

# PORT MASTER PLAN 2050

## A Road Map for the Next 30 Years



October 21, 2019

NJTPA FIC Meeting

# The Port Master Plan Is and Is Not...



## **A Framework**

Provides a framework of potential options and a guide for future land use decisions

## **Near and Long**

Provides near and long-term strategies to ensure delivery of needed infrastructure

## **Consistent**

Ensures future development is consistent with goals and policies

## **Holistic**

Helps integrate Port facilities into a transportation network



## **Commercial**

Facilitates commerce and business growth

## **Economic**

Supports long-term economic benefits to the region, including jobs and tax revenue

## **Change-Based**

Considers changes in shipping, population, environmental impacts and technological advances

## **Flexible**

Adapts to changes in the baseline assumptions and provides flexibility over time



## ***Definitive***

Not absolute in its recommendations

## ***Final***

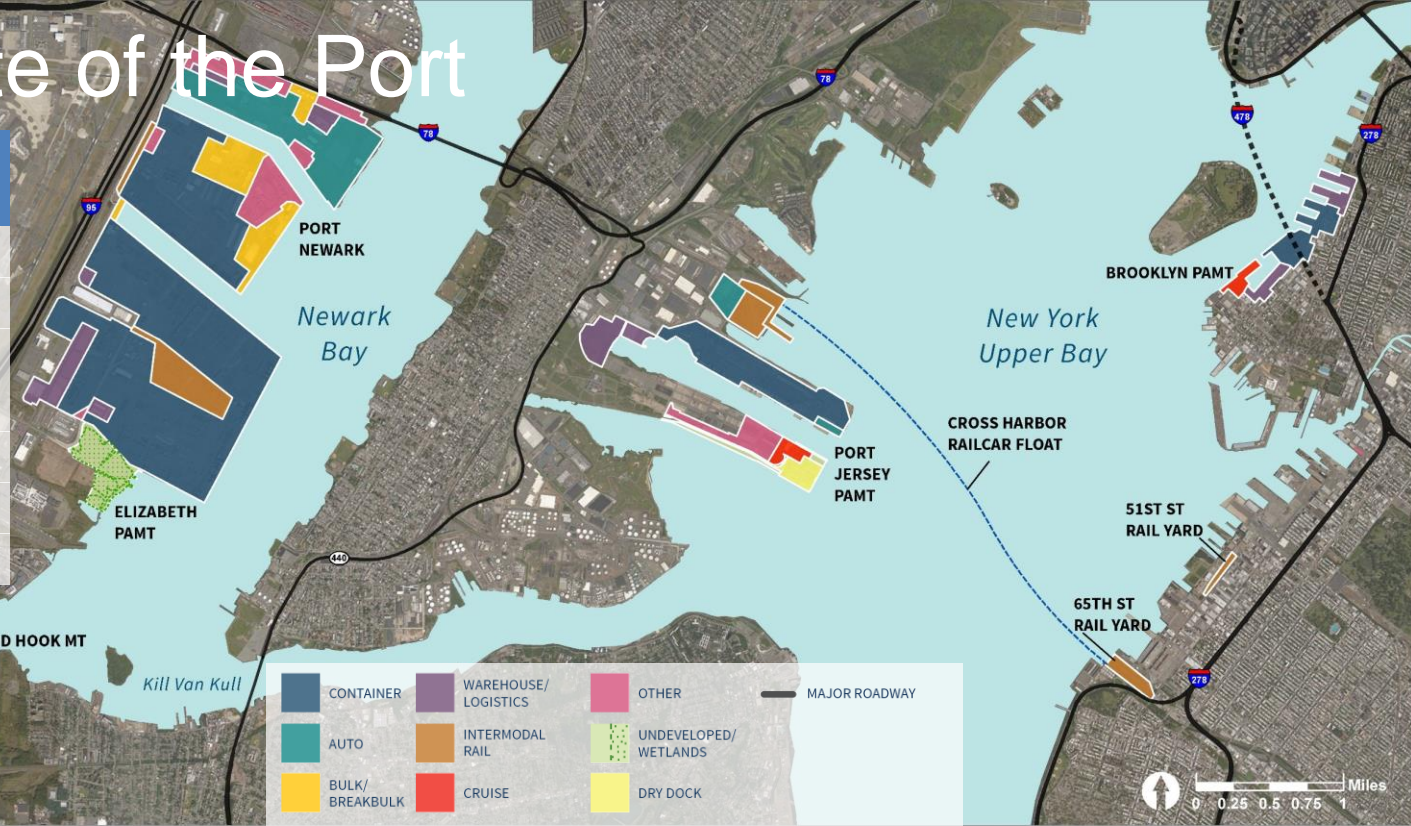
Not the final plan for all development over the next 30 years

**...and implementation will require design, permits, outreach and authorization**

# Current State of the Port

## Key Statistics: Port Department Facilities

<b>Acres</b>	<b>3,000+</b>
Port Newark	846
Elizabeth PAMT	1,124
Howland Hook MT	279
Port Jersey PAMT	419
Brooklyn PAMT	151
<b>Tenants</b>	<b>~60</b>



## Cargo Volumes (2018)

**7.2 million**  
Containers (TEU)

**645,760**  
By Rail (Lifts)

**3.6 million**  
Dry Bulk (Tons)

**573,035**  
Autos (Units)

**856,271**  
Cruise (Passengers)

# PONYNJ Benefits



## LOCATION

- Located in the middle of the largest consumer markets in one of the most affluent parts of the world
- Greatest port reach on the East Coast. 45 million people within 4 hours' drive, 1/3 of the nation's GDP
- Access to 125 million people within a 36-hour drive



## CONNECTIVITY AND SUPPORTING INDUSTRIES

- Direct access to major road and rail networks.
- Over 1 billion square feet of warehouses and distribution centers within 50 miles of port.
- More first port of call services than any other East Coast port



## INVESTMENT

- Significant private and public sector investment to support future growth



# Port Master Plan Process



# Port Master Plan 2050 Vision

Create a flexible roadmap to develop a competitive, financially successful port, maximizing regional jobs and economic impacts, and minimizing environmental effects

 Sustainable and Resilient	 An Economic Generator	 A Platform for Partnership	 Shaping Future Growth	 State of the Art
<p>...leading by example, the Port Authority will continue to drive down carbon emissions, minimize noise, congestion and environmental impacts at its facilities and throughout the Port of New York and New Jersey.</p>	<p>...with increased jobs on the Port and in the region, enabling small and large businesses to thrive and providing opportunities for training, job creation and entrepreneurship.</p>	<p>...with communities, customers, operators, shippers, logistics providers, and potential investors all actively involved in decision-making and implementation.</p>	<p>...accommodating the future needs of shippers, rationalizing land uses, consolidating containers, autos, and bulk, and partnering to improve regional rail, road, and off-site facilities.</p>	<p>...with technology, safety and data management at the heart of improved operations.</p>

# Port Master Plan Engagement and Outreach

**45+**

Total Presentations to  
Regional Stakeholders and  
Community Groups

**50+**

Planning Workshops,  
Interviews, and Activities

**400+**

Stakeholders across  
New York & New Jersey

## STAKEHOLDERS INCLUDED

NY & NJ Elected Officials  
Transportation Authorities and  
Planning Agencies  
Commercial Real Estate &  
Property Management Groups  
Technology Leaders  
Academic Institutions  
Environmental Justice Groups  
Host Communities

