





Delaware State Rail Plan

October 12,2011

DVRPC Freight Committee





Delaware State Rail Plan

- Developed in compliance with Federal regulations
 - FRA's National Rail Plan (2011, ant.)
- Planned public involvement efforts
 - Meetings with MPOs and Sussex County
 - Posting on DTC's website
 - Press release
- Linked with State policies and goals for a multimodal system
 - DTC's LRTP and Business Plan
 - DelDOT's LRTP







Delaware State Rail Plan Development

- Rail Plan Advisory Committee
 - DelDOT
 - DTC
 - Delaware EconomicDevelopment Office(DEDO)
 - Dover/Kent CountyMPO
 - NS
 - WILMAPCO

- Stakeholder Workshop
 - Amtrak
 - City of Wilmington
 - CSX
 - Kent EconomicPartnership
 - MDOT
 - New Castle County
 - Office of State Planning Coordination
 - Sussex County Economic Development Office
 - SEPTA
 - Sussex County



SRP as a Basis for Federal and State Rail Investment in Delaware

- The SRP aims to:
 - Broaden the understanding of rail issues for all stakeholders
 - Define the role of railroads in a multimodal environment
 - Identify infrastructure and other improvements required to improve rail service
 - Provide a framework to implement rail improvement initiatives in Delaware
 - Support DelDOT and other agencies in obtaining federal and other funding

State Rail Plan Areas of Emphasis

- National strategic goals
 - Safety
 - State of good repair
 - Economic competitiveness
 - Livable communities
 - Environmental sustainability









Vision, Goals and Objectives

- Realize Delaware's role in regional, national, global transportation network
- Emphasize important role of rail transportation in State's economy
- Identify the challenges in funding infrastructure needed to maintain and enhance the system





SRP Goals

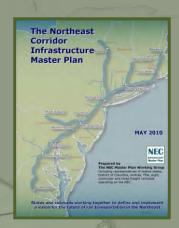
- 1. Provide mechanisms for continuous safety and security on all modes.
- 2. Preserve the existing network and provide additional capacity to maintain and improve Delaware's important link in regional and national rail networks.
- 3. Seamlessly integrate passenger and freight rail with other modes, including transit, ports and aviation.
- 4. Work with other states and stakeholders to advance improvements in rail transportation through partnerships and innovative funding opportunities.
- 5. Promote the energy efficiency of rail transportation and educate the public, elected officials, and others on the environmental benefits of rail as well as the economic development opportunities it creates.
- 6. Contribute to the decision-making process with local governments and land owners to preserve rail corridors and potential station areas for future development.



Delaware's Vision for Passenger Rail

- Allows for more travel options as congestion and travel costs increase
- Provides safe, fast, reliable and frequent rail service that is competitive with other travel modes
- Easily connects to other modes
- Aligns with Amtrak's vision for highspeed rail in the NEC as well as the NEC Infrastructure Master Plan







Delaware's Vision for Freight Rail

- Better serves shippers' needs for efficient delivery of goods
- Provides shippers with connections to other modes, e.g., highway and water for market access, modal economics and service



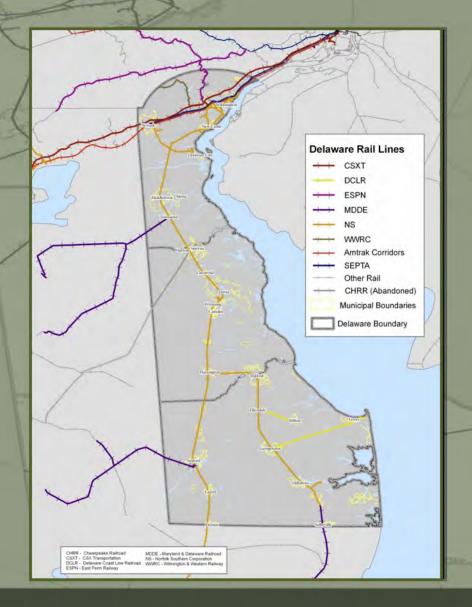
 Encourages rail-related industries to support economic development





