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# Maryland Statewide Truck Parking Study

Project Stakeholder Workshop

September 20<sup>th</sup>, 2019

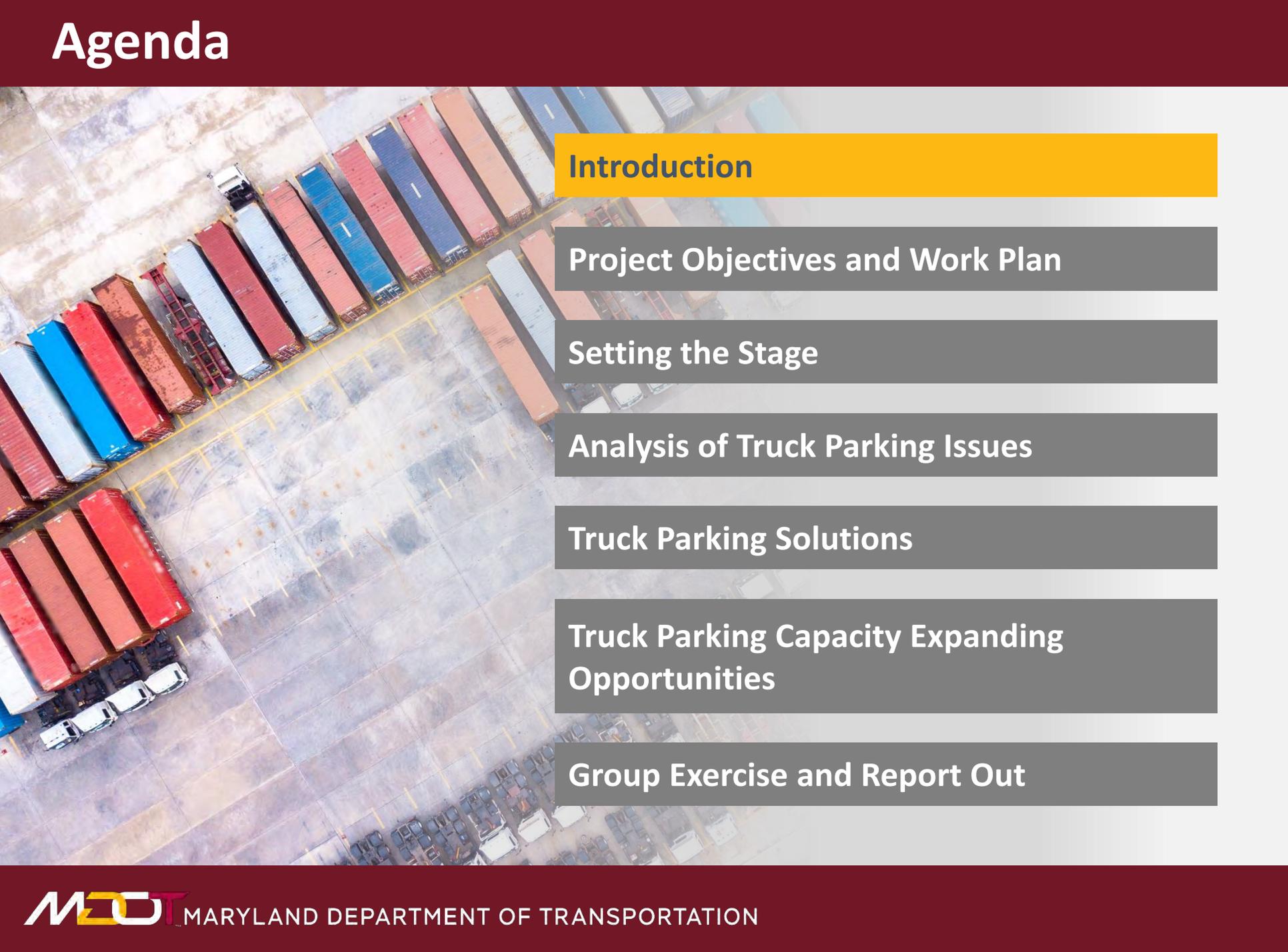
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# Housekeeping

- We look forward to a free flowing conversation with you. **Please ask your questions any time;**
- Please **mute your line** if using GoToWebinar to limit distractions;
- We will be using an **interactive polling application** for the meeting in addition to GoToWebinar (more information to come);
- A **15-minute break** is scheduled today at 3:30;
- **Be Safe!!** Contact information for the project team will be provided if you are driving and are therefore unable to type your comments or participate in the polls.

# Agenda



**Introduction**

**Project Objectives and Work Plan**

**Setting the Stage**

**Analysis of Truck Parking Issues**

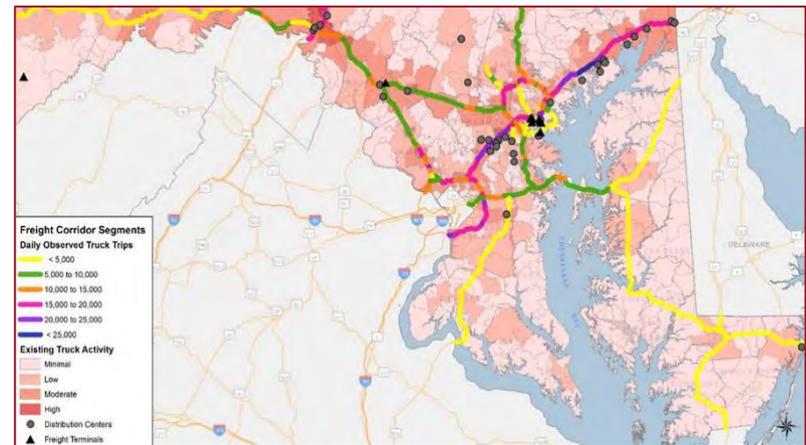
**Truck Parking Solutions**

**Truck Parking Capacity Expanding Opportunities**

**Group Exercise and Report Out**

# Previous Freight Planning Studies & References

- 2009 Maryland Statewide Freight Plan
- 2012 SHA/MDTA Freight Implementation Plan
- Maryland's Strategic Goods Movement Plan – 2015
- MD Excellerator - Performance Measure SHA 3.4 which aims to document the amount of Illegal Truck Parking occurring along Maryland State Roadways
- Maryland's Strategic Goods Movement Plan – 2017 Update



Source: 2017 Maryland Strategic Goods Movement Plan

## MAP-21 (2012) and Fast Act (2015) transportation legislation

Include requirements and funding to address freight mobility within the statewide multimodal infrastructure network.

- Under Map-21 Jason's Law was introduced to ensure that state DOTs were providing safe and secure parking areas for the trucking industry.

# Previous Freight Planning Studies & References

SHA Truck Parking Facilities - Usage Chart

Truck Stop	Roadway	County	Municipality	Truck Spaces Available	Average # of Trucks						Highest # of Trucks						Annual Average Truck Volume	Average Truck %	Usage (%)					
					2012	2013	2014	2016	2017	2018	2012	2013	2014	2016	2017	2018			2012	2013	2014	2016	2017	2018
					Youghiougheny Overlook Welcome Center	I-68 EB Friendsville	Garrett	Friendsville	22	18	17	21	19	21	24	24			23	26	27	27	31	3200-6100
I 95 Welcome Center - Northbound	I-95 SB Laurel	Howard	Laurel	21	32	54	50	52	79	68	50	62	62	75	95	101	16000-28000	9-23%	152%	257%	238%	248%	376%	324%
I 95 Welcome Center - Southbound	I-95 NB Laurel	Howard	Laurel	46	40	38	43	58	51	53	43	46	55	56	64	61	16000-28000	9-23%	87%	83%	93%	126%	111%	115%
Maryland House - Northbound	I-95 NB Aberdeen	Cecil	Aberdeen	28	36	*	43	42	68	46	40	*	52	52	93	52	16000-28000	9-23%	129%	N/A	154%	150%	243%	164%
Maryland House - Southbound	I-95 SB Aberdeen	Cecil	Aberdeen	21	37	*	31	33	14	35	47	*	40	41	35	44	16000-28000	9-23%	176%	N/A	148%	157%	67%	167%
Chesapeake House - Northbound	I-95 NB North East	Cecil	North East	35	20	26	25	29	27	30	25	37	30	38	45	40	16000-28000	9-23%	57%	74%	71%	83%	77%	86%
Chesapeake House - Southbound	I-95 SB North East	Cecil	North East	37	18	16	14	19	13	16	24	22	20	33	16	21	16000-28000	9-23%	49%	43%	38%	51%	35%	43%
U.S. 13 Welcome Center - Northbound	US 13 NB at VA State Line	Worcester	Pocomoke City	14	18	20	20	3	1	1	23	24	26	7	1	1	1500-3000	5-16%	129%	143%	143%	21%	7%	7%
Bay Country Welcome Center	US 301 Centerville	Queen Anne's	Centerville	25	14	14	19	22	24	28	22	16	25	33	34	35	2900-5200	18-36%	56%	56%	76%	88%	96%	112%
I-70 Welcome Center - Eastbound	I-70 EB South Mountain	Frederick	Myersville	26	41	39	38	37	41	43	48	47	43	44	50	47	6000-16000	11-30%	158%	150%	146%	142%	158%	165%
I-70 Welcome Center - Westbound	I-70 WB South Mountain	Frederick	Myersville	23	25	24	30	23	33	23	35	33	46	30	44	45	6000-16000	11-30%	109%	104%	130%	100%	143%	100%
I-70 Truck Rest Area	I-70 EB New Market	Frederick	New Market	9	10	14	13	13	16	14	13	15	18	18	20	21	6000-16000	11-30%	111%	156%	144%	144%	178%	156%

Note: \* Under construction for renovations

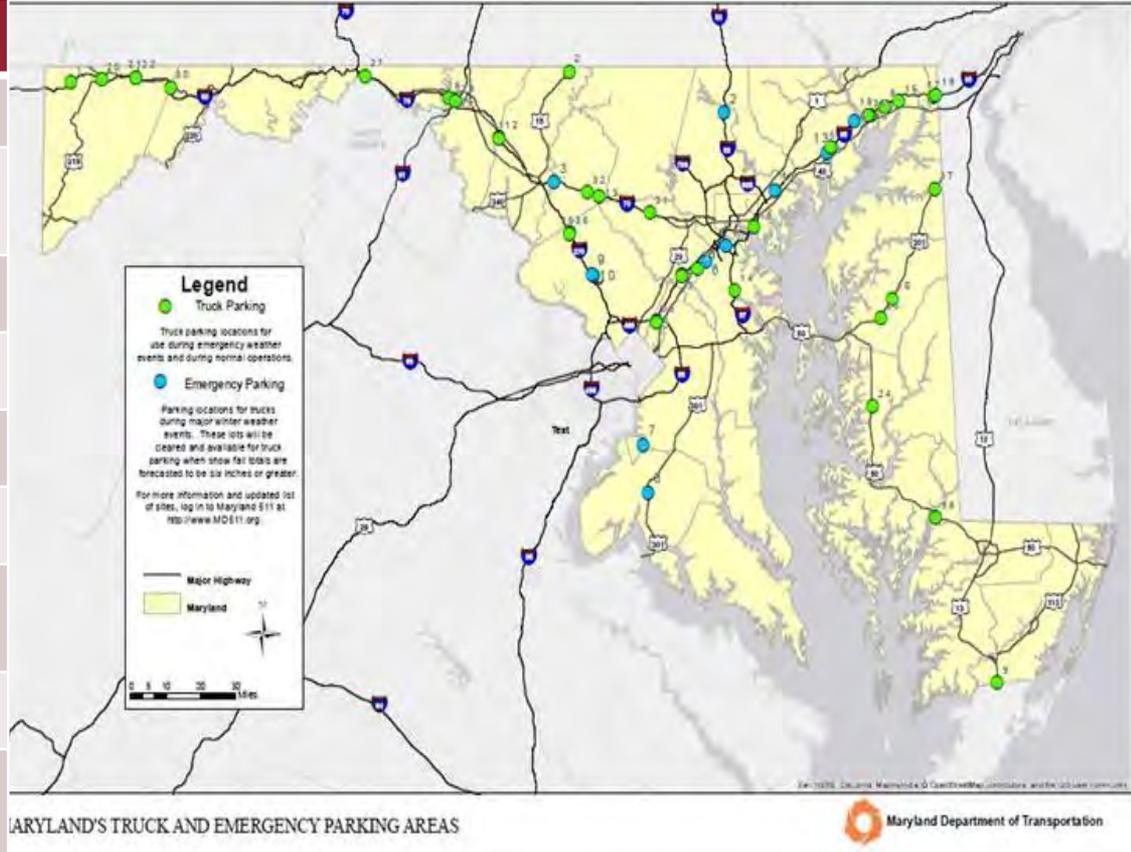
\*\*Was not included in highest truck parking volumes list

\*\*\*Not included in counts as this is not located on the existing MD Truck Network

Usage	Percentage
Low	0-25%
Average	25-50%
Moderate	50-75%
Full	75-100%
Over	>100%

# Recent Truck Public Parking Expansions (2010-Present)

Location	Spaces
I-95 SB Welcome Center (Laurel)	41
I-95 NB Welcome Center (Laurel)	0 (4F issues)
I-495/I-495 Weigh Station/P&R	9
US 301 Bay Country Rest Area	14
I-95 NB Maryland House	28*
I-95 SB Maryland House	21*
I-95 NB Chesapeake House	35*
I-95 SB Chesapeake House	37*
I-70 EB Welcome Center	10+ (in design)
I-70 WB Welcome Center	10+ (in design)



\*MDTA facilities

# Workshop purpose

- **Introduce the Maryland Statewide Truck Parking Study**
- **Present Work to Date and Discuss Early Findings from Data Analysis and Internal Stakeholder Inputs**
- **Solicit Feedback and Inputs on Truck Parking Opportunities and Solutions from the Workshop Participants**

# Soliciting your inputs



During this session, an audience response application will be used to collect your inputs on the issues related to truck parking as well as the preliminary study findings presented at the meeting.

**Voting will be anonymous!**

The inputs will be used as talking points, to facilitate discussion around the statewide truck parking supply, demand, and current issues.



**When prompted,**

Go to **www.menti.com** and use the code **[984134]**



The cumulated results will be visualized on the screen in real-time.

# Pause for Mentimeter Input & Discussion

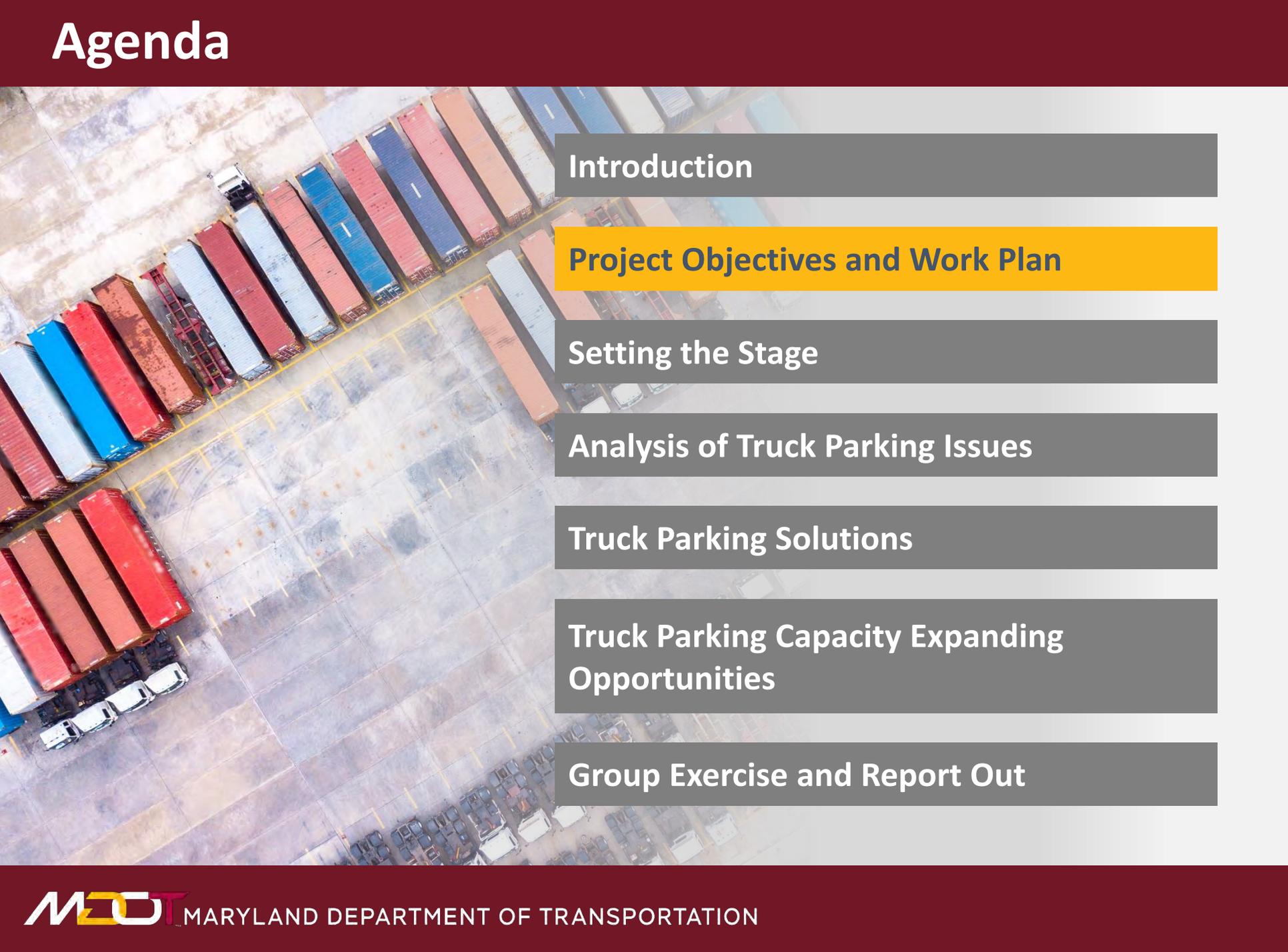
## What best describes your industry?

