



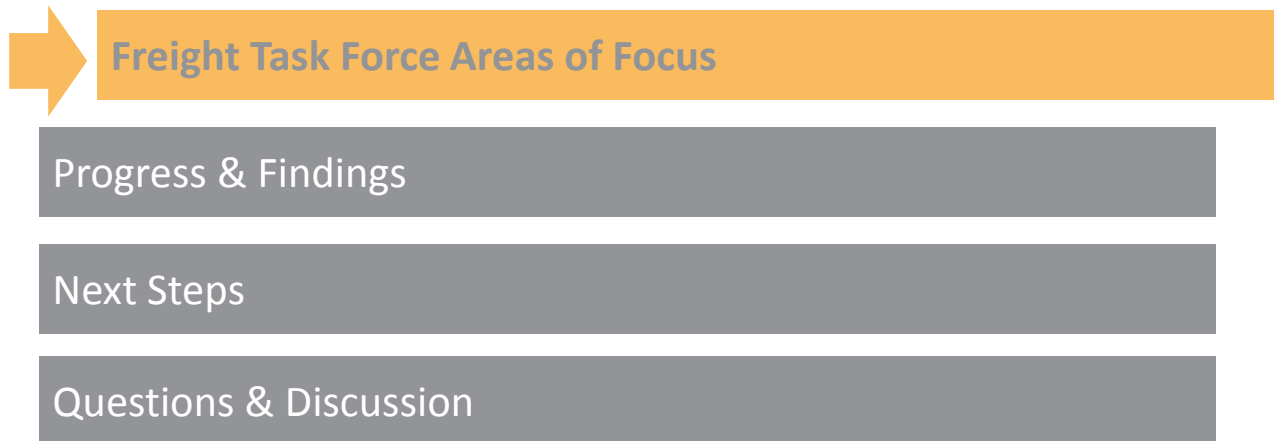
North/West Passage – Freight Task Force, Year 2

A Year in Review

Solutions for
growing economies

July 25, 2017

Presentation Map



North/West Passage Freight Task Force

Established in 2014 to enhance North/West Passage activities and help realize the North/West Passage Corridor's vision of...

...developing effective methods for sharing, coordinating, and integrating traveler information and operational activities across state and provincial borders

Work Plan



Presentation Map

Freight Task Force Areas of Focus



Progress & Findings

Next Steps

Questions & Discussion

2016-17 Freight Task Force Web Series



Month	Topic	Presenters
July	Introduction to Freight Task Force Web Series, Topic Solicitation	Bob Koeberlein and CPCS
August	FAST Act Freight Provisions Overview	Jeff Purdy and Chip Millard, FHWA
September	Freight Data	Donald Ludlow, CPCS and Dan Murray, ATRI
October	Truck Parking	Davonna Moore, KSDOT, John Tompkins, MnDOT and Dan Murray, ATRI
November	Connected Trucks (I-80 Pilot)	Vince Garcia, WYDOT and Tony English, TriHydro
January	Toward Zero Deaths	Kristine Hernandez, MnDOT and John Milton, WSDOT
February	Truck Platooning 101	Steve Boyd and Geoff Johnson, Peloton Technologies
March	State Freight Plan Best Practices	Ernie Perry, University of Wisconsin CFIRE
May	NWP Annual Meeting <i>(select invitations)</i>	Erika Witzke, CPCS, Jeff Marker, ITD and Beverly Kuhn, TTI
July	Truck Platooning Roundtable <i>(select invitations)</i>	Erika Witzke and Alex Marach, CPCS



Provide insight into available funding and partnerships for project implementation

- Update on freight projects identified during Year 1 Task Force
- Indicate what projects should be continue to be considered
- Identify future projects for Task Force coordination or facilitation
- Align potential funding mechanisms to advance priority projects

Level of Activity and Interest in Each Project (2017)

Project	Active	Planned	Interested	Not Interested
Oversize/Overweight Permitting Uniformity	4	1	1	0
Electronic Display of Oversize/Overweight Permits	3	0	1	1
Pursue a "Toward Zero Deaths" Campaign	4	0	1	1
Pilot Escort Certification and Reciprocity Universal Standard	2	0	2	2
Calibrate Downstream WIM Scales with Permanent Scale Data	2	0	2	2
NWP Virtual Weigh Station Initiative	1	0	4	1
Model Legislation for Autonomous Commercial Vehicle Operation	1	0	3	2
Advanced Notice of Truck Parking Availability – Phase 2	1	0	5	0
Multistate Commercial Vehicle Platoon Demonstration	0	0	4	2