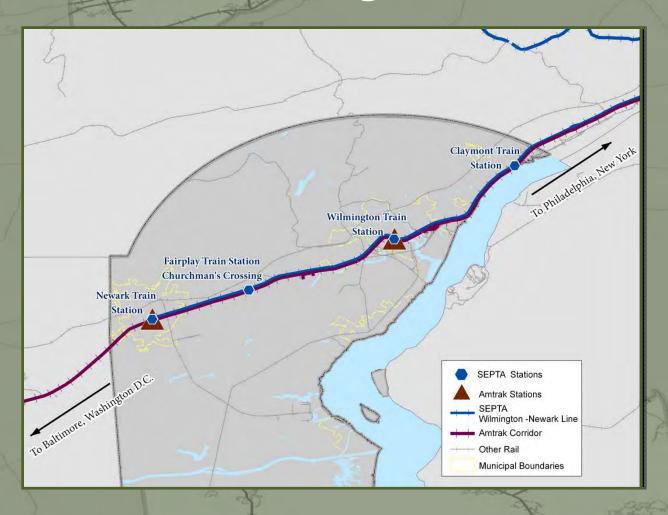


Delaware's Current Rail Transportation Network





Delaware's Passenger Rail Network





Delaware's NS Rail Network and Facilities





Delaware's Freight Facilities

- Port of Wilmington
- Norfolk Southern
 - Edgemoor Yard
 - Newark Yard
 - Harrington Yard
 - Jello Yard
- CSX
 - Wilsmere Yard
 - TransFlo Facility







Delaware's Shortline Railroads

Wilmington & Western Railroad



East Penn Railroad

Maryland & Delaware Railroad 🚺



Delaware Coastline Railroad







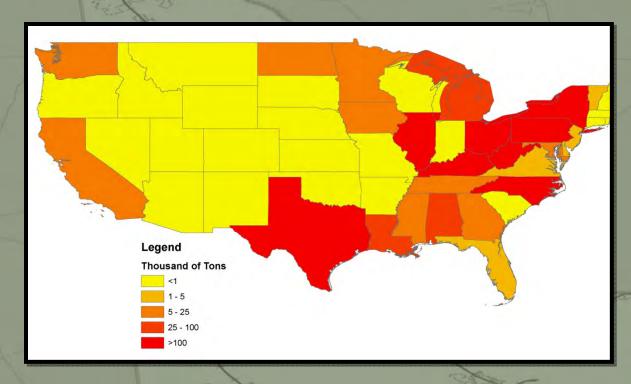


Freight Activity in Delaware

- Truck carries overwhelming majority of freight shipped to and from Delaware
- Largest dollar value rail transported commodities terminating in Delaware include basic chemicals, motorized vehicles, and coal
- Inbound rail freight projected to experience 2.5% average annual growth
- Rail shipments from Delaware expected to decline, with slight growth in intermodal shipments

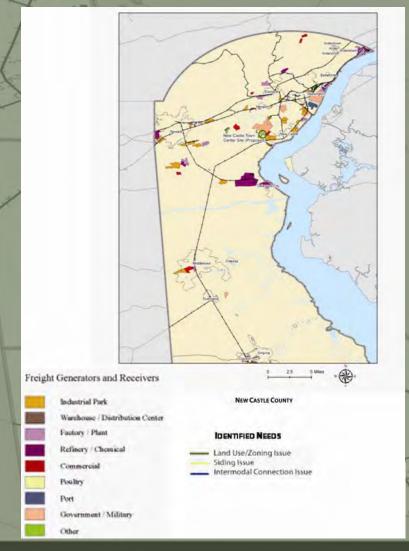
Origins of Rail Freight with Destination in Delaware

Source, Freight Analysis Framework (2007)