- State Agency
- Metropolitan Planning Organization
- County Office
- Shipper
- Carrier
- Truck Parking Developer/Operator

Go to [www.menti.com](https://www.menti.com) and use the code

984134

# Agenda



Introduction

**Project Objectives and Work Plan**

Setting the Stage

Analysis of Truck Parking Issues

Truck Parking Solutions

Truck Parking Capacity Expanding Opportunities

Group Exercise and Report Out

# Project Objectives

**The Maryland Statewide Truck Parking Study will provide MDOT with the data, context, and actionable solutions needed to advance priority projects and strategies that improve truck parking statewide.**

**1.) Assess existing truck parking locations and utilization**

**2.) Assess truck parking needs based on gaps in the system and truck parking demand**

**3.) Identify truck parking opportunities statewide**

**4.) Identify funding opportunities including innovative options - exploring P3 and grant opportunities**

## Identify Truck Parking Supply, Utilization, & Gaps

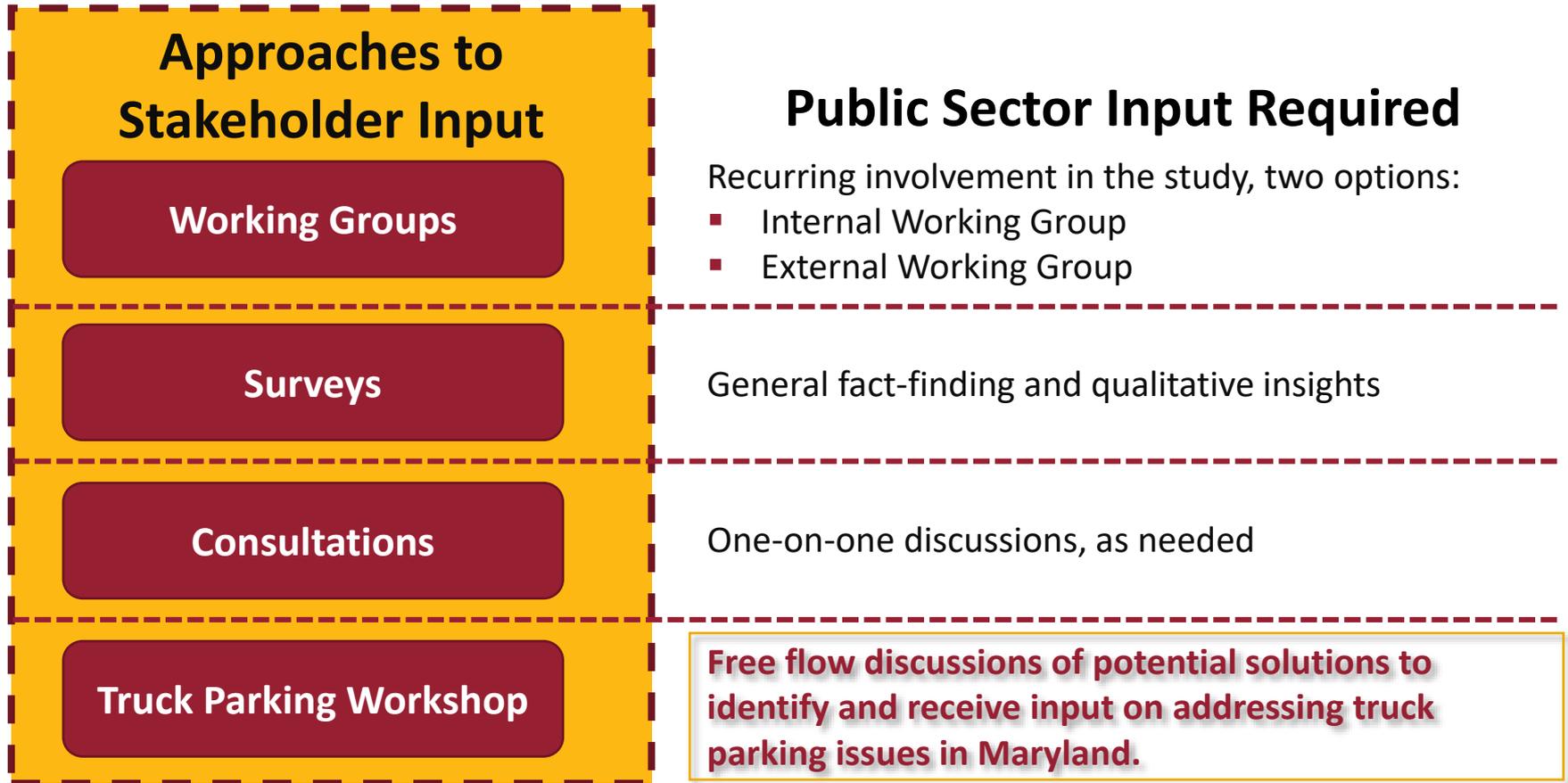
- Analysis must cover public and private truck parking locations

## Define and Prioritize Truck Parking Opportunities & Solutions

- Critical to differentiate the type of project – no “Silver Bullet”

# Stakeholder Involvement

## Soliciting Public & Private Sector Input & Validation



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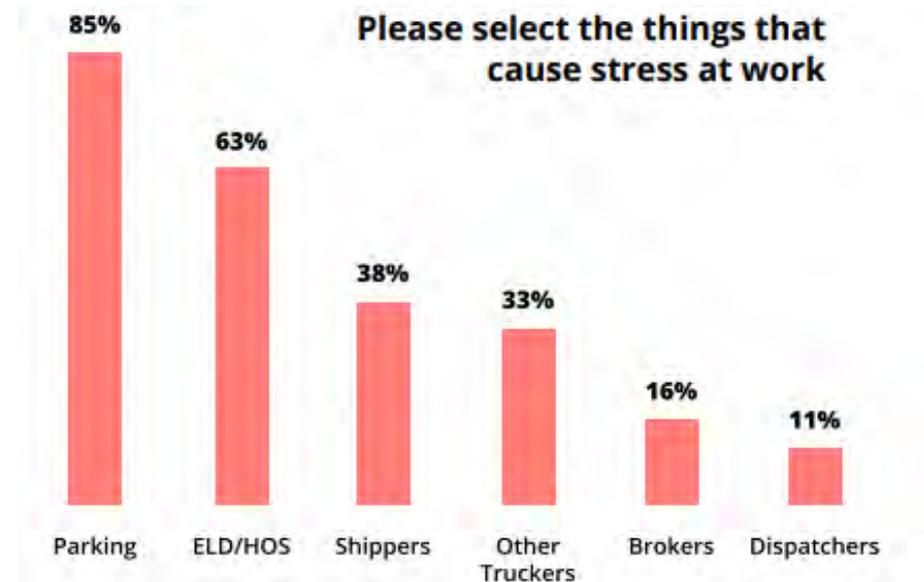
Truck Parking Solutions

Truck Parking Capacity Expanding Opportunities

Group Exercise and Report Out

# Why a Truck Parking Study?

- **Truck Parking is a Top Issue for Truck Drivers**
- **Truck Parking is Critical to Supply Chains (Compliance and Staging)**
- **Truck Drivers in Maryland Face Truck Parking Shortages**



Source: 2018 Trucker Path Survey

- **Inadequate Truck Parking Negatively Impacts**
  - Truck drivers –safety and wages
  - Infrastructure –ramp and shoulder damage
  - Other roadway users –Parked truck in ROW

# About Hours of Service Regulations

- **Hours of Service (HOS) Regulations are Not New**

- First regulated in 1938
- Latest change in 2013
- Rulemaking is currently under review

- **HOS – Establish Limits on Driving and On-Duty Time**

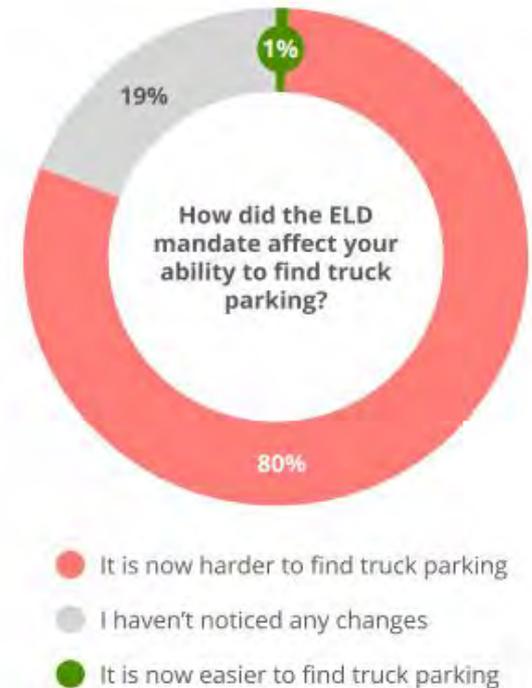
- Maximum of 11-hours driving and 14-hours on-duty
- Required 30-minute break by the 8th hour of driving
- 10-hours off-duty to maximize drive and on-duty time

- **Drivers Track HOS via Paper Logbooks (old method) and Electronic Devices**



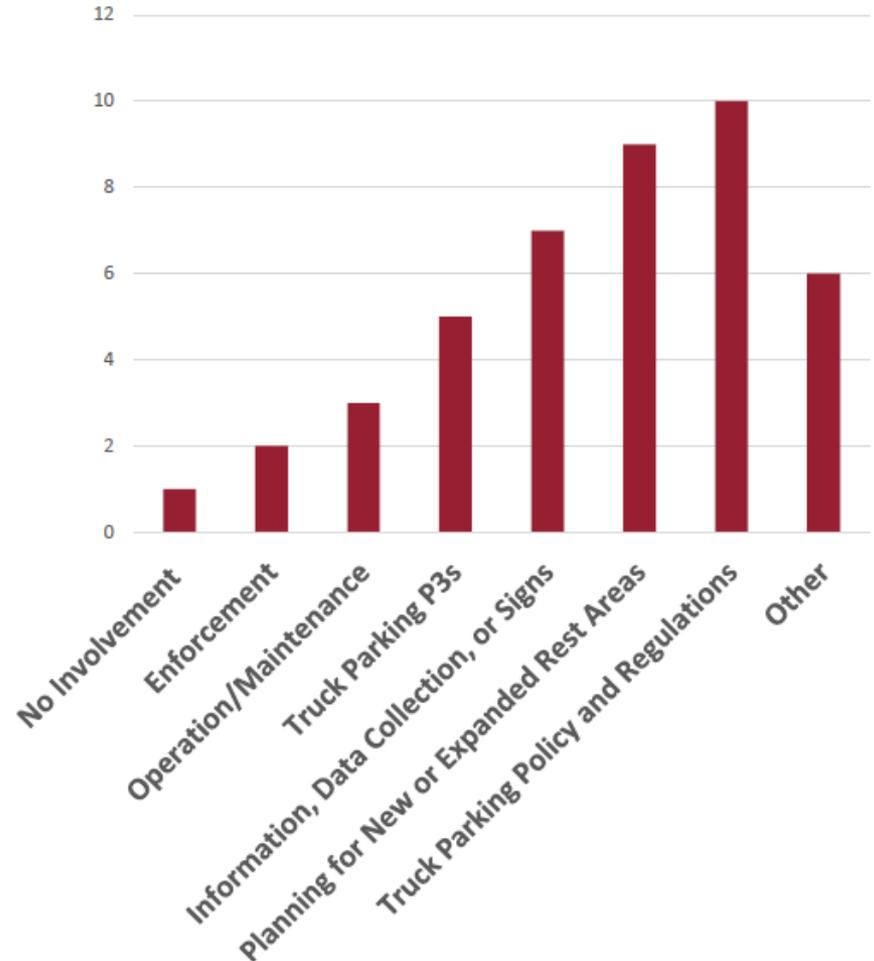
# Paper Logs vs Electronic Logging

- **The Latest Change to Truck Parking Demand is the Electronic Logging Device (ELD) Mandate**
  - Deadline for implementation started in Dec. 2017
  - Additional Automatic On-Board Recording Device (AOBRD) replacement deadline in Dec. 2019

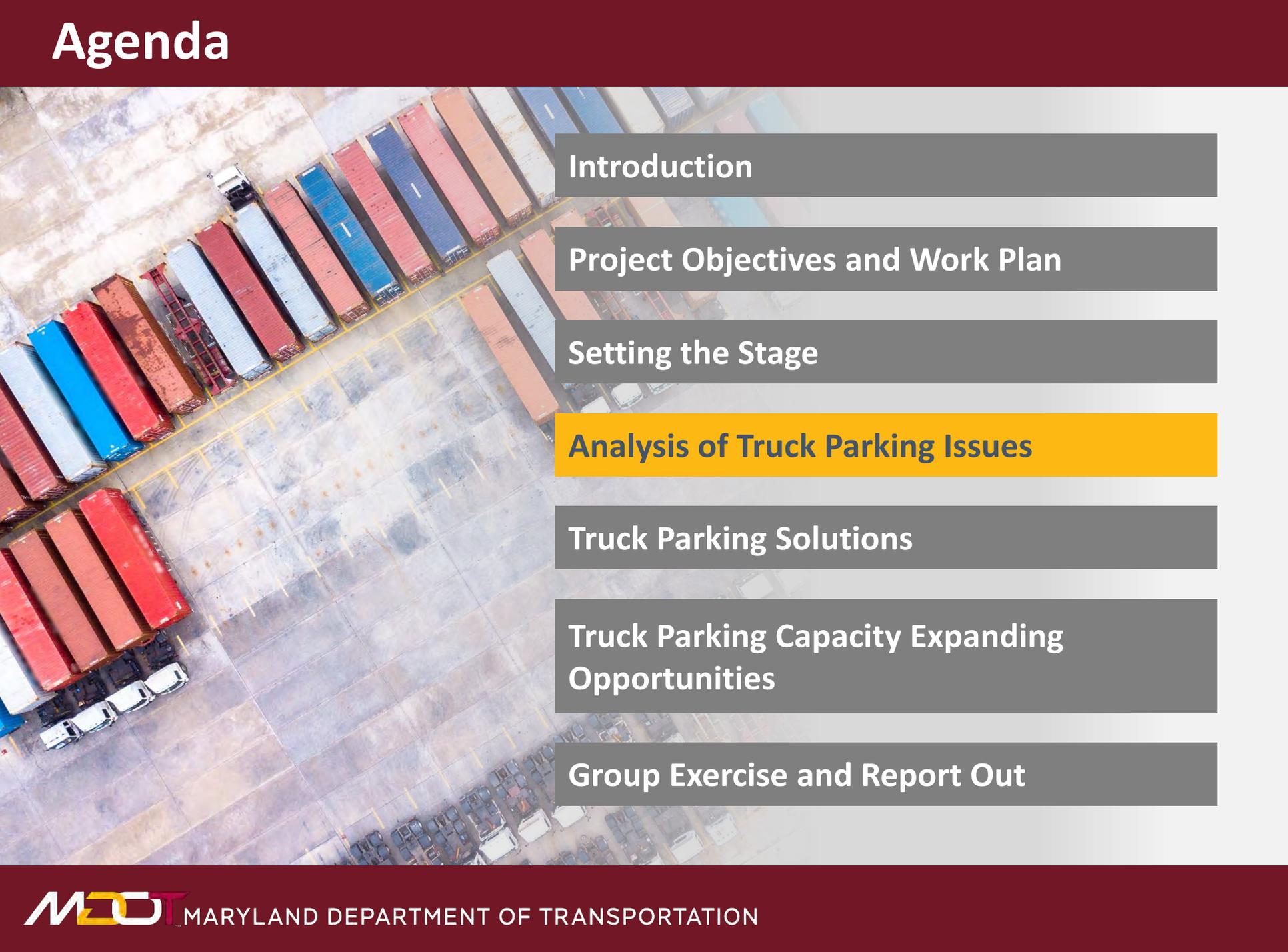


# Existing Role of MDOT in Truck Parking

- **Survey of Internal MDOT Stakeholders**
  - MDOT is engaged in truck parking throughout the organization
  - Highlights the importance of continued internal engagement
- **Other truck parking activities**
  - Emergency truck parking / resiliency
  - Safety
  - Oversize/Overweight freight