Findings

The NWP Freight Task Force should continue to be a Project Champion

- Pursue Toward Zero Deaths Commercial Vehicle Campaign
- North/West Passage Virtual Weigh Station Initiative
- Calibrate Downstream WIM Scales

The NWP will conduct The Model Legislation for Autonomous Commercial Vehicle Operations in Year 3 activities

Findings

Suggested Next Steps

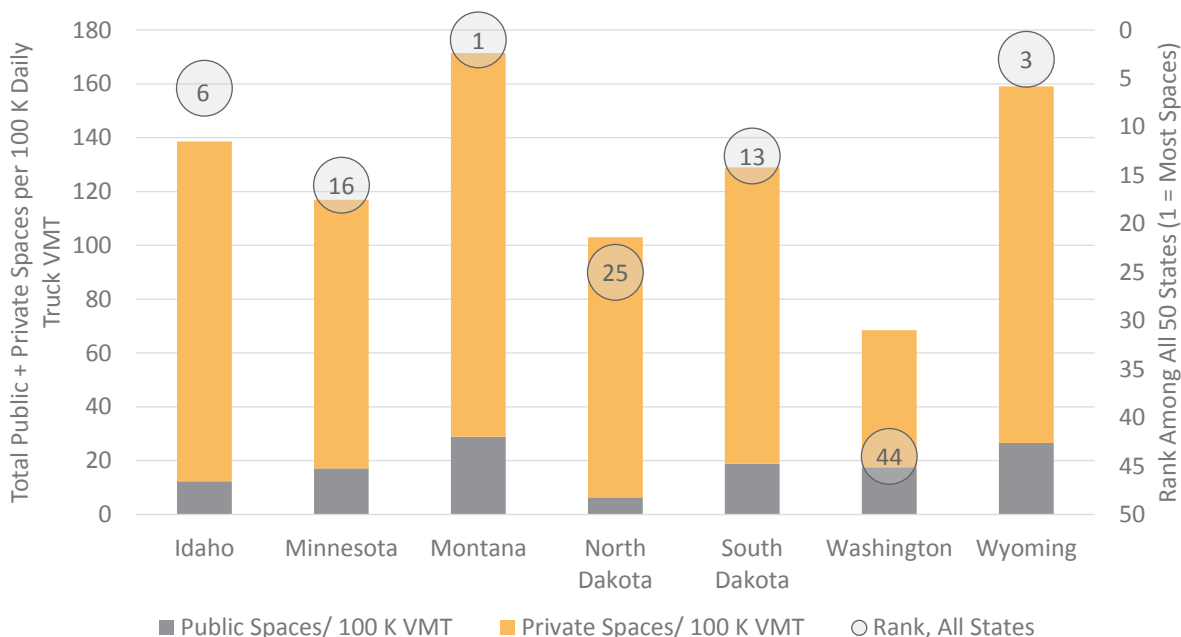
- Update or Remove Irrelevant Projects from List
- Identify New Projects
- Align Projects with Funding
- Transition to Implementation



Provide insight into available funding and partnerships available to the Task Force for project implementation

