



DVRPC  
**Critical Urban & Rural  
Freight Corridors**

April 12, 2017

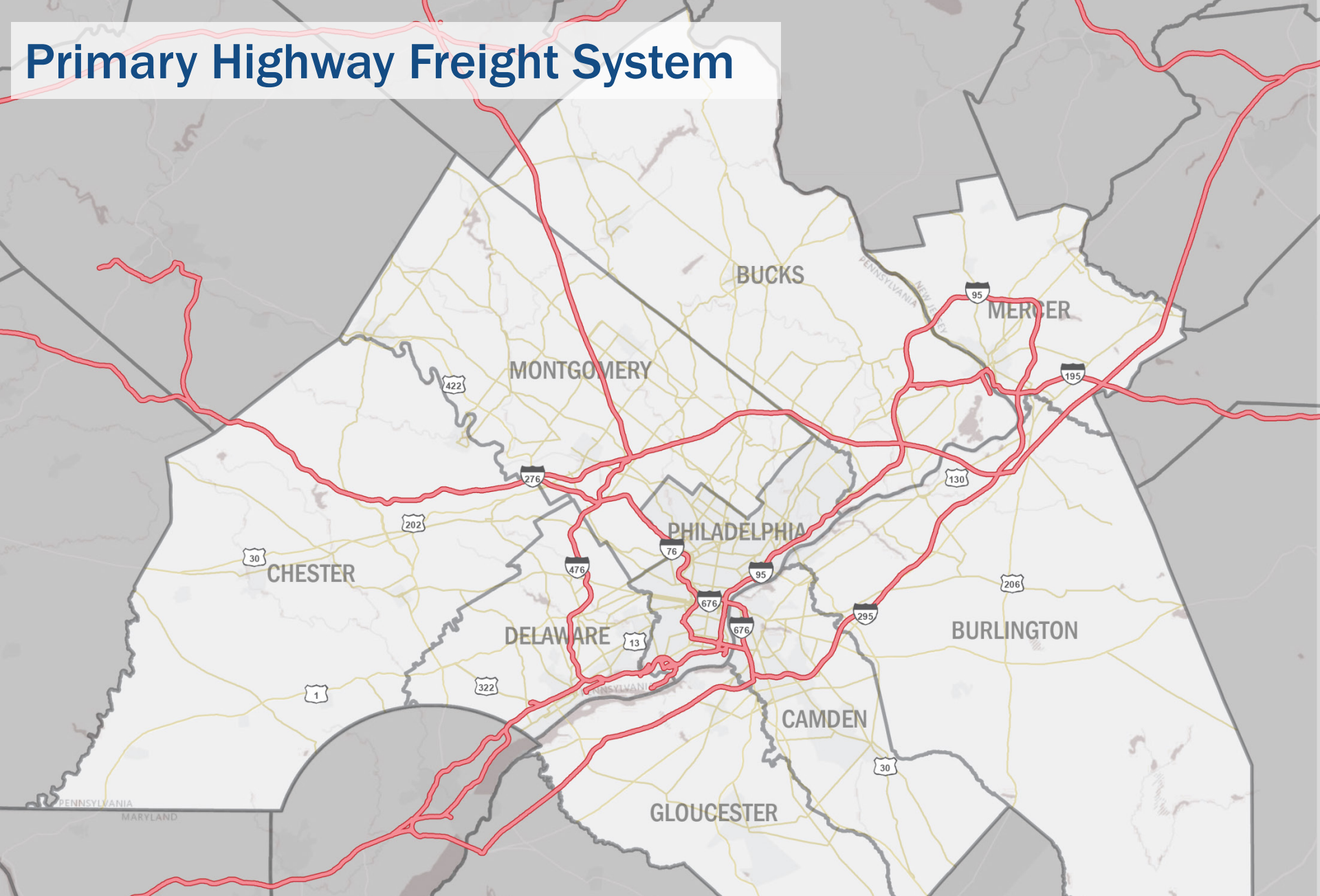
DVRPC Goods Movement Task Force

# What are Critical Urban and Rural Freight Corridors?

- MPO & State DOT designated routes critical to freight movement that extend the Primary Highway Freight System established under the FAST Act
- Eligible for freight funding through the Primary Highway Freight Program

	Urban Miles	Rural Miles
Pennsylvania	141.25	282.53
New Jersey	75	150

# Primary Highway Freight System



# Evaluation of Critical Urban Freight Corridors

- connects an intermodal facility to:
  1. the PHFS;
  2. the Interstate System; or
  3. an intermodal freight facility;
- is located within a corridor of a route on the PHFS and provides an alternative highway option important to goods movement;
- serves a major freight generator, logistic center, or manufacturing and warehouse industrial land; or
- is important to the movement of freight within the region, as determined by the MPO or the State.

# Evaluation of Critical Rural Freight Corridors

- is a rural principal arterial roadway and has a minimum of 25 percent of the annual average daily traffic of the road measured in passenger vehicle equivalent units from trucks (Federal Highway Administration vehicle class 8 to 13);
- provides access to energy exploration, development, installation, or production areas;
- connects the PHFS or the Interstate System to facilities that handle more than:
  1. 50,000 20-foot equivalent units per year; or
  2. 500,000 tons per year of bulk commodities;
- provides access to:
  1. a grain elevator;
  2. an agricultural facility;
  3. a mining facility;
  4. a forestry facility; or
  5. an intermodal facility;
- connects to an international port of entry;
- provides access to significant air, rail, water, or other freight facilities in the State; or
- is determined by the State to be vital to improving the efficient movement of freight of importance to the economy of the State.

# Evaluation of Critical Freight Corridors

## Evaluation criteria

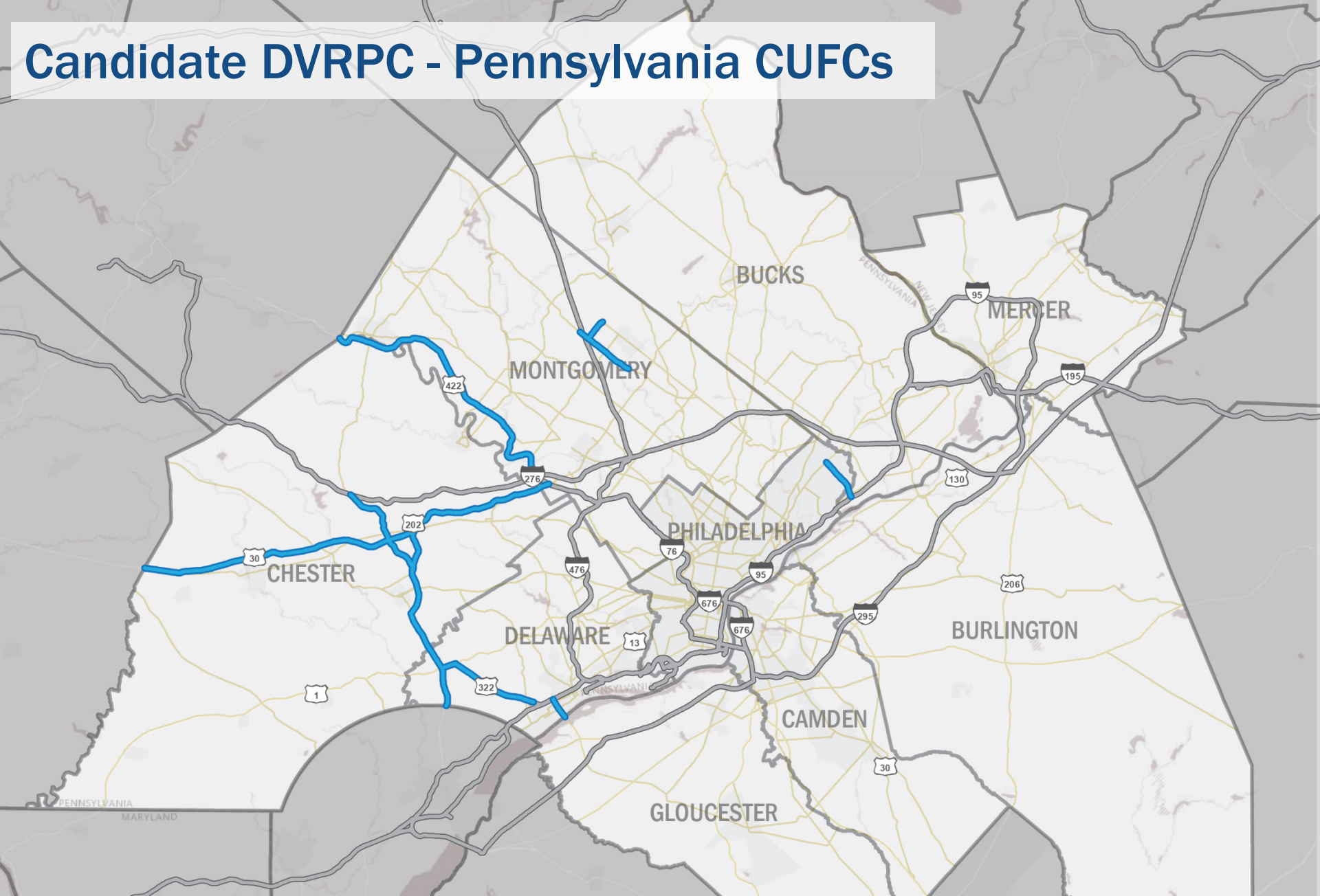
- Freight centers served
  - Employment
  - Industrial square footage
- Corridor designation by neighbor
- Corridor type
- Intermodal service
- Truck activity based on classification counts

# Evaluation of Critical Freight Corridors

## Our Process

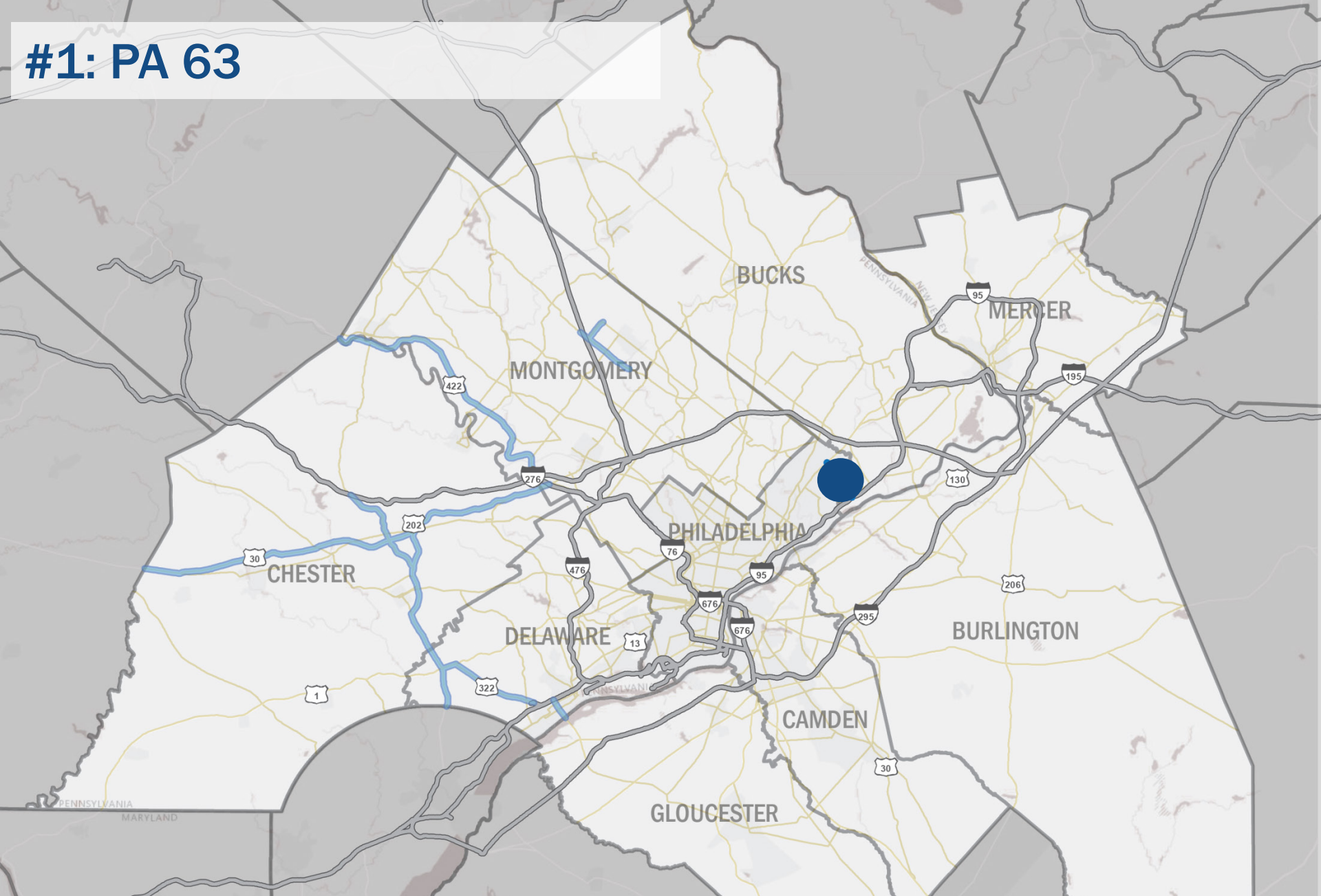
- Evaluation based on technical criteria
- Feedback from Goods Movement Task Force and planning partners through PhillyFreightFinder
- Refinement of designation criteria and corridors

# Candidate DVRPC - Pennsylvania CUFCs

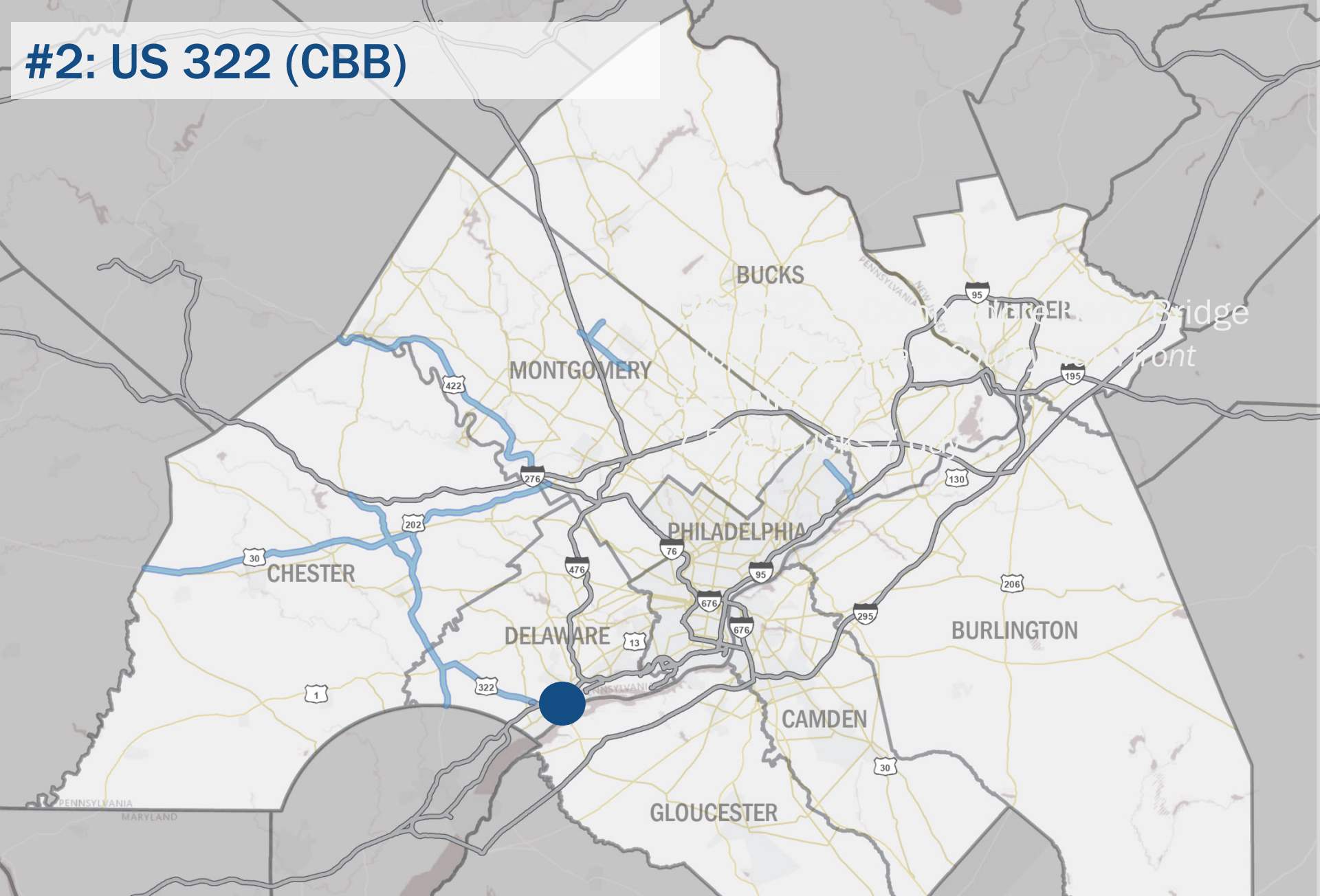




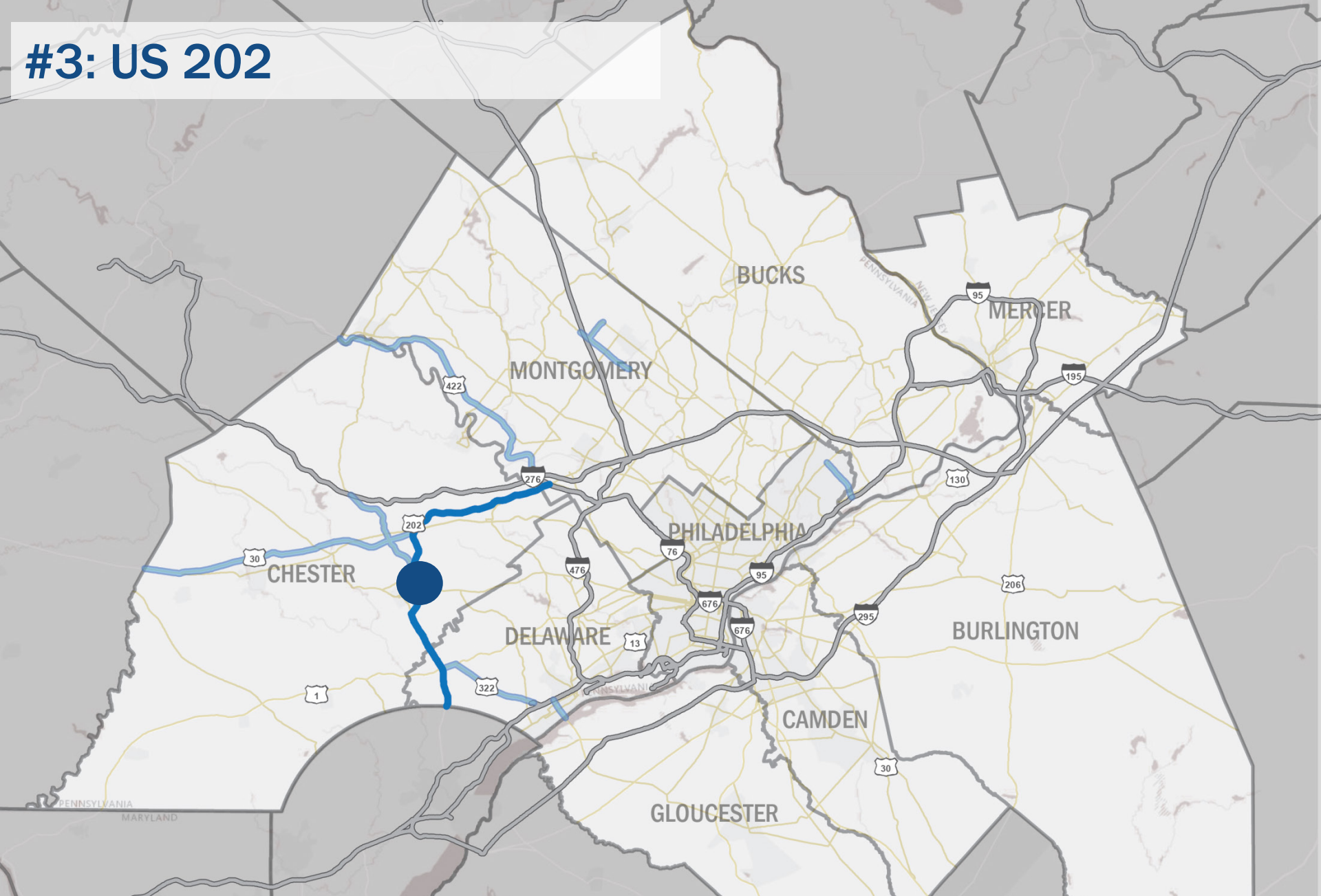
# #1: PA 63



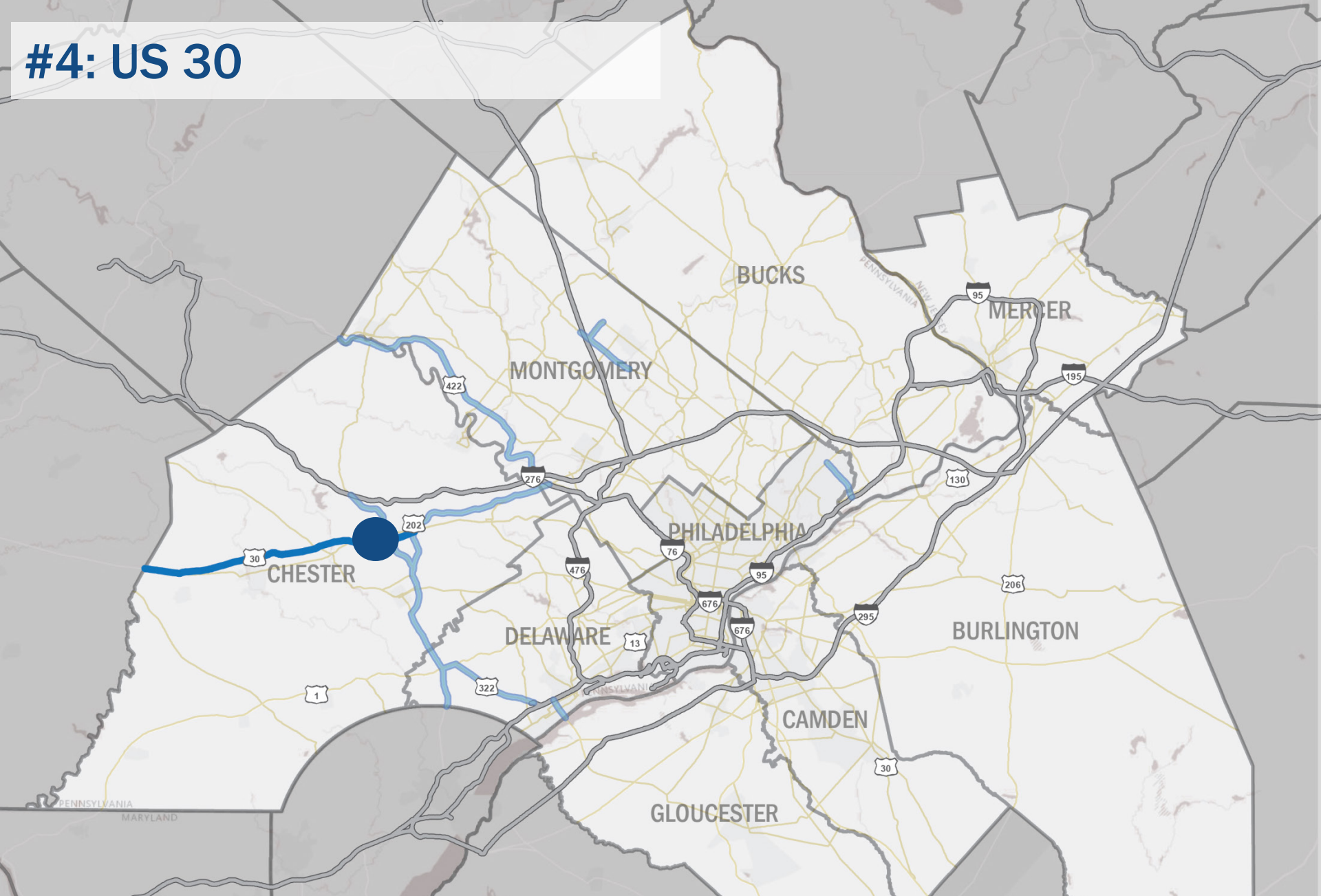
# #2: US 322 (CBB)



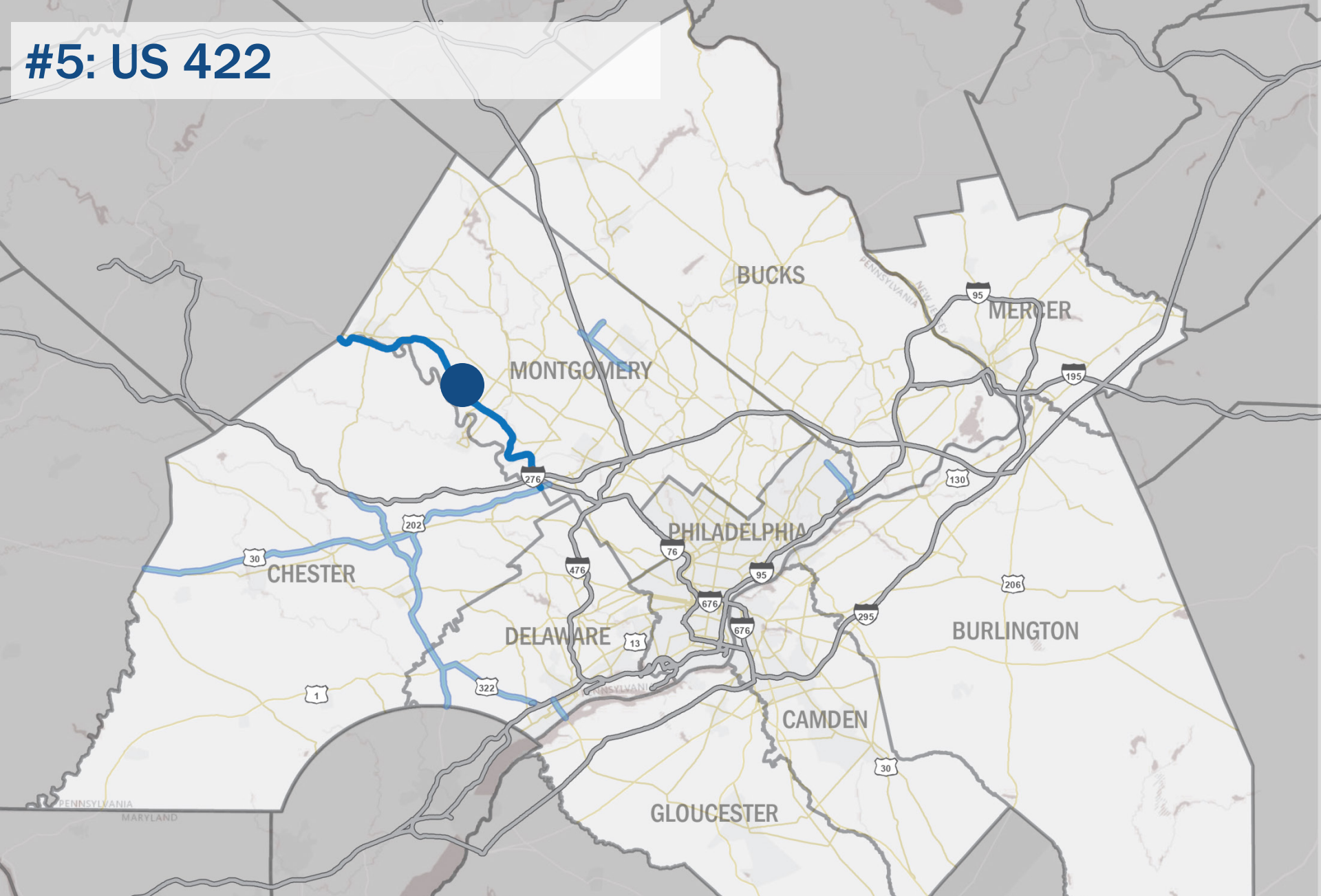
# #3: US 202



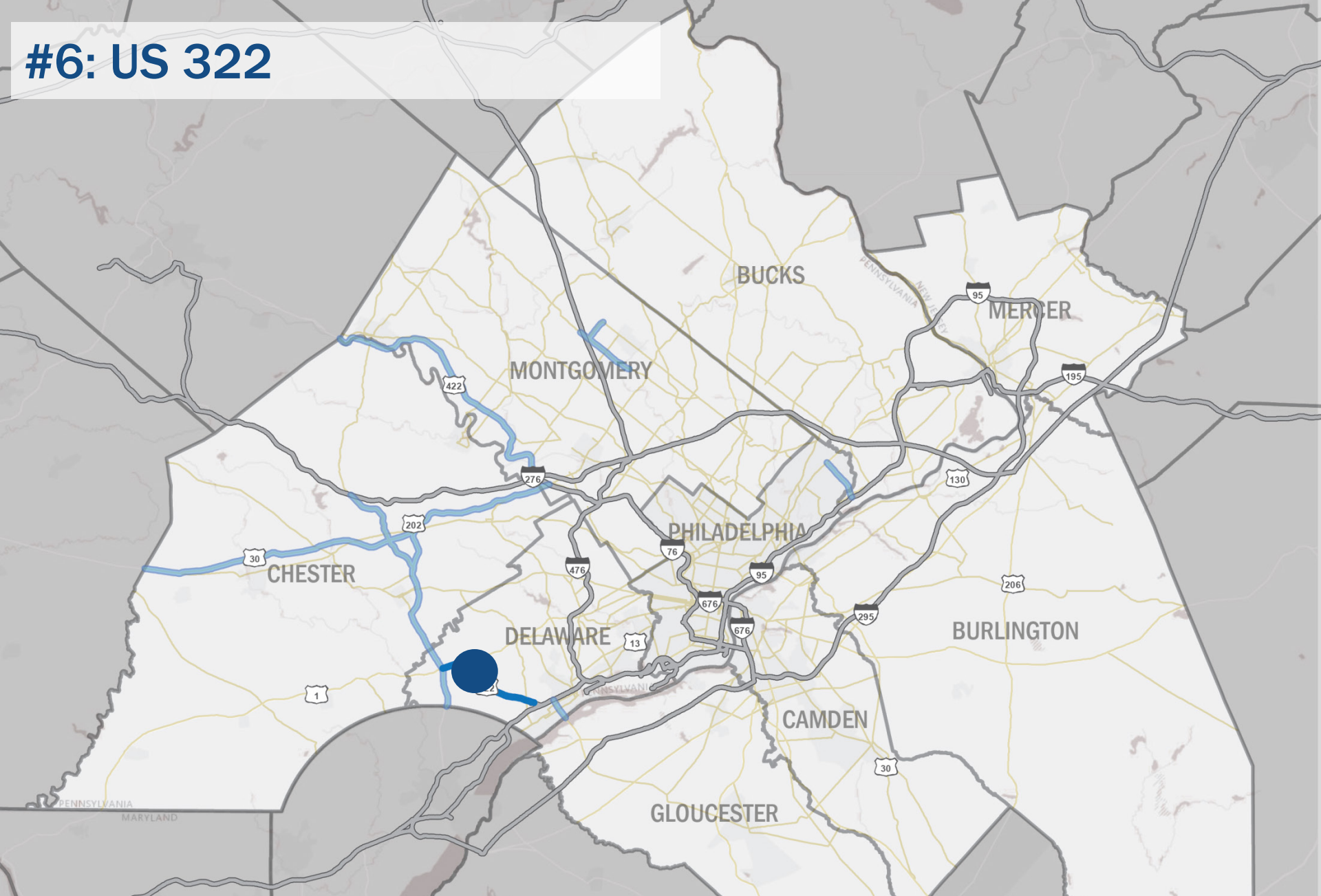
# #4: US 30



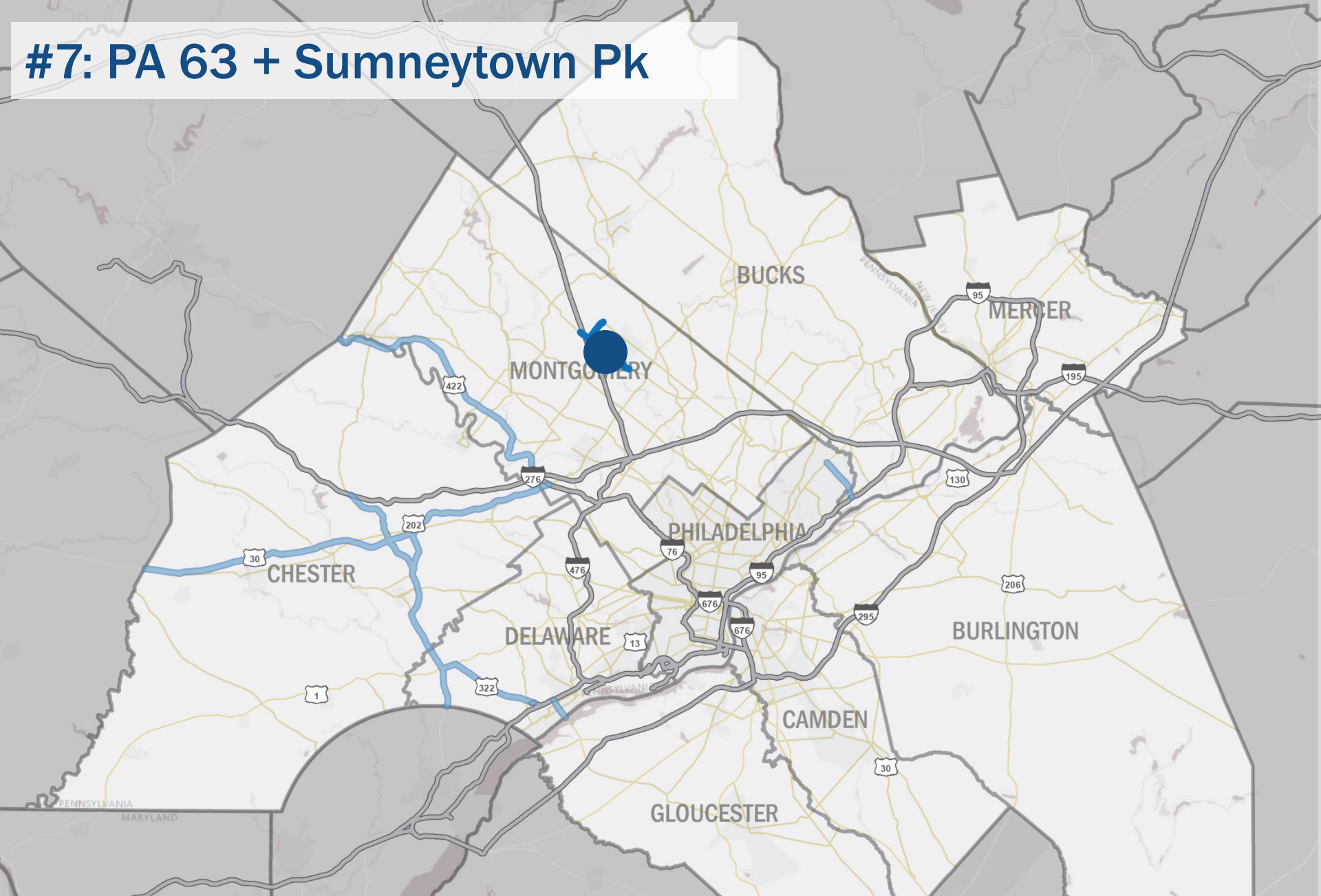
# #5: US 422



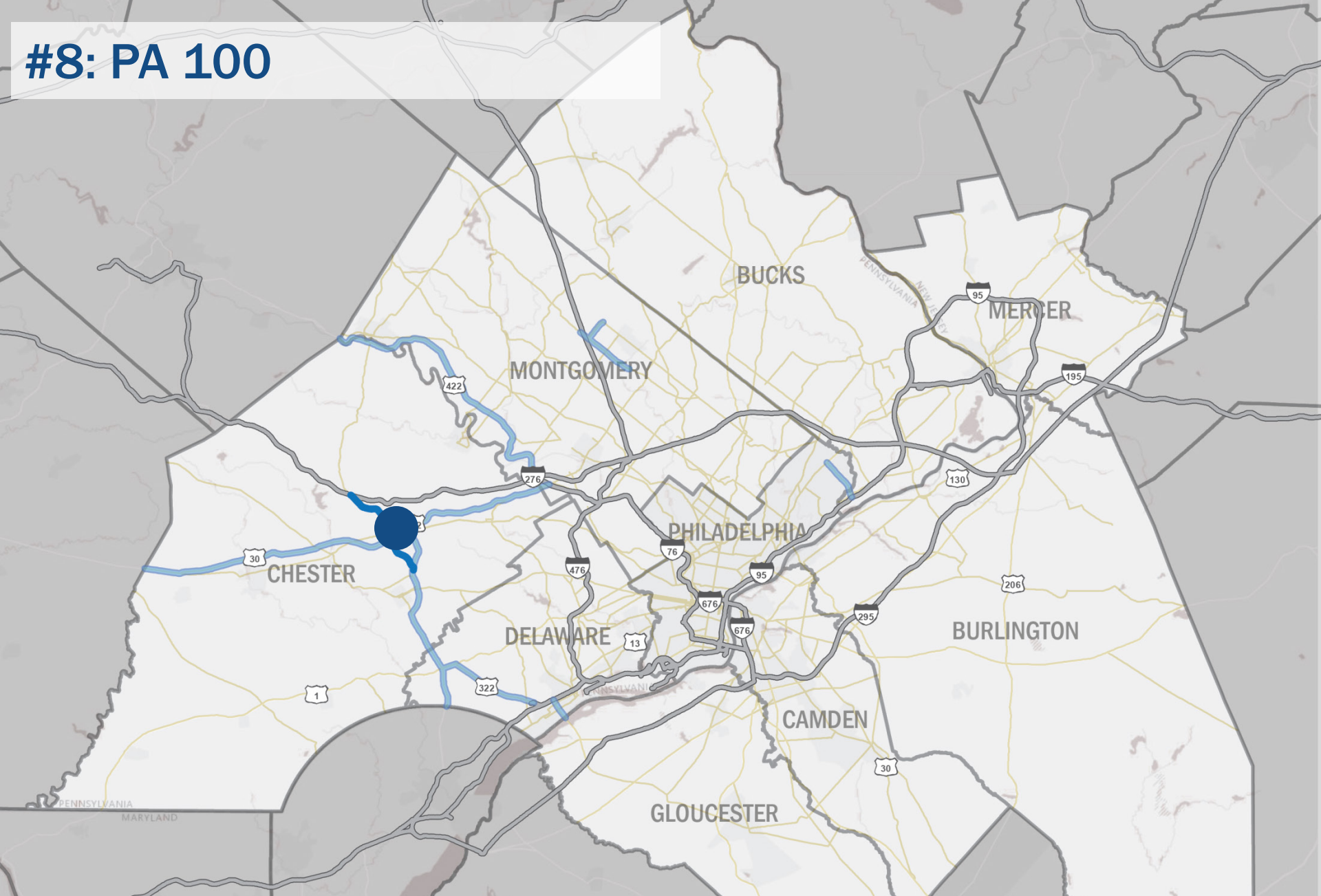
# #6: US 322



# #7: PA 63 + Sumneytown Pk



# #8: PA 100

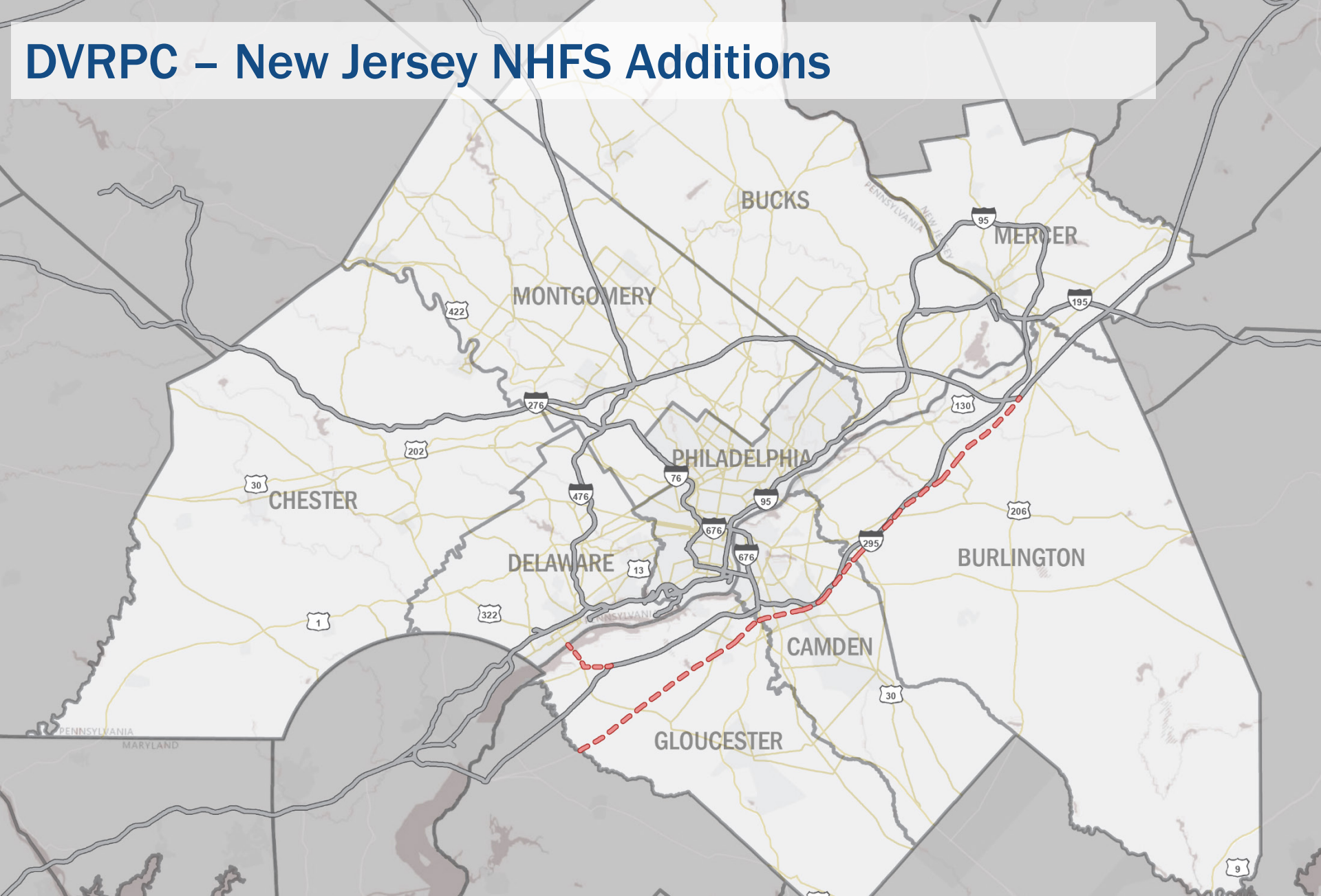




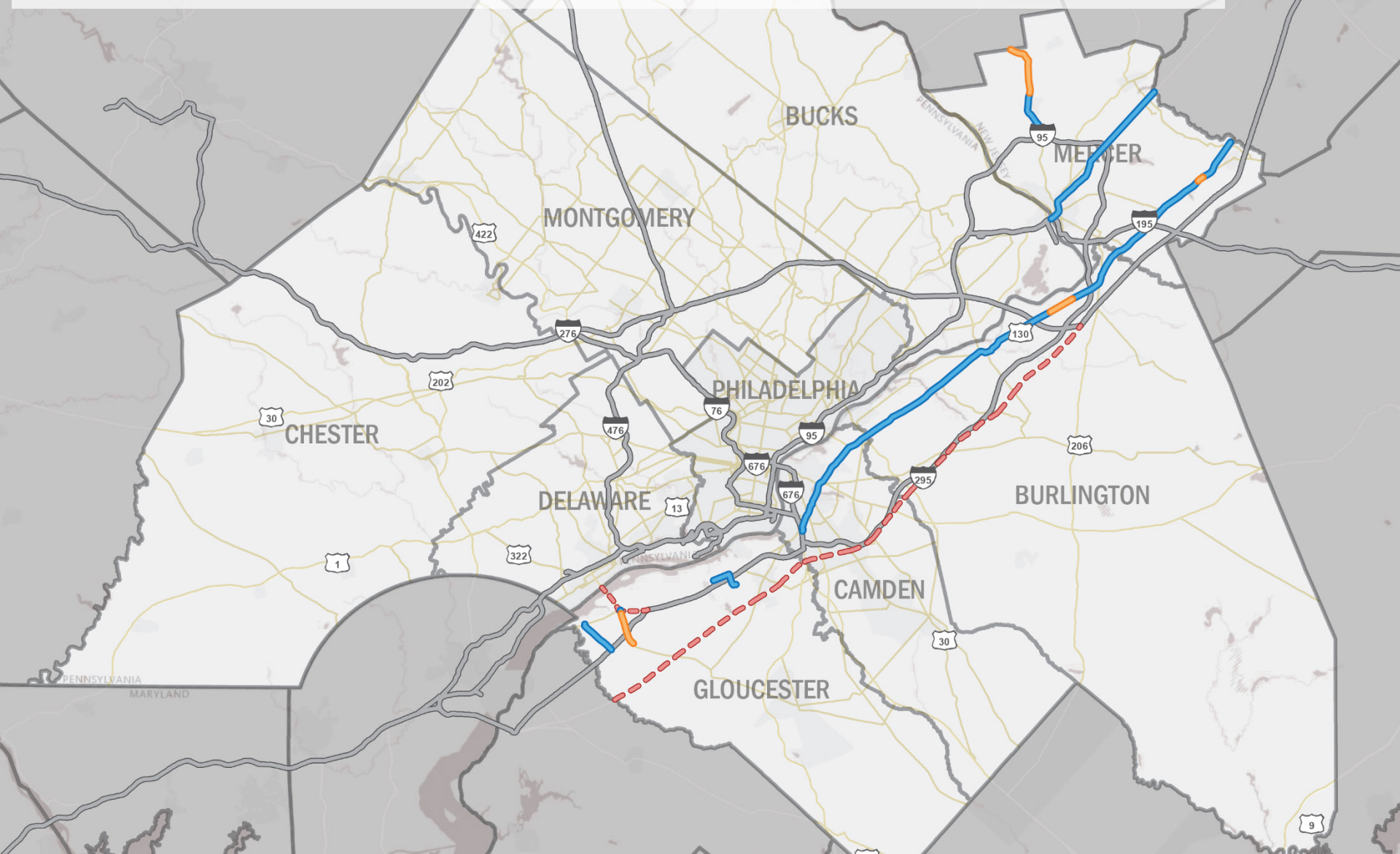
## CUFC Designation in PA

- Approval of PA CUFCs by RTC & Board (February 2017)
- Submitted as recommendations to PennDOT
- **PennDOT conducting review**
- FHWA must approve PennDOT's final designations (December 2017)

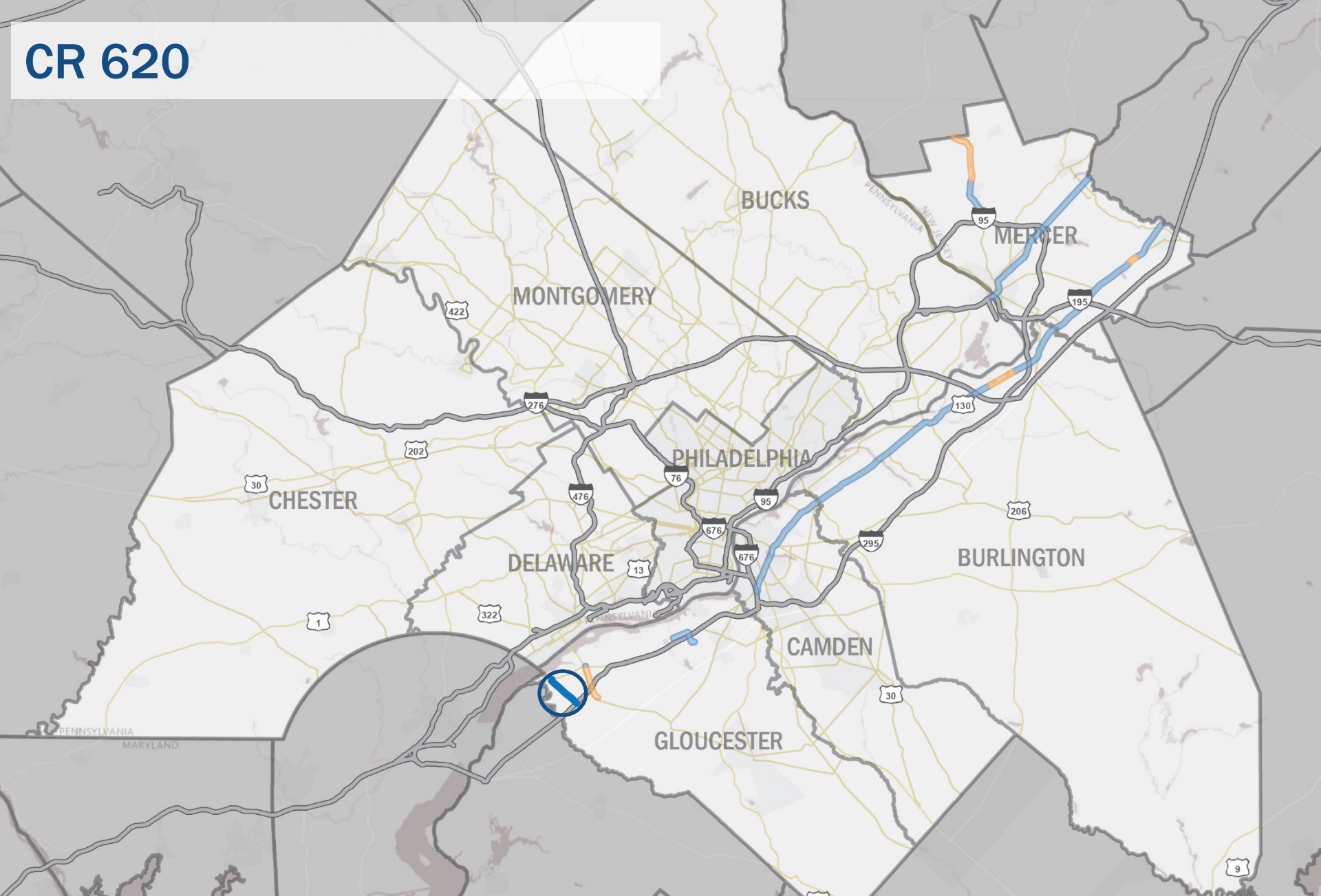
# DVRPC – New Jersey NHFS Additions



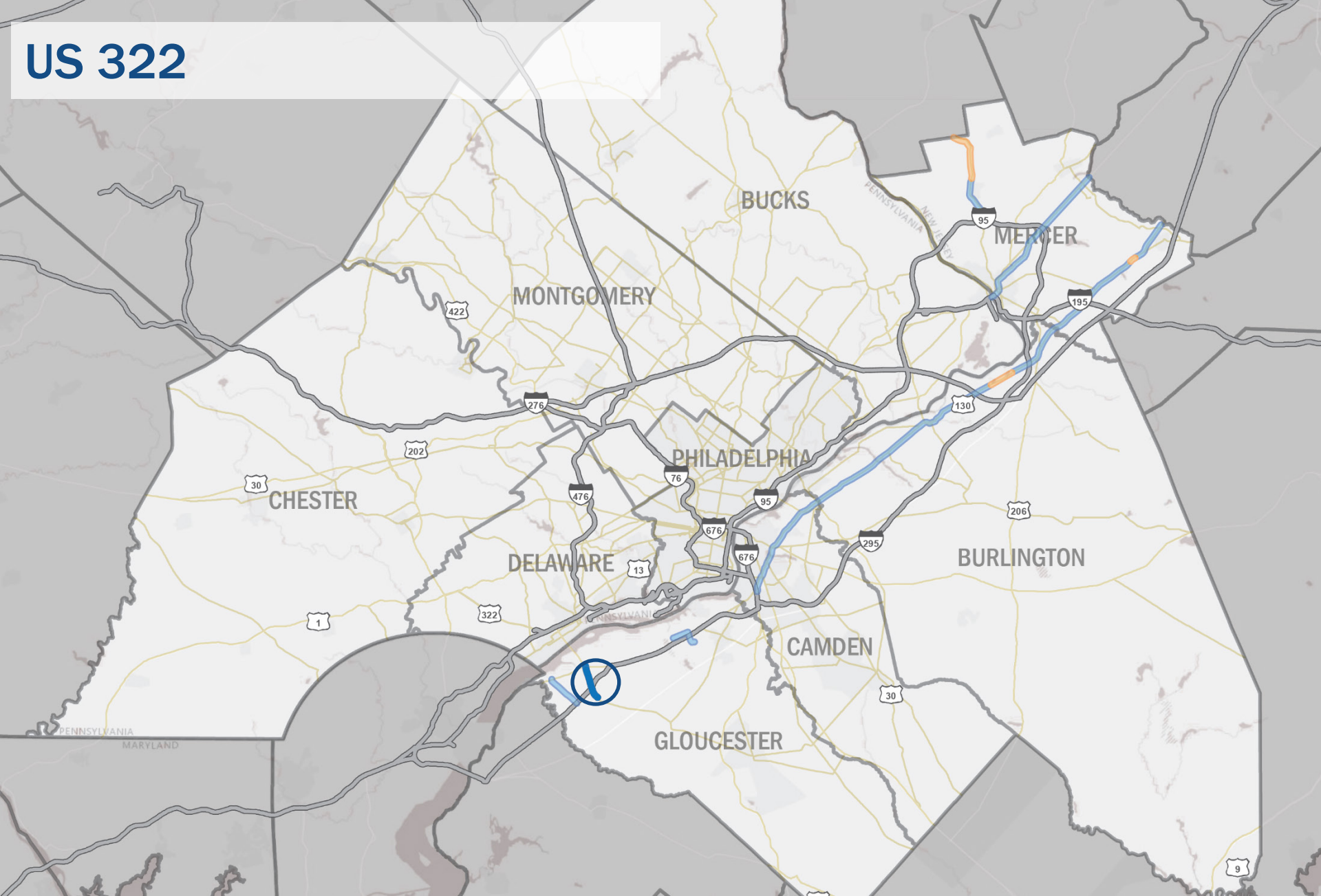
# Candidate DVRPC – New Jersey CUFC & CRFCs



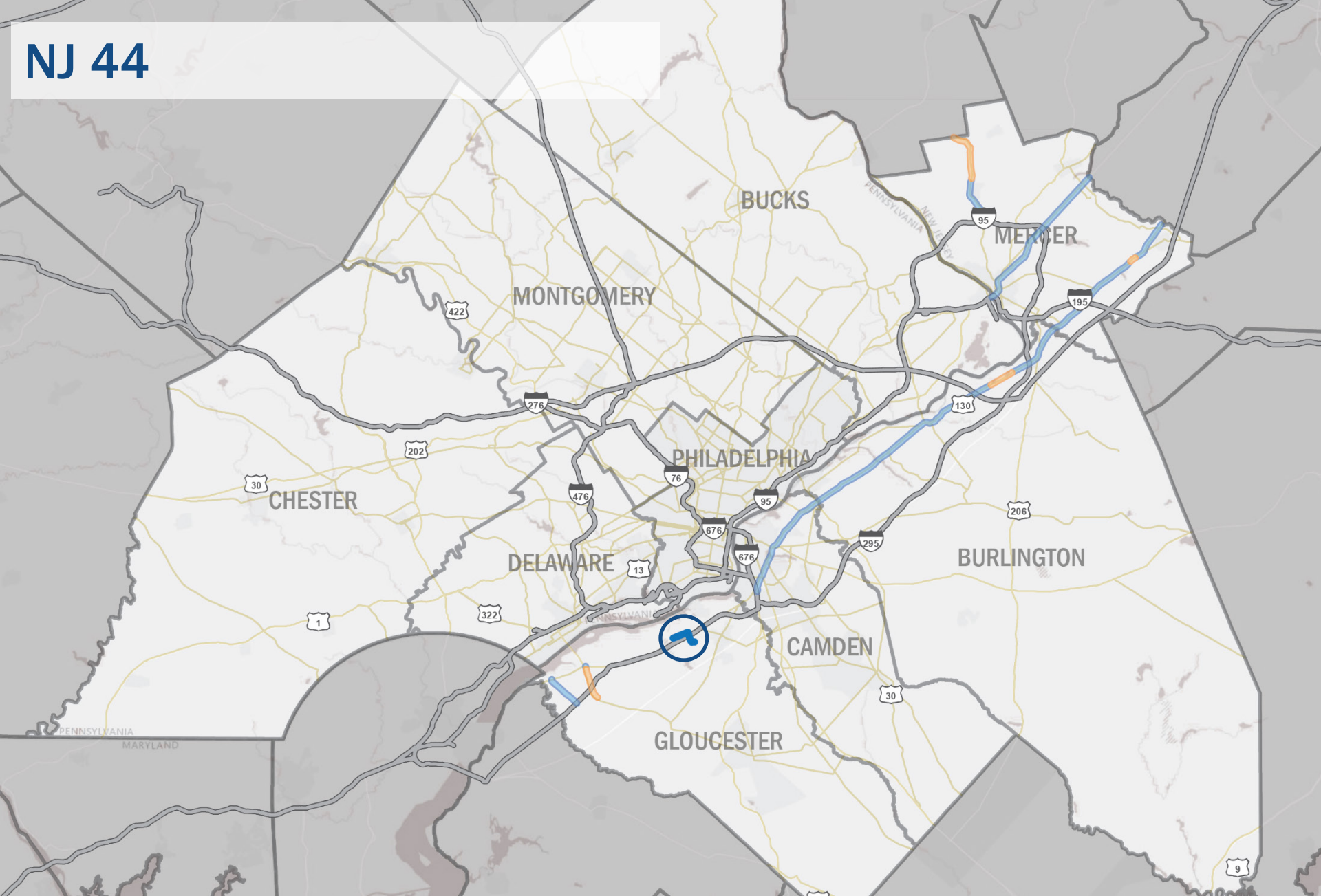
# CR 620



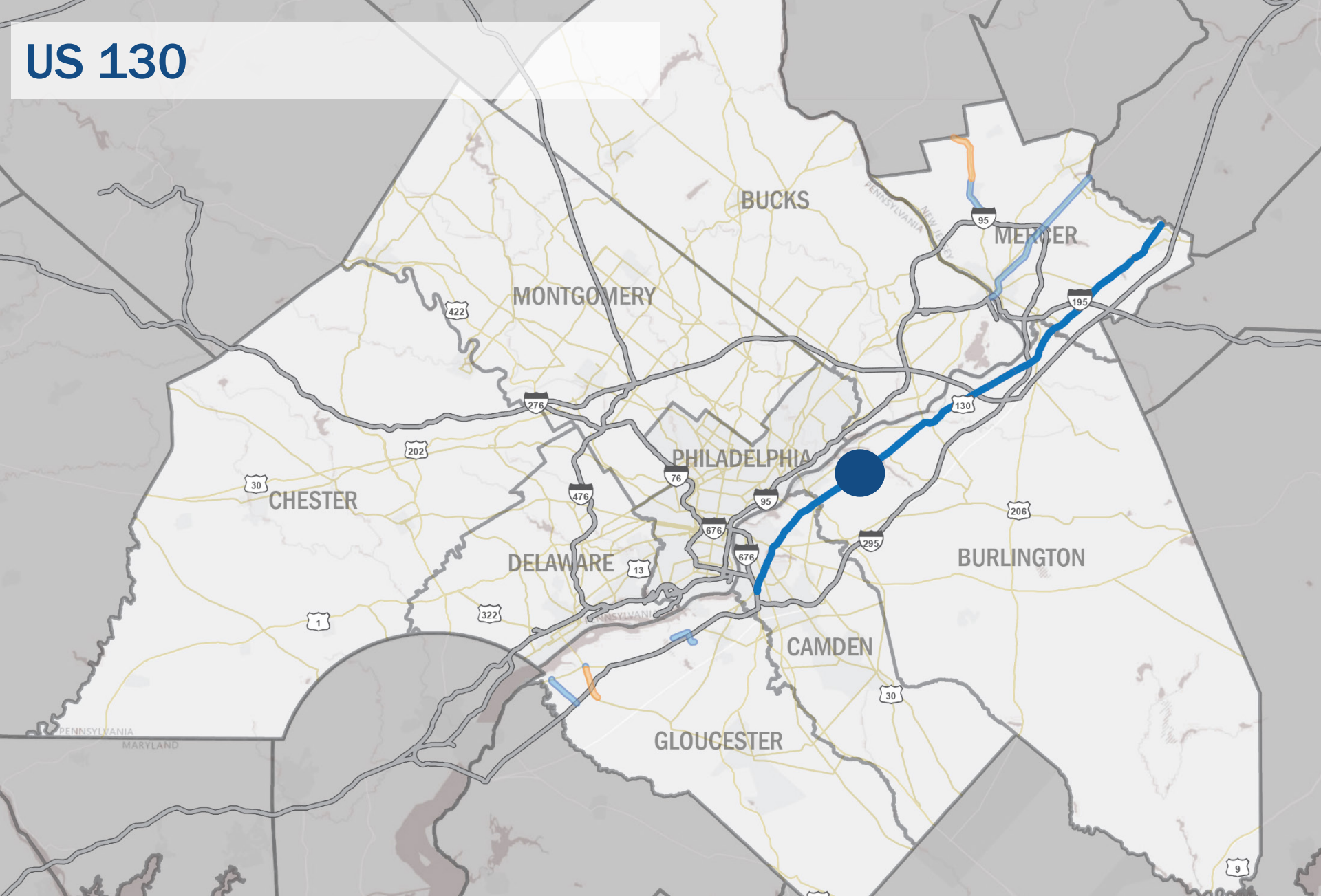
# US 322



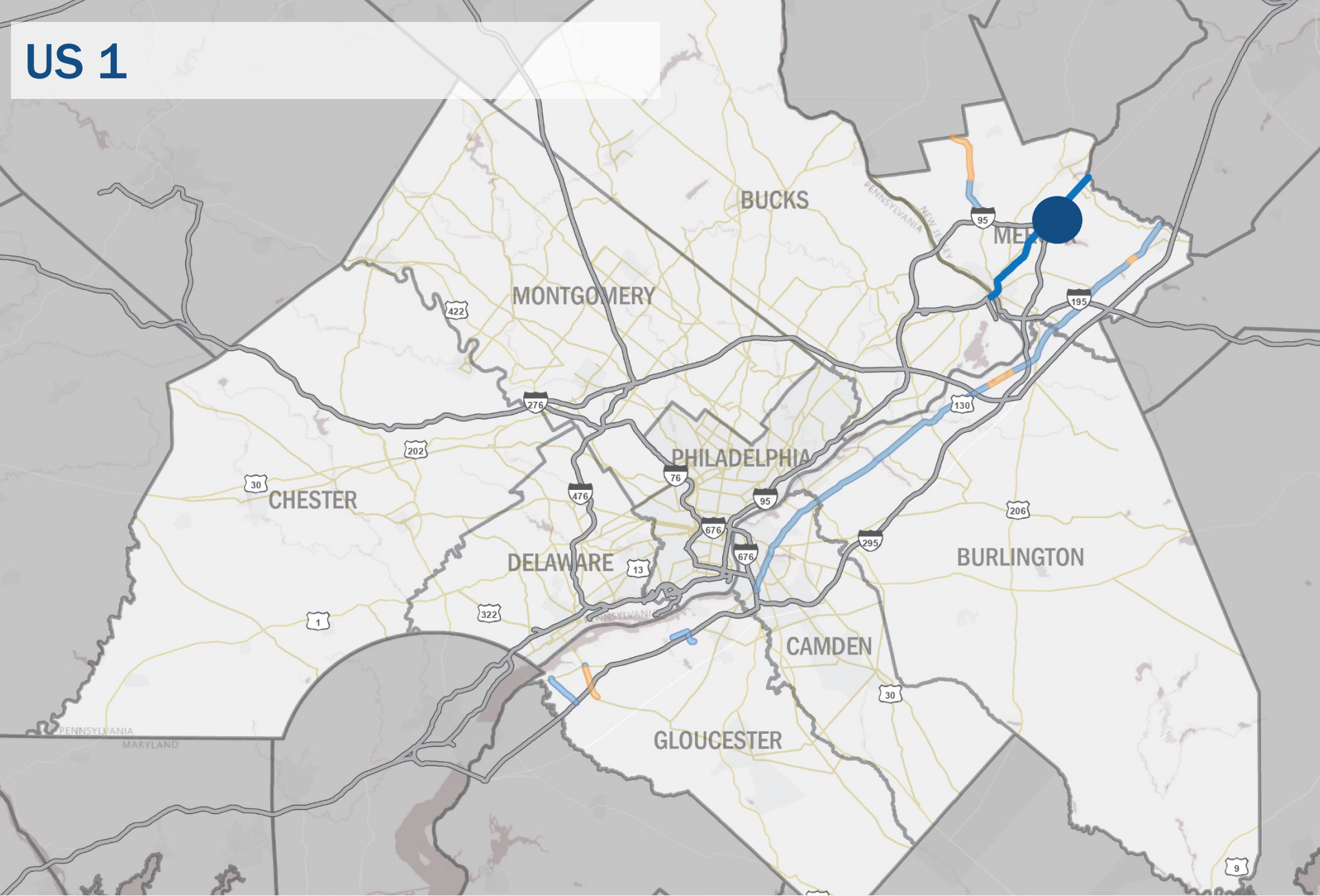
# NJ 44



# US 130

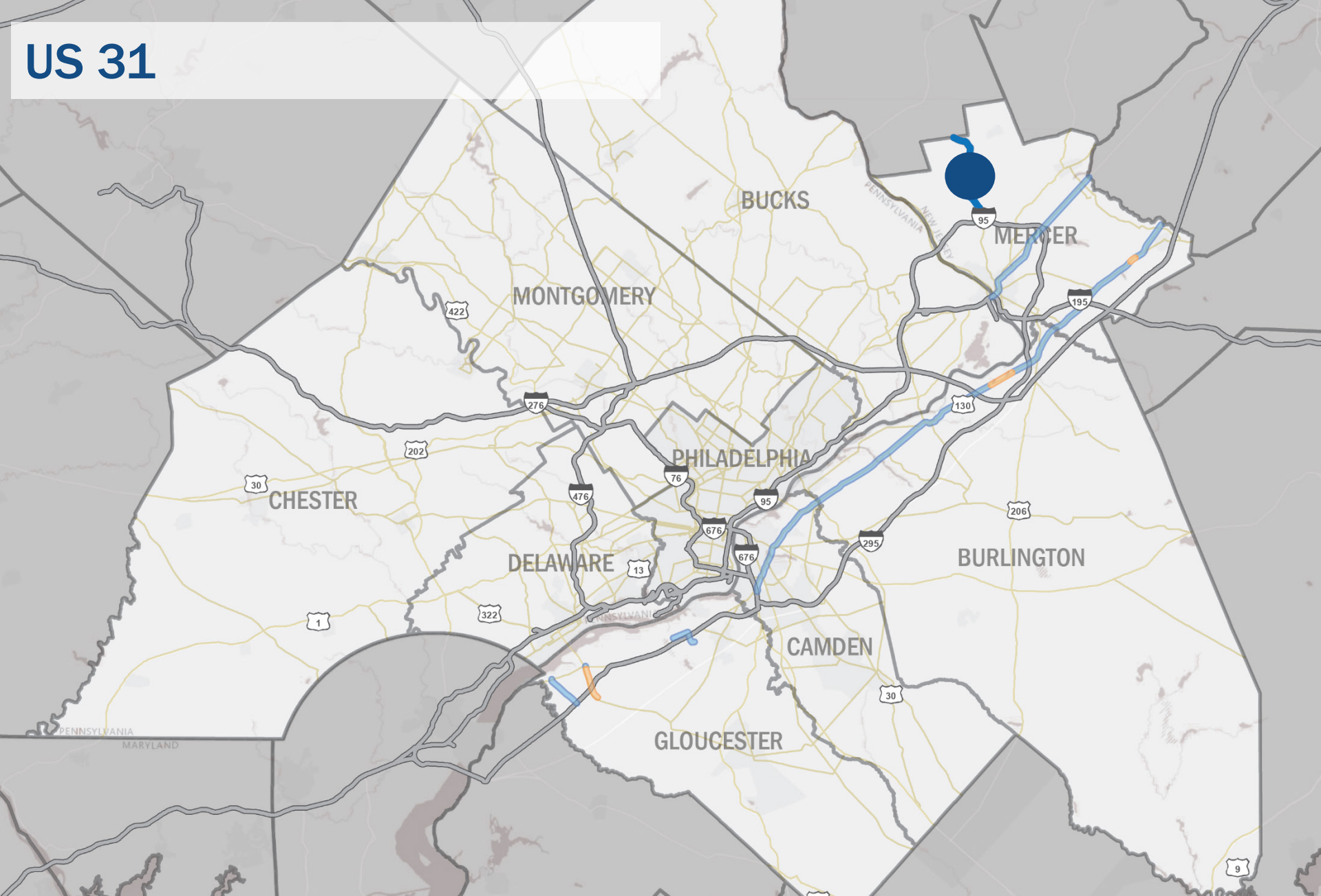


# US 1





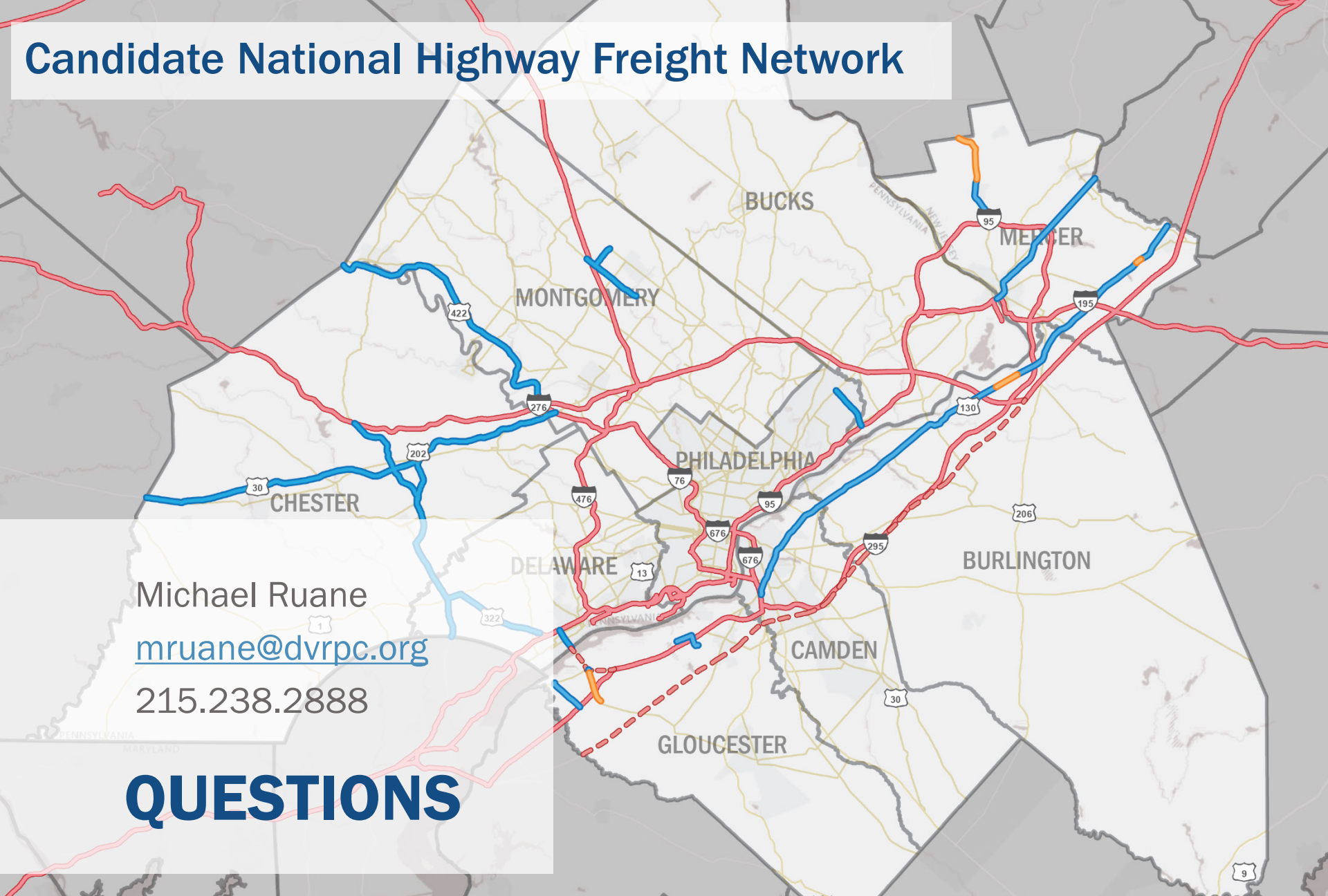
# US 31



## CUFC & CRFC Designation in NJ

- Review by the Freight Advisory Committee (February 2017)
- **Workshop on Projects and Priorities in conjunction with NJ State Freight Plan**
- Submission by December 2017 deadline

# Candidate National Highway Freight Network

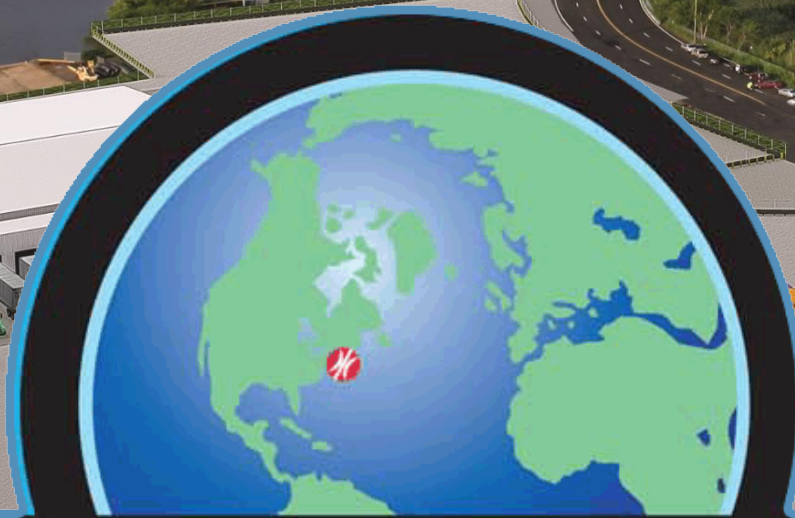


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## QUESTIONS



# Philadelphia Regional Port Authority PORT DEVELOPMENT PLAN



**PHILADELPHIA**  
REGIONAL PORT AUTHORITY

**DELAWARE VALLEY GOODS MOVEMENT TASK FORCE**

# Development Stages

## Port of Philadelphia | Development Stages

1. Channel Deepening – 85% Complete
2. Waterfront Development

### Delaware River Main Channel Deepening | Project Details

Current Depth vs. Future Depth	40 Feet to be deepened to 45 feet mean low water*
Length	103 Miles
Cost Estimate	\$392 million
Commonwealth Estimated Share	\$137 million
Material	16 million cubic yards of dredge materials
Duration	7 years
Progress	85% Complete
Targeted Completion	January 2018

\*The Delaware River has a 6 foot (1.83 meter) tide



## Current Vessel Capability | 9,000 TEUs

August 2016 > Neo-Panamax vessels begin calling PRPA's Packer Avenue Marine Terminal.



# Inbound Philadelphia Hinterland Cargo\*

Total inbound loaded containers moving **within 200 miles** of the Port of Philadelphia.

Serviced by two class-one railroads:



767,976 TEU  
Land-Bridge



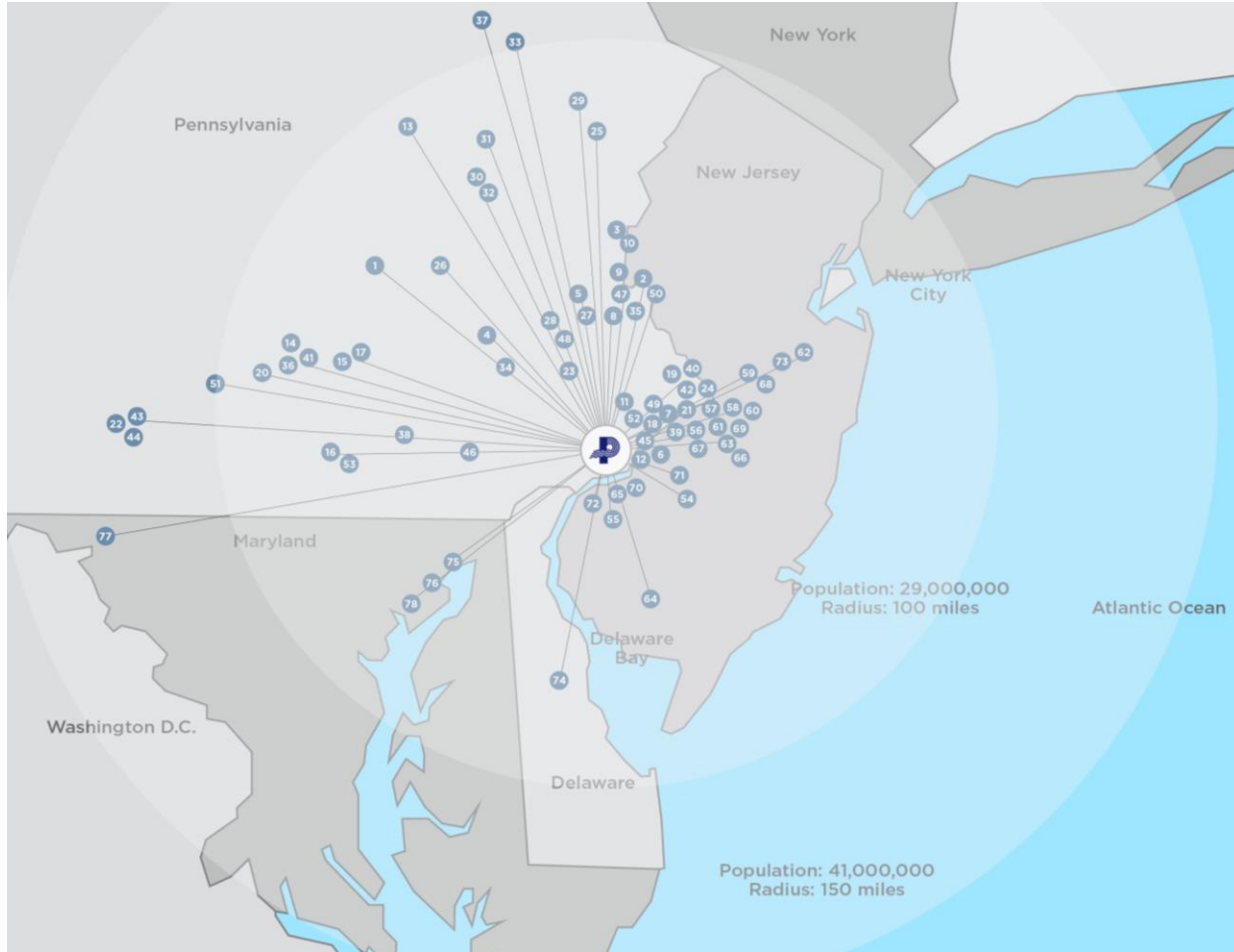
1,666,742 TEU  
Across Mid-Atlantic  
Ports\*\*

\*Year 2016

*Includes Shippers within 200 miles radius base on Piers Data.*

\*\*Mid-Atlantic Ports include Boston, New York, Newark, Philadelphia, Delaware, Baltimore and Norfolk.

## Distribution Centers | Imports



“Lehigh Valley is the **inland empire of the East Coast.**”

- David Egan

Head of Industrial & Logistics Research for the Americas,  
CBRE (Real Estate services)

The Journal of Commerce - Oct. 17, 2016 edition

- 5<sup>th</sup> Largest Metropolitan Area
- Over 300 Distribution Centers within the PRPA's immediate hinterland



# Packer Avenue Marine Terminal

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# Packer Avenue Marine Terminal

**\$266 Million Investment**  
 \$188 Million Commonwealth Investment



	Present
<b>Terminal Area</b>	106 acres
<b>Capacity</b>	480,000 TEUs
<b>Warehouse Capacity</b>	460,000 sq. ft. (on-dock)
<b>Reefer Plugs</b>	2210
<b>Cranes</b>	2 · Post-Panamax container cranes (17 wide) 2 · Panamax container cranes (14 wide) 2 · Panamax container cranes (13 wide) 1 · Heavycontainer crane
<b>Number/Size of Berths</b>	3 · 1,000 ft. Berths 1 · Ro/Ro Berths
<b>Berth Depth at MLW</b>	3 · 42 ft. 1 · 38 ft. Ro/Ro
<b>Channel Depth*</b>	40 ft.

\*The Delaware River has a 6 foot (1.83 meter) tide

# Packer Avenue Marine Terminal

**\$266 Million Investment**  
**\$188 Million Commonwealth Investment**



Green= New Super Post-Panamax cranes; Red= Removal of old cranes and warehouses.

	2017
<b>Terminal Area</b>	146 acres (+40 acres)
<b>Capacity</b>	552,000 TEUs
<b>Warehouse Capacity</b>	460,000 sq. ft. (on-dock)
<b>Reefer Plugs</b>	2210
<b>Cranes</b>	<ul style="list-style-type: none"> <li>2 · Super Post-Panamax container cranes (23 wide)</li> <li>2 · Post-Panamax container cranes (17 wide)</li> <li>2 · Panamax container cranes (14 wide)</li> <li>1 · Panamax container cranes (13 wide)</li> </ul>
<b>Number/Size of Berths</b>	<ul style="list-style-type: none"> <li>3 · 1,000 ft. Berths</li> <li>1 · Ro/Ro Berths</li> </ul>
<b>Berth Depth at MLW</b>	<ul style="list-style-type: none"> <li>1 · 45 ft.</li> <li>2 · 42 ft.</li> <li>1 · 38 ft. Ro/Ro</li> </ul>
<b>Channel Depth*</b>	45 ft.

\*The Delaware River has a 6 foot (1.83 meter) tide

# Packer Avenue Marine Terminal

**\$266 Million Investment**  
**\$188 Million Commonwealth Investment**



Green= New Super Post-Panamax cranes; Red= Removal of old cranes and warehouses.

	2018-2019
<b>Terminal Area</b>	170 acres (+24 acres)
<b>Capacity</b>	900,000 TEUs
<b>Warehouse Capacity</b>	90,000 sq. ft. (on-dock) 365,000 sq. ft. (on-dock)
<b>Reefer Plugs</b>	2210+
<b>Cranes</b>	4 · Super Post-Panamax container cranes (23 wide) 2 · Post-Panamax container cranes (17 wide) 1 · Panamax container cranes (14 wide)
<b>Number/Size of Berths</b>	3 · 1,000 ft. Berths 1 · Ro/Ro Berths
<b>Berth Depth at MLW</b>	3 · 45 ft. 1 · 38 ft. Ro/Ro
<b>Channel Depth*</b>	45 ft.

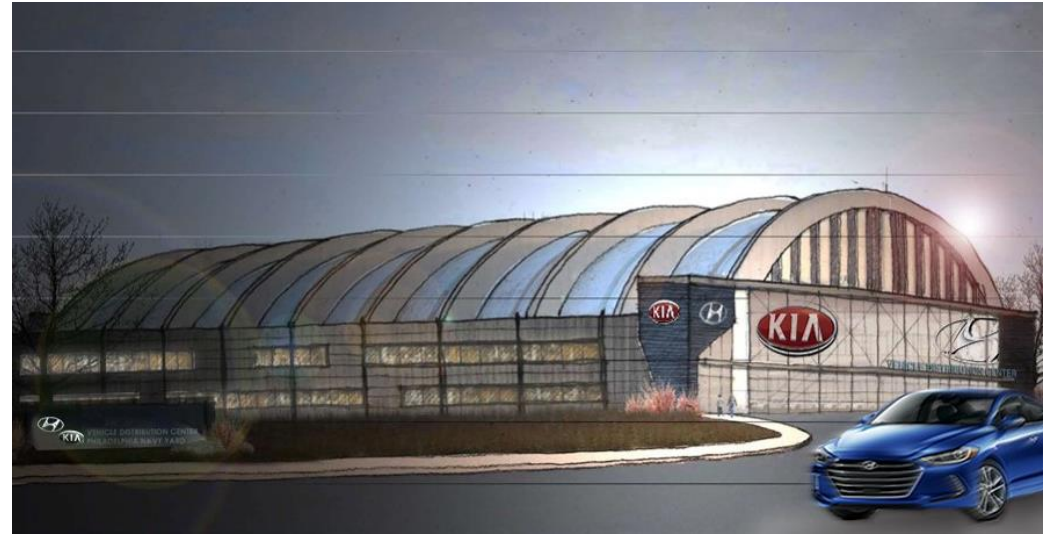
\*The Delaware River has a 6 foot (1.83 meter) tide

## Port Development Plan | Philadelphia Auto Port \$93 Million



# Philadelphia Auto Port

**\$93 Million Investment | Philadelphia Auto Port**



	Present	2017	Future
<b>Capacity</b>	155,000 Autos (Import)	300,000 Autos (Import/Export)	350,000 Autos (Import/Export)
<b>Terminal Area</b>	149 acres	235 acres (+116 acres)	240 acres (+5 acres)
<b>Number/Size of Berths</b>	1 Ro/Ro Berths	2 Ro/Ro Berths	2 Ro/Ro Berths

# Philadelphia Auto Port



NS Future Expansion

NS Future Expansion

# Philadelphia Auto Port

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# Tioga Marine Terminal

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# Tioga Marine Terminal

**\$12 Million Investment | Tioga Marine Terminal**



	Present	2017	Future
<b>Warehouse Capacity</b>	300,000 sq. ft. (food grade)	397,500 sq. ft. (food grade)	397,500 sq. ft. (food grade)
<b>Cranes</b>	2 · Panamax container cranes (13 wide) 1 · Mobile Harbor Crane	2 · Panamax container cranes (13 wide) 2 · Mobile Harbor Cranes	2 · Mobile Harbor Crane
<b>Support Structure</b>	Trailer Park	Modular Building	Modular Building

# Tioga Marine Terminal, \$12 Million | Port Development Plan



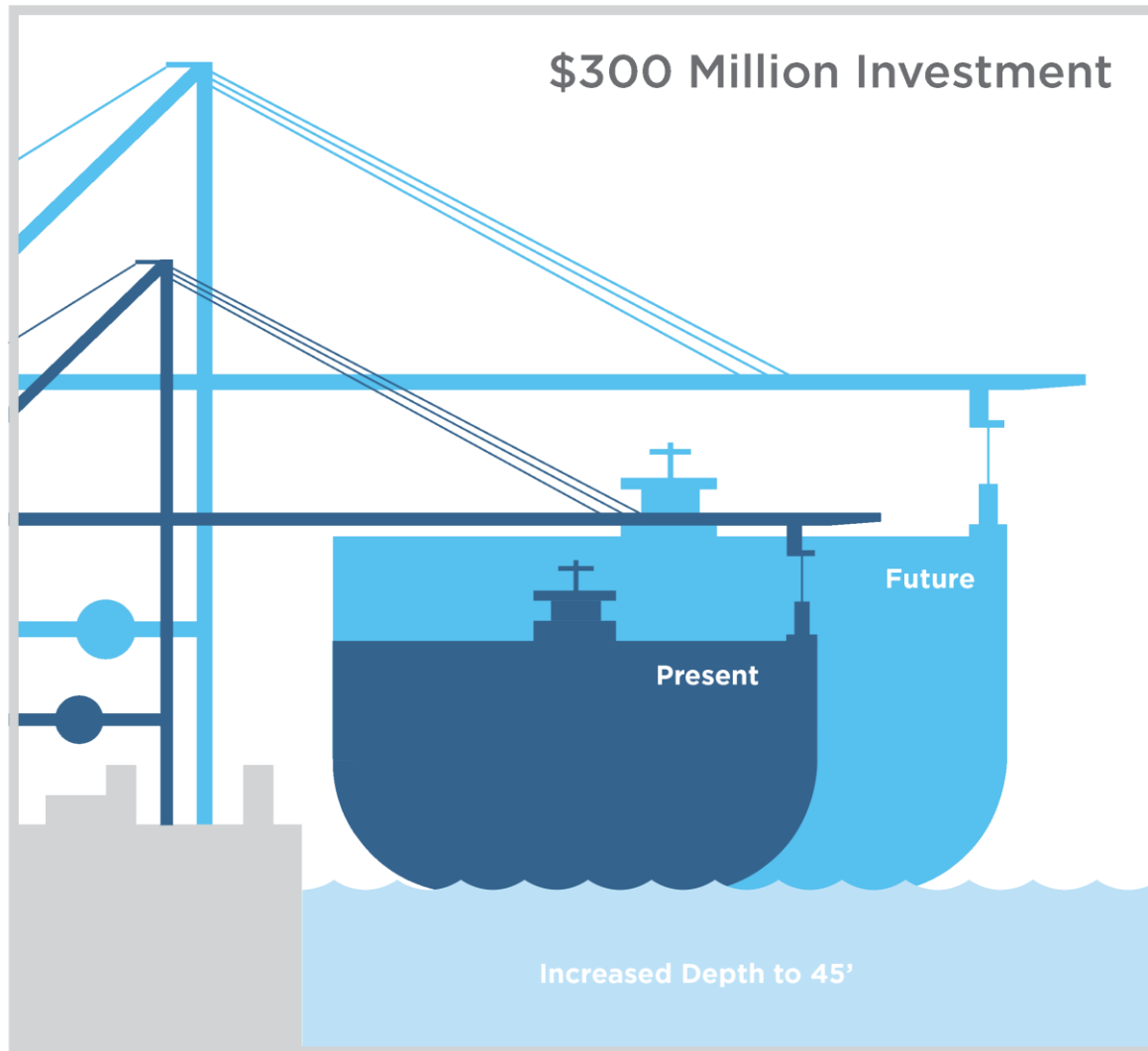
*Upgraded warehouse photos.*








# Tioga Marine Terminal, \$12 Million | Port Development Plan



*Upgraded warehouse photos.*

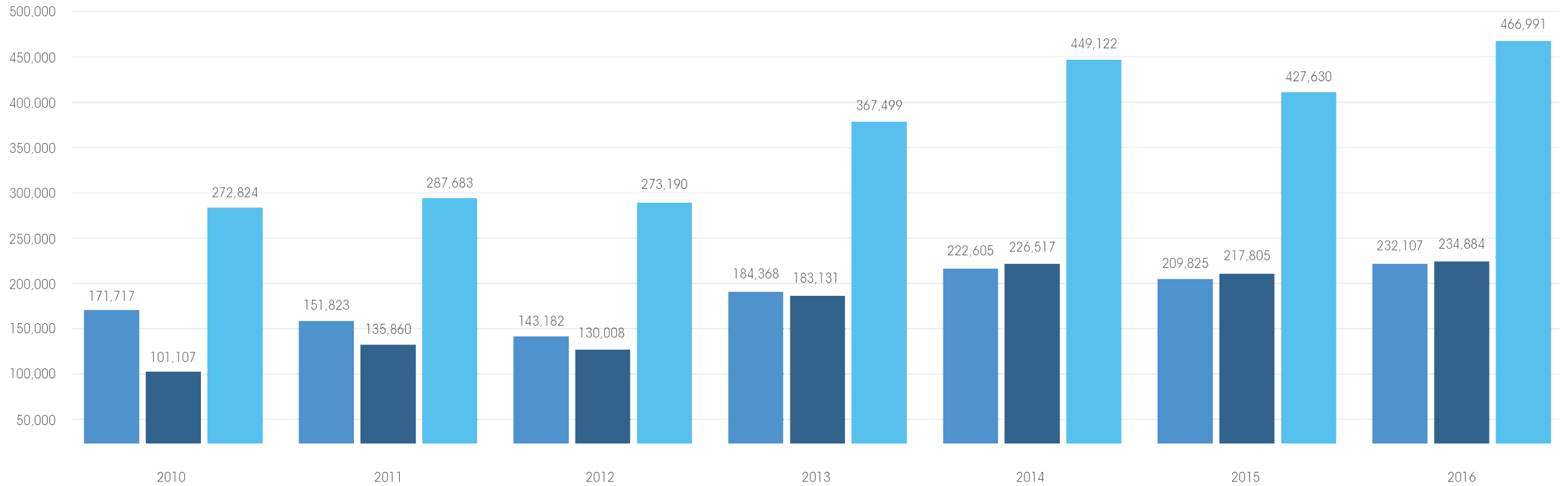
# Port Development Plan



	Present	Future
 Containers	455,900 TEUs	900,000 TEUs
 Jobs	10,341	17,020 65% Increase
 Clean Air	Diesel Operated	Diesel to Electric
 Cars	155,000 Units	350,000 Units
 Cranes	Small Panamax	Large Super Post Panamax
 Tax Benefit	\$69.6m Annually	\$108.4m Annually
 Forest Products	350,000mt	425,000mt

# Port of Philadelphia Container Volumes

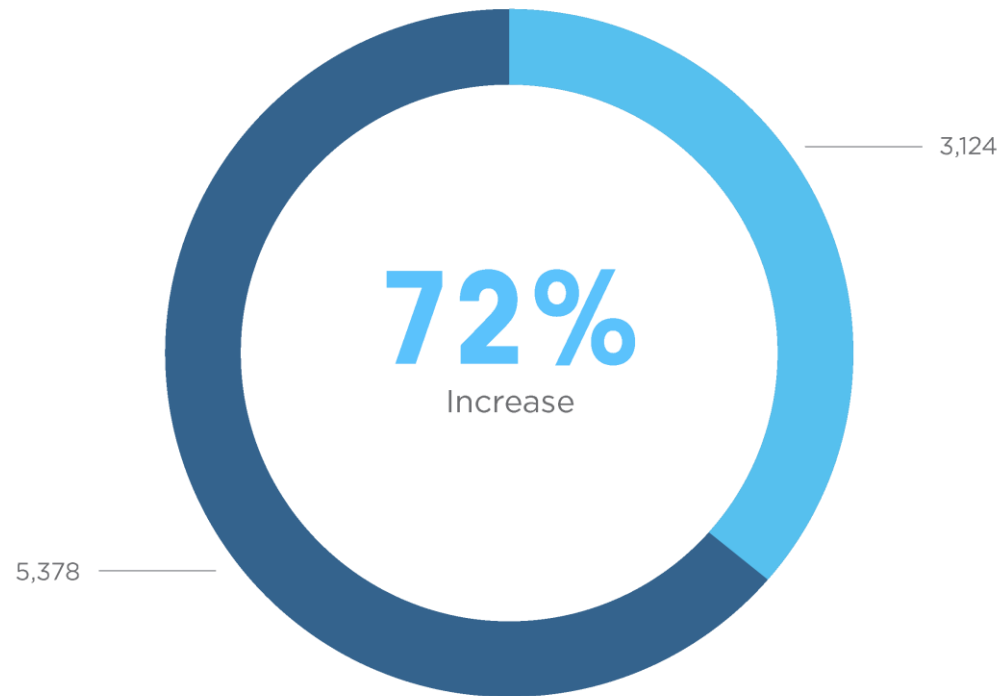
● Import TEUs   ● Export TEUs   ● Total TEUs



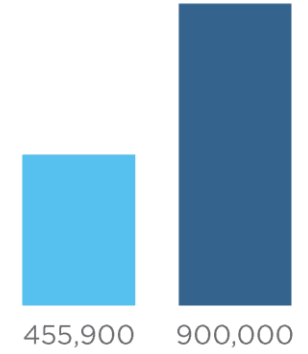
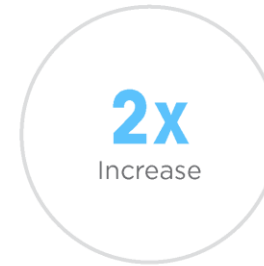
# Growth at Capacity

● Future ● Current

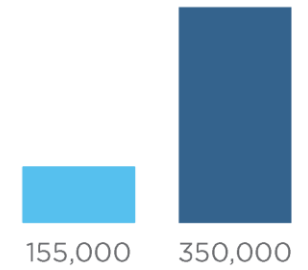
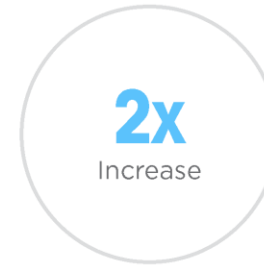
## Direct Jobs



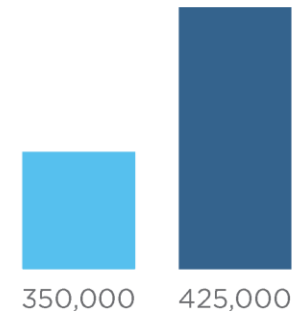
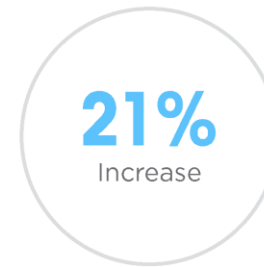
## Containers



## Automobiles

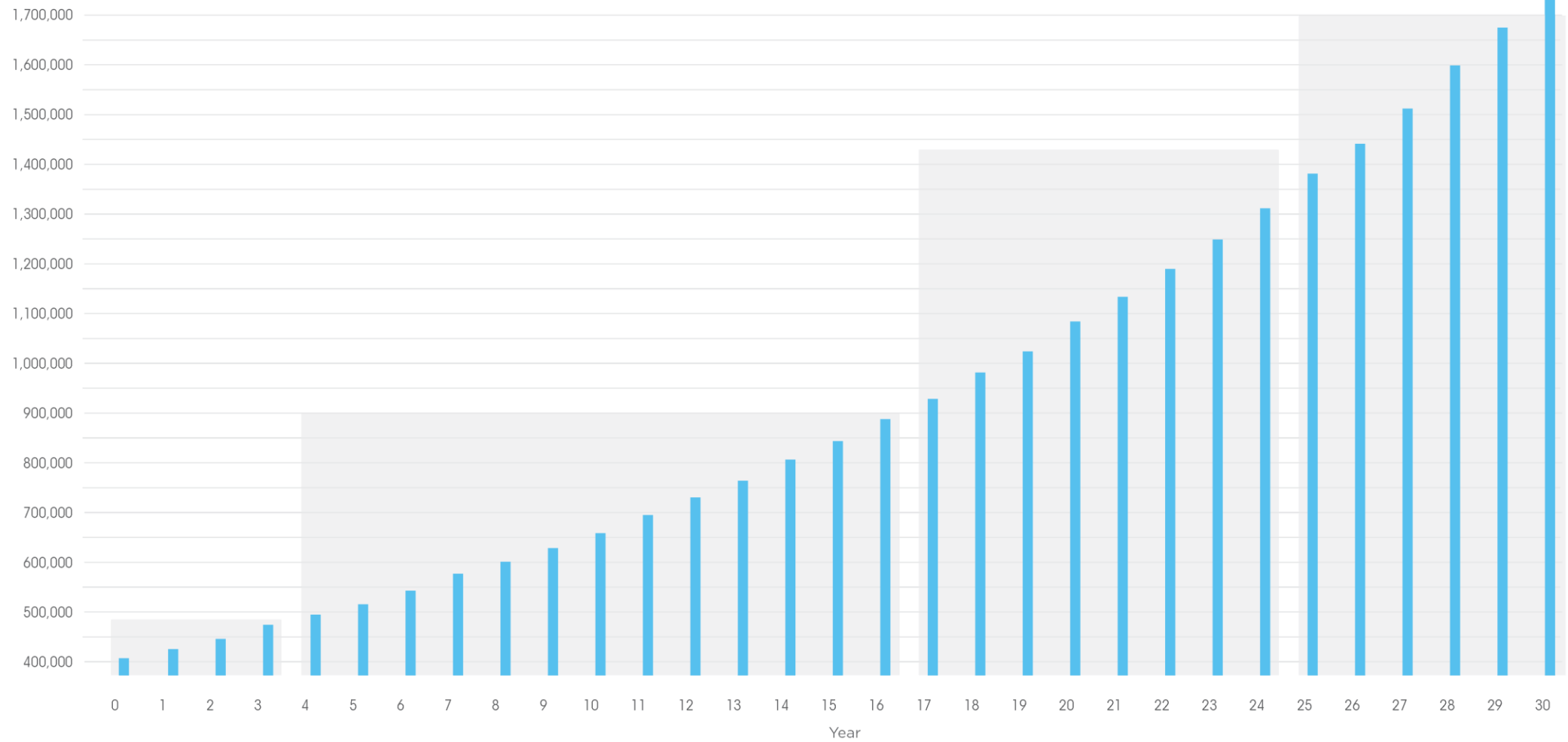


## Breakbulk



# Growth Rates

● Capacity ● Forecasted TEUs





# Investment Summary

**Packer Avenue Marine Terminal:**

APPROX  
**\$188**  
MILLION

**Auto Processing Facility:**

APPROX  
**\$93**  
MILLION

**Tioga Marine Terminal:**

APPROX  
**\$12**  
MILLION

**Estimated Project Total:**

**\$293**  
MILLION

	Current	Future
<b>Direct Jobs</b> (70% Increase)	3,124	5,378
<i>Total Employment</i> (65% Increase)	10,341	17,020
<b>State/Local Taxes</b> (56% Increase)	\$69.6m	\$108.4m

- Capital - Estimate..... \$293M
- Growth in Container Capacity..... 2X
- Growth in Breakbulk Capacity..... 21%
- Growth in Automotive Capacity..... 2X

**Thank you!**





# **Holtec Technology Campus**

**Ed Mayer**

**Program Director, Holtec Technology Campus**

# Holtec Technology Campus - Vision



## Community:

- Investing in Economically Depressed Area
- Employing hundreds of Camden Residents
- Helping develop local Supply Chain & Manufacturing Companies in the Area

## Clients:

- Center for Technology for Innovation & high quality Manufacturing
- Unique Fabrication Capabilities Found Nowhere Else

## Company:

- \$320M State of the Art Campus
- Bringing Holtec Designers, Engineers and Fabricators together
- Manufacture and ship SMR components worldwide



# Holtec Technology Campus

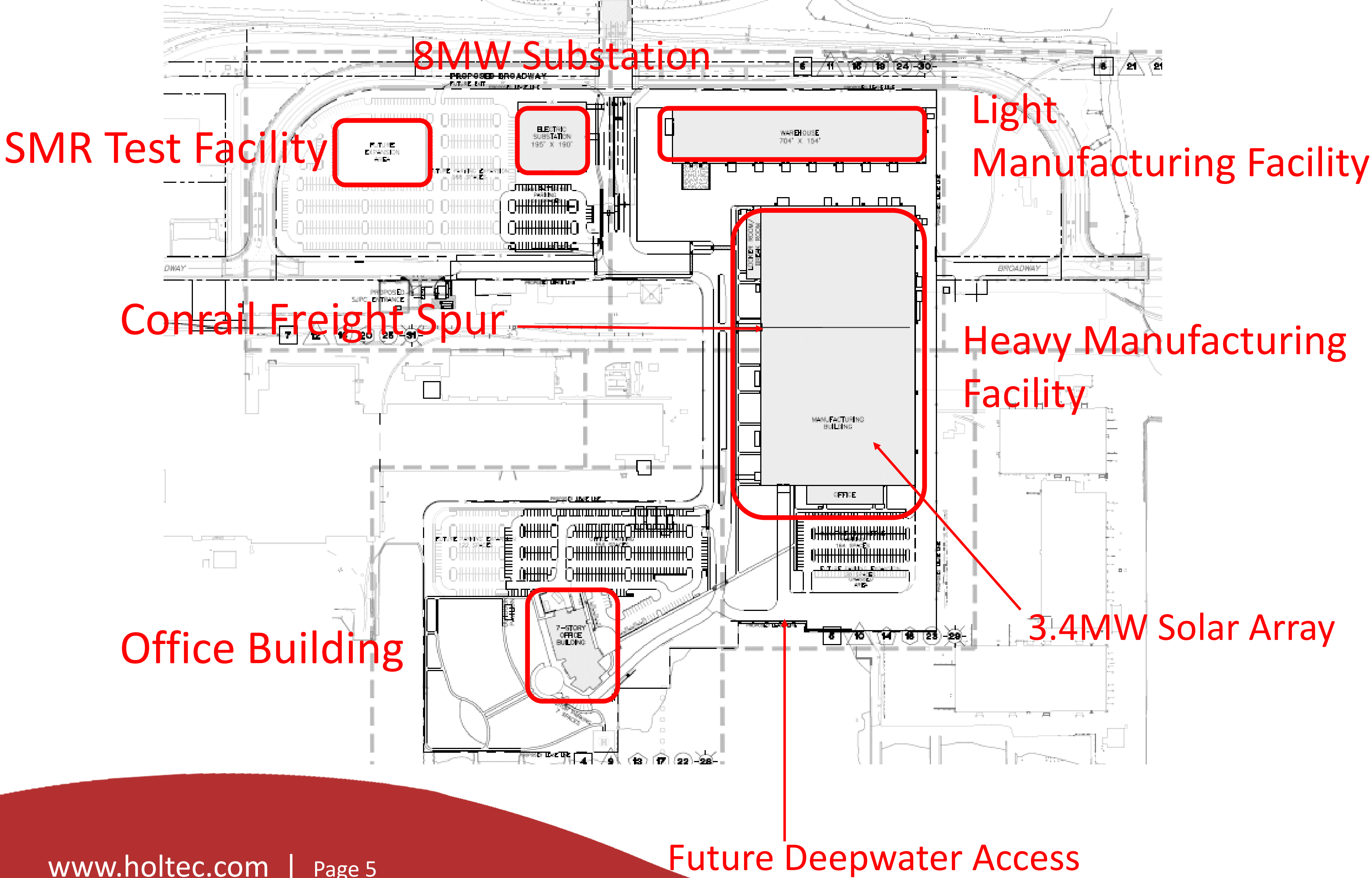


- **7- Story Office Building**
- **320,000 sqft Heavy Manufacturing Plant**
- **50,000 sqft Light Manufacturing Plant**
- **8 MW Sub Station**
- **3 MW Solar Array**
- **SMR Test Facility**



**The Campus will be LEED Silver Certified**

# Holtec Technology Campus



# Path to Manufacturing

- **Groundbreaking: July 1, 2015**
  
- **Temporary Certificates of Occupancy: December 30, 2016**
  - **> 1 Year ahead of Schedule**
  - **Resources / Holtec JJS Team**
  
- **Holtec Move-in Complete**
  
- **Machine Tool Install: 1<sup>st</sup> & 2<sup>nd</sup> Qtr 2017**
  
- **Heavy Fabrication Begins: Summer 2017**





# Construction: No Easy Task Large Plate Roll Foundation



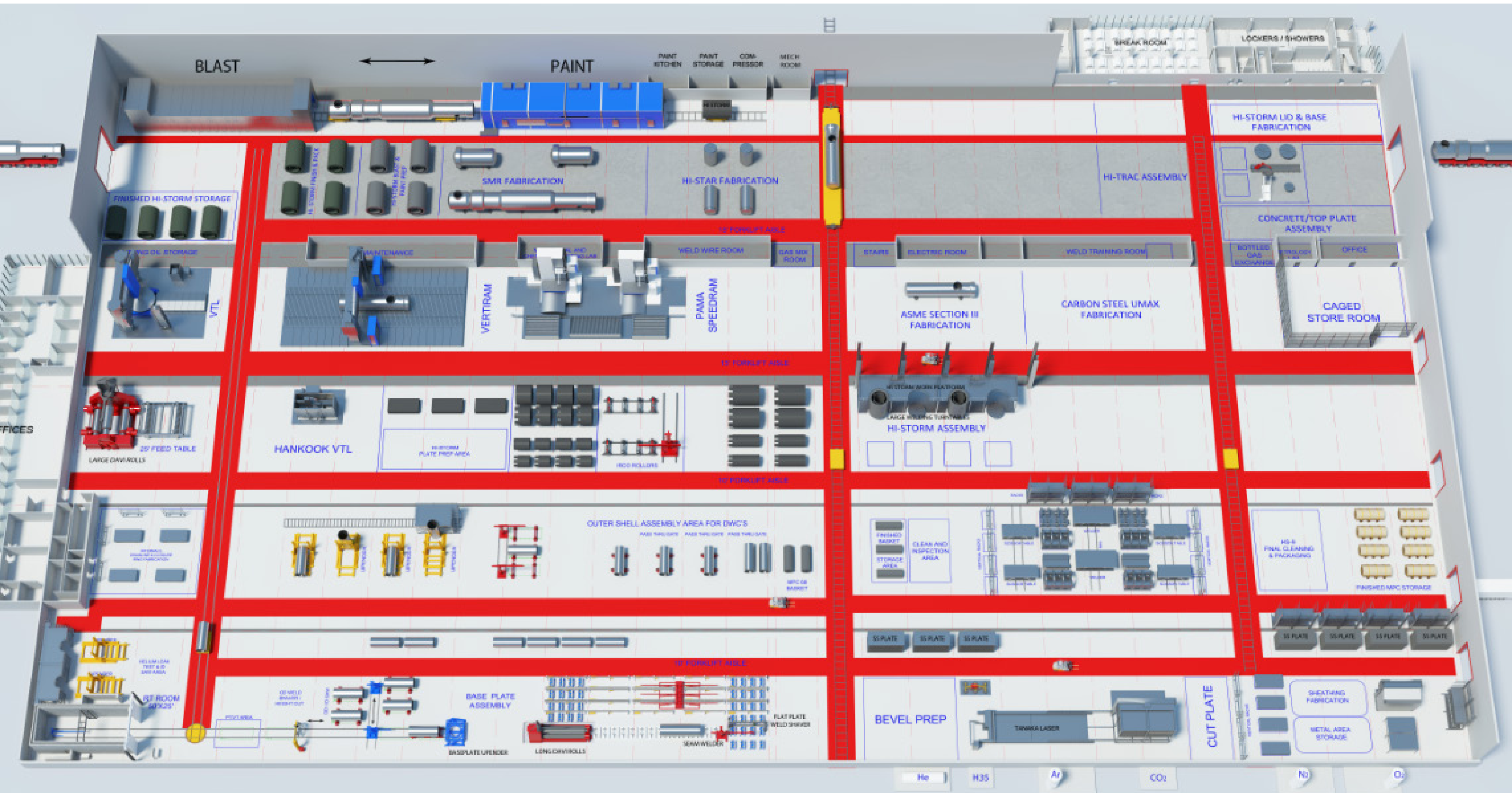
- Complex Construction Techniques:
  - ✓ 30ft Pit – 5ft Water Table
  - ✓ Pump Down Water Table
  - ✓ Excavate & Drive Piles
  - ✓ Construct Equipment Pit
  - ✓ Waterproof & Secure Dewatering

# Manufacturing Facility Stats



- 370,000 ft<sup>2</sup> fabrication facilities
- 12 Cranes: 9x50T, 3x200T
- Unique Large Machining Capability
- Sized to Manufacture SMR Components
  - ✓ Manufacturing capability: 400T & 100ft
  - ✓ Ability to ship via Delaware River

# Efficient & Capable Purpose Built



# Manufacturing Early Start



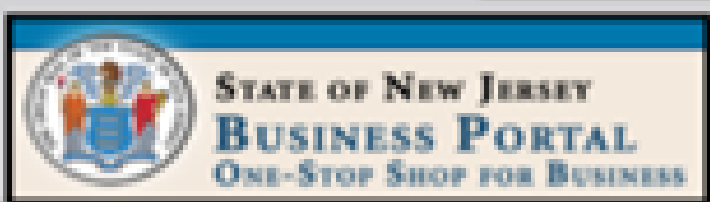
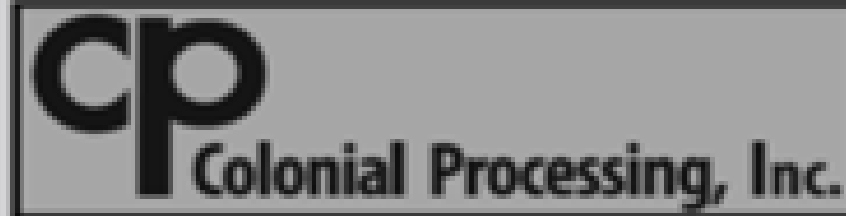
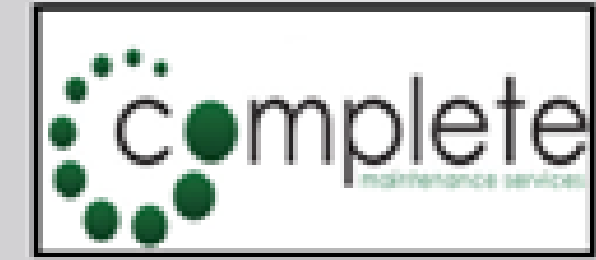
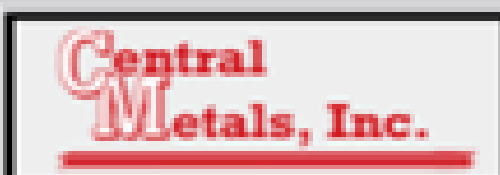
- March 2016, 1<sup>st</sup> welder hired for Camden
- August 2016, TCO for 100ft of Warehouse
  - Opened Weld School
  - First arc struck
- September 2016, implemented Holtec QA program
- October 2016, Internal QA Audit conducted
- November 2017, Entergy performed QA audit
- December 2016, completed fabrication of 6 HI-STORM work Platforms
- December 2016, shipped first Important to Safety parts; Gamma Shields for Vermont Yankee
- On track for June 2017 start-up

# Committed to the Community

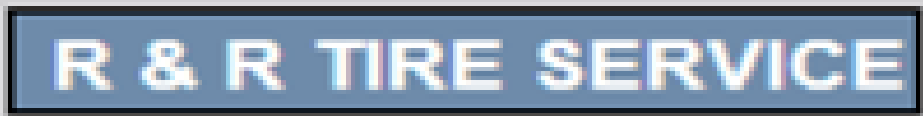
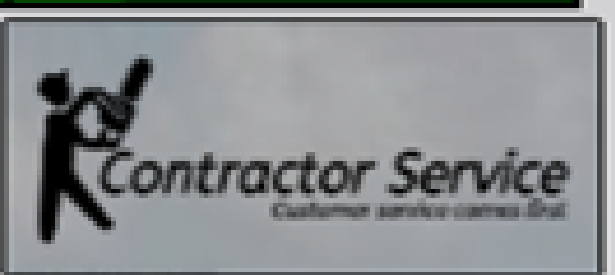
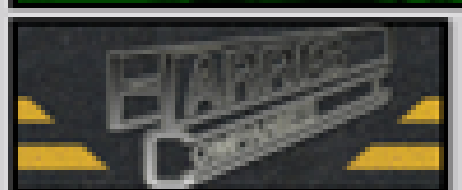
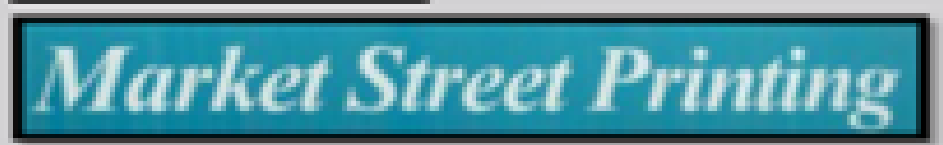
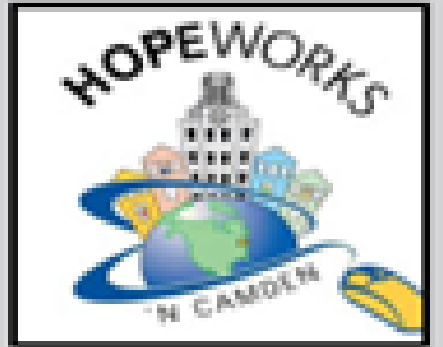
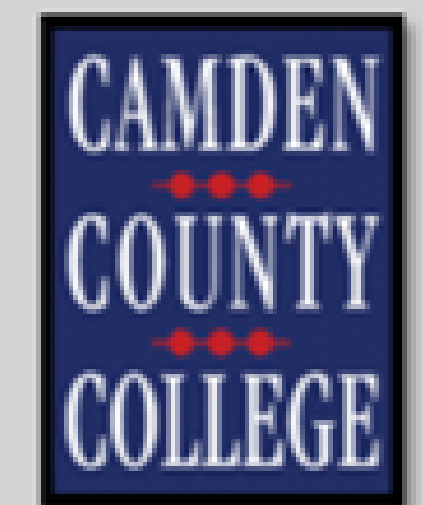


- **400 Employees by July 2017, 1,000 by 2020, 1,000s for SMR**
  - ✓ 200 existing from Marlton, NJ
  - ✓ 200 new employees - predominately manufacturing
  
- **Construction Phase**
  - ✓ Camden Workers - 25 of about 450/day
    - JJS identified and trained via public outreach
  - ✓ Camden vendors: 20 local companies
  
- **Operations Phase**
  - ✓ Camden County Community College
    - Weld training
    - Hired 20 welders
  
  - ✓ Formed partnership with Cities
    - Camden City - Board of Education / Summer program / internship (2017)
    - Gloucester City
      - Mayor, school superintendent, council members – tour and presentation
      - NDT Training by CCC in Gloucester City facility – similar to welding course
    - Pennsauken Township
      - Scheduling meeting with Mayor
  
  - ✓ “Youth Build”, “Joseph Fund”, “Urban Promise” – non-profits assisting to find qualified workers
  
  - ✓ Develop Camden supply chain - Member of Camden Small Business Association

# Supporting Camden Local Business



THANK YOU TO OUR  
CAMDEN BASED  
BUSINESS PARTNERS



# Committed to the Future



## ■ Phase 2 Construction

- ✓ Office Building Café
- ✓ Corporate Apartments, Daycare Center
- ✓ Facilities Maintenance Center
- ✓ Deep Water Access
- ✓ Helo Pad, Floating Dock

## ■ Holtec is Investing \$320M

- ✓ World Class Design & Heavy Manufacturing
- ✓ Capabilities No Other Company Can Offer
- ✓ Committed to its Employees, Clients, and the Community





# Davi - Large Plate Roll

- Largest Roll in North America
- Working Range
  - ✓ Cold Roll 7.5" Steel
  - ✓ Hot Roll 10" Steel
  - ✓ 13' rolling surface
  - ✓ 54" top roll dia.



# PAMA VertiRam - Gantry Mill



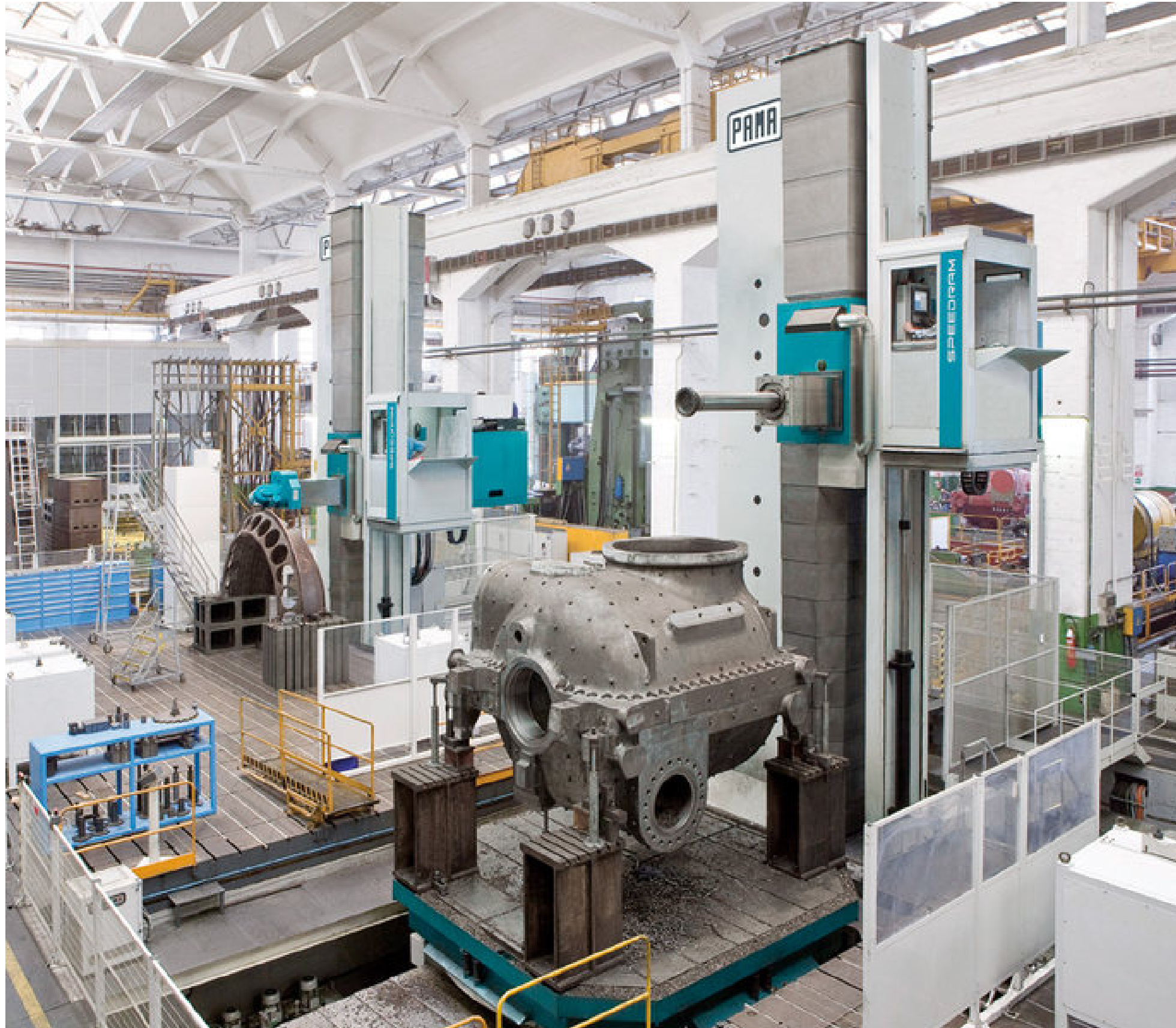
- Gantry Milling System
- 5 Axis Milling w/ Lathe Capability
- Universal Milling Head
- Working Range:
  - ✓ Clearance btw columns: 11'
  - ✓ Clearance under spindle: 13'
  - ✓ Gantry Travel: 39'

# Carnaghi – Vertical Turning Center



- Vertical Turning & Milling Center
- Working Range:
  - ✓ Max Dia: 15'
  - ✓ Max Height: 17'
  - ✓ Capacity 100T
- Universal Milling Head
  - ✓ Double magazine
  - ✓ 9 Accessories
  - ✓ 30 tools

# PAMA Speed Ram - Unique Machining Capabilities



- 6 Axis Milling & Drilling
- 2 Milling Machine Towers
- Working Range:
  - ✓ 52' L x 20' H
  - ✓ 100T Capacity
  - ✓ 30" Gun Drilling

# Holtec Technology Campus Located on the Delaware River Camden, New Jersey

**Corporate  
Technology Center**



**Heavy  
Manufacturing Plant**



**Light  
Manufacturing Plant**



Property Line



# Truck Parking



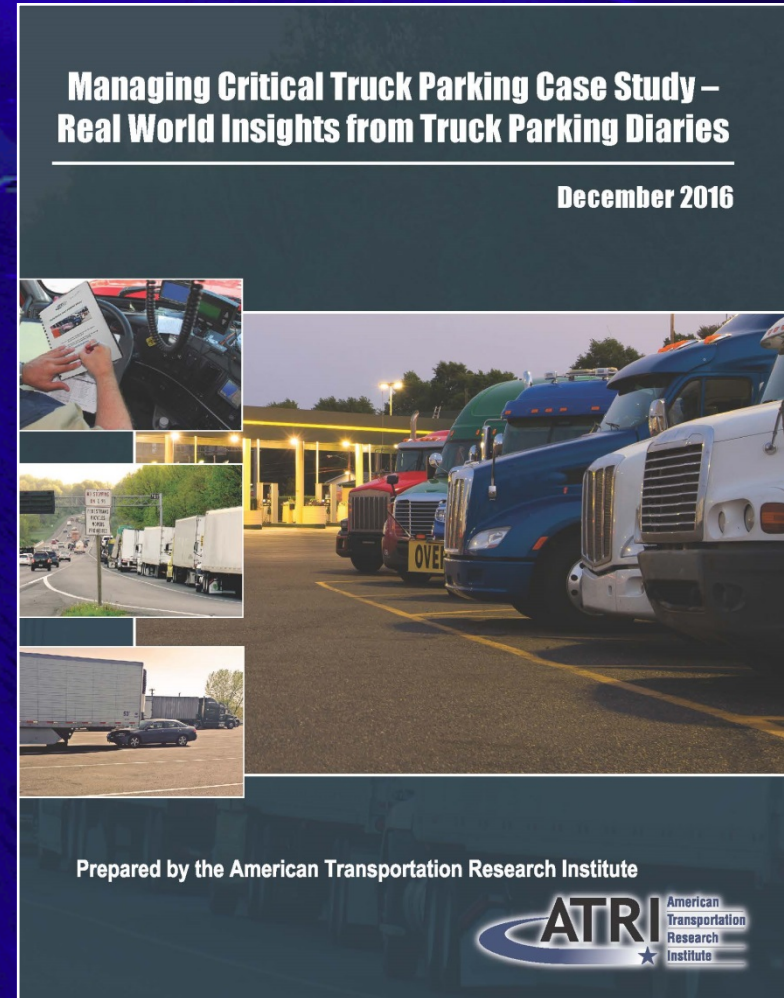
# Truck Parking

- Critical Issues in the Trucking Industry Survey shows truck parking growing steadily from number 8 in 2012 to number 4 in 2016.
- Ranked number 3 by drivers.



# Truck Parking Diary Report

- **Truck Parking Diaries**
- **Drivers kept 14 days of parking activity**
- **Includes when, where, how long to find a spot, how many spots occupied by non-CMV, lost productivity, etc**
- **148 completed diaries were returned between June and September 2016**
  - ◆ **2,035 days of truck parking activity**
  - ◆ **4,763 unique stops**



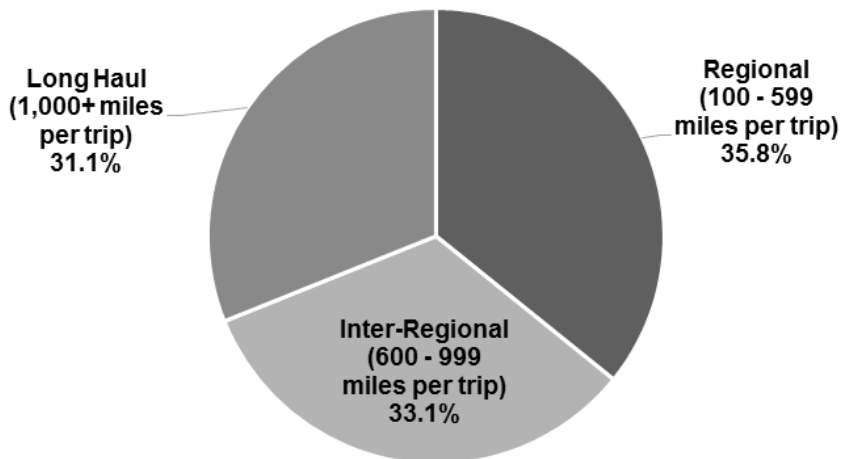


# Diary Participants

- **72.3 percent Employee Drivers**
- **25.7 percent Independent Contractors**
- **2.0 percent Owner Operators**

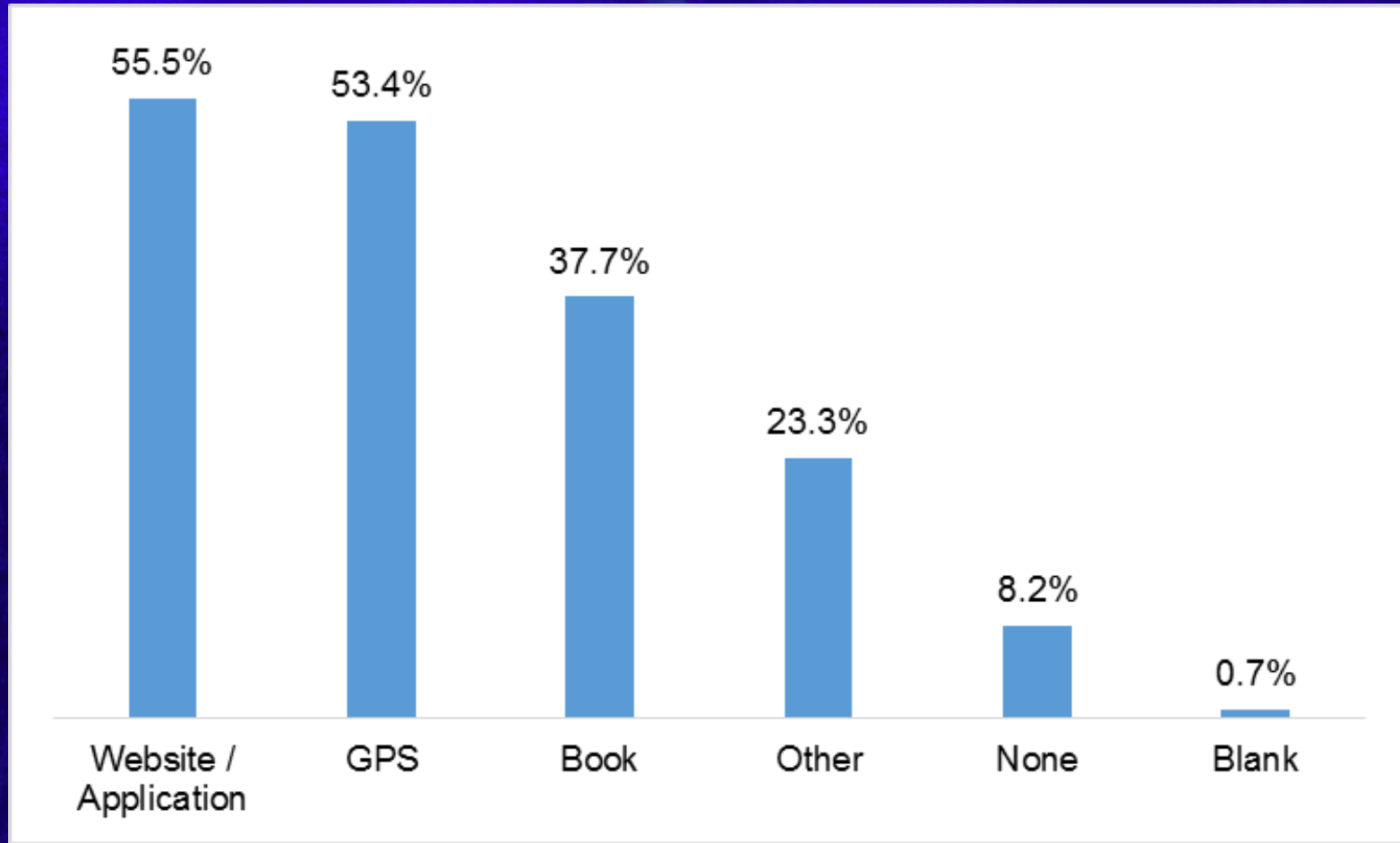
Industry Sector	Percent of Diary Participants
Truckload	56.1%
Less-than-Truckload	4.1%
Flatbed	20.9%
Tanker	4.1%
Intermodal Drayage	0.7%
Other	5.4%
Express / Parcel Service	0.0%
No Response	8.8%

# Truck Parking Diaries Key Findings



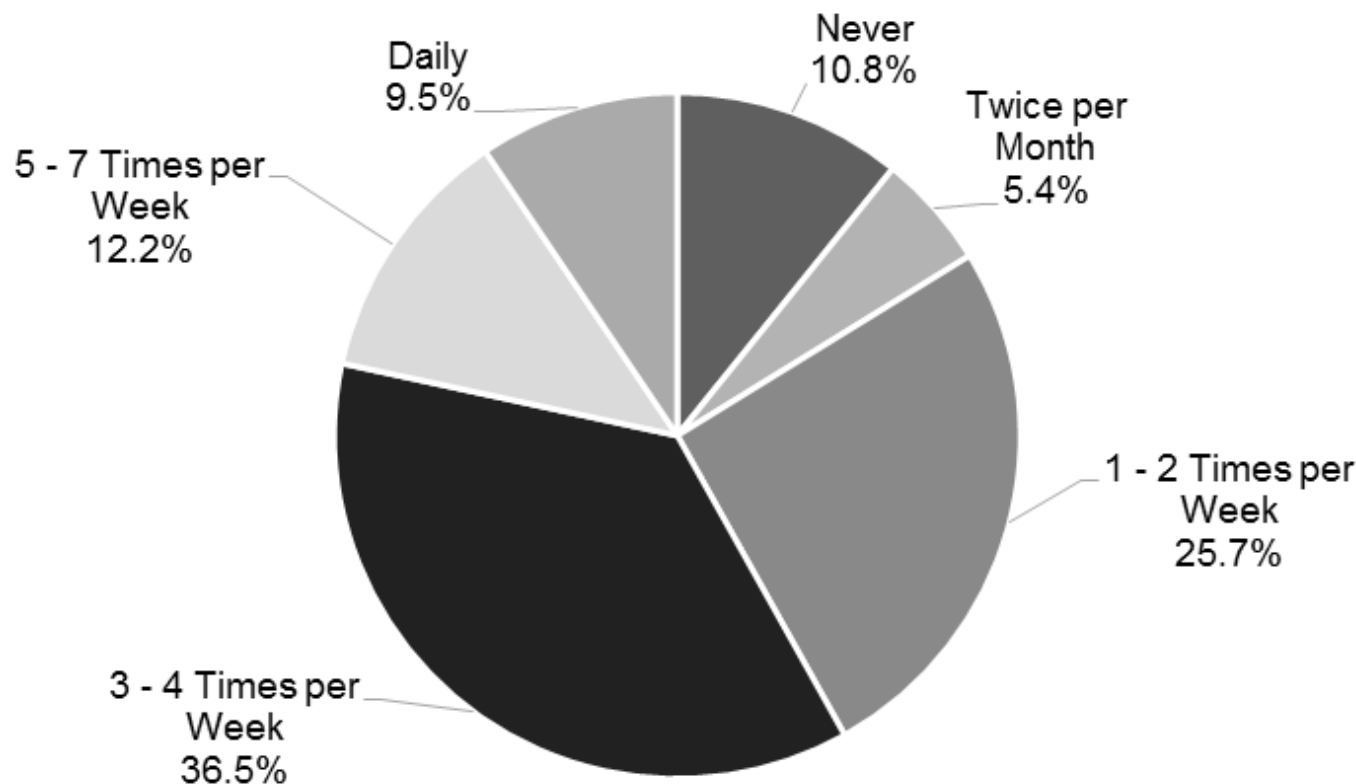
Region	Average Percent of Operating Miles	Percent of Diary Stops
Midwest	35.5%	34.5%
Northeast	18.6%	11.3%
Southeast	28.9%	32.7%
Southwest	19.2%	9.3%
West Coast	18.7%	10.4%
Canada	4.3%	1.7%

# Tools Used to Find Parking



Only 4% of drivers do no advance planning

# Frequency of Unauthorized/Undesignated Parking

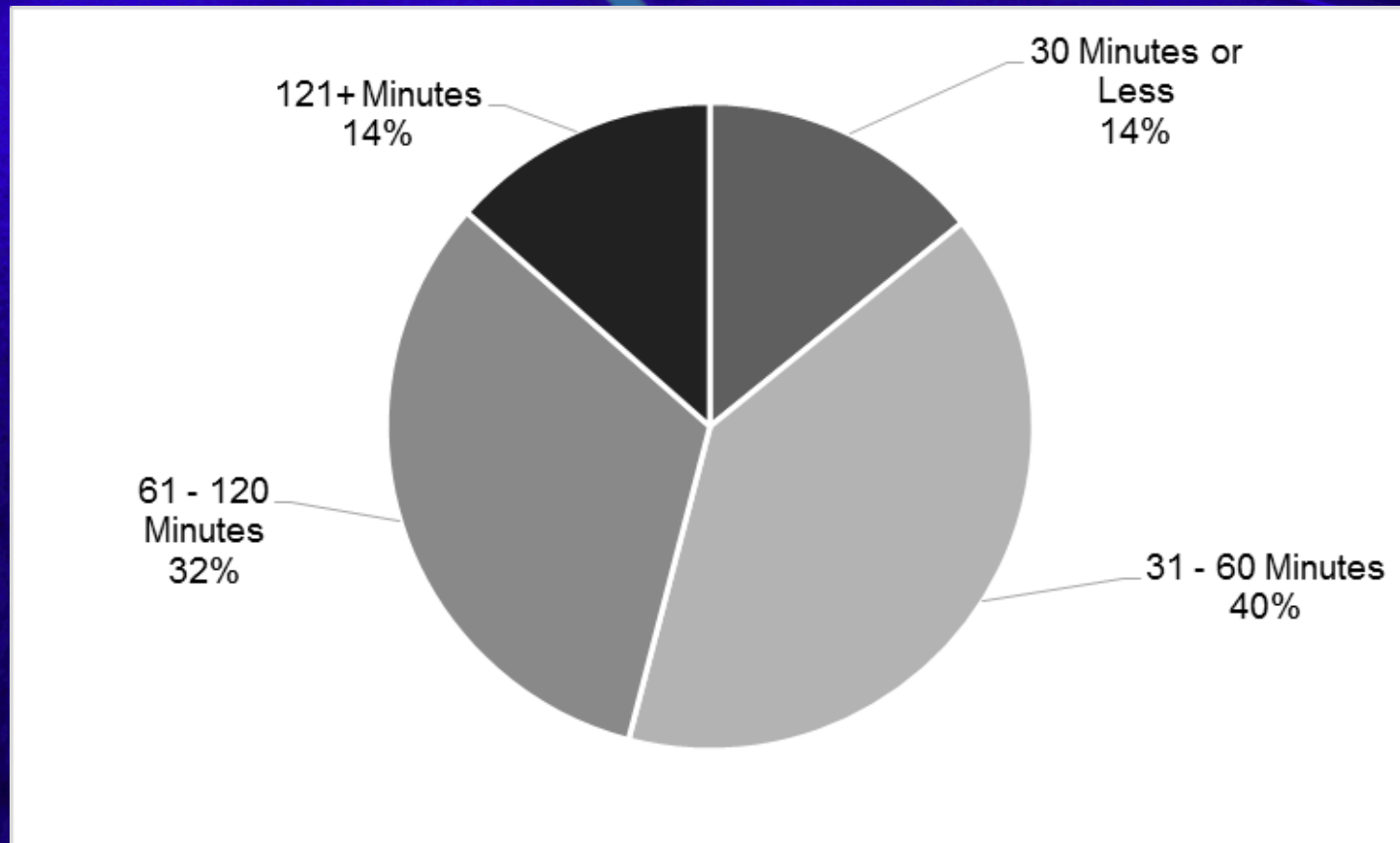


# Unauthorized/Undesignated Parking

Time	Midnight to 4:59 AM	5:00 AM to 8:59 AM	9:00 AM to 11:59 AM	Noon to 3:59 PM	4:00 PM to 6:59 PM	7:00 PM to 11:59 PM
	<b>35.04%</b>	<b>22.41%</b>	<b>16.62%</b>	<b>15.48%</b>	<b>18.97%</b>	<b>28.22%</b>

\*Jason's Law Report surveyed 387 private truck stop operators, of whom 48% reported parking demand exceeding supply between Midnight and 4:59 AM.

# Average Remaining Drive Time



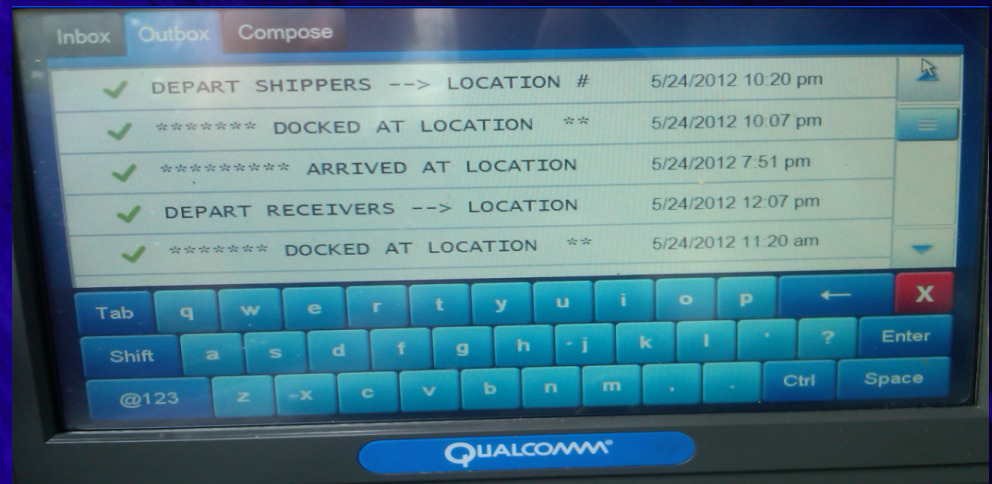
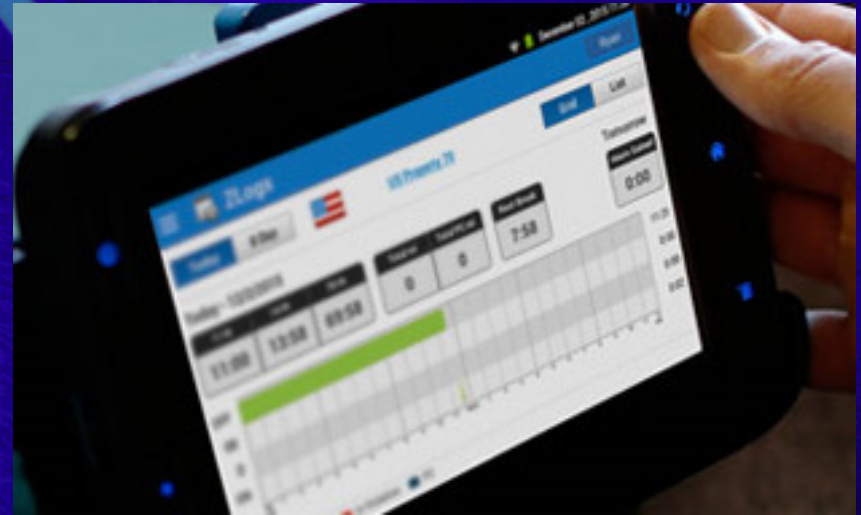
**Average = 56 minutes/day**

**Opportunity Cost = \$4,600 annually**

# 49 CFR Part 395 HOS Regulations

- **Question 28: Does the emergency conditions exception apply to a driver who planned on arriving at a specific rest area to complete his 11 hours driving and found the rest area full, forcing the driver to continue past the ten hours driving looking for another safe parking area?**
- **Guidance:**
- No. The emergency conditions exception does not apply to the driver. It is general knowledge that rest areas have become increasingly crowded for commercial motor vehicle parking, thus, it is incumbent on drivers to look for a parking spot before the last few minutes of a 11 hour driving period. The driver should provide the reason for exceeding the 11 hours driving in the Remarks section of the record of duty status.

# Electronic Logging Device





# The Real Reason for Location Selection

Important Factor	Percent of Responses
Proximity to Route / Destination	96.5%
Restroom / Showers	79.8%
Expected Parking Availability	75.5%
Width of Parking Space / Ease of Access	31.9%
Restaurant	30.5%
Security	20.3%
Company Policy / Loyalty Program	18.1%
Internet	6.9%
Laundry	4.0%
Maintenance / Service Center	3.7%
Weather Conditions	3.6%

Location Type	Percent
Private Truck Stop	71.4%
Public Rest Area	9.6%
Customer	8.9%
Business	4.3%
Terminal	4.1%

# Exceptions to Private Truck Stops?

- *“I am reluctant to eat by myself in a sit down restaurant. The women I know would rather think ahead, go grocery shopping and prepare a healthy, quiet meal in the truck while watching our favorite program on DVD. We would also rather use our own porta-potty instead of public facilities, especially at night. So since we have everything we need in our micro homes, all we need is a legal parking space. Rest areas also have more RV dumps and are much quieter at night.”*

***Female Truckload Driver from Missouri***

# Truck Parking Diary Report: Key Findings

*"I've been kicked out of truck stops due to overcrowding. I've been kicked out of rest areas wondering if I will have a safe haven for my 10-hour break. It is the most stressful aspect of the job."*

**Flatbed Driver from  
Alabama**

*"The first thing states do when they cut budgets is to close rest areas. So we cannot depend on them to be open when we need them. Some states are 'no trucks allowed' in some rest areas or restricted to 2 hrs. And if we use them, we risk having our break interrupted by a DOT inspection."*

**Truckload Driver from  
Oklahoma**

# 67 PA Code Chapter 443

- § 443.2. Prohibited activities or actions. The following specified activities or actions are prohibited in roadside rest areas:
  - (1) Failure to comply with posted traffic signs and markings.
  - (2) Parking or standing of a vehicle for more than 2 hours in a single 24-hour period or in excess of the posted time limit. Vehicles unattended for more than 24 hours will be considered abandoned and subject to removal and storage at the sole cost and expense of the owner.
  - (3) Driving or parking of a vehicle in areas other than those provided.

# Truck Parking Diary Report: Key Findings

*"Parking is a huge problem. I start early and end my day early to help my chances of finding a parking space. The routes I travel are mostly out west, and parking is not as hard to find, with the exception of urban areas. I have found that east of the Mississippi River, you need to be parked way before you are out of drive time, or you won't find a legal place to park."*

**Truckload Driver from Wisconsin**



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