMENT COORDINATION FOR DEVELOPING TRUCK PARKING SOLUTIONS

• This webinar discussed some of the various truck parking coordination efforts taking place between trucking and truck parking industry stakeholders and State, regional, and local government stakeholders to identify and develop truck parking solutions. The Working Group partnered with FHWA's Talking Freight webinar series to host this webinar to reach a broad and diverse audience.

• The recording and materials from the webinar are available at https://www.fhwa.dot.gov/planning/freight_planning/talking_freight/may_2018/

THE IMPORTANCE OF CONSIDERING TRUCK PARKING IN LOCAL PLANNING AND ZONING

Local government needs to consider truck parking as part of community planning and local zoning and development codes.





Figure 9: Front Cover of *The Importance of Considering Truck Parking in Local Planning and Zoning* brochure.

SECTION 3: SUMMARY, FUTURE RESEARCH, AND NEXT STEPS

Truck parking availability issues cannot easily be addressed by a single group. A coordinated approach that involves all or most stakeholders is needed.

The four National Coalition on Truck Parking Working Groups created a community of practice for truck parking issues, conducted targeted truck parking research, and produced deliverables that can be used by various truck parking stakeholders to help address truck parking issues. However, there are additional research ideas that will need to be addressed through future efforts of the National Coalition on Truck Parking or others.



Figure 10: Photo of a semi-trailer truck at a loading dock. Source: Henryk Sadura. Semi-truck in the Loading Area of the Warehouse. 2011.

Some ideas that were generated by the

Working Group members were not pursued because they were not voted a top priority by Working Group members during the first meetings. The Working Group members and champions either thought that the ideas were too broad, were out of the scope of the group, or they were simply not identified by members during the initial meetings. FHWA views these ideas as opportunities for future research by the National Coalition on Truck Parking.

FHWA also reached out to the core and extended partners of the National Coalition on Truck Parking for their future research ideas, including AASHTO, American Trucking Associations (ATA), ATRI, Owner-Operator Independent Drivers Association (OOIDA), National Association of Truck Stop Operators (NATSO), Commercial Vehicle Safety Alliance (CVSA), and Real Women in Trucking.

FUTURE RESEARCH

The Working Groups could only address a few of the research ideas that were raised during the Working Group meetings. Figure 11 lists the future research priorities identified by the Working Groups.

Figure 11: Future Research Priorities

Working Groups	Future Research Priorities			
Parking Capacity	 Explore contractual relationship between truck stops and fleets for fuel purchases. Consider how to implement staging in urban and suburban zones. Hold a peer exchange with international partners and stakeholders to discuss parking capacity. 			
Technology and Data	 Research data standards and application program interfaces (API) for smart phone applications and promote common standards. Research and promote common, functional standards across information systems including: Apps Dynamic message signs (DMS) and other roadside signs mentioned in the Manual on Uniform Traffic Control Devices (MUTCD) In the cab Data transmission Intelligent transportation systems (ITS) 			
Funding, Finance and Regulations	 Analyze the use of truck parking fees as a revenue source for private and public parking. Analyze tax incentives for the private sector to build new parking capacity. Track the amount of money being spent and types of projects being developed by States for truck parking projects. 			
State, Regional and Local Government Coordination	 Work with the American Planning Association (APA) to develop a guide for city, county, and regional governments on truck parking. Consider developing a webinar to accompany this. Write an article for APA's Zoning Practice or Planning magazine about zoning considerations for truck parking. Continue to develop resources regarding local zoning and land use authorities directed to city engineers and planners. Develop zoning template language and design guidelines for truck stops and truck parking lots that includes requirements for minimum acreage, site design, lighting, setbacks/buffers, landscaping, security, and other aspects. Differentiate requirements by area type (rural vs. suburban vs. urban) or roadway type (arterial vs. collector). Hold an interstate Peer Exchange on truck parking solutions. 			

Figure 12 lists other research ideas discussed by the Working Groups, but that were not deemed as priorities.