Current Tenants  
Rail and Terminal Operators  
Federal, State, and Local Agencies  
Harbor Pilots  
Shipping and Labor Management  
Associations  
Labor  
Trucking and Logistics Companies

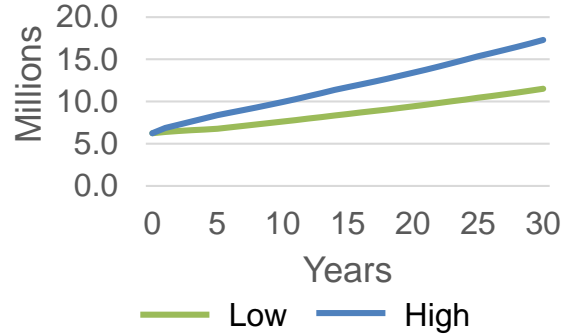
# Containers

## Trends and Emerging Issues

- Container volumes are projected to double or triple by 2050
- Ocean carrier consolidation and alliances
- Vessel size increasing rapidly
- Use of real-time decision making and other technologies



## Market Forecast (TEU)



## Estimated Leasehold Acreage

	Present	2050
Acres	1,649	1,779 – 1,815



## Design Vessel

Capacity	18,000 TEU
Class	ULCV
Length (LOA)	399 m (1,310 ft)
Beam (max)	54 m (177 ft)
Draft	16 m (52 ft)
Air Draft (est.)	59 m (194 ft)



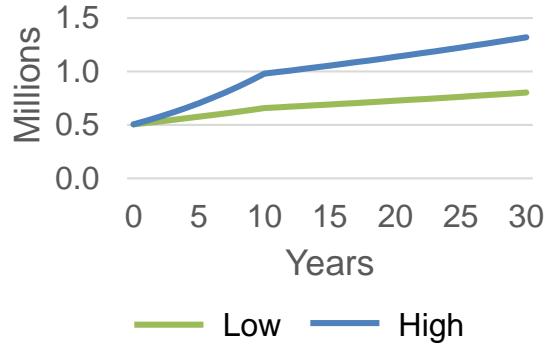
# Autos

## Trends and Emerging Issues

- Auto volumes remain strong
- Mobility as an on-demand service
- Autonomous vehicles
- Electric and hybrid vehicles



## Market Forecast (CEU)



## Estimated Leasehold Acreage

	Present	2050
Acres	291	390



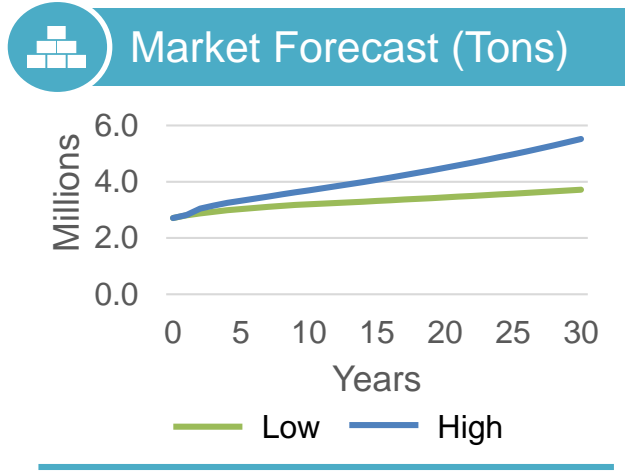
## Design Vessel

Capacity	9,000–10,000 CEU
Class	PCTC
Length (LOA)	265 m (869 ft)
Beam (max)	42 m (138 ft)
Draft	13 m (43 ft)
Air Draft (est.)	52 m (171 ft)

# Bulk

## Trends and Emerging Issues

- Bulk volumes remain strong
- Offshore wind and other renewable energy sources
- LNG bunkering
- Additive manufacturing (i.e. 3D printing)
- Beneficial use of recycled commodities



### Estimated Leasehold Acreage

	Present	2050
Acres	160	179 – 281



### Design Vessel

Capacity	80,000 DWT
Class	Panamax
Length (LOA)	290 m (950 ft)
Beam (max)	32.3 m (106 ft)
Draft	14.6 m (47.9 ft)
Air Draft (est.)	40 m (132 ft)

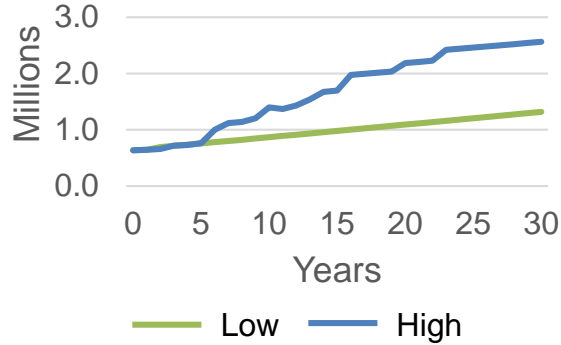
# Cruise

## Trends and Emerging Issues

- Consistent growth in passenger volumes
- Increasing vessel size
- NY/NJ as port of call



## Market Forecast (Pax)



## Estimated Leasehold Acreage

	Present	2050
Acres	No change	No change



## Design Vessel

Capacity	5,400 pax
Class	Oasis Class
Length (LOA)	362 m (1,188 ft)
Beam (max)	65.5 m (215 ft)
Draft	9.1 m (30 ft)
Air Draft (est.)	57 m (187 ft)

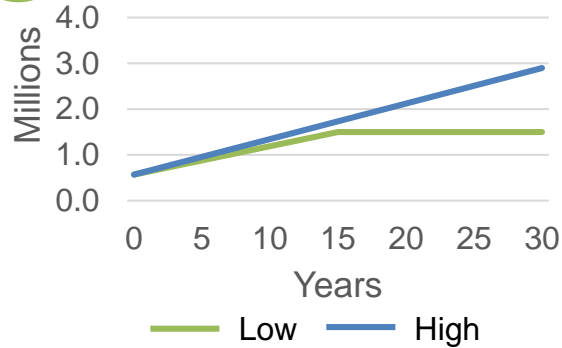
## Intermodal Rail

### Trends and Emerging Issues

- Potential demand for inland port facilities
- Need for additional off-terminal facilities (including storage tracks)
- Discretionary market opportunity



### Market Forecast (Lifts)



### Estimated Leasehold Acreage

	Present	2050
Acres	(included in container leaseholds)	



### Design Vessel

Capacity	Not Applicable
Class	
Length (LOA)	
Beam (max)	
Draft	
Air Draft (est.)	