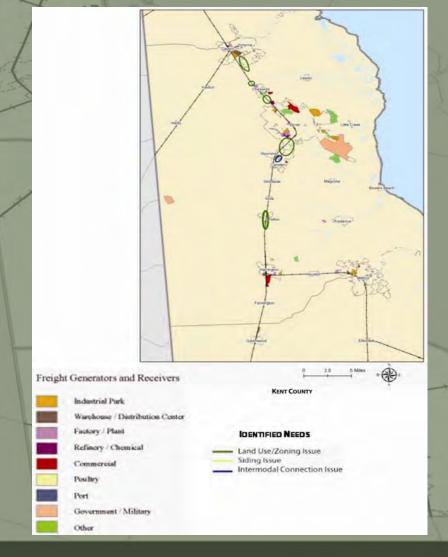




New Castle County Freight Generators and Receivers



Kent County Freight Generators and Receivers



Sussex County Freight Generators and Receivers



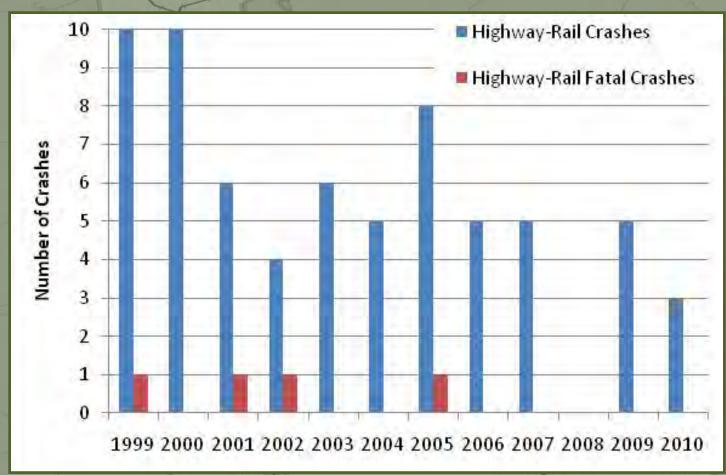
Rail Safety and Security

- 379 highway rail crossings in Delaware
- •Multiple DelDOT entities responsible for safety including DTC, Traffic Engineering, Quality Section, Planning, Subdivisions, Signing and Striping, Pavement Management, Project Development

Crossing Device	Number
Crossings with Gates and Flashers	61
Crossings with Flashers and/or Traffic Signal	166
Passive Crossings (signs and markings only)	49
Total At-Grade Crossings	276
Total Grade-Separated Crossings	103
Total Crossings	379



Delaware's Highway-Rail Crashes





Institutional Arrangements

 Rail Planning Responsibilities and Arrangements

DelDOT	DTC
 Implementation and monitoring of grade-crossing-control devices (Traffic) Develop and implement the State Rail Plan (Planning) Evaluate strategic and long-range rail planning (Planning) Ensure federal safety guidelines on rail freight operations are followed (Traffic) Support Delaware's economic goals through strategic enhancement of the rail freight system (Planning) Administer grade crossing protection program (Traffic) 	 Monitor regional rail freight service and safety issues Passenger rail studies and projects Management of commuter rail operations Administer State-owned shortline Coordinate and monitor regional rail freight service issues Promote rail safety Inspect State-owned rail lines Manage federal grants rail infrastructure and service planning projects



Organizational Structure of the State's Rail Involvement

- With establishment of DTC in 1995, most rail functions followed staff expertise
- SRP recommends re-examining assignment of activities between DelDOT and DTC
- Identify opportunities for better efficiency and effectiveness



Rail Funding Options

 Passenger rail capital investments receive limited funding through FTA Section 5309 program; no dedicated source for freight rail

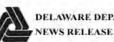
 State rail funding typically accomplished through funding specific projects on a limited, strategic basis

Partnerships with the private sector are of great interest

Federal Support for Rail Investments

- ARRA funding
 - Wilmington Station
- HSIPR funding
 - Downstate Rail
 - Wilmington Third Track
- TIGER II grant
 - Newark Regional Transportation Center





DELAWARE DEPARTMENT OF TRANSPORTATION NEWS RELEASE

DelDOT Public Relations / 800-652-5600 or 302-760-2080 / dot-public-relations/d-state de-us / www.deldot.gov

October 18, 2010

Delaware Awarded \$2.25 million in TIGER II Transportation Funds

Grant Will Target Options for the Newark Rail Station

Newark — The United States Department of Transportation (USDOT) has announced the award of \$2.25 million in planning grant funds to address transportation needs surrounding the redevelopment of the former Chrysler assembly plant in Newark. A consortium of state, academic and private agencies joined together to apply for funding under the Transportation Investment Generating Economic Recovery (TIGER) II grant program.