Figure 12: Other Research Ideas

Working Groups	Other Research Ideas
Parking Capacity	 Improve rest areas to accommodate modern trucks. Address the issue of parking time limits at public rest areas. Investigate options for using large venues during off hours for truck parking. Consider brownfield redevelopment for parking/staging in industrial areas. Facilitate conveyance of surplus Federal land for parking/staging in industrial areas. Update rest area and truck parking standards. Distinguish long-term driver rest needs vs. staging in terminal/industrial areas. Incorporate trucking industry practices to minimize down time of drivers (relays, teams). Adopt practices of specialized carriers for non-traditional parking arrangements. Consider how investments today in truck parking capacity can help facilitate future autonomous trucking transfer points/infrastructure.
Technology and Data	 Utilize funding programs for new technology. Tie parking apps/technology to existing platforms and parking reservations. Study technologies related to vehicle-to-infrastructure communication, connecting weather information to truck parking apps, and other emerging technologies. Collect data about occurrence of parking on the sides of roads and on on-ramps. Analyze existing contour maps to help predict truck parking needs. Ensure data on amenities at truck stops and truck parking areas is easily available to drivers. Work with the telematics industry on data standards to consistently deliver information in the cab. Create a national database to ensure all vendors have access to truck parking data. Consider the impact of autonomous vehicles on truck parking. Analyze electronic logging device (ELD) data through a third party non-governmental research organization or university to understand where the greatest need for truck parking is.
Funding, Finance and Regulations	 Explore additional dedicated funds from existing sources. Investigate "industrial park co-operatives" or industrial tax districts for pooled parking. Investigate regionally-funded truck parking, particularly in rural areas. Identify non-profits that have expressed interest in operating and maintaining rest stops. Conduct a survey to gather data on which State DOTs or local governments have a specific capital program for truck parking. Evaluate how States and MPOs are using federal-aid highway funding to pay for parking-related projects.
State, Regional and Local Government Coordination	 Ensure truck parking is addressed in State and MPO freight plans. Identify revenue sources to make truck parking facilities attractive land uses for local governments. Model truck parking collaboration off of coordination between DOTs and the trucking industry for permitting/operations. Use industry events to highlight issues and promote solutions. Investigate financing truck parking expansion. Develop examples of communities effectively addressing air quality non-attainment by using TSE. Educate the general public and elected officials to address "Not in My Back Yard" (NIMBY) sentiments regarding truck parking. Explore how to integrate truck parking into brownfields or grayfields. Ensure it is palatable environmentally and experientially an economically productive. Disseminate best practices on truck parking enforcement and "eduforcement" or the transition tools to reach truck parking stakeholders on enforcement. Develop a clearinghouse of requests for proposals/quotations/information and scopes related to truck parking. Investigate zoning and development regulations that have the effect of limiting expansion of truck stops. Explore mitigation measures that can be incorporated into zoning standards to ensure proper development of truck parking that minimizes negative impacts

USDOT solicited additional ideas and priority research needs during and after the fourth Working Group meetings. FHWA also solicited feedback on future research priorities from core partners of the National



Coalition on Truck Parking via email. FHWA is continuing to advance truck parking research and evaluate the state of the practice.

JASON'S LAW SURVEY 2018

As mandated by MAP-21 section 1401(c)(3), FHWA is conducting an updated Jason's Law survey in 2018. Upon completion of the survey and analysis of the data, FHWA will publish an updated Jason's Law Survey and Comparative Assessment. In addition to the statutory requirements for periodic updates, this project will update the progress of work completed since the previous Jason's Law Survey to:

- Update the inventory of truck parking and identify improvements to truck parking availability since the previous survey.
- Evaluate truck travel by State for the purposes of evaluating increases in truck parking demand.
- Evaluate the types of technology being used to monitor availability and demand that have resulted from recent advances in truck parking information systems and applications.
- Compile truck parking plans, studies, and projects completed by States and MPOs, particularly as it relates to new freight planning requirements of the Fixing America's Surface Transportation (FAST) Act.

Outcomes of the Jason's Law survey may also influence the future direction of truck parking research undertaken by FHWA.

CONCLUSION AND NEXT STEPS

Between 2017 and 2018, the National Coalition on Truck Parking Working Groups brought the public sector and private industry together to discuss truck parking issues across the country. The Working Groups developed products that provide truck parking stakeholders accessible examples, strategies, and best practices for advancing truck parking availability in their communities. Participants valued being able to share information among both public and private sector stakeholders, including truck drivers. Sharing information and best practices will allow truck parking solutions to be replicated across the country.

FHWA hosted the fourth National Coalition on Truck Parking annual meeting in December 2018 to continue the dialogue around truck parking. During this meeting, each Working Group had an opportunity to discuss the products they developed. The discussion was led by the Working Group champions. Additional next steps and future research priorities were discussed at that time. There were also presentations on the state of the practice from truck parking stakeholders. The notes from the National Coalition on Truck Parking annual meeting are available at https://ops.fhwa.dot.gov/freight/infrastructure/truck_parking/index.htm.

FHWA seeks to continue to lead a dialogue around truck parking beyond December's annual meeting through the National Coalition on Truck Parking.

SECTION 4: ACKNOWLEDGMENT OF KEY CONTRIBUTORS

The National Coalition on Truck Parking Working Groups could not have been successful without the engagement and participation of stakeholders across the country. FHWA would like to specifically thank the champions of each Working Group for helping to create achievable goals, facilitate meetings, provide review of documents, and serve as leaders in this effort.