# Other Emerging Trends and Issues

## Trucking and Logistics

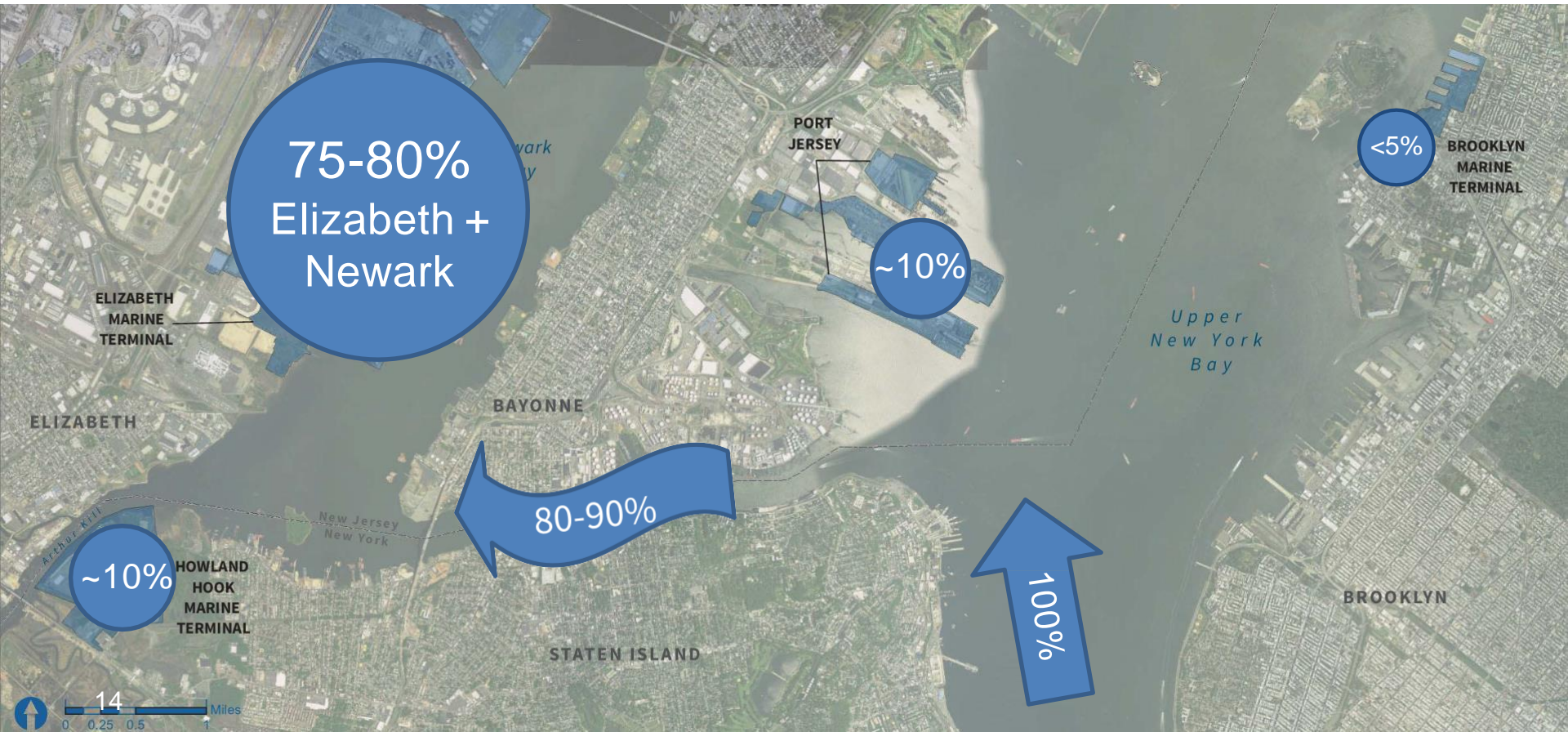
- Truck data capture
- Shared chassis pools and empty container depots
- Autonomous trucking and platooning
- Driver supply
- Intelligent transportation systems (ITS)
- Digitization of information streams



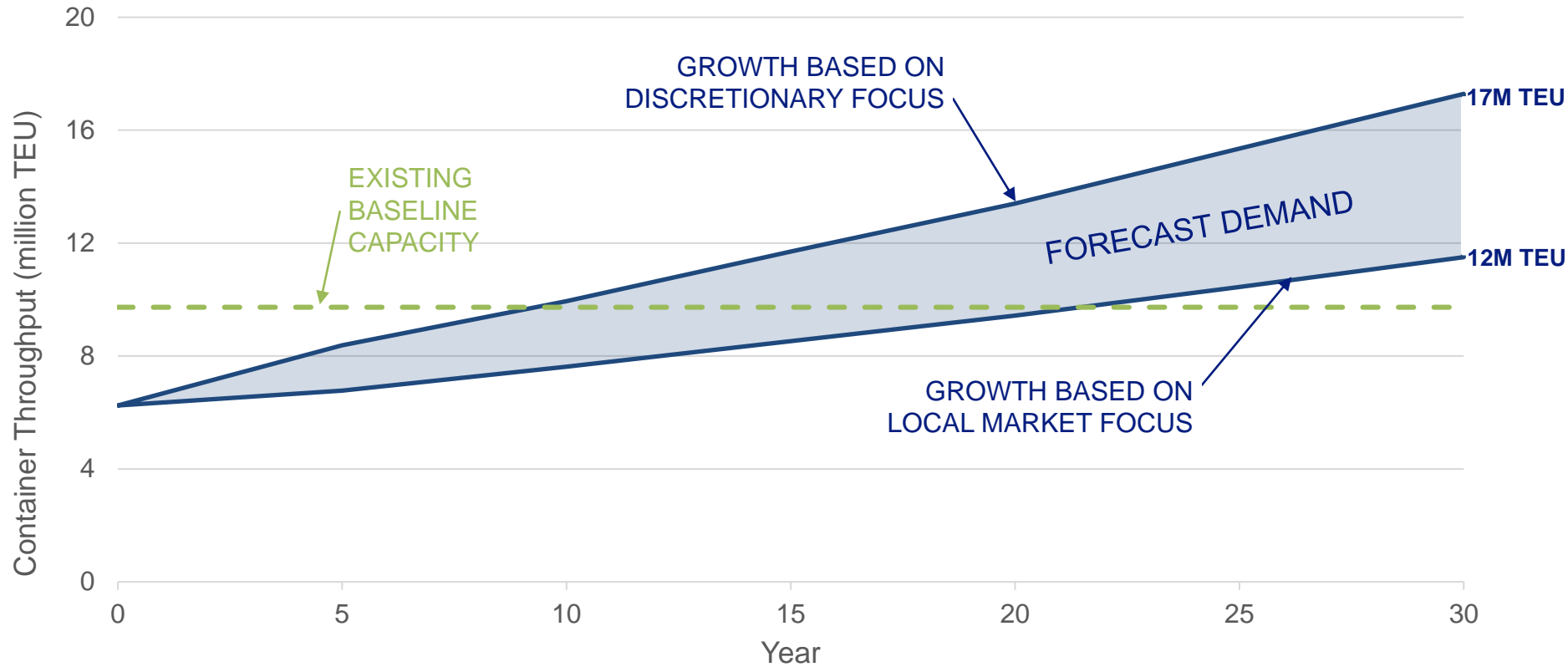
## Infrastructure and Terminals

- Kill Van Kull channel becomes a greater constraint without mitigation
- Modal split has opportunity to increase, including rail and marine highway (barge)
- Tenants want to invest in capacity to support growth

# Current Container Capacity of Port

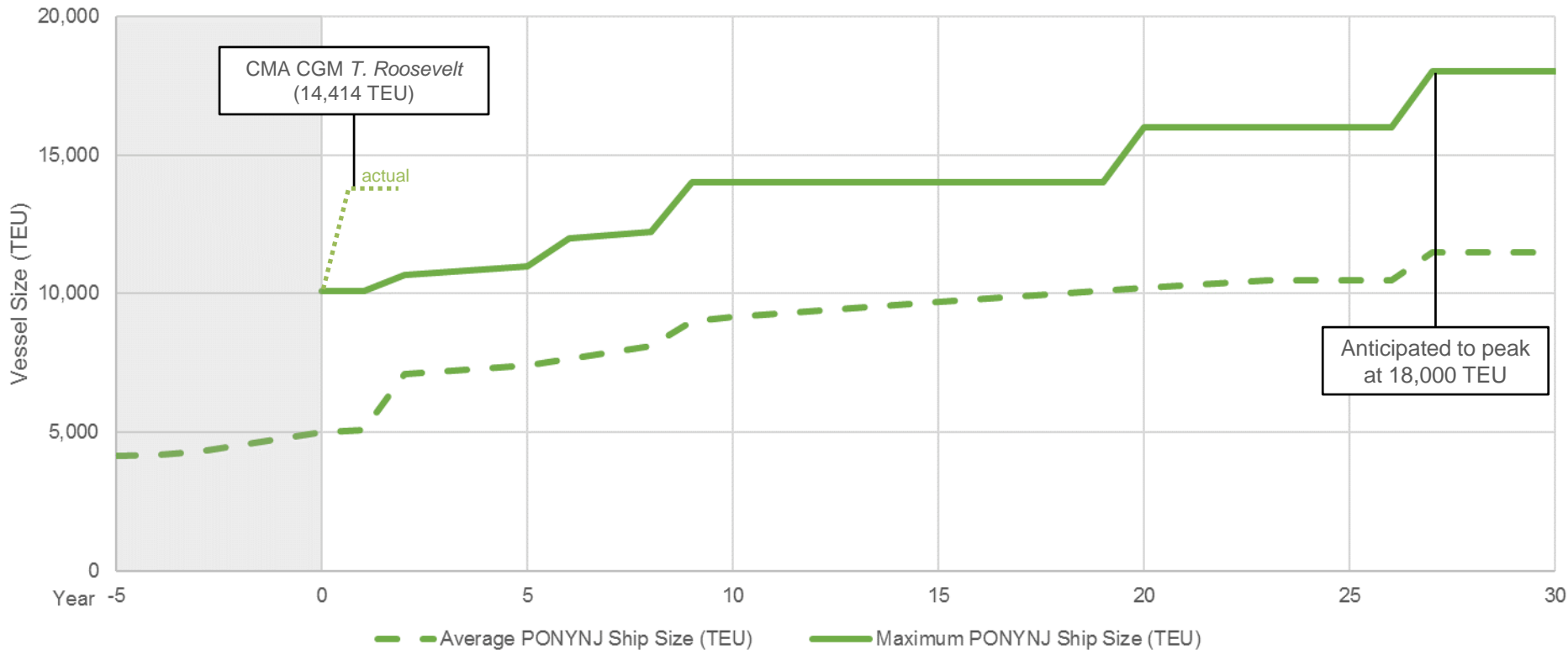


# Current Container Capacity vs. Forecast Demand



# Forecast of PONYNJ Container Fleet Vessel Size

*Ever-Larger Vessels → Long-Term Decrease in Vessel Calls → Less Pollution*





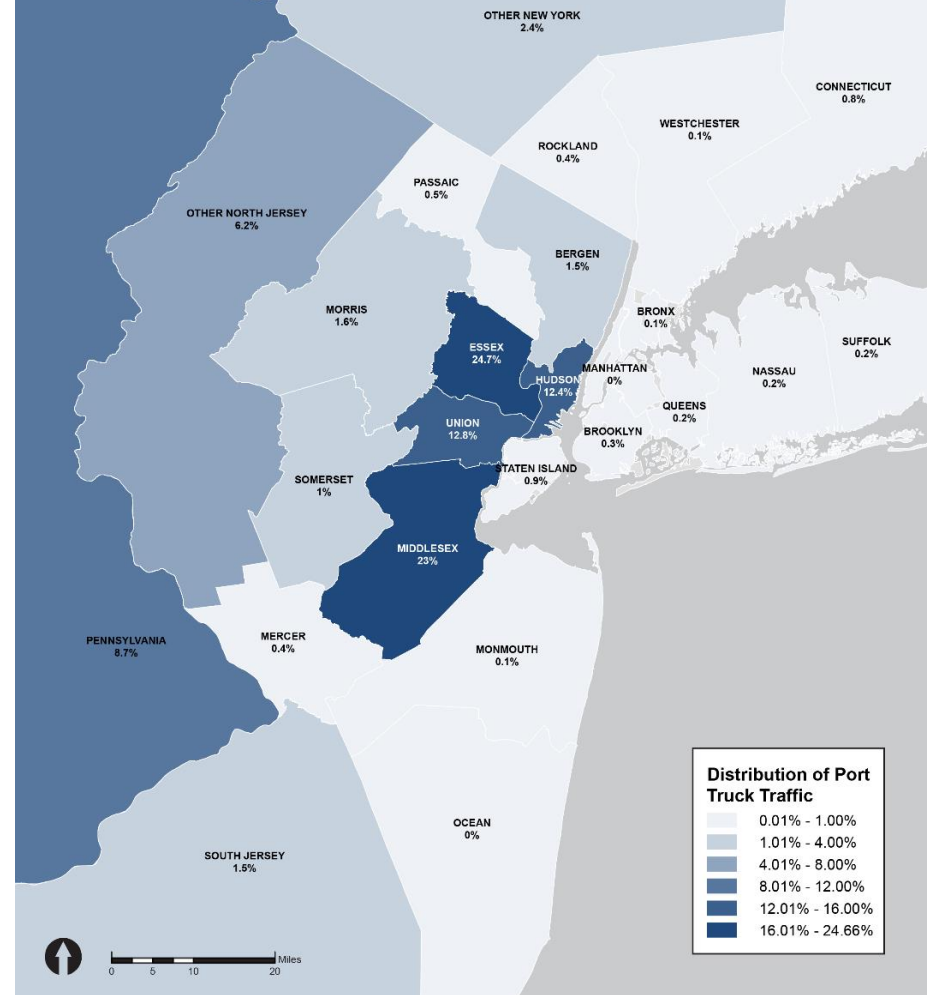
# Port Truck Distribution



Primary destinations (first stop) for Port truck traffic (top 4 counties account for almost 75% of trucks)



Interstate highways, showing major routes for Port trucks and peak traffic congestion