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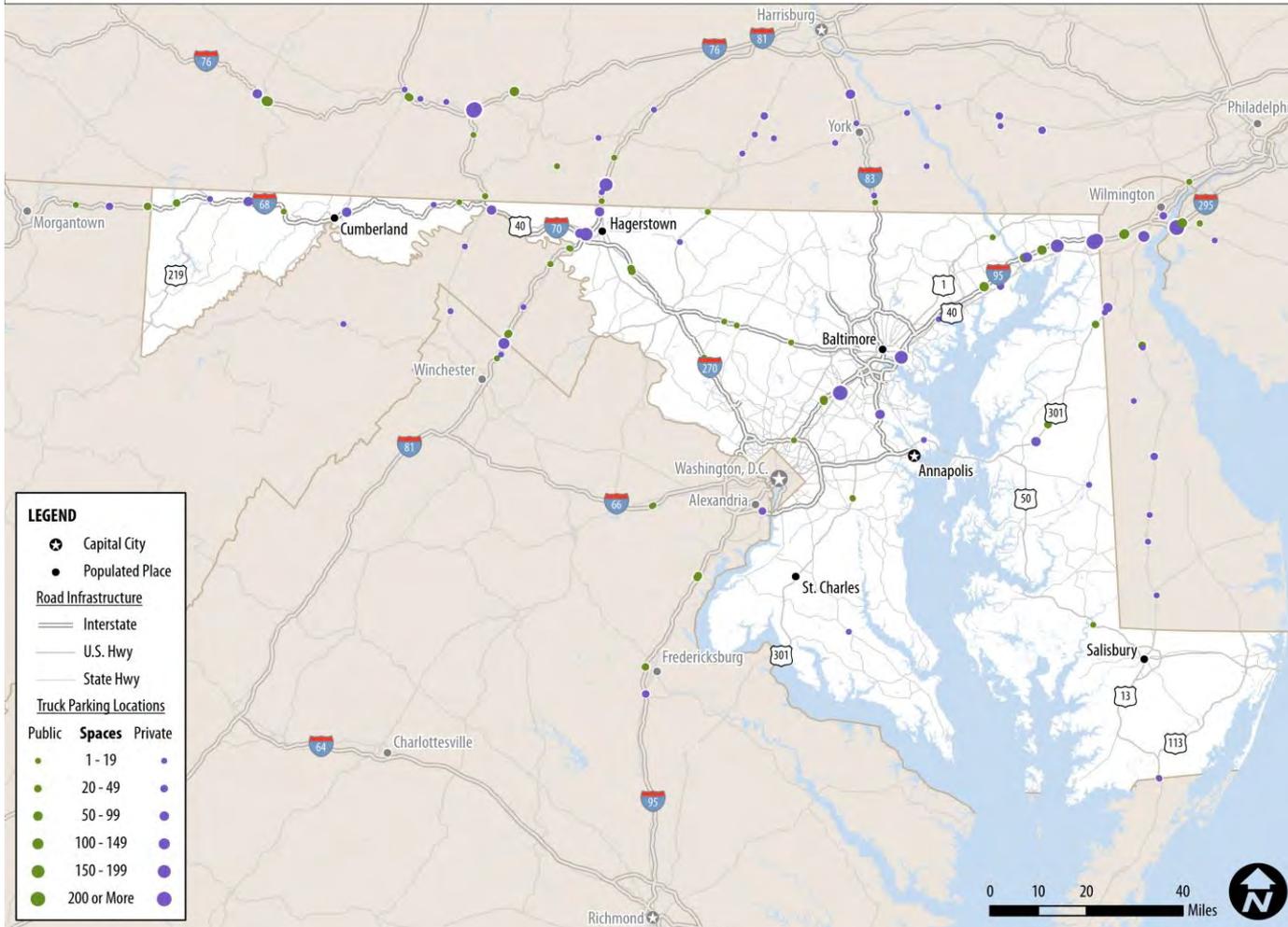
Group Exercise and Report Out

# Truck Parking In Maryland

CPCS

Truck Parking Facilities in and around Maryland

Maryland Statewide Truck Parking Study



Maryland

2,267 Private Spaces  
595 Public Spaces  
2,862 Total

25-Miles Around  
Maryland

2,019 Private Spaces  
810 Public Spaces  
2,829 Total

# Truck Parking Utilization

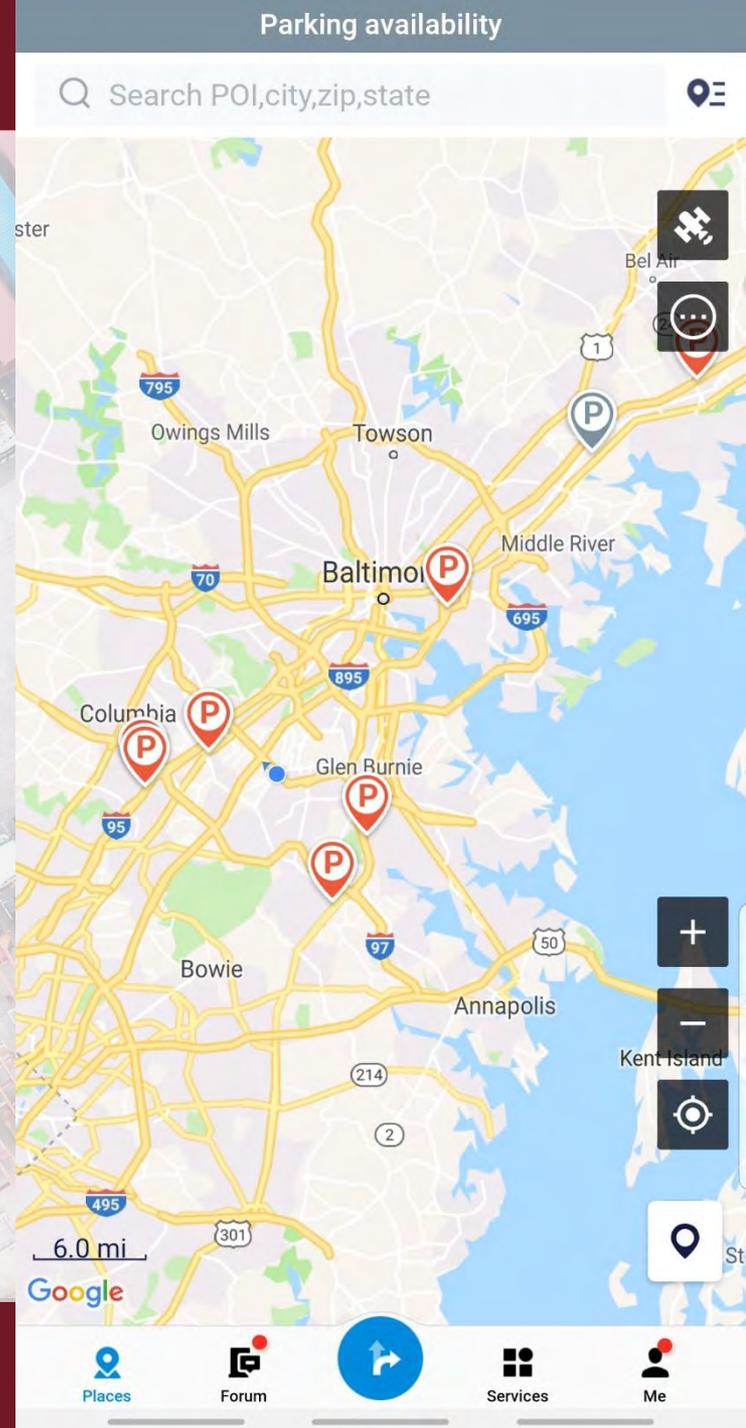
## Leveraging the crowd

- > 1 million monthly users validate and update

## Information

- Number of spots, amenities, history, and reviews

## Location based prompts to update truck parking utilization

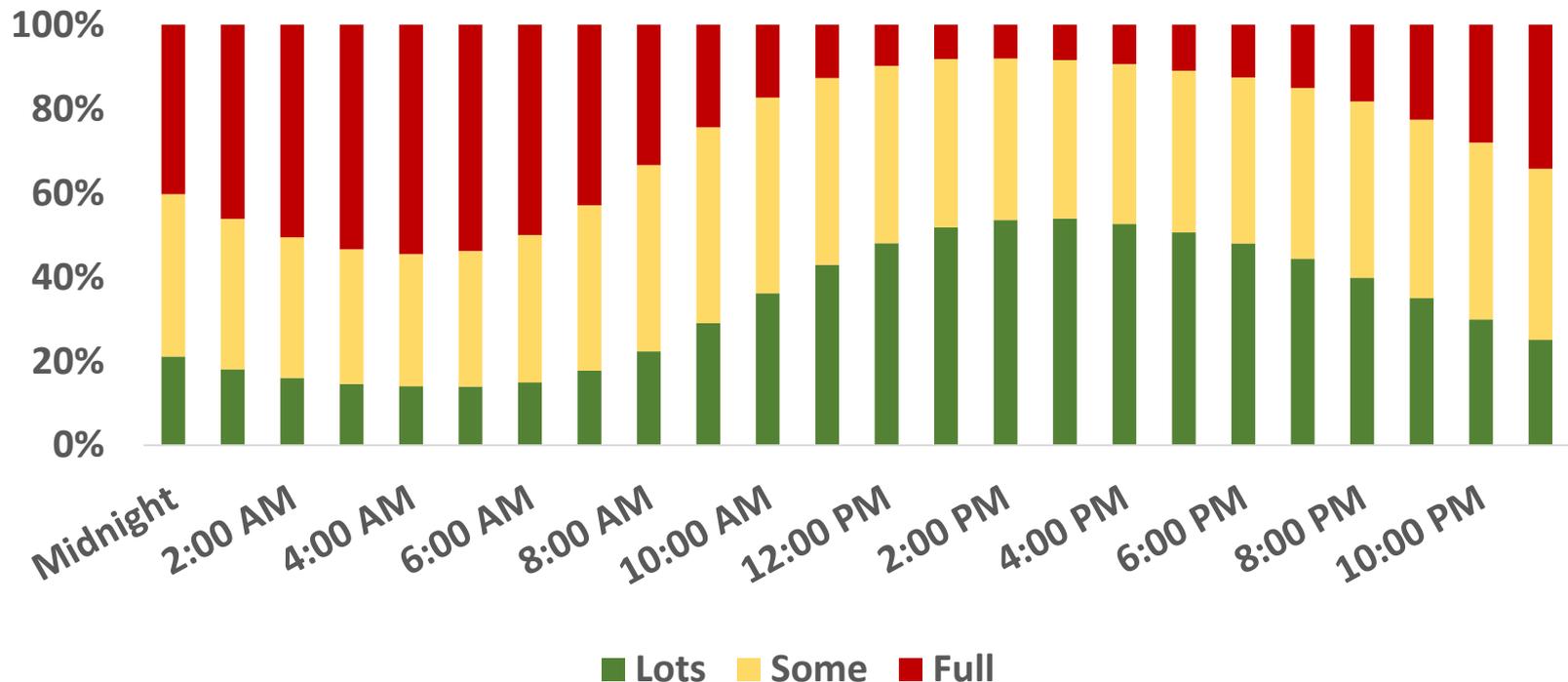


# Study Area Truck Parking Utilization

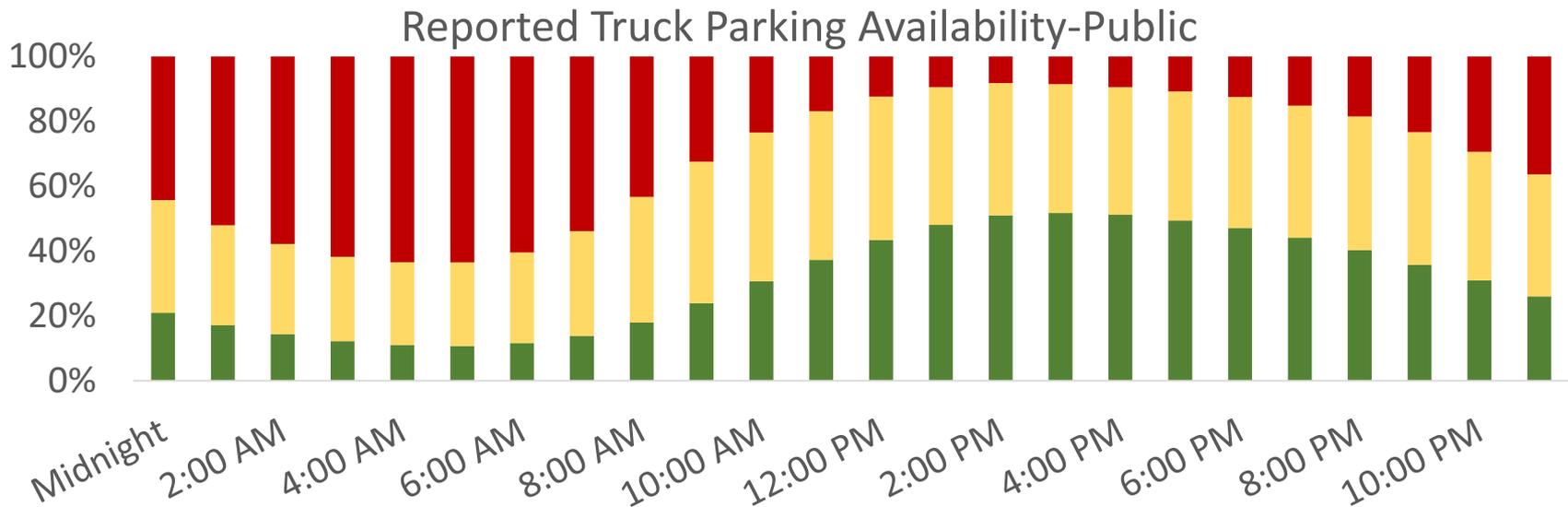
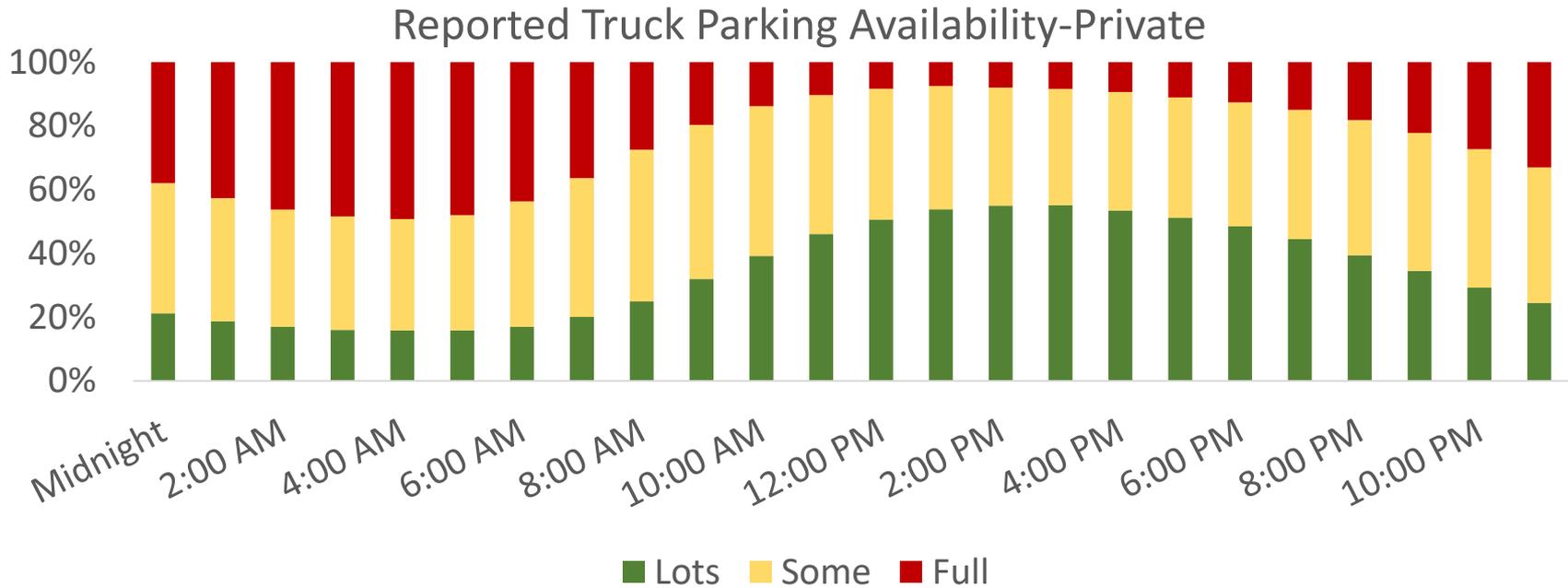
## ■ Truck parking is most difficult to find overnight

- 4pm to 4am spaces are filling

Reported Truck Parking Availability-Study Area

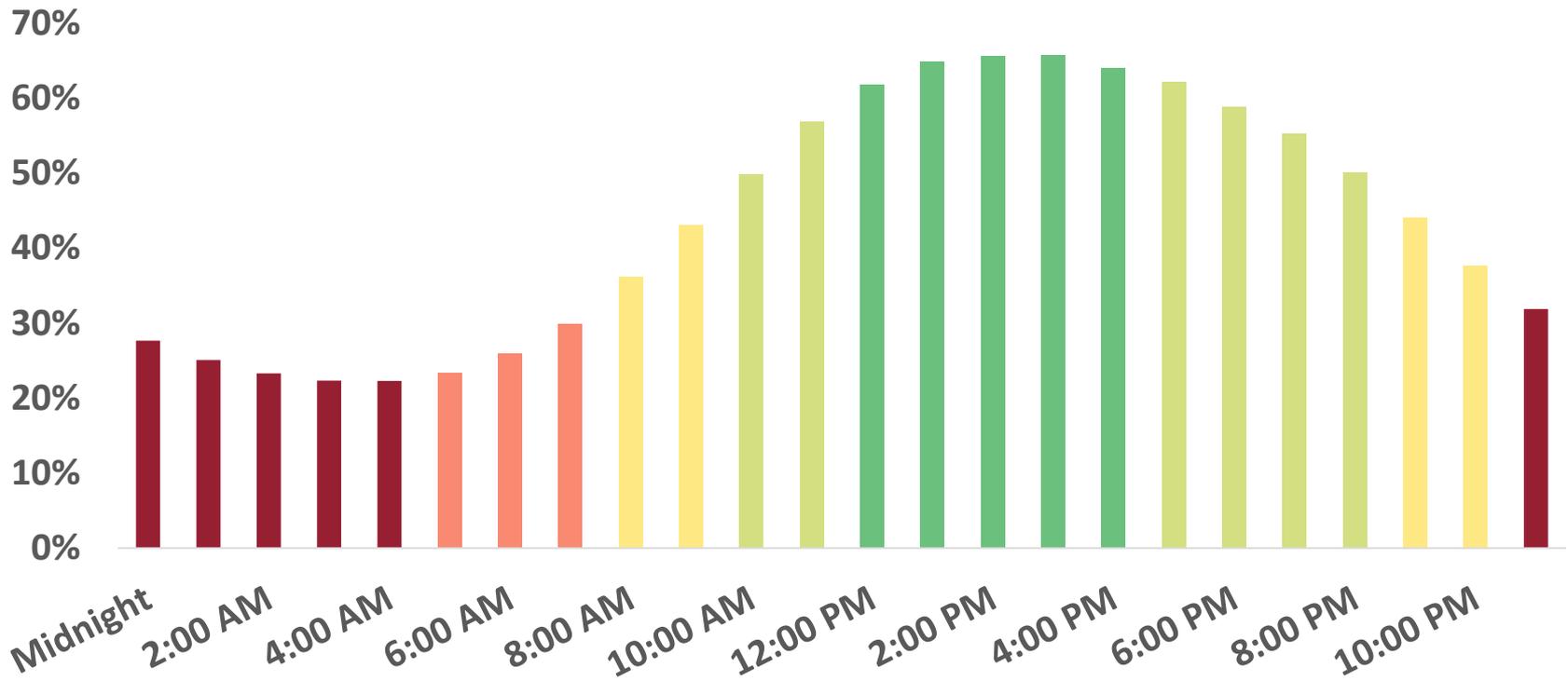


# Public vs Private Truck Parking Utilization



# Weighted Truck Parking Utilization in Maryland

- Weighting by number of spaces displays difficulty finding truck parking overnight
- Maryland has higher utilization rates than surrounding truck parking locations