	Parking Capacity	Brian Hunter, Freight Coordinator, Florida DOT District
-)	Technology and Data	Dan Murray, Vice President, American Transportation Research Institute (ATRI)
\$	Funding, Finance, and Regulations	Tiffany Wazlowski-Newman, Vice President, Public Affairs, National Association of Truck Stop Operators (NATSO)
	State, Regional, and Local Government Coordination	Scott Grenerth, Truck Specialized Parking Services

FHWA would also like to thank the National Coalition on Truck Parking core partners:

- American Association of State Highway and Transportation Officials (AASHTO)
- American Trucking Associations (ATA)
- Owner-Operator Independent Driver Association (OOIDA)
- National Association of Truck Stop Operators (NATSO)
- Commercial Vehicle Safety Alliance (CVSA)

APPENDIX A: NATIONAL COALITION ON TRUCK PARKING MEETING NOTES LINKS

National Coalition on Truck Parking Annual Web Conference - October 19, 2017:

https://ops.fhwa.dot.gov/freight/infrastructure/truck_parking/workinggroups/web_conf/mtg/mtg10192017.htm

FIRST WORKING GROUP MEETING NOTES

Parking Capacity – November 15, 2017:

https://ops.fhwa.dot.gov/freight/infrastructure/truck_parking/workinggroups/parking_capacity/mtg/mtg11152017.htm

Technology and Data – November 16, 2017:

https://ops.fhwa.dot.gov/freight/infrastructure/truck_parking/workinggroups/technology_data/mtg/mtg11162017.htm

Funding, Finance, and Regulations – November 29, 2017

https://ops.fhwa.dot.gov/freight/infrastructure/truck_parking/workinggroups/funding_finance_reg/mtg/mtg1129 2017.htm

State, Regional, and Local Government Coordination – November 30, 2017:

https://ops.fhwa.dot.gov/freight/infrastructure/truck_parking/workinggroups/state_reg_lgov_coord/mtg/mtg113_02017.htm

SECOND WORKING GROUP MEETING NOTES

Parking Capacity – February 14, 2018:

 $\underline{https://ops.fhwa.dot.gov/freight/infrastructure/truck_parking/workinggroups/parking_capacity/mtg/mtg0214201}\\ \underline{8.htm}$

Technology and Data – February 21, 2018:

https://ops.fhwa.dot.gov/freight/infrastructure/truck_parking/workinggroups/technology_data/mtg/mtg02212018.htm

Funding, Finance, and Regulations – February 22, 2018:

https://ops.fhwa.dot.gov/freight/infrastructure/truck_parking/workinggroups/funding_finance_reg/mtg/mtg0222 2018.htm

State, Regional, and Local Government Coordination – February 23, 2018:

https://ops.fhwa.dot.gov/freight/infrastructure/truck_parking/workinggroups/state_reg_lgov_coord/mtg/mtg02232018.htm



THIRD WORKING GROUP MEETING NOTES

Parking Capacity – May 1, 2018:

https://ops.fhwa.dot.gov/freight/infrastructure/truck_parking/workinggroups/parking_capacity/mtg/mtg05012018.htm

Technology and Data – May 10, 2018:

https://ops.fhwa.dot.gov/freight/infrastructure/truck_parking/workinggroups/technology_data/mtg/mtg05102018.htm

Funding, Finance, and Regulations – May 8, 2018:

https://ops.fhwa.dot.gov/freight/infrastructure/truck_parking/workinggroups/funding_finance_reg/mtg/mtg0508 2018.htm

State, Regional, and Local Government Coordination – May 30, 2018:

https://ops.fhwa.dot.gov/freight/infrastructure/truck_parking/workinggroups/state_reg_lgov_coord/mtg/mtg053_02018.htm

FOURTH WORKING GROUP MEETING NOTES

Parking Capacity – August 9, 2018:

 $\underline{https://ops.fhwa.dot.gov/freight/infrastructure/truck_parking/workinggroups/parking_capacity/mtg/mtg0809201}\\8.htm$

Technology and Data – August 16, 2018:

https://ops.fhwa.dot.gov/freight/infrastructure/truck_parking/workinggroups/technology_data/mtg/mtg08162018.htm

Funding, Finance, and Regulations – August 14, 2018:

https://ops.fhwa.dot.gov/freight/infrastructure/truck_parking/workinggroups/funding_finance_reg/mtg/mtg0814 2018.htm

State, Regional, and Local Government Coordination – August 21, 2018:

https://ops.fhwa.dot.gov/freight/infrastructure/truck_parking/workinggroups/state_reg_lgov_coord/mtg/mtg082_12018.htm