# Port Truck Distribution



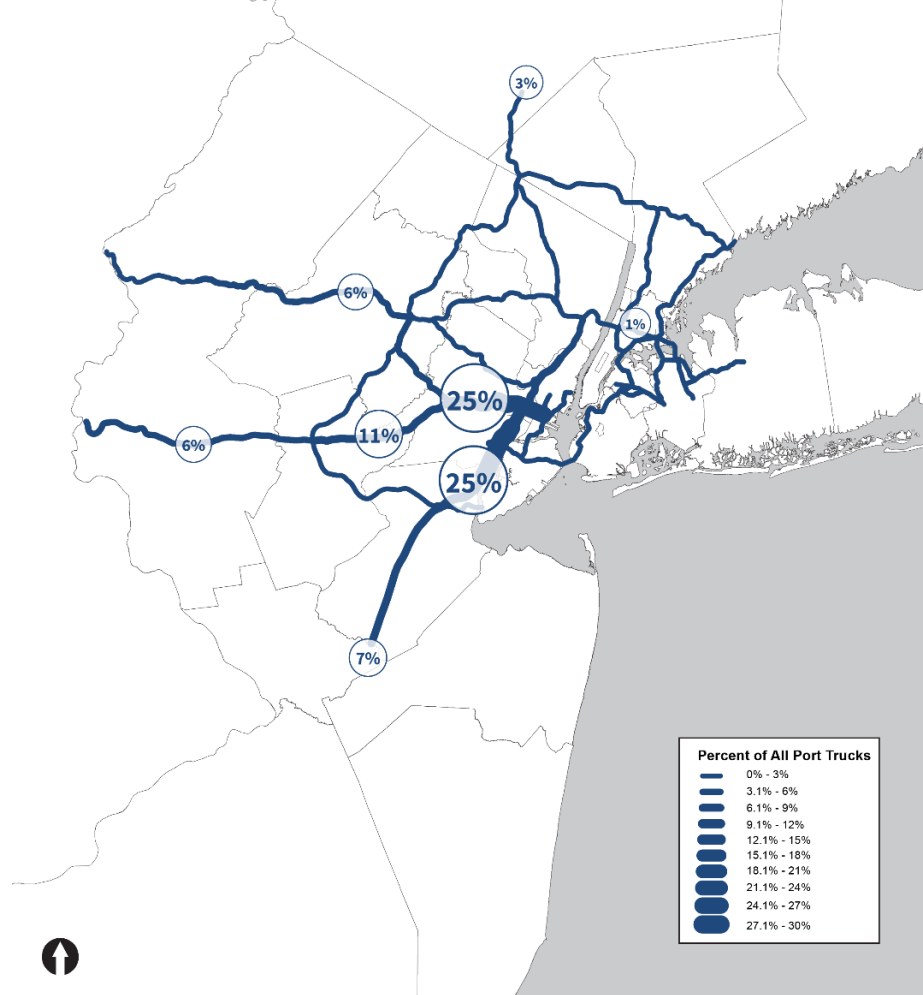
Primary destinations (first stop) for Port truck traffic (top 4 counties account for almost 75% of trucks)



Interstate highways, showing major routes for Port trucks and peak traffic congestion

Key east-west corridors:  
I-78 and I-80 (along with I-280 and NJ 24)

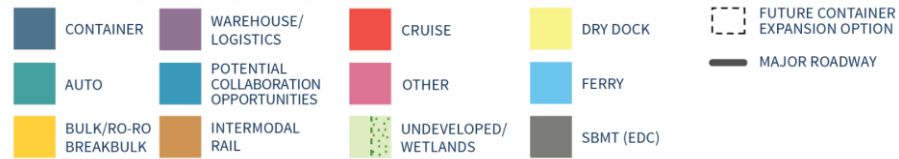
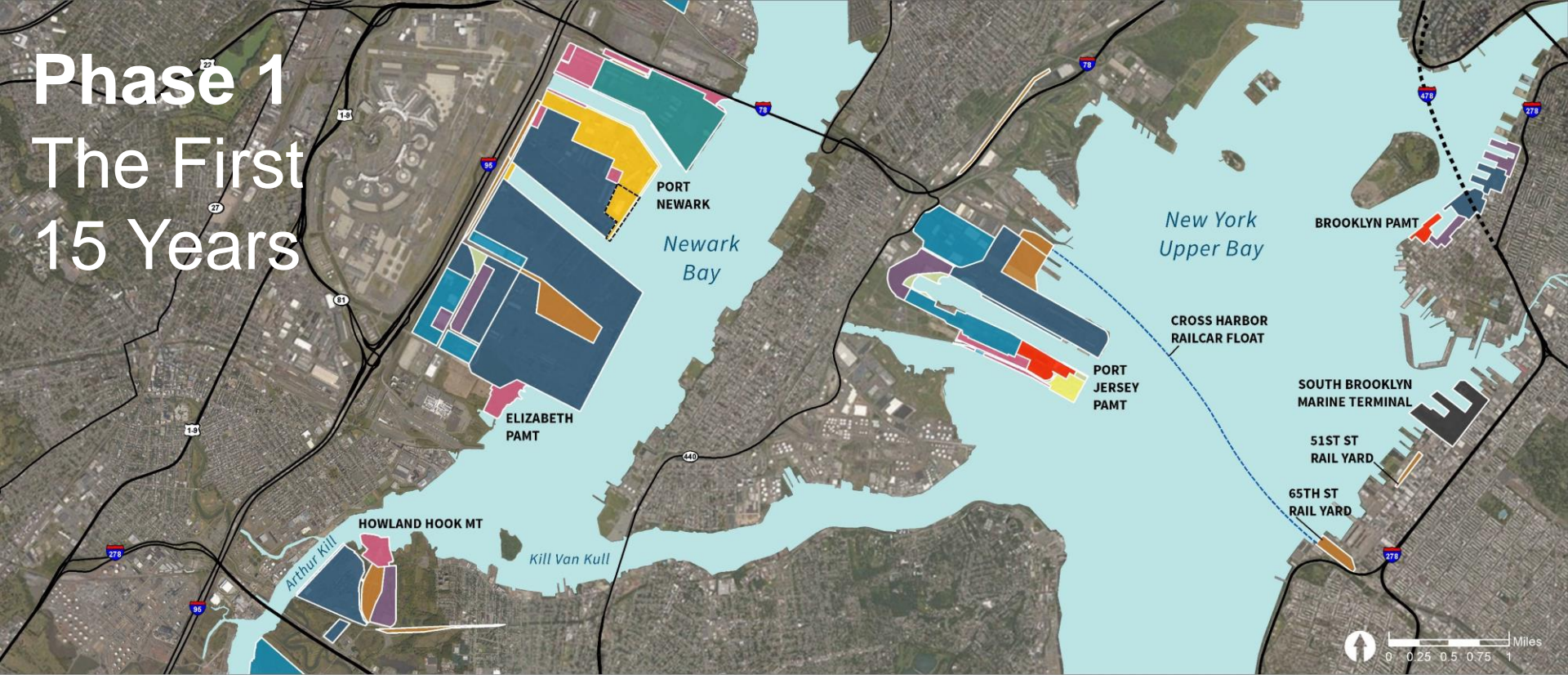
Key north-south corridors:  
I-95, I-287 and NJ 17



# Port Master Plan 2050

# Phase 1

## The First 15 Years



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### Port-Wide

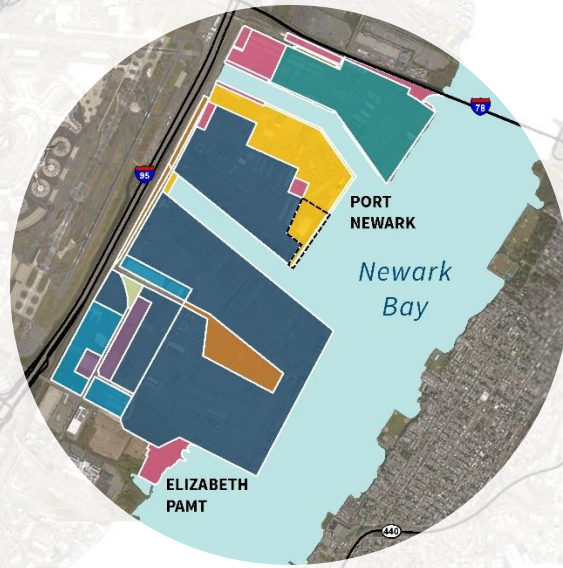
#### GOALS

- Support growth of existing tenants
- Allow PANYNJ to meet sustainability/resiliency goals
- Lay the foundation for future investments

#### ACTIONS

- Continue to set green goals and policies aimed at driving down port-related impacts
- Establish working group, planning forum and policies for inclusion in projects, processes and leases
- Scope NYNJ waterways capacity study project, South Brooklyn studies, intermodal initiatives
- Establish consistent stakeholder outreach procedure
- Develop scope of work for Port Ivory and Port Jersey South (former MOTBY) development projects
- Conduct detailed future capacity analysis of New York and New Jersey waterways
- Collaboratively plan for the future – expansion options at Newark/Elizabeth and/or Port Jersey
- Increase intermodal (discretionary) rail cargo volume (planning marketing)

# Phase 1 Facilities



## PORT NEWARK AND ELIZABETH PAMT

- Focus investment on road- and rail-enabling projects
- Implement alternate power source program over time
- Seek to work with Cities of Elizabeth and Newark to envision greater public access

# Phase 1: Port Newark/Elizabeth PAMT

## IMPLEMENT

An alternate power source program converting to low-emissions operations and equipment

## DEVELOP

A site-wide communications and electrical platform that is forward thinking and resilient

## IMPLEMENT

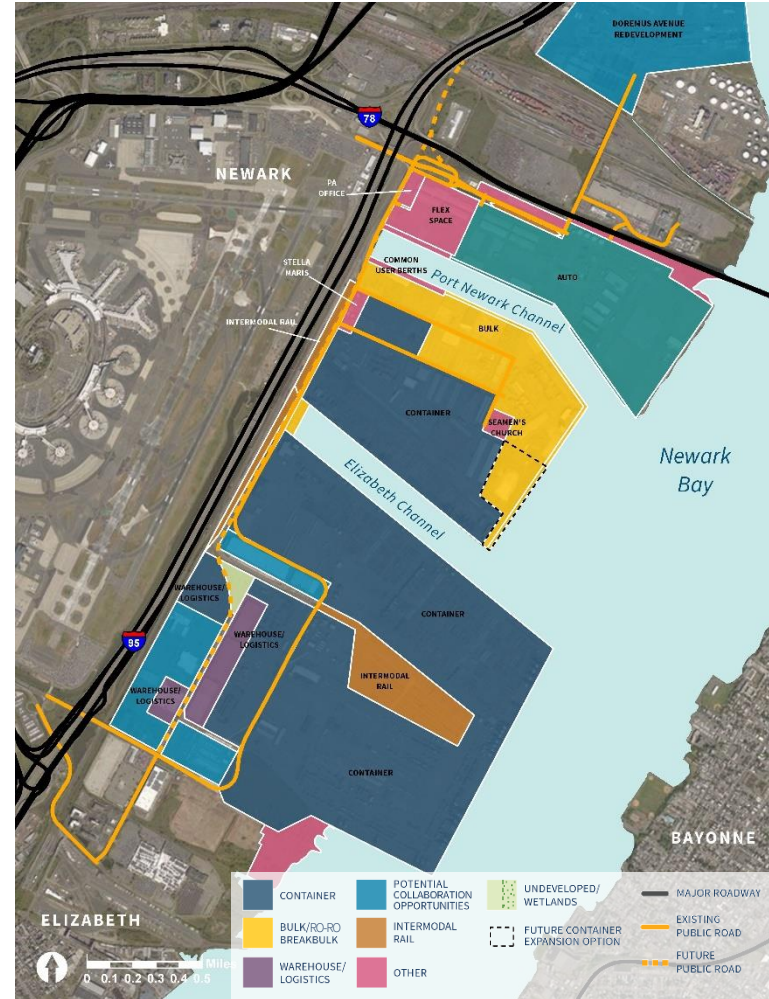
Roadside improvement projects including Port Street realignment, data capture utilizing E-Z Pass or GPS reader technology and chassis and empty container storage location studies

## IMPROVE

Connectivity with I-95 and I-78

## INCREASE

Intermodal rail volume to ensure ExpressRail facilities are operating efficiently and increase container on barge usage intra-harbor and regionally



# Next Steps: Port Newark & Elizabeth PAMT

## PROJECT

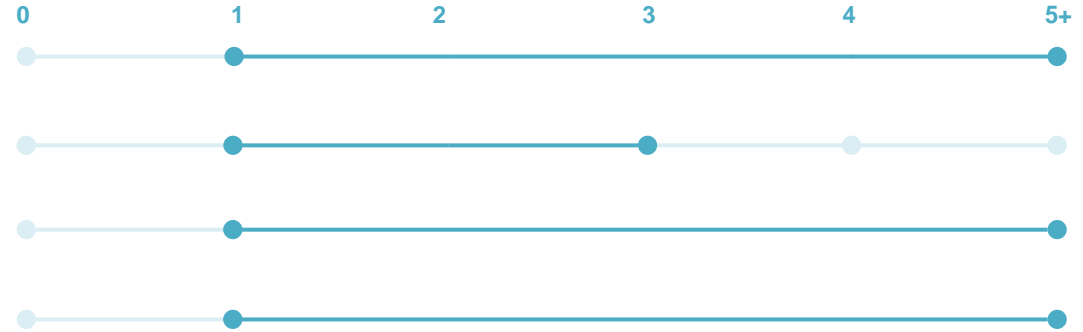
**01** | Improve circulation along common transportation spine and local port streets

**02** | Establish upgraded power and communications network (study phase, implementation to follow)

**03** | Establish community access & education programs

**04** | Continue move to low emission operations

## TIMELINE (YEARS)

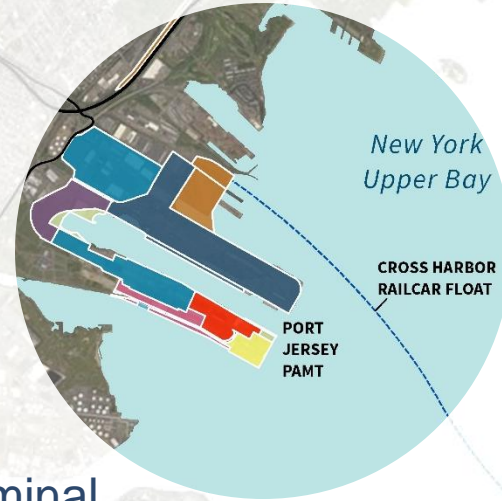




# Phase 1 Facilities

## PORT JERSEY PAMT

- Continue to support establishment of ferry terminal
- Investigate container expansion alternatives



# Phase 1: Port Jersey PAMT

## COMPLETION

Of the 14A interchange and enhanced separation of port and public vehicles

## SUPPORT

Progressive expansion that could eventually lead to an expanded ICTF Greenville Yard network that provides high-efficiency (i.e. longer working track) on-dock rail capability

## INVESTIGATE

Expansion alternatives for future additional container capacity north of the existing facility

## ACQUIRE

Land if needed to enable the envisaged plan and seek potential partnering for development that will improve circulation and ease congestion



# Phase 1: Port Jersey PAMT

## DEVELOP

A coordinated distribution and warehousing hub in conjunction with adjacent property owners along Port Jersey South (former MOTBY)

## CONTINUE

To support the establishment of a ferry terminal

## ENHANCE

Provisions for a future second cruise berth



# Next Steps: Port Jersey

## PROJECT

01 | Establish ferry terminal service

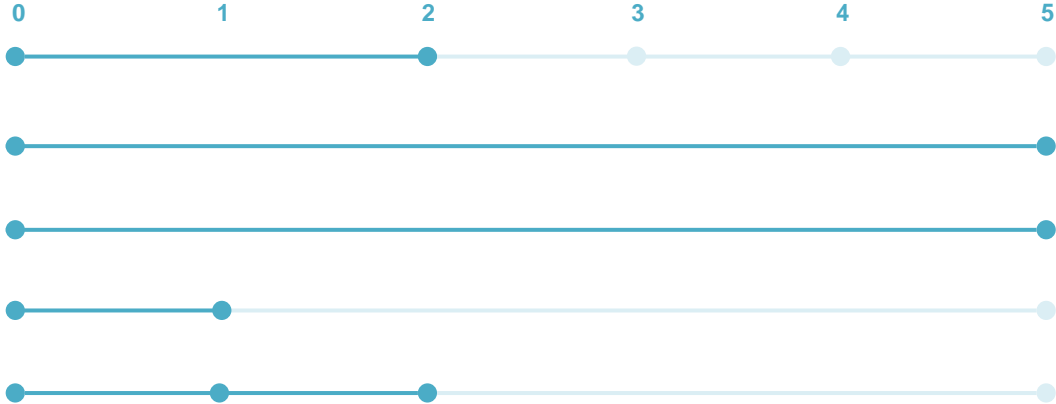
02 | Strategic land acquisition

03 | Assist development of Port Jersey South

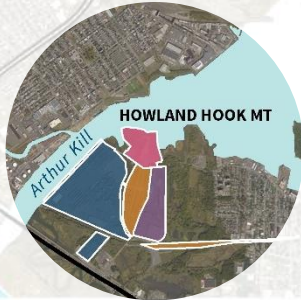
04 | Expand GCT Bayonne

05 | Plan for future capacity

## TIMELINE (YEARS)



# Phase 1 Facilities



## HOWLAND HOOK MARINE TERMINAL

- Support enhanced container-handling capacity
- Potential to develop Port Ivory site as a facility for logistics and distribution or to support offshore wind and other renewable energies

# Phase 1: Howland Hook Marine Terminal

## SUPPORT

Enhanced container-handling capability

## LEVERAGE

Logistics and distribution center developments through greater connectivity between the facilities, marine terminal and local road & interstate networks

## DEVELOP

Port Ivory into a logistics facility linked to the existing ExpressRail network with a realigned Western Avenue (Parcel B)

## BROADEN

Potential cargoes and take advantage of emerging opportunities in offshore wind and renewable energy support on Port Ivory (Parcel C)



# Next Steps: Howland Hook

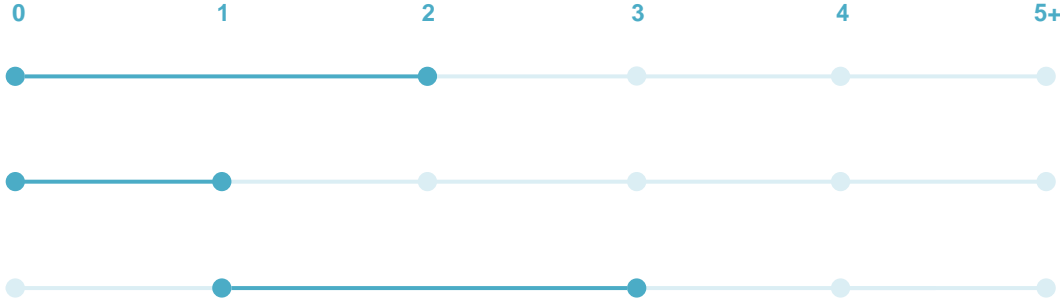
## PROJECT

01 | Support HHMT growth, including review of current Howland Hook Toll Reimbursement Program

02 | Implement coordinated marketing strategy

03 | Develop Port Ivory & realign Western Ave

## TIMELINE (YEARS)



# Phase 1 Facilities

## BROOKLYN PAMT AND WATERFRONT FACILITIES

- Continue evaluating alternatives to maintain and grow East-of-Hudson marine cargo operations
- Partnering and collaboration among numerous public and private stakeholders





# Phase 1: Brooklyn PAMT and Waterfront Facilities

## EVALUATE

Alternatives to maintain and grow East-of-Hudson marine cargo operations

## ACTIONS

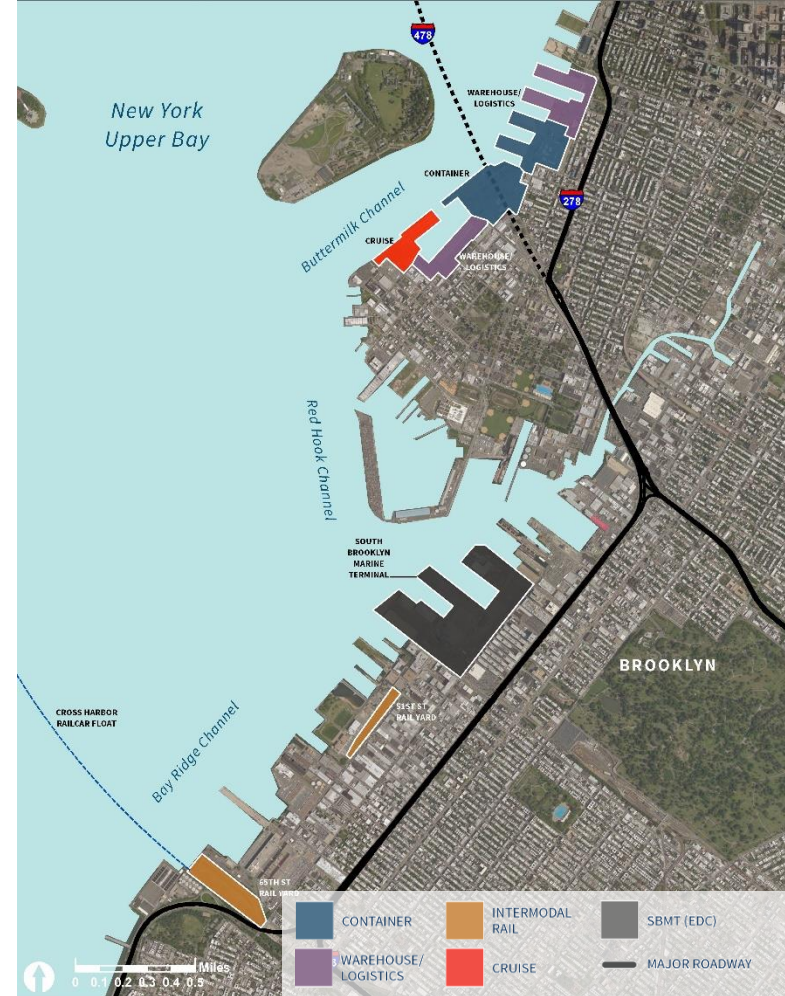
Arising from the study of alternatives are dependent on timing, and partnering/collaboration among public and private stakeholders

## CONTINUATION

Of ongoing Red Hook marine activity at Brooklyn Port Authority Marine Terminal (BPAMT) will necessitate additional investment in infrastructure improvements and exploration of ways to improve capacity to grow

## DEVELOPMENT

At SBMT could enable establishment of a state-of-the-art marine facility with opportunities for expansion to meet the future needs of the East-of-Hudson market



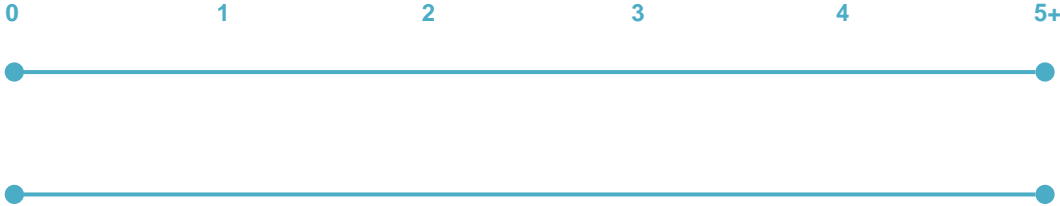
# Next Steps: Brooklyn PAMT

## PROJECT

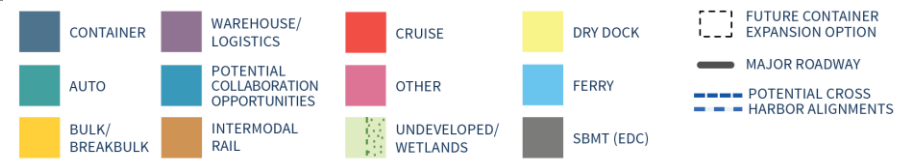
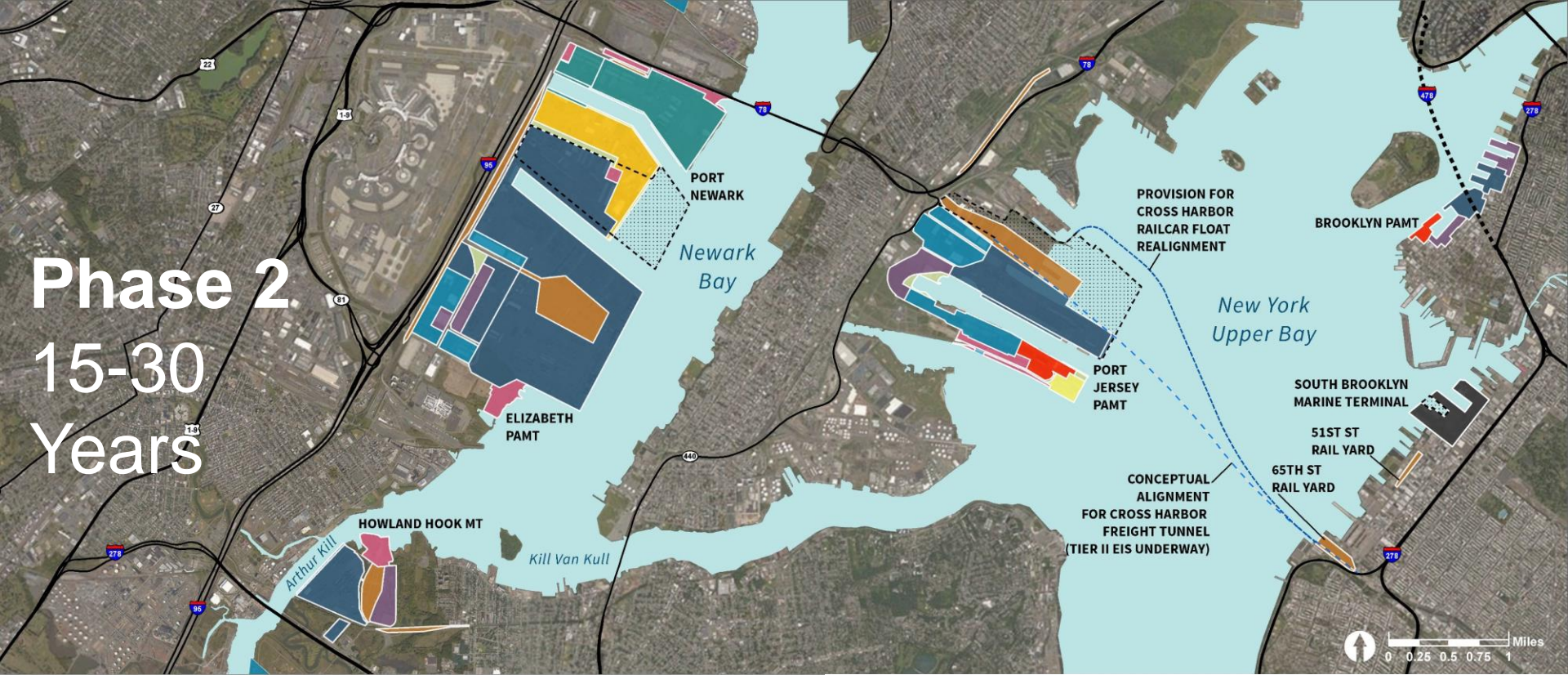
01 | Maintain and grow container and maritime activity on the Brooklyn waterfront

02 | Continue to support and maintain operations at Brooklyn PAMT facilities

## TIMELINE (YEARS)






# Phase 2 15-30 Years



# Port Master Plan 2050 Results

When successfully implemented, the PONYNJ will be a competitive and financially successful port that is environmentally sustainable and provides the maximum benefit for regional jobs and economic impact.

 <b>Sustainable and Resilient</b>	 <b>An Economic Generator</b>	 <b>A Platform for Partnership</b>	 <b>Shaping Future Growth</b>	 <b>State of the Art</b>
<ul style="list-style-type: none"><li>...greenhouse gas emissions reduced by 35% by 2025 and 80% by 2050</li><li>...alternative-fuel vehicles deployed</li><li>...alternative energy sources harnessed</li><li>...new construction includes resiliency measures</li><li>...increasing modal split</li></ul>	<ul style="list-style-type: none"><li>...80,000 new jobs created regionally</li><li>...\$25 billion in incremental economic activity</li><li>...implements 30 major projects and develops unused space</li><li>...workforce development and education opportunities</li></ul>	<ul style="list-style-type: none"><li>...community engagement</li><li>...industry forums and summits</li><li>...public access</li></ul>	<ul style="list-style-type: none"><li>...proactive rather than reactive</li><li>...partnering with state and regional planning organizations</li></ul>	<ul style="list-style-type: none"><li>...leveraging technology developments to:<ul style="list-style-type: none"><li>...improve safety</li><li>...streamline infrastructure operations and maintenance (O&amp;M)</li><li>...increase efficiency across the port and the region</li></ul></li></ul>

# Thank You

## **Beth Rooney**

Deputy Director, Port Department  
berooney@panynj.gov

## **Charlie Bontempo**

Senior Program Manager, Port Department  
cbontempo@panynj.gov