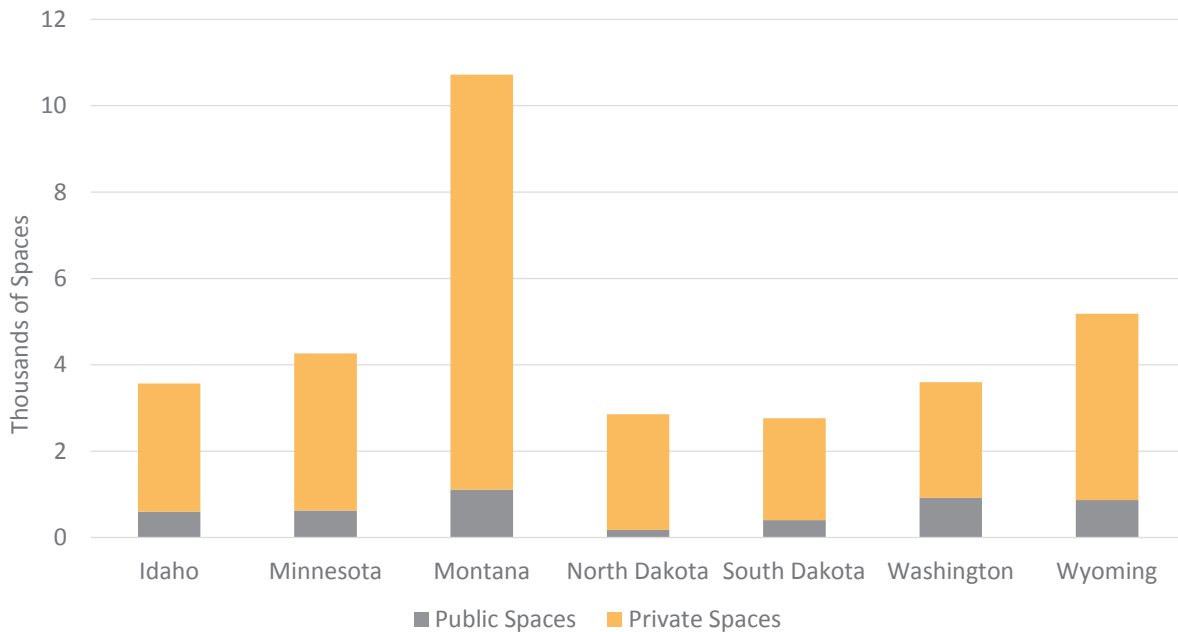
- What truck parking information systems are available and what are their strengths/weaknesses?
- What are public and private sector stakeholder perspectives?
- What components of truck parking information systems should be implemented in the NWP?
- How can truck parking availability be incorporated in the NWP website for disseminating information?

Public and Private Truck Spaces per 100,000 VMT



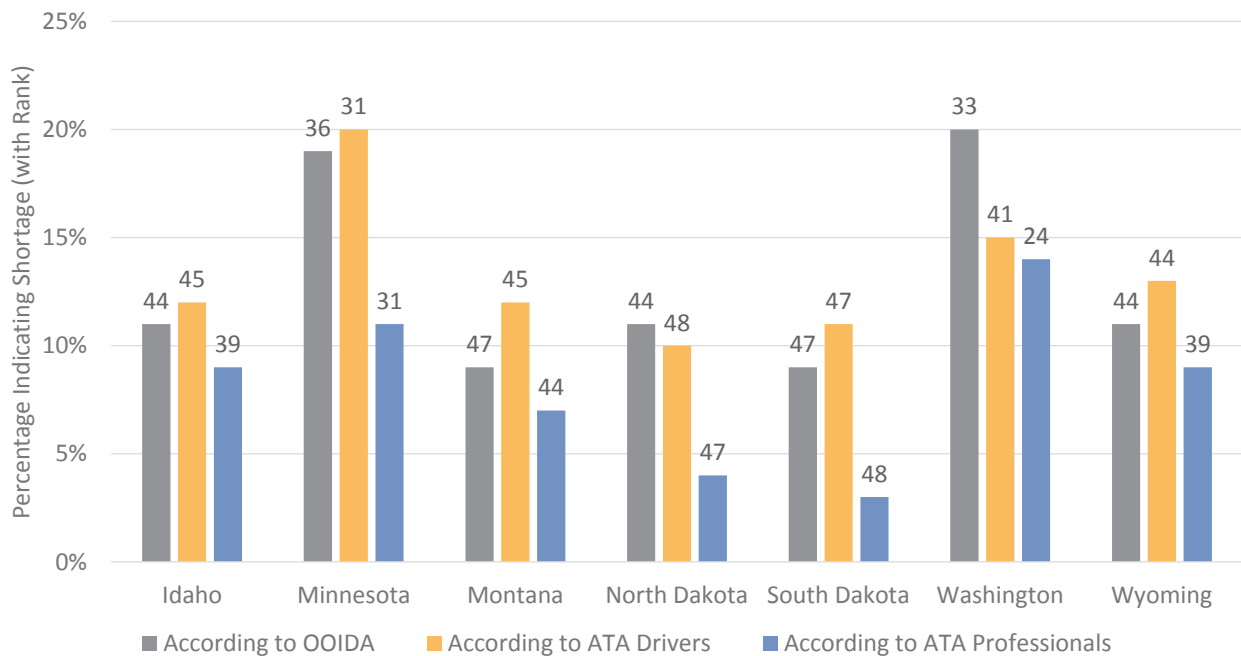
Source: Jason's Law Truck Parking Survey Results and Comparative Analysis, Federal Highway Administration, 2015

Public and Private Spaces in Each State



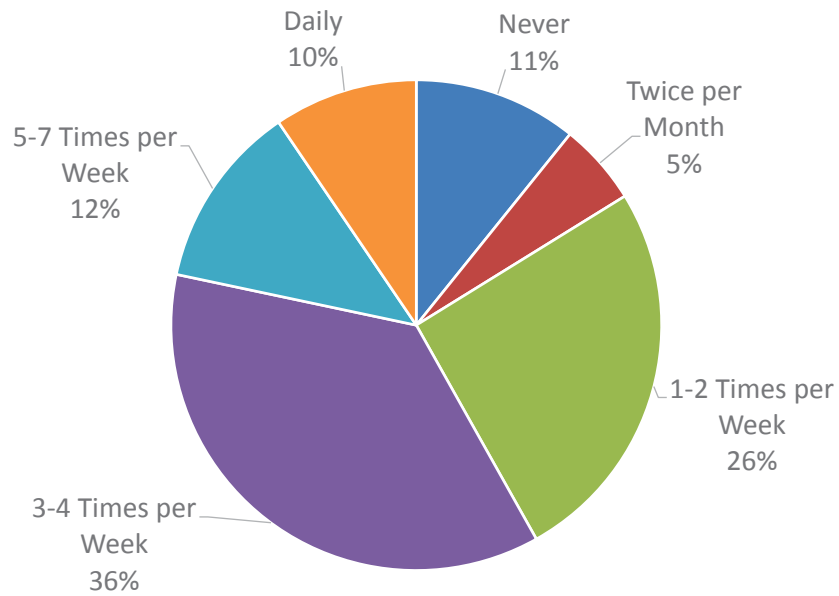
Source: Jason's Law Truck Parking Survey Results and Comparative Analysis, Federal Highway Administration, 2015

Truck Parking Shortage: Percentage of Respondents Indicating Shortage and Rank



Source: Jason's Law Truck Parking Survey Results and Comparative Analysis, Federal Highway Administration, 2015
 Note: value above the bars indicates rank among all 50 states (1 = greatest perceived shortage)

Unauthorized or Undesignated Parking Frequency



Source: Managing Critical Truck Parking Case Study – Real World Insights from Truck Parking Diaries, American Transportation Research Institute, 2016