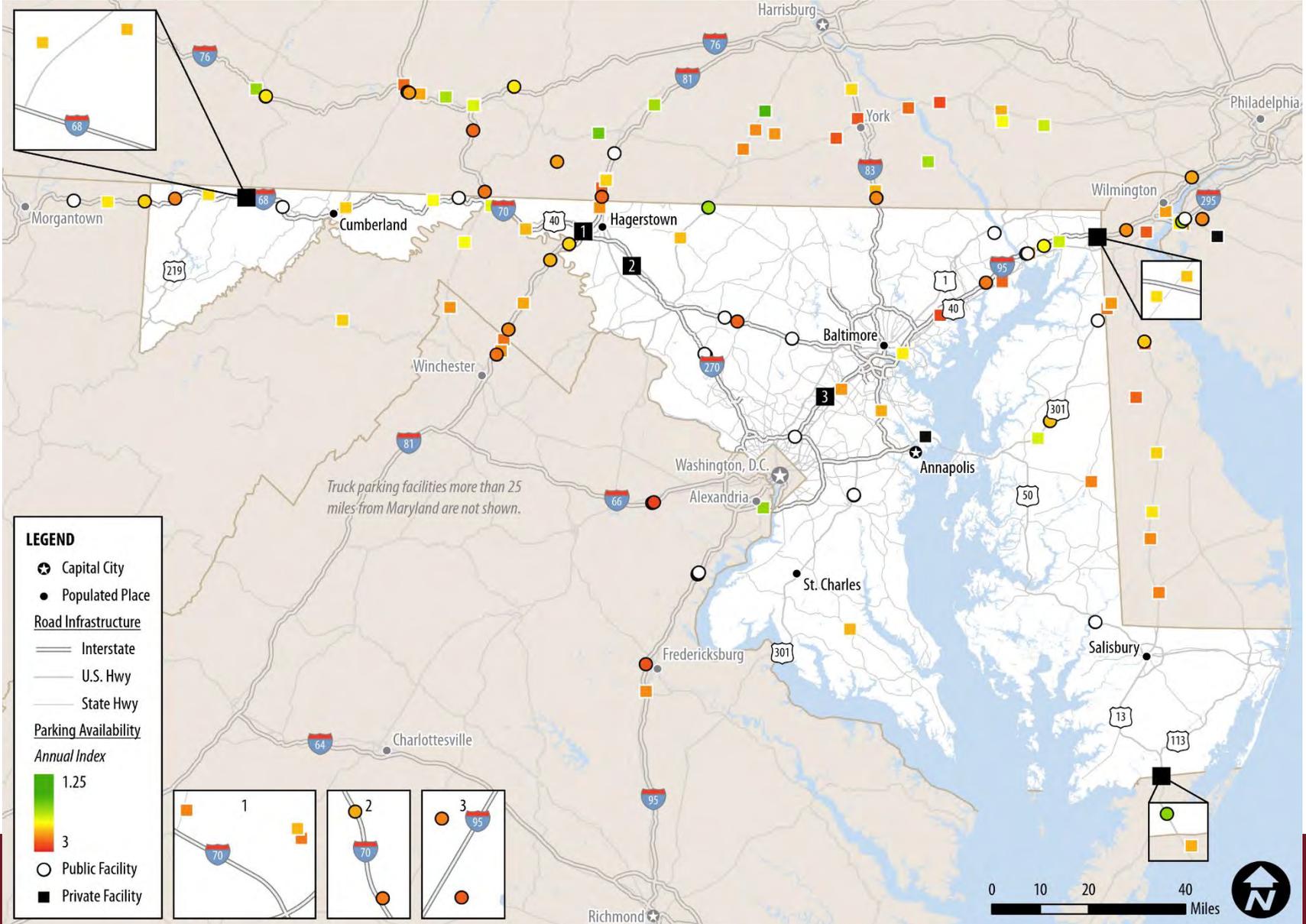


# Utilization 9am – 10am

CPCS

## Weighted Availability = 43%

9am - 10am

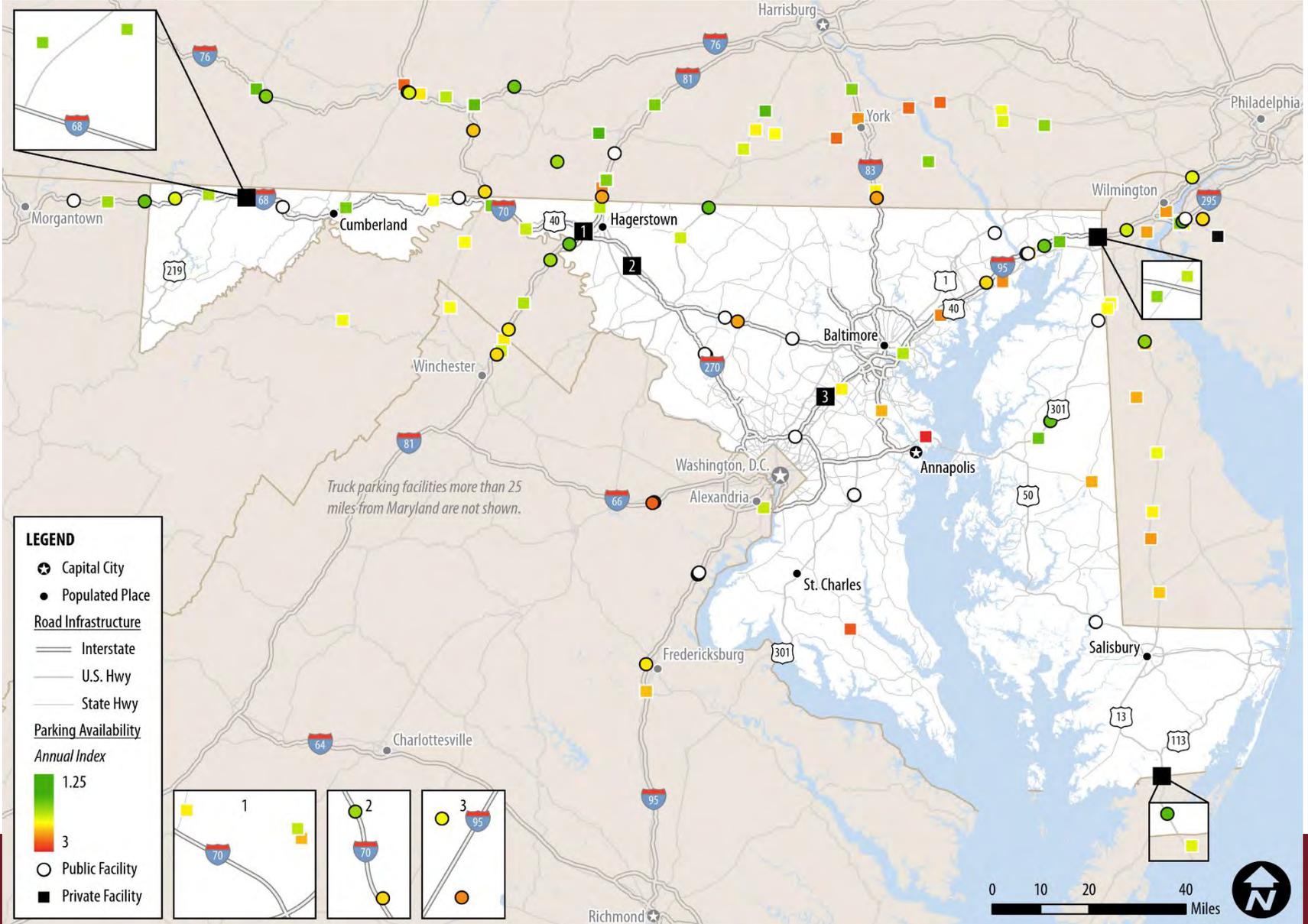


# Utilization 3pm – 4pm

CPCS

## Weighted Availability = 66%

3pm - 4pm

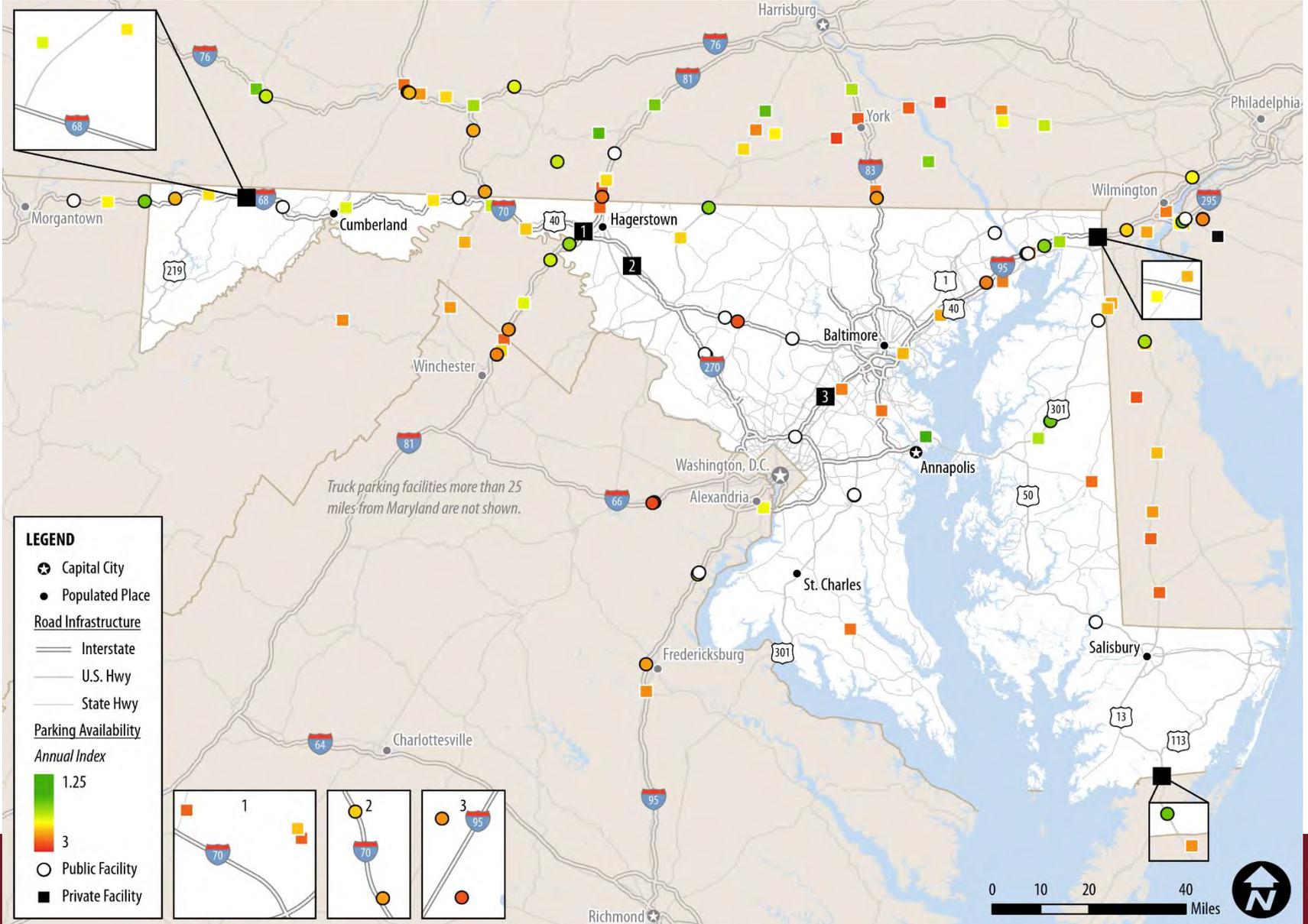


# Utilization 9pm – 10pm

CPCS

## Weighted Availability = 44%

9pm - 10pm

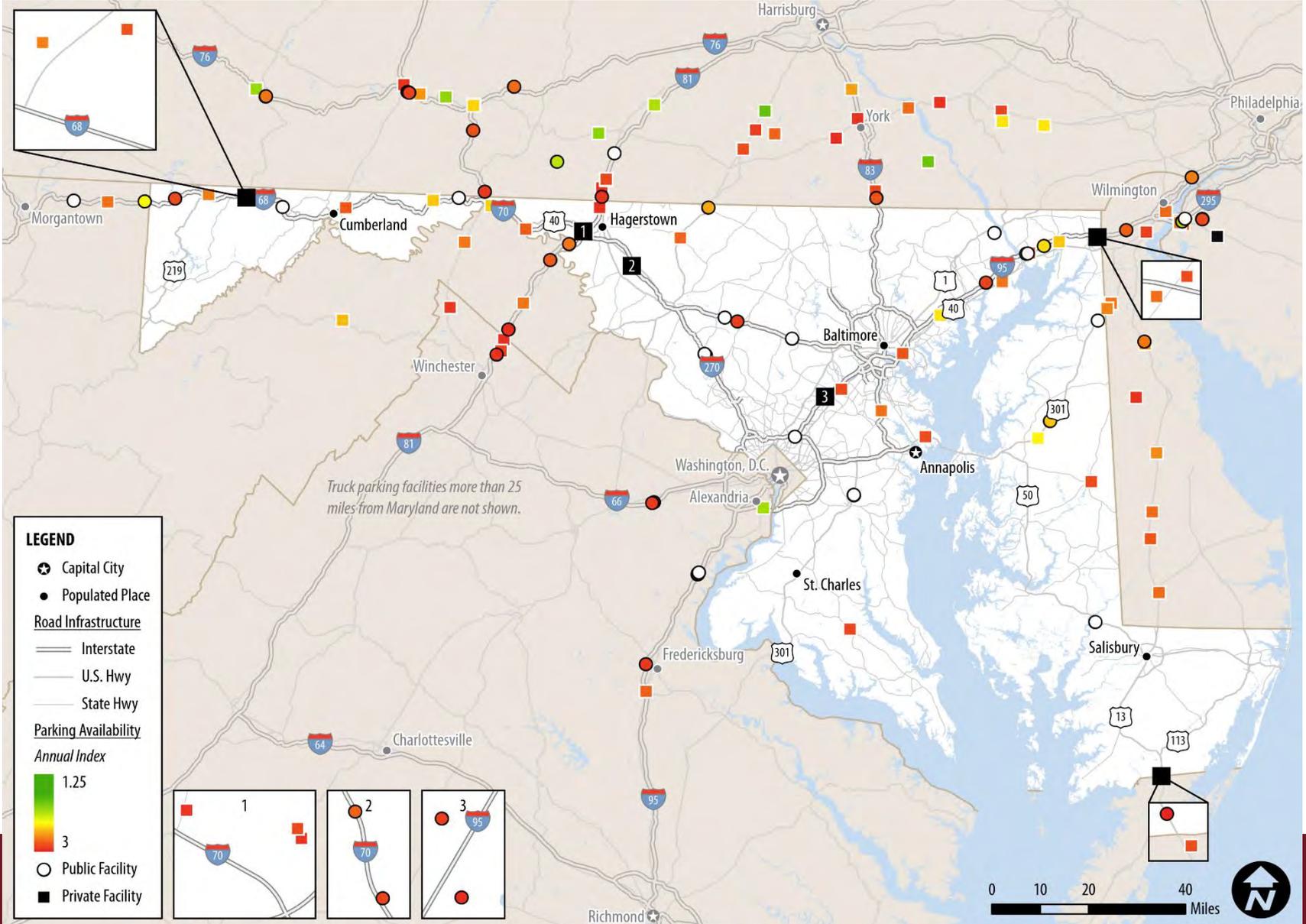


# Utilization 3am – 4am

CPCS

## Weighted Availability = 22%

3am - 4am



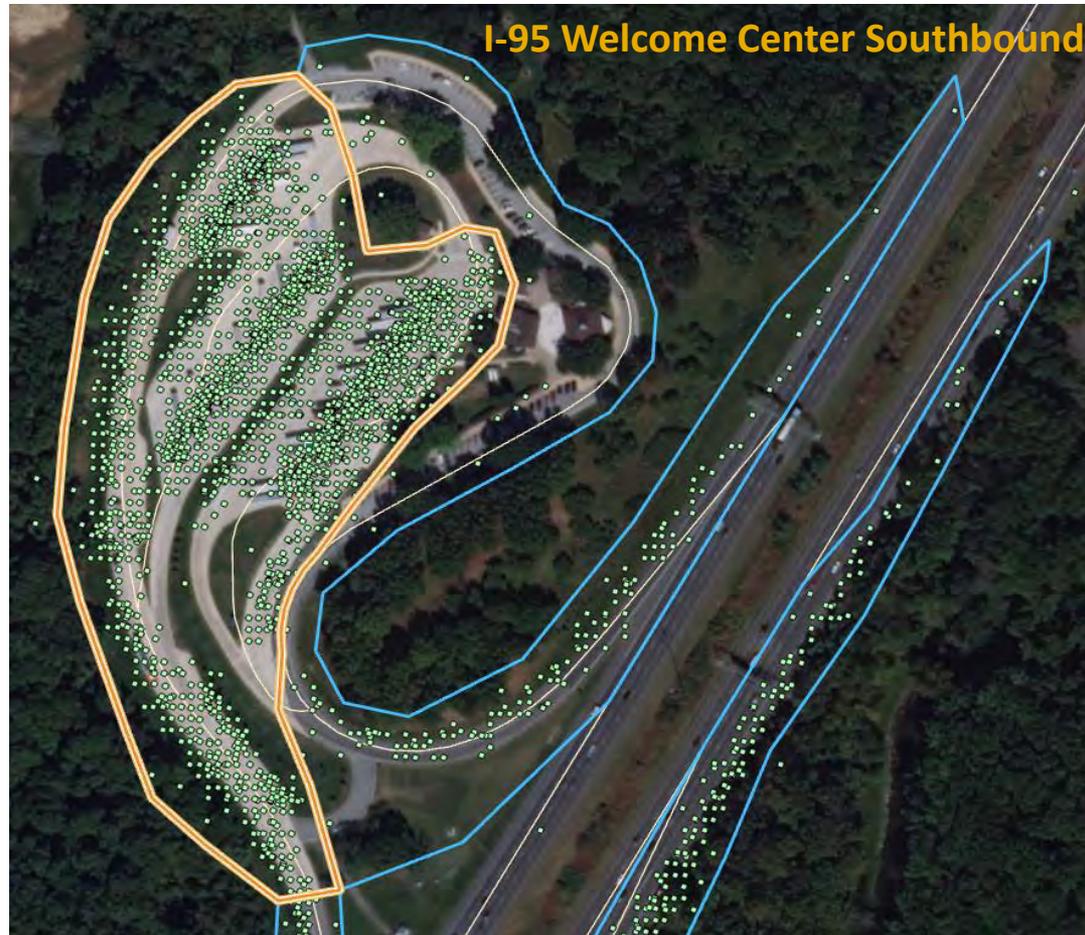
# Findings of the Trucker Path Analysis

- **Maryland has 3.8 private truck parking spaces for every public space**
- **Truck parking is most difficult to find overnight, especially in the early morning**
- **Interstates and urbanized areas have high truck parking utilization**
  - Especially I-81, I-95, and the area around Baltimore and Hagerstown
- **Public truck parking locations have higher utilization rates overnight than private truck stops**

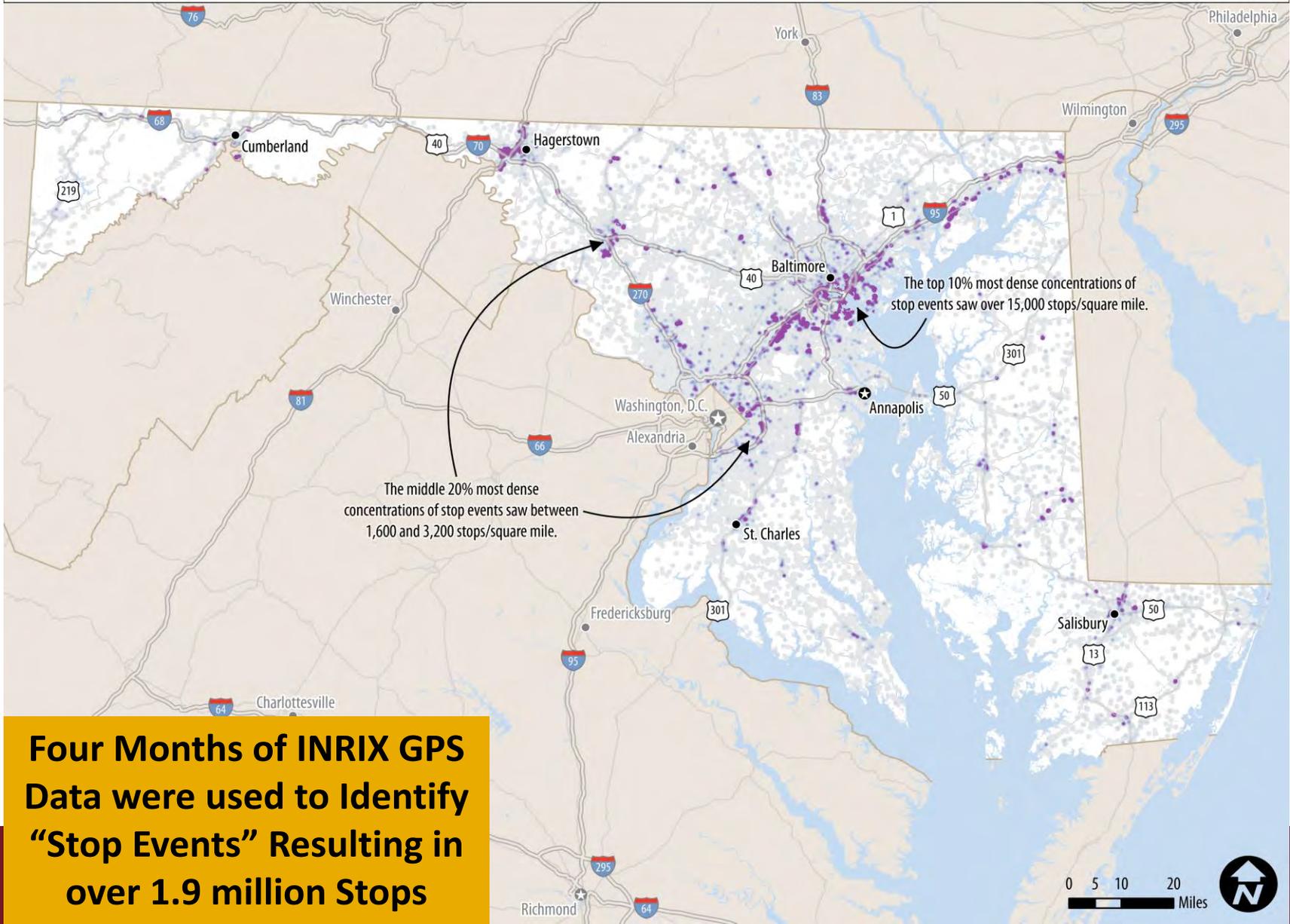
## QUESTIONS BEFORE WE MOVE ON?

# Identifying Truck Parking Issues

- Undesignated truck parking is a marker of a truck parking issue
- Truck GPS data analysis identifies where trucks stop and classifies designated and undesignated truck parking
- The project team is using undesignated truck parking and the context surrounding it to identify the cause and guide solutions

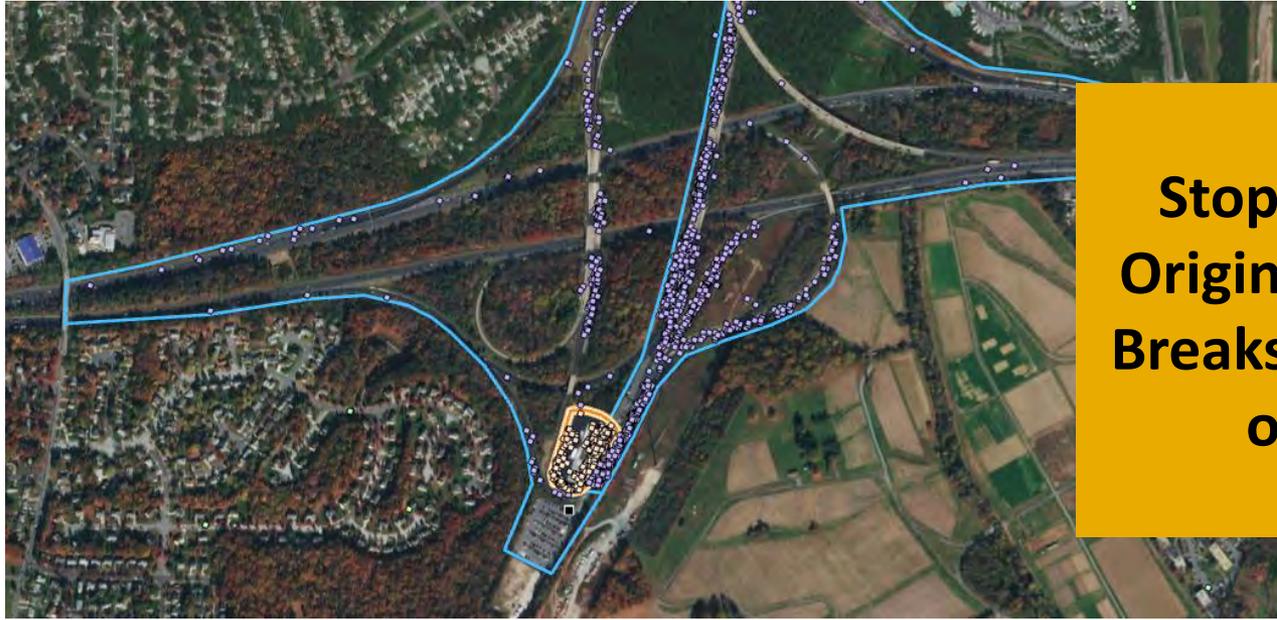


# Identifying Undesignated Truck Parking



**Four Months of INRIX GPS Data were used to Identify “Stop Events” Resulting in over 1.9 million Stops**

# Classifying Stop Events

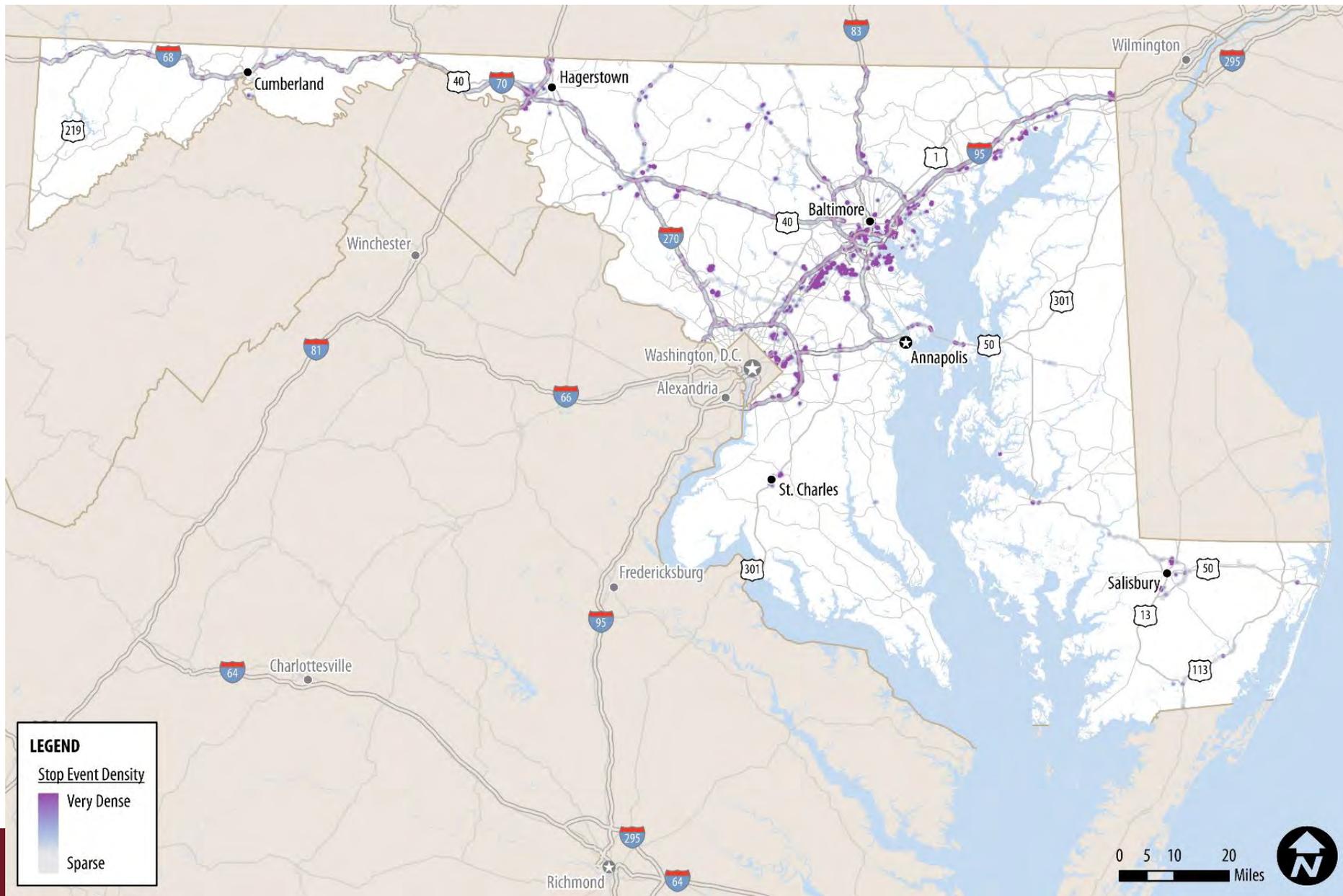


**Stop Events include the Origins, Destinations, HOS Breaks, and any other Stop over 30 minutes.**

## **Process used to Classify Stop Events:**

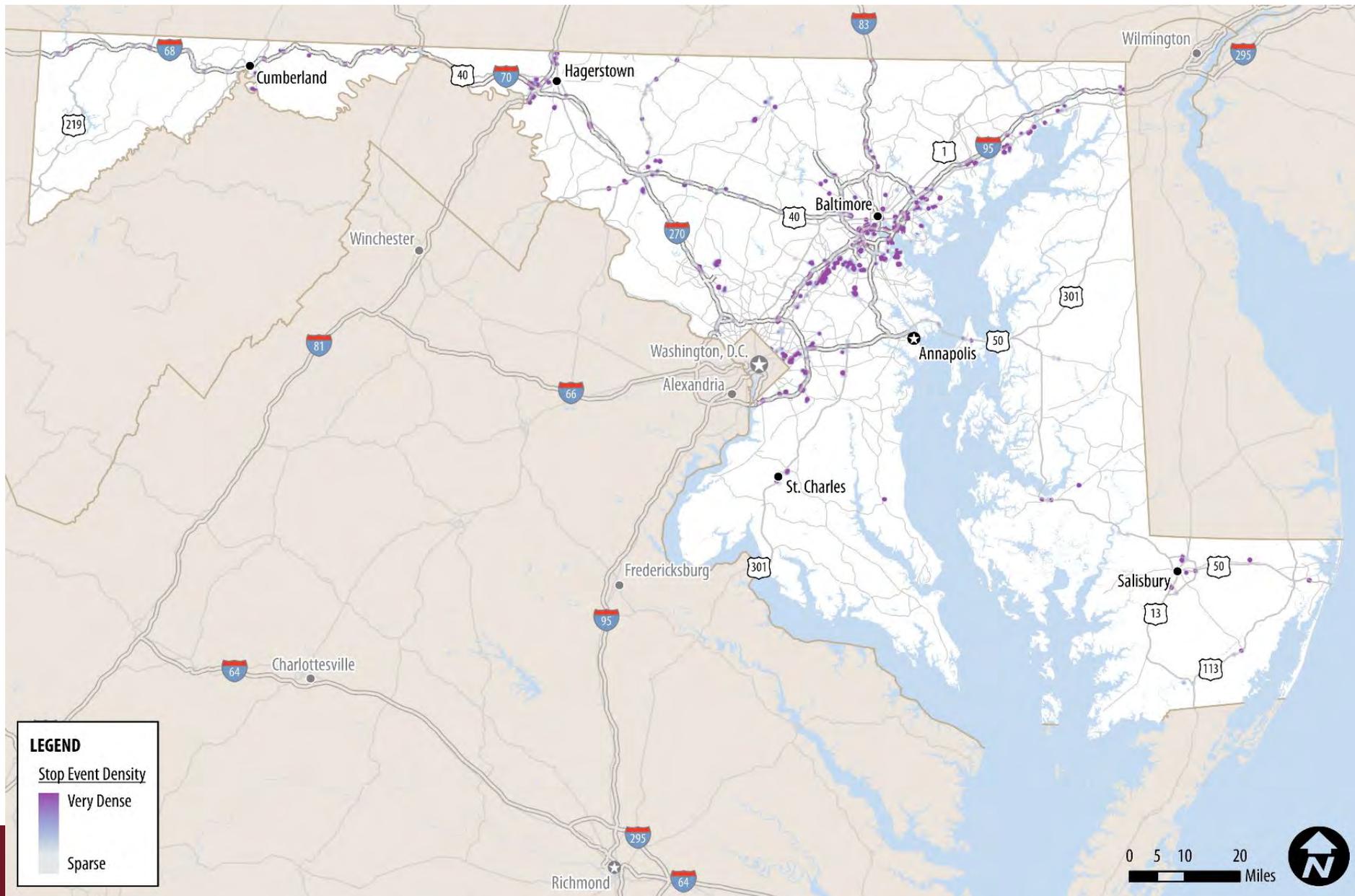
- Identify parcels associated with freight to designate trucking origins and destinations
- Classify portions in MDOT Rest Areas as designated or undesignated
- Cluster and manually classify remaining stop events

# Undesignated Truck Parking Clusters: ½ to 3 Hours Stopped





# Undesignated Truck Parking Clusters: 10+ Hours Stopped

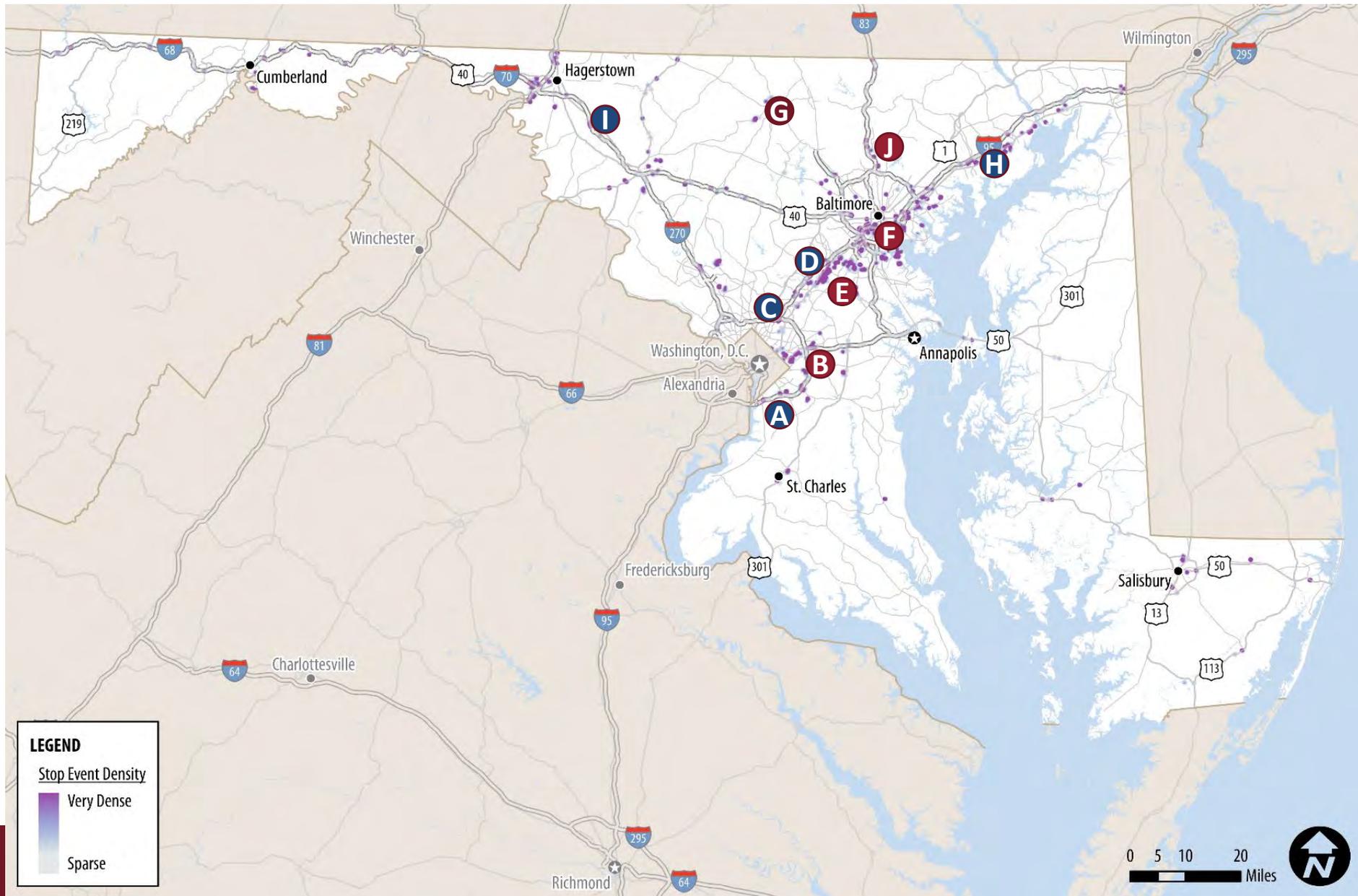


# Findings of the Analysis of Truck GPS Data

## Undesignated Truck Parking Occurs Throughout the State, but is Heaviest on Interstates and Near Urban Areas.

- On/Off Ramps are Frequently Used for Truck Parking
  - Interchanges and connectors to rest areas
- Frontage Roads and Connectors to Truck Stops, Hotels/Motels, and Warehouses are Frequently used for Truck Parking
  - The presence of “No Parking” signs vary
- Vacant Lots and “Authorized Vehicles Only” Areas are also Popular Locations of Undesignated Truck Parking

# Undesignated Truck Parking Clusters



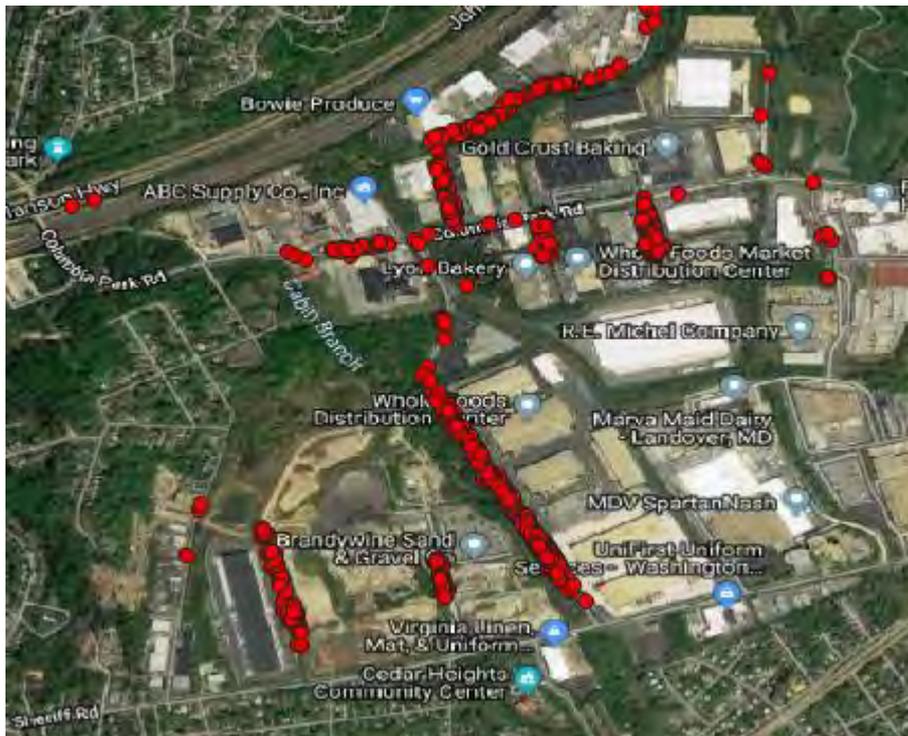
# Cluster A: I-495 Emergency

## Over 750 trucks parking at Emergency Vehicle Lot



# Cluster B: Industrial Cluster Northeast of DC

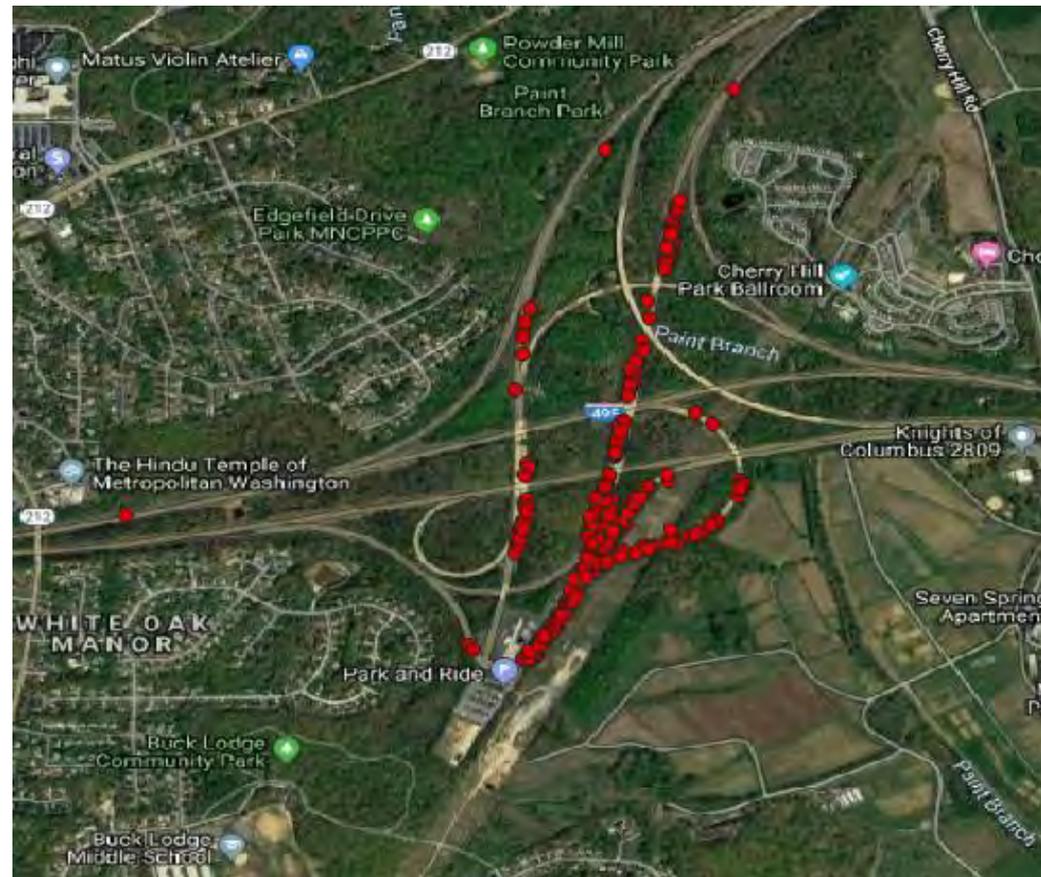
Over 1,300 trucks parked near warehousing and distribution cluster



# Cluster C - Weigh Station and Park and Ride in Adelphi, MD

About 1,500 trucks parking around the weigh station and Park and Ride

- 18 existing truck parking spaces



# Cluster D - I-95 South Welcome Center-Laurel, MD

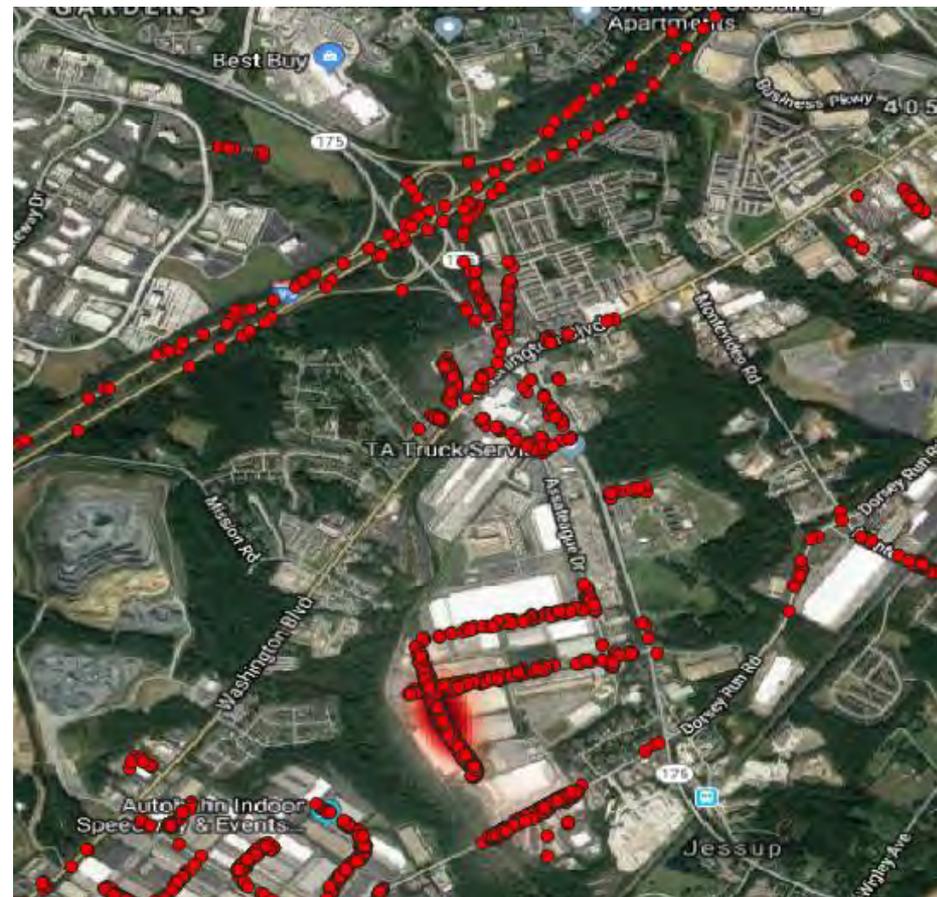
## About 3,100 trucks parking around Rest Area

- Southbound - 21 existing truck parking spaces
- Northbound - 46 existing truck parking spaces



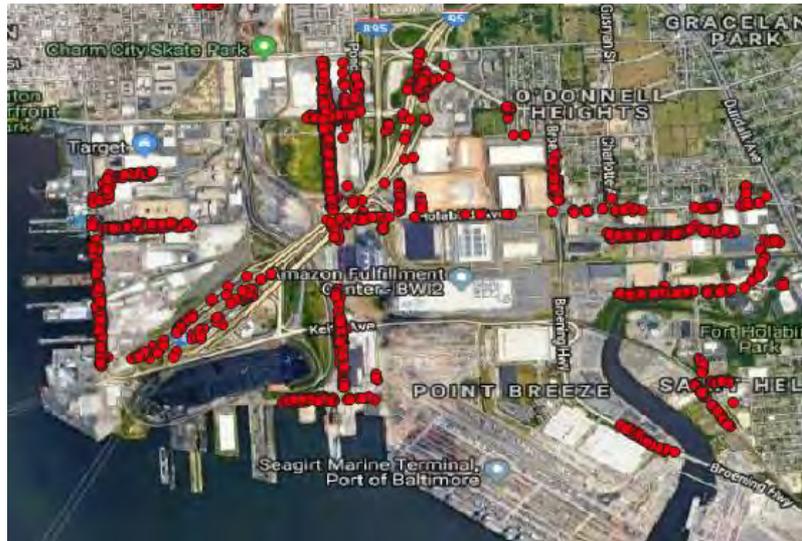
# Cluster E: Hanover/Jessup Industrial Cluster

About 3,000 trucks parked near warehousing, distribution, and logistics, and cluster



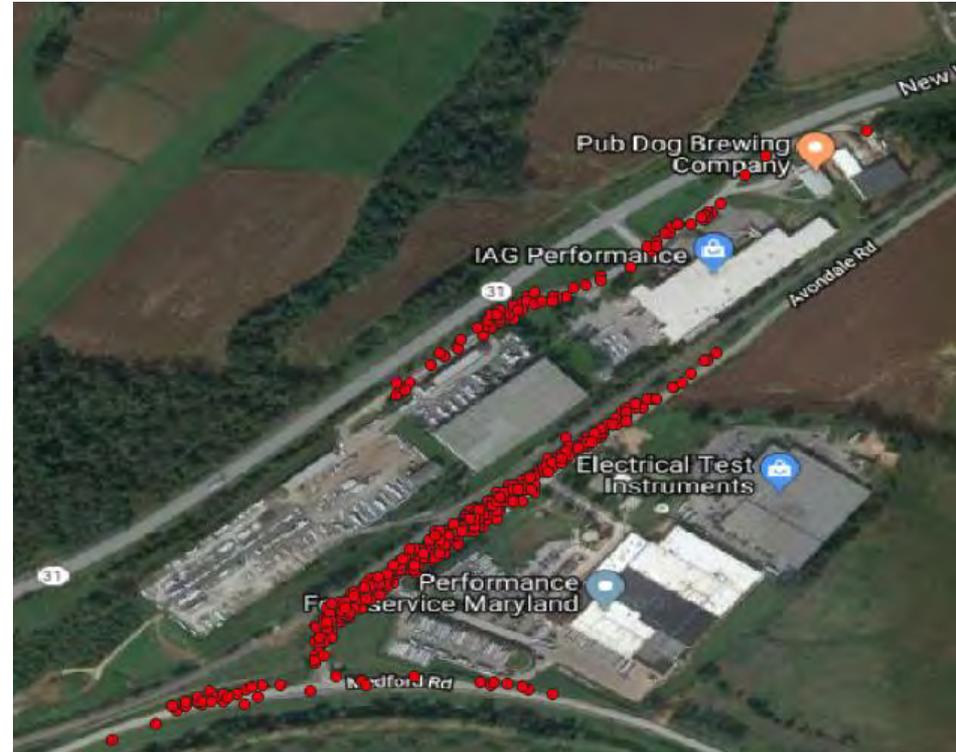
# Cluster F: Port of Baltimore Around Southeast Baltimore

Multiple clusters surrounding the Port of Baltimore and clusters of warehousing the distribution centers



# Cluster G: Avondale Road in New Windsor

About 780 trucks parked near warehousing, distribution, and logistics, and cluster



# Cluster H: Maryland House

**Almost 1,300 trucks parked around the Maryland House Truck Plaza**

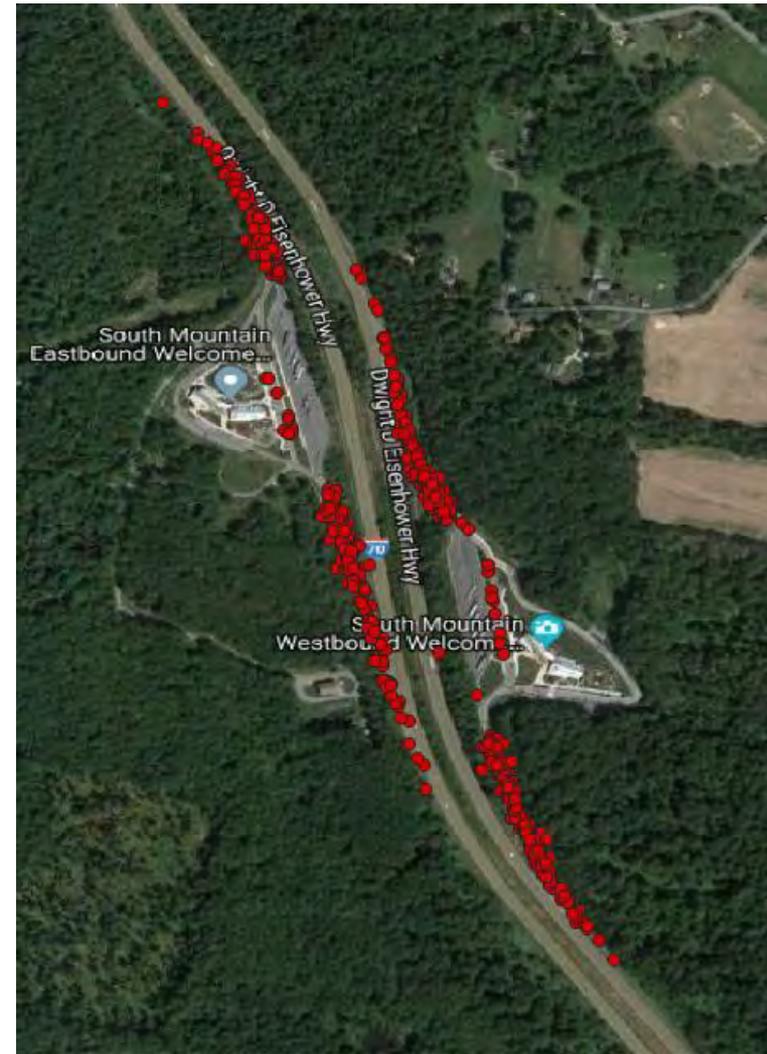
- **55 existing truck parking paces**



# Cluster I: South Mountain Welcome Center – I-70

**Over 1,600 trucks parked around the South Mountain Welcome Center**

- **Eastbound: 26 existing truck parking paces**
- **Westbound: 23 existing truck parking paces**





# Pause for Mentimeter Input & Discussion

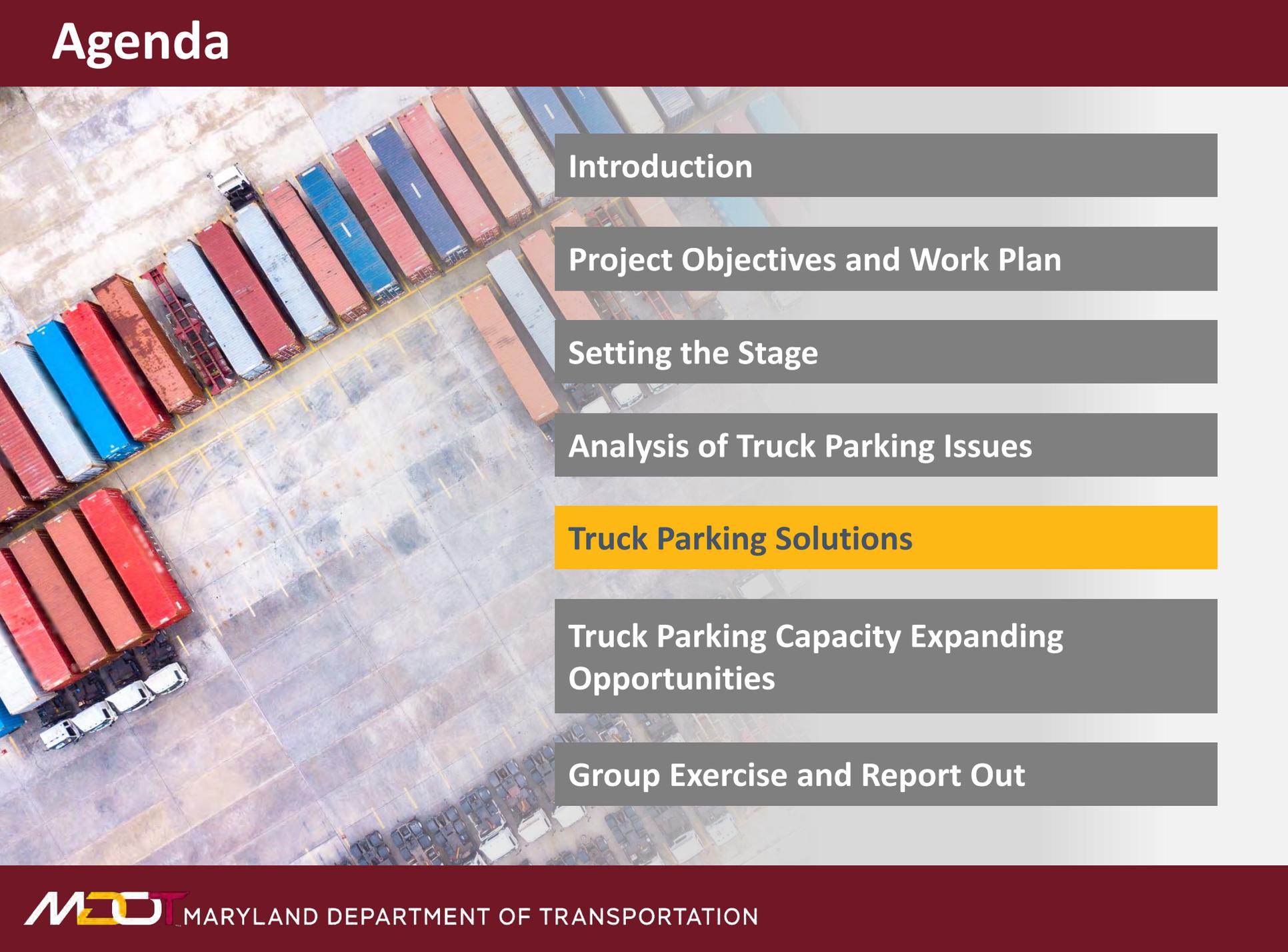
**Rank your top three truck parking issues identified by the project:**

- **Safety**
- **Capacity**
- **Cost of Expansion**
- **Enforcement**
- **Geometric Design**

Go to **www.menti.com** and use the code

**Have we missed any of the top truck parking issues in Maryland?**

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**Truck Parking Solutions**

Truck Parking Capacity Expanding Opportunities

Group Exercise and Report Out

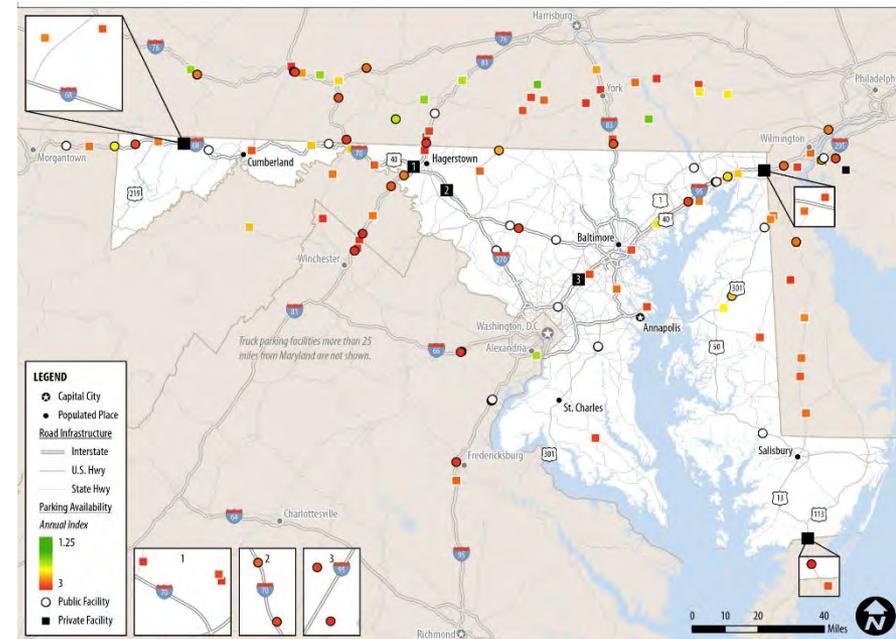
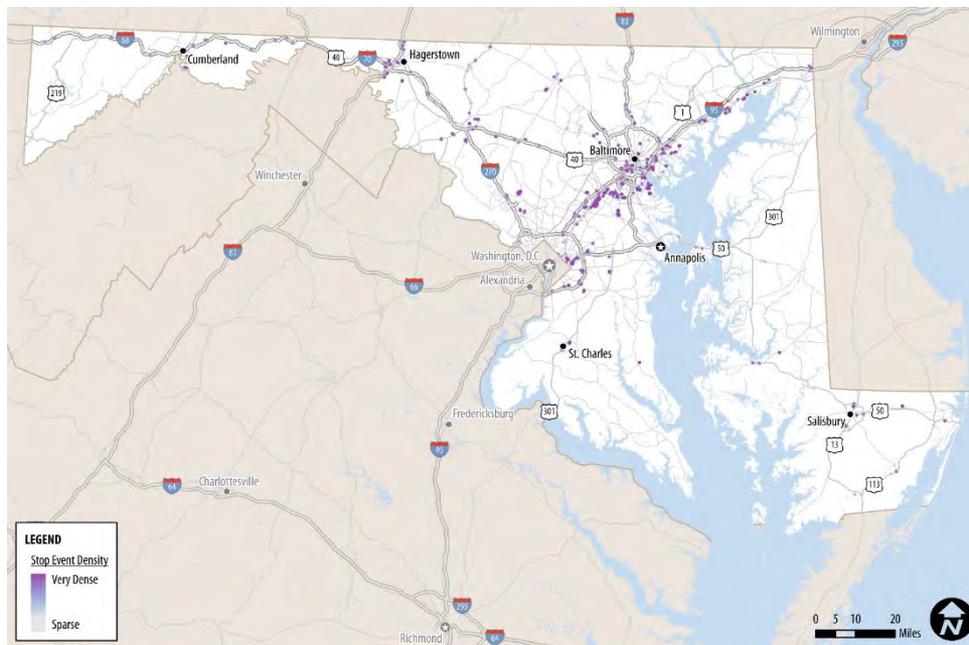
# Match Truck Parking Issues to Solutions and Identify Opportunities

## Capacity Solutions

- Undesignated Truck Parking
- Nearby truck parking is full

## Information Solutions

- Undesignated truck parking
- Open truck parking spaces nearby



# Pause for Mentimeter Input & Discussion

**In your opinion, are Maryland's truck parking issues due to a lack of truck parking spaces (capacity) or information about truck parking availability (information)?**

Go to **www.menti.com** and use the code

# Match Truck Parking Issues to Solutions and Identify Opportunities

## Information Problems

Where are parking locations?

What are parking amenities?

Are spaces available?

## Information Solutions

Stand – Alone Solutions

IT Information System Required

Maps

Fixed Signs

Websites and Apps

Variable Signs



Lower Cost  
Less Complex  
Short-Term Implementation

Long-Term Implementation  
More Complex  
Higher Cost

# Match Truck Parking Issues to Solutions and Identify Opportunities

## Capacity Problems

How do we provide additional parking?

## Capacity Solutions

Collaboration Required

Stand-Alone Solutions

P3s

Adapting Existing

Re-Opening Areas

Building New Areas



Lower Cost  
Uncertain Complexity

Higher Cost  
More Complex

# Translating Undesignated Truck Parking to Solutions

## Add Context to Undesignated Truck Parking Locations and Focus on those that are Most Acute



# Pause for Mentimeter Input & Discussion

Have we missed any truck parking solutions or actions that MDOT or its partners could undertake to improve truck parking?

Go to **www.menti.com** and use the code

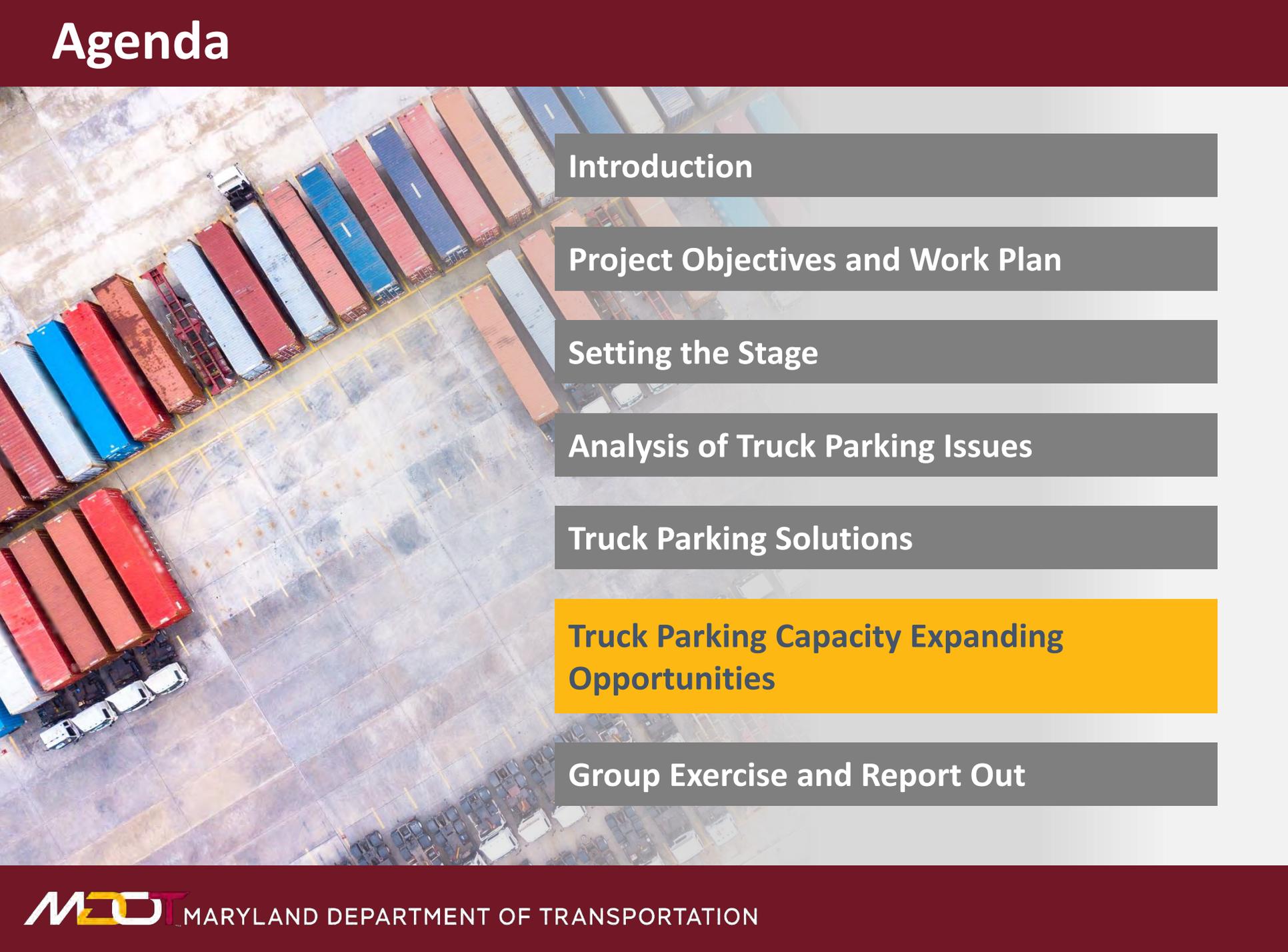
# Pause for Mentimeter Input & Discussion

**In your opinion what type of solution would yield the greatest improvement to truck parking?**

- **Capacity – Adding truck parking spaces or improving existing spaces**
- **Information – Providing information about the availability of truck parking to drivers**
- **Policy – Institutional or regulatory changes to improve truck parking**
- **Partnership – Partnership with another public or private organization to provide additional truck parking capacity or information**

Go to **www.menti.com** and use the code

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**Truck Parking Capacity Expanding Opportunities**

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# Truck Parking Opportunity Survey



## Westfield Shopping Mall

**Highway:** US 50

**Location:** Annapolis

**Opportunity:** potential for providing overnight truck parking spaces and amenities

# Truck Parking Opportunity Survey



## Park & Ride

**Highway:** I-95 and I-495

**Location:** Adelphi

**Opportunity:** potential for providing overnight truck parking spaces

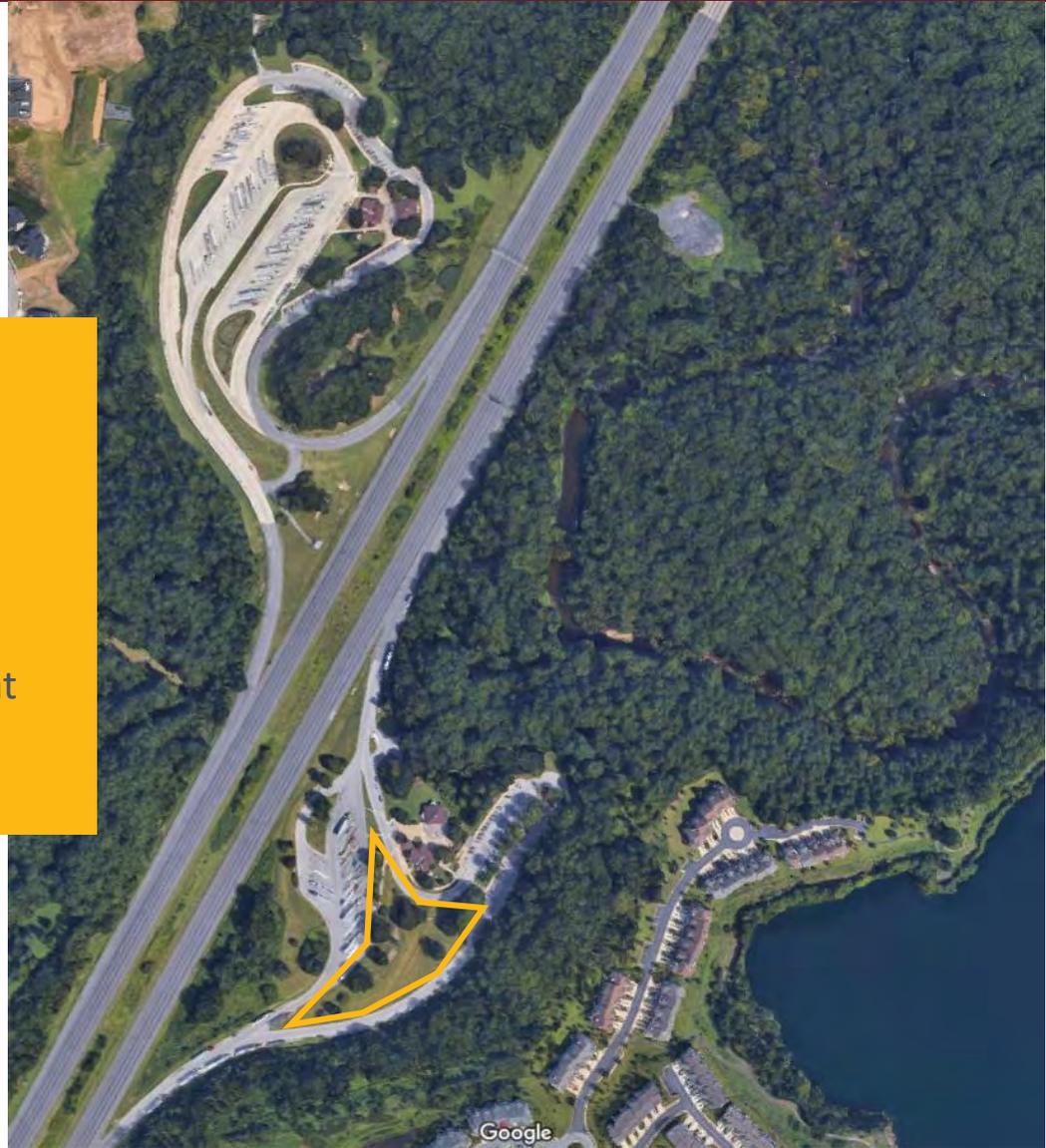
# Truck Parking Opportunity Survey-Challenge

## I-95 Welcome Center

**Highway:** I-95, both directions

**Location:** Savage

**Opportunity:** existing truck parking facility with potential for expansion at the northbound welcome center



# Truck Parking Opportunity Survey

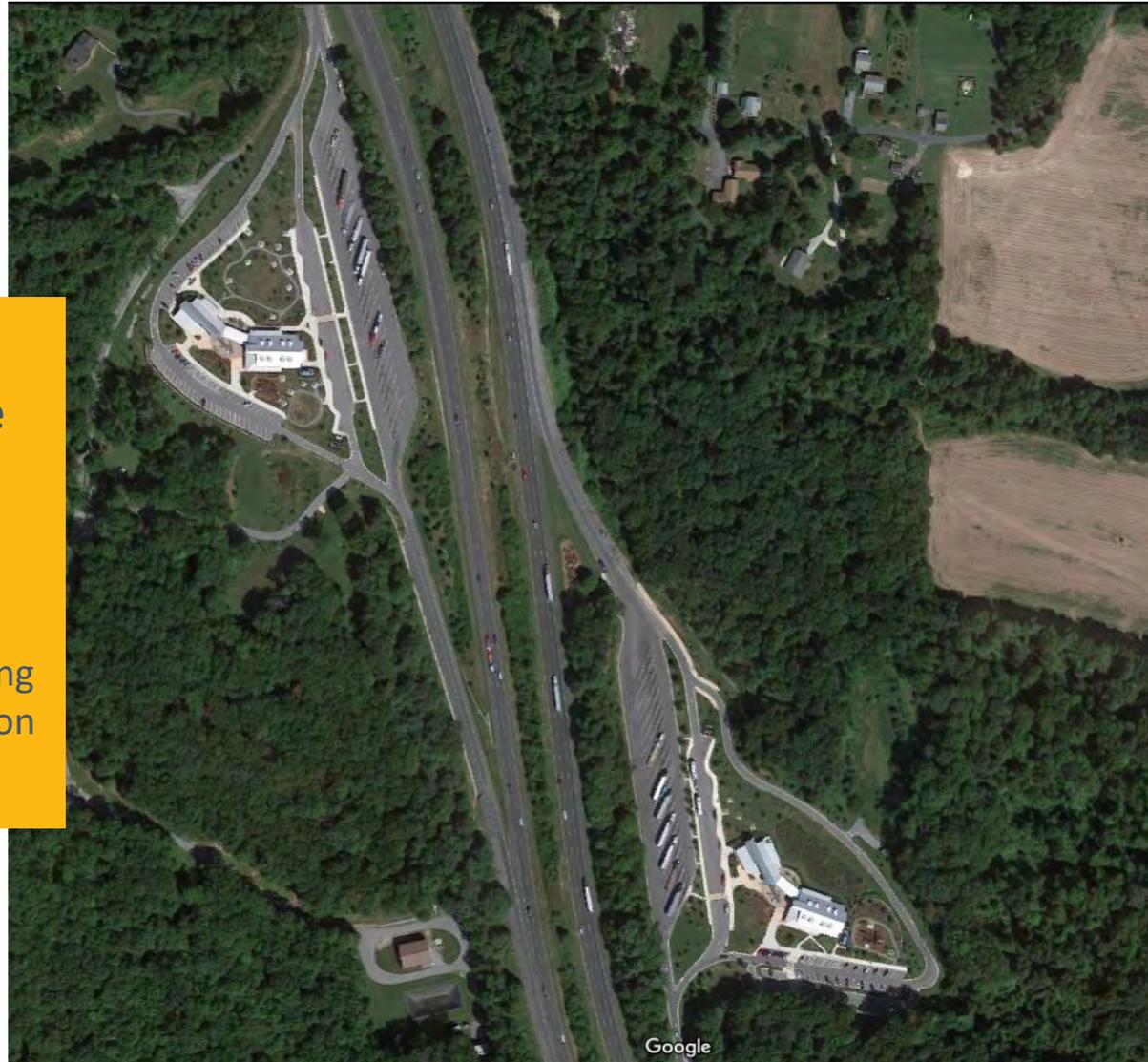
## South Mountain Welcome Centers on I-70

### South Mountain Welcome Center

**Highway:** I-70, both directions

**Location:** Myersville

**Opportunity:** existing truck parking facility with potential for expansion



# Truck Parking Opportunity Survey

## Paved Lot

**Highway:** I-495 and MD Route 210

**Location:** Forest Heights

**Opportunity:** potential for providing overnight truck parking spaces



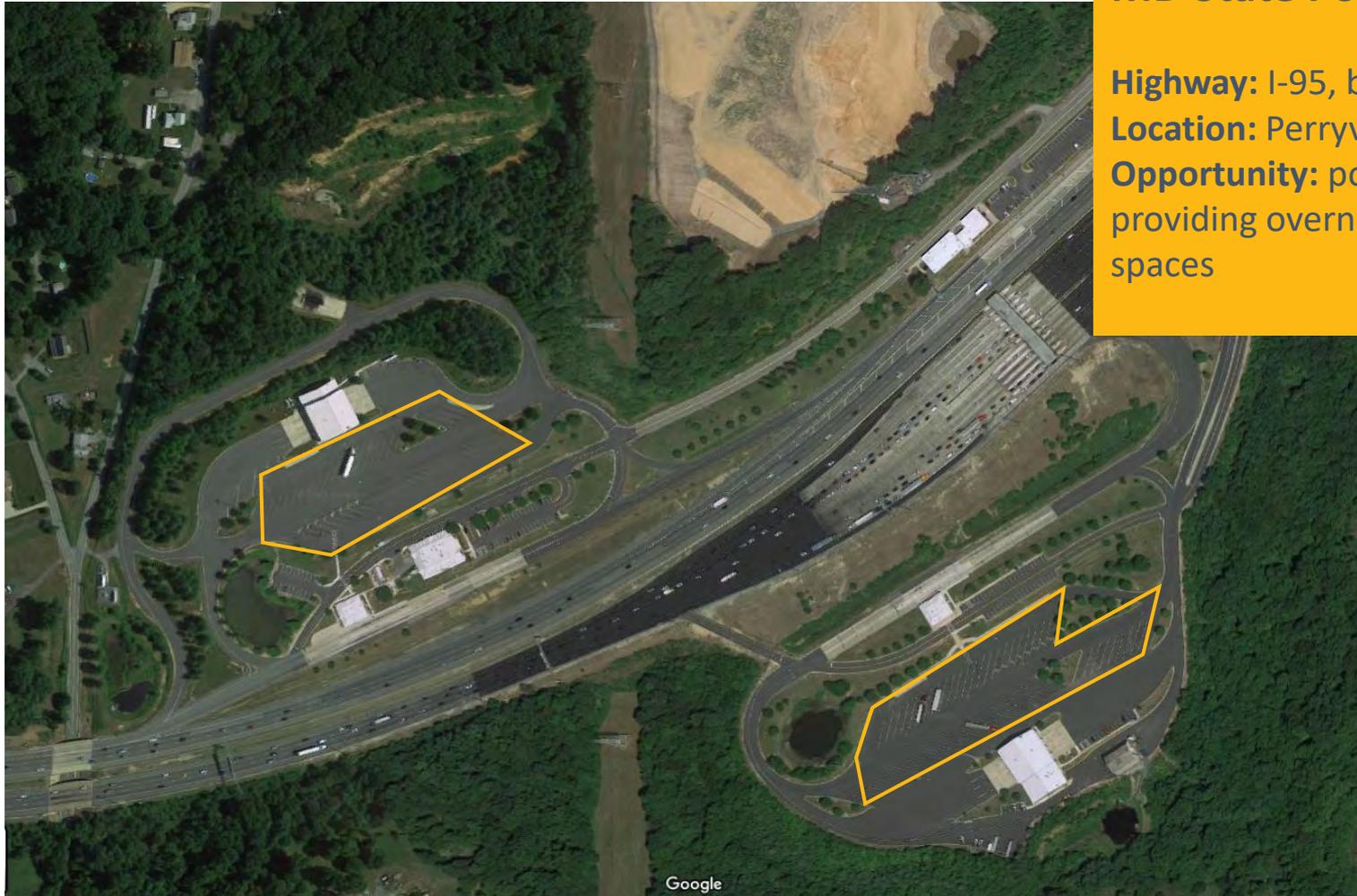
# Truck Parking Opportunity Survey

## MD State Police Office

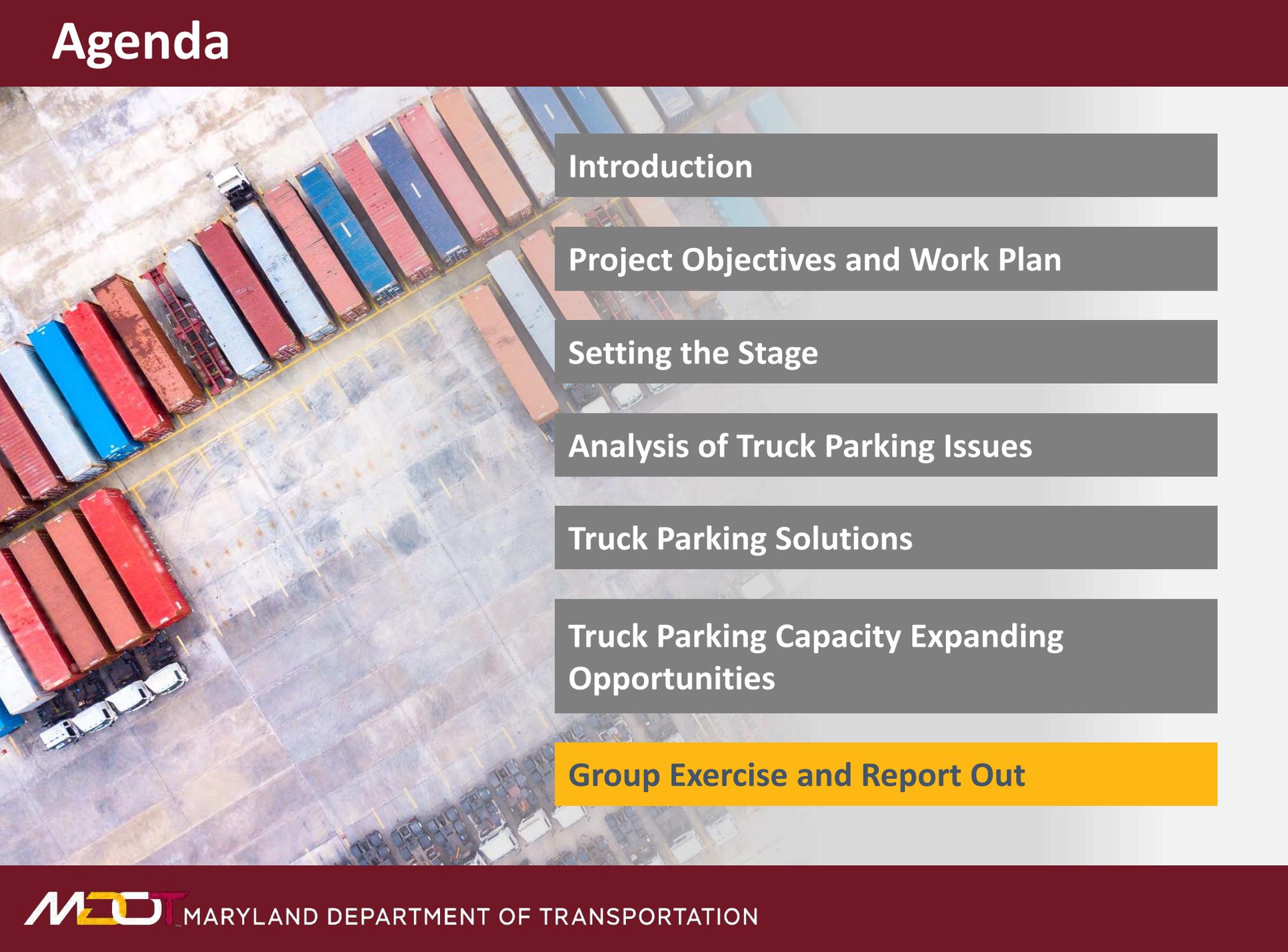
**Highway:** I-95, both directions

**Location:** Perryville

**Opportunity:** potential for providing overnight truck parking spaces



# Agenda

An aerial photograph of a large truck parking lot. The lot is filled with numerous semi-trailers in various colors, including red, blue, orange, and white. Several white trucks are parked at the bottom left. The ground is paved and marked with yellow lines. The background shows some greenery and other structures.

**Introduction**

**Project Objectives and Work Plan**

**Setting the Stage**

**Analysis of Truck Parking Issues**

**Truck Parking Solutions**

**Truck Parking Capacity Expanding  
Opportunities**

**Group Exercise and Report Out**

# Discussion of Truck Parking Opportunities

**Discuss the opportunities related to each solution type starting with Rank 1 from the last Mentimeter Question.**

**Specific variables about each opportunity to collect:**

- Are there specific opportunities or actions related to this solution?
- Where is the opportunity located (try to tie to top issues in Maryland)?
- What is the role of the public and private sector?
- What are the barriers to implementation and how might they be overcome?

**In conclusion:**

**What are the top three opportunities discussed today?**

## Each Group Shares:

- The top three opportunities or action items identified by the group
- The role of public and private sector in these actions
- Barriers to implementing specific action items and proposed solutions

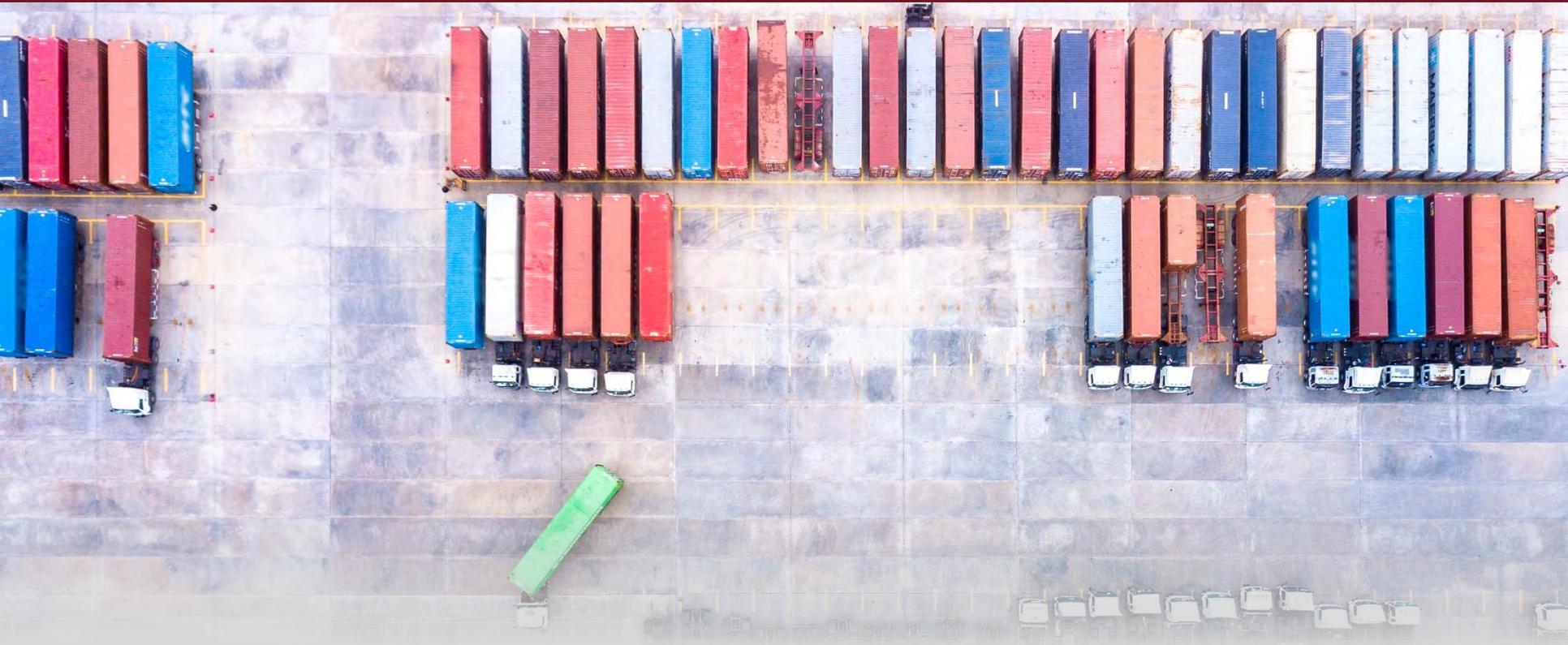


# Pause for Mentimeter Input & Discussion

**In your opinion what are the top opportunities identified today?**

Go to **www.menti.com** and use the code

# Questions or Comments?



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