Ongoing Capital Investment Programs

Program Name	FY 2011 Funding ('000)
Rail crossing safety	\$1,447
Rideability program	\$750
Transportation Enhancements*	\$4,250
Information Technology Initiatives*	\$6,960
Rail preservation	\$300

^{*} Only a small portion is related to rail



Current Capital Investment Projects

Project Name	FY11 Cost ('000)	Total Cost ('000)
Newark Train Station	\$1,008*	\$95,000
NEC Improvements Yard to Ragan	\$3,375	\$37,600
Orange Street Bridge Rehabilitation	\$60	\$7,400

Source: WILMAPCO TIP FY2012-2015



Other Projects Underway

- SEPTA Commuter Rail Cars
- Wilmington Station
 Rehabilitation Project
- BR 1-651 on Newport
 Road Railroad Crossing at
 Marshalton Road (CSX)
- BR 1-503 over St. Anne's Church Road Railroad Crossing (NS)





Proposed Projects – Freight Rail

TABLE 9-1: PROPOSED FREIGHT PROJECTS

Timing	Project Title	Location	Description	Total Capital Cost (In (Millions)	Fationale	Estimated completion date
Short- term	New Castle Secondary Siding	New Castle County	Storage capacity transferred from NEC to the New Castle Secondary, Reconstruct or rebuild the Tasker siding on New Castle Secondary, Project will also increase capacity on the Newport Industrial Track.	\$0,7	This project will accommodate additional NS stone trains heading Downstate by allowing more traffic flow without impacting local operations.	2015
Short- term	Rail Program Autoport	New Castle County	The project will address capacity improvements for handling railroad cars at Port of Wilmington. Sidings will be constructed on Autoport, Inc. and NS Railway right-of-way to increase capacity from 60 to 90 railcars. New connections to the NS main track will be provided to eliminate the conflict with highway traffic at Terminal Avenue, It is part of a public-private project with NS putting up 70% of the cost and FHWA 30%.	\$3,015	This project represents earmark money going to NS to improve access to the Port of Wilmington Improving access to the Port of Wilmington will enable easier transportation of goods into and out of the Port, which will contribute positively to Delaware's economy. The project is a partnership between the Port and NS. NS has received an FHWA earmark of \$984,900 and is funding the remainder themselves.	2015
Short- term	Raise Edgemoor Yard	New Castle County	Flooding frequently occurs in the yard causing disruption in service. To fix this problem the yard could be raised anywhere from 2 to 6 feet.	\$7.0	This is a short term solution that may not be the most effective because of the steep grade the yard will need to be raised to avoid the flooding. A longer term solution would be to relocate the yard.	2015



Project List – Passenger Rail

TABLE 9-2: PROPOSED PASSENGER RAIL PROJECTS

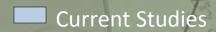
Timing	Project Title	Location	Priority	Description	Total Capital Cost (In Millions)	Local Share	Federal Share	Rationale		Estimated completion date
Short- term	Orange Street Bridge Rehabilitation	New Castle County	Low	Reconstruct bridge near Wilmington Station. Reconstruction of the Orange Street railroad overpass on the Amtrak Northeast Corridor in Wilmington to allow three through tracks making it more efficient to have more commuter trains south of Wilmington.	\$7.4	\$2.4	\$5.0 (Amtrak)	Remove girder perm Track 2 northbound Amtrak recently indic Engineering of a pote	saving operating time. cated through Value	2013
Short- term	CRIP – Third Track Wilmington- Newark, Third Track - Ragan to Brandy	New Castle County	High	Install 1.5 miles of track, turnouts, freight approach and reconfiguring interlockings. Also includes communications and signals work.	\$37.6	\$10.1	\$27.5	Improvements are es commuter frequenci and improve reliabili	es south of Wilmington	Mar. 2014
Long- term	Ruthby Interlocking	New Castle County	Low	Expand rail capacity near S.R. 273	\$2.0	\$0.4	\$1.6	Crossovers between support expanded SE	tracks 1, 2 and 3 to PTA train frequencies.	Long-term
Long- term	High level platforms - Churchmans Crossing	New Castle County	Low	Gauntlet track for freight; high level platforms both sides and parking garage	\$20.0	\$4.0	\$16.0	Expanded capacity a to support expanded Contract with partne parking.		Long-term
Long- term	Claymont Station Improvements	New Castle County	Medium	From Claymont Station Study – construct new high- level platforms at north part of station platform on straight section of track. The Preferred Alternative would add station amenities, improved pedestrian connections, a new station building located close to Myrtle Avenue and a new station entrance with a bus turnaround, passenger drop-off, public plaza, and 12 carpool and carshare parking spaces. Expand Claymont's commuter station in collaboration with TOD. Passenger bridge and structured parking.	\$30.0	\$6.0	\$24.0	in partnership with d and improve passen		Long-term
Long- term	Reconfigure Holly Interlocking	New Castle County	Low	Realign passenger tracks near Claymont.	\$10.0	\$2.0	\$8.0	Increase speed of int separation of freight	ercity and commuters; operations.	Dec. 2020
Long- term	Holly - Landlith Interlockings - Track Upgrade, Reconfiguration, New Fourth Track	New Castle County	Low		TBD	TBD	TBD	Reconfiguration of in flexibility through Wi	terlocking will provide Imington. New track pacity and operations.	Long-term
Long- term	Churchmans Crossing Parking Structure	New Castle County	Medium	Construct new parking garage at commuter rail station in conjunction with private development at the site.	\$7.0			Contract with develor requires structured p		Long-term