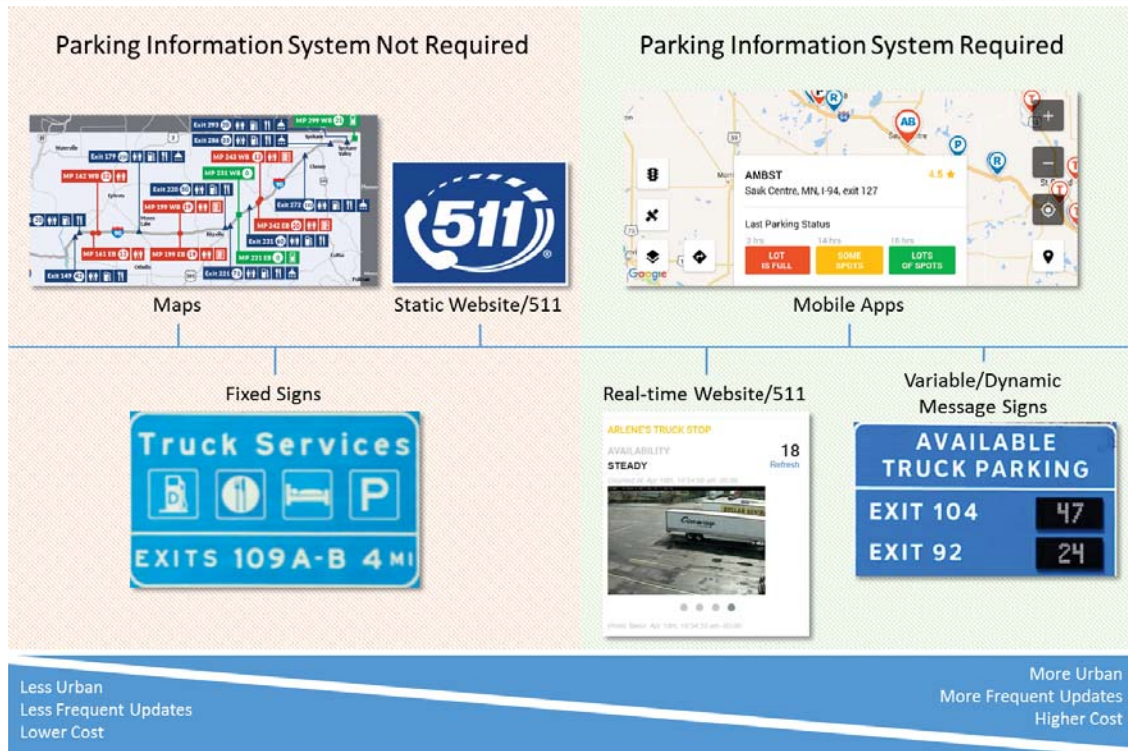
Solutions for growing economies

Stakeholders, Cities, and Noted Parking Issues



Solutions for growing economies

Continuum of Parking Solutions



Findings

Three key areas of need in NWP

- Additional truck parking (primarily in Seattle and Twin Cities, and select rural areas)
- Information on truck parking facility locations and amenities throughout the NWP region
- Information on truck parking availability (primarily in Seattle and Twin Cities)

Suggested Next Steps

- Establish a project champion
- Inventory truck parking facility location and amenity information and develop a map
- Provide a website that houses truck parking facility location and amenity information by adapting the existing NWP traveler information site
- Confirm the need for truck parking availability information and agree on future partnership
- Continue to track on-going TPIMS deployments to gather best practices

Task 5 – Truck Platooning Exploration



To help North/West Passage Members remain informed about truck platoon demonstrations on other corridors and determine the interest level in truck platooning demonstrations corridor-wide along the I-90/I-94 corridor

- Profile Truck Platooning Initiatives
- Facilitate Discussions
- Identify Action Plan and Reporting

About Truck Platooning

A communications link between vehicles equipped to platoon, allows the rear truck(s) to decrease following distance.

Benefits of platooning systems:

- Improved safety
- Reduced fuel consumption



Source: Long Beach Press-Telegram



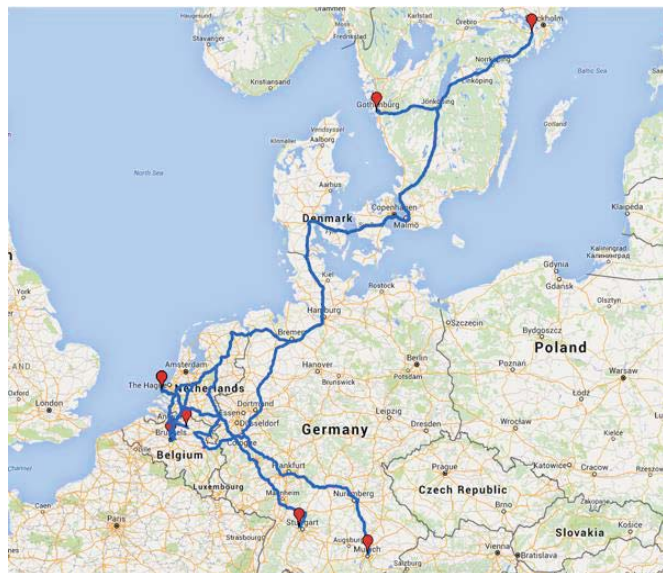
Source: San Francisco Chronicle

Truck Platooning Demonstrations – Europe

- European Truck Platooning Challenge (2016)
 - 5 nations, 6 companies
 - Focus on overcoming regulatory differences
 - Applicable to NWP



Source: Scania



Source: European Truck Platooning Challenge, 2016

Truck Platooning Demonstrations (and legislation) – US

Date	State	Accomplishment
2013		
November	Utah	Platoon demonstration with CR England trucking
2014		
May	Nevada	Platoon demonstration on I-80
2015		
May	Utah	Reduced following distance regulation for platooning
August	California	Exempted platoon demos from minimum following distance regulation
November	Utah	Platoon demonstration on I-80
November	California	Peloton platoon demonstration near Sacramento
2016		
July	Florida	Legislation instructing FDOT to study truck platooning technology, and authorizing a pilot project to test vehicles
July	Texas	Technology demonstrations on closed tracks
July	Michigan	U.S. Army truck platoon demonstration on I-69
December	Michigan	Exempted platoon demos from minimum following distance regulation
2017		
January	Multiple	Pennsylvania, Michigan, and Ohio created 'Smart Belt Coalition' to promote development of AV and CV technologies, including truck platooning
March	California	Platoon demonstration near Port of Los Angeles
April	Arkansas	Reduced following distance regulation for platooning
May	South Carolina	Exempted platooned trucks from following distance regulations
Upcoming Events		
TBD	Iowa	Platoon enabling legislation under consideration
TBD	Ohio	Planned platoon demonstrations on Ohio Turnpike
TBD	North Carolina	Platoon enabling legislation under consideration



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Project Goal – Position TxDOT as a leader in this research area and the overall TSM&O and CV/AV initiatives.

- Comprehensive truck platooning demonstration in Texas.
- Proactive effort in assessing innovative operational strategies.



Project Focus – Assess the feasibility of deploying 2-vehicle truck platoons on specific corridors in Texas in 5 to 10 years



Deployment Site Characteristics

Phase 3 Requirements

- \geq 4-lane, rural interstate highways
- Low AADT
- High truck percentage \rightarrow least 15% of AADT.
- Relatively long stretches of highway between urban centers
- Posted speed limit \geq 65 mph



Legislation

“Following too closely” laws – typical legal elements

- Two common elements to prevent rear-end collisions involving combination vehicles
 - Variable distance standard
 - typically phrased as a “reasonable and prudent” requirement
 - discretionary – accounts for speed, traffic, etc.
 - 28 states – including ID, MT, ND, SD, WA, WY
 - Fixed distance standard
 - varies by state between 100 and 500 ft
 - 22 states – including MN
- All states have additional element(s) such as requiring “sufficient space” for another vehicle to “enter and occupy”



Status of Truck Platooning Implementation in the NWP

- Four research initiatives have been identified for further study:
 - Day One Activities to Prepare for Connected and Automated Vehicles (*on-going*)
 - Model Legislation for Autonomous and/or Connected Vehicle Operations (*expected, 2017/18*)
 - Multistate Commercial Vehicle Platoon Demonstration (*not funded*)
 - Expanded I-80 Connected Vehicle Pilot (*not funded*)

July 2017 Roundtable Discussion

Participants responded with their perspectives on

- Do you (your state) have an interest in a truck platooning project along the I-90/94 corridor?
- Do you (your state) have any concerns about a private led truck platooning demonstration (similar to Phase 3 of the demonstration in Texas)?
- Do you (your state) have a preference in advancing a truck platooning project as a corridor, or as individual states?

Suggested Next Steps

- Establish a Project Champion
- Advance “Model Legislation for Autonomous and/or Connected Vehicle Operations” project
- Identify research gaps and North/West Passage truck platooning project objective
- Seek a university or other research partner
- Identify potential demonstration location(s)
- Leverage private sector innovations (publish RFI)

Presentation Map

Freight Task Force Areas of Focus

Progress & Findings

 **Next Steps**

Questions & Discussion

Next Steps

- Continue NWP Freight Task Force Activities (Year 3)
 - Continue to serve as a Champion for NWP States
 - Continue to provide timely information (webinars)
 - Advance Model Legislation for Autonomous and/or Connected Vehicle Operations
- Other Next Steps
 - Revisit and realign priority freight projects and funding opportunities
 - Inventory truck parking information and develop a map

Resources for your use

The screenshot shows a web browser window displaying the NorthWest Passage website. The URL in the address bar is <https://www.nwpassage.info/projects/phase10/?project=10.4>. The page features a navigation menu on the left with categories like Home, Projects, Outreach, Events Calendar, Steering Committee, Strategic Plan, How to Join, Contact Us, Links, and Site Map. The main content area is titled "Project 10.4 Freight Task Force - Year 2" and describes the activities of the Freight Task Force for Year 2, including web meetings, surveys, and the development of working papers on freight operations research, truck parking, and truck platooning technology. A callout box at the bottom of the screenshot contains the URL: <https://www.nwpassage.info/projects/phase10/?project=10.4>

Questions?

Thank You



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