Current and Proposed Studies

Table 9-3: Proposed Studies

Timing	Project Title	Description	Total Study Cost (In Millions)	Estimated completion date	
Short-term	Downstate Rail-Delmarva Intercity Rail Study	Investigate demand and start-up needs for 1-2 daily trains to Southern Delaware and Ocean City, Maryland. Study proposed intercity passenger rail corridor in southern Delaware.	\$0.9	2012	
Short-term	Newark Station Design & Environmental Analysis	Enlarge station capacity to accommodate new large development at University of Delaware.	\$3.0	2012	
Short-term	Chesapeake Connector	Design, environmental analysis and preliminary engineering, 3rd track Bacon to Prince (Maryland).	\$2.0	2015	
Short-term	Delaware-Maryland Commuter Rail	Analyze demand costs for commuter rail connecting Newark, Northern Maryland, Baltimore & Washington DC.	\$1.5	2013	
Short-term	Newport Station Area Planning TOD	Transit and land use planning, traffic analysis and modeling, site development design.	\$0.1	2011	
Long-term	Edgemoor Station Area Planning TOD	Transit and land use planning, traffic analysis and modeling, site development design.	\$0.1	Mid-term	
Long-term	Kent County to New Castle County Commuter Rail	Address commuter rail New Castle County to Kent County regardless of the outcome of the Delmarva Intercity study	\$0.9	Long-term	





Other Future Projects of Interest

- Georgetown Siding (NS)
- Relocate Edgemoor Yard (NS)
- Seaford Swing Bridge Rehabilitation (NS)
- Potential needs
 - Positive Train Control (PTC)
 - Double tracking in New Castle County (CSX)







NJ TRANSIT AND NJDOT TEAM

- Developing State Rail Plan
- ▶ NJ TRANSIT contract
- Over the next six months
- Most planning information already exists
- Data must be collected into a cohesive plan by NJ TRANSIT and NJDOT

NEW JERSEY IS DIFFERENT THAN THE OTHER 49 STATES

- NJ TRANSIT is a statewide transit agency
- NJ TRANSIT oversees passenger rail planning
- NJDOT oversees freight rail planning







DELAWARE AND PENNSYLVANIA TRANSIT ROLES

- New Jersey has a single transit provider, like Delaware
- Pennsylvania has several transit agencies
- All three states have a significant relationship with Amtrak and use NEC for transit
- New Jersey has legacy of multiple providers of service to New York, via NEC, Jersey City and Hoboken
- NJ TRANSIT focus has been on integrating networks

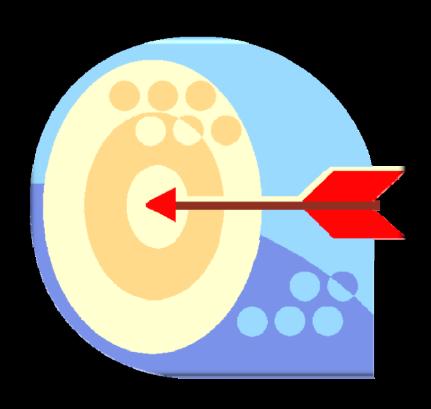


FEDERAL RAILROAD ADMINISTRATION REQUIREMENTS

- Each state must have a State Rail Plan
- ► Needed to be eligible for FRA grants
- Plan will be done in compliance with Passenger Rail Investment and Improvement Act (PRIIA)
- ► FRA template provided as a beginning point

COMPONENTS OF STATE RAIL PLAN

- ► From AASHTO State Rail Planning Best Practices
- Visions, goals and objectives
- ▶ Rail system inventory and assessment
- Planning for the future



VISIONS, GOALS AND OBJECTIVES

- To guide actions, programs, prioritization
- Provide linkages to State
 Transportation Plan

RAIL SYSTEM INVENTORY AND ASSESSMENT

- System inventory
- Performance assessment
- Issues and opportunities
- Identification of needs (current and future)

PLANNING FOR THE FUTURE

- Investments
 - Economic, environmental and community factors
- Implementation plan
 - Organizational, financial elements
 - Integrated with other state transportation plans and priorities



RAIL TRANSIT PROVIDERS

- **► NJ TRANSIT**
- ► SEPTA Trenton area
- ► PATCO Southern New Jersey Philadelphia
- PATH Port Authority of NY and NJ Northern New Jersey to New York

NEW JERSEY STATE RAIL PLAN



NJ TRANSIT SYSTEM

- The nation's largest statewide public transportation system with:
 - 10 commuter rail lines
 - 3 light rail lines
 - 238 bus routes
- Passengers per day
 - Rail 285,000
 - Light Rail 71,000

NEW JERSEY STATE RAIL PLAN

- CSX
- ▶ Norfolk Southern
- Conrail
- NYS&W
- Shortlines

FREIGHT RAIL PROVIDERS









NEW JERSEY STATE RAIL PLAN



NEW JERSEY FREIGHT RAILROADS

- Similar footprint to commuter rail
- Legacy of combined freight/passenger providers

SHARED RAIL CORRIDORS

- > 3/4 of NJ TRANSIT route miles are shared with freight
 - NJ TRANSIT and Conrail use Amtrak's NEC
 - Raritan Valley Line uses Conrail Lehigh Line
 - AC Line on Delair Bridge
 - NS on NJ Transit North Jersey lines
 - Conrail on River Line

STRATEGIC FREIGHT RAIL STUDY

- 2007 Comprehensive Statewide Freight Plan
 - Across modes
 - 50,000 foot view
 - Policy Level
- Recommendation
 - Strategic Freight Rail Study



STRATEGIC FREIGHT RAIL STUDY

- Develop a clear understanding of:
 - Where we are today
 - The challenges and opportunities confronting the freight rail industry
 - Where we need to be tomorrow
 - What are the priority actions needed to get there



STRATEGIC FREIGHT RAIL STUDY

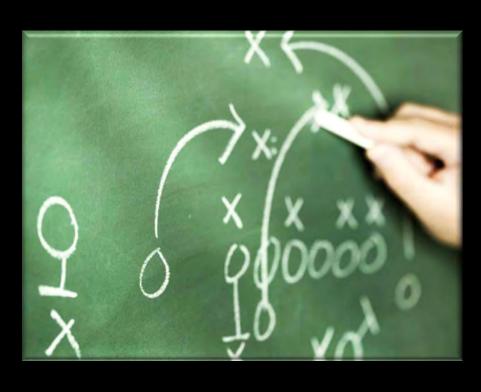
- Infrastructure Inventory
- Commodity Flows
- Survey and prioritization of rail issues
- Solution sets for issues
- Projection of annual capital and maintenance costs



NEW JERSEY STATE RAIL PLAN STATUS

- ► NJDOT and NJ TRANSIT coordination meetings
- ► MPO coordination
- Procure consultant to assist NJDOT/NJ TRANSIT

NEXT STEPS



- Consultant input on scope
- Data collection
- NJDOT and NJT Rail Plan inputs
- Outreach and coordination
- Coordinate Federal reporting requirements
- State Rail Plan

OUTREACH: MPO AND FREIGHT RAILROADS

- Input from stakeholders
 - Metropolitan Planning Organizations
 - Freight railroads
 - Counties and cities
 - Shippers
 - Other MPO associates
 - Suggestions
 - Contact: NJ TRANSIT
 - Alan Kearns <u>akearns@njtransit.com</u>



PennDOT I-95 Corridor Program

Working with the DVRPC's Freight Advisory Committee





Agenda

- Introduce PennDOT's I-95 Corridor Program and Activities
- Introduce Potential Operational Strategies
- Let's Work Together
- Questions/Discussion



I-95 CORRIDOR PROGRAM AND ACTIVITIES





I-95 Corridor Vision Statement

I-95 in Pennsylvania will be a sustainably funded, managed, operated, and maintained Corridor that has reduced fatalities, meets the mobility and economic demands of the growing Region, serves as the economic catalyst for all adjacent communities and businesses, delivers quality of life needs of the neighborhoods, and is the national leader for transportation innovation.





Contract Assignment

- Coordinate project activities for all of I-95
- Part 1 Innovative Strategies
 - 12-18 month effort to recommend innovative, implementable strategies for the life-cycle delivery of the l-95 corridor prioritize cost and time savings
 - Nine discipline teams
- Part 2 Design Management, Design Review, and Public Involvement
 - Design management and environmental compliance for all I-95 projects except those for Sector A1
 - Lead public involvement
- Part 3 Construction Consultation
 - Oversight of construction



Innovative Strategy & Design Teams

Part 1: Innovative Strategy Teams

Design Innovation

Construction Technologies

Design Build and Alternative Delivery

Maintenance and Protection of Traffic

Transportation Operations

Safety

Green House Gas Emission Reduction

Asset Management

Funding and Finance

Part 2: Design Management

Public Involvement

Design Management

Environmental Compliance





Challenges to Reconstruct I-95

- **Timeframe** unacceptable 40-year program
- Funding full funding not identified
- Infrastructure conditions pavement and bridges require major rehabilitation

Design Challenges:

Balance user needs and design modifications in a constrained urban environment

Community issues:

- Improve access, aesthetics, and environment
- Compatibility with proposed development plans

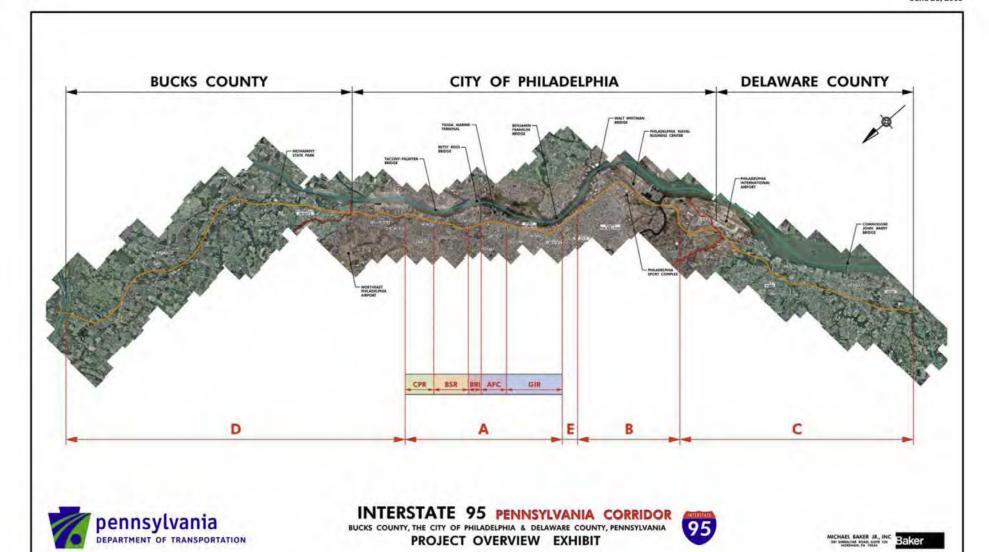




I-95 Corridor

- 51 miles in PA (21 miles in Philadelphia)
 - One of the 5 most congested highways in U.S.
 - Crashes higher than statewide average
 - Diverse neighborhoods
- Sector A Current Projects (~\$2 Billion)
 - □ 5 Sections 16 projects
 - GIR and CPR in construction
 - □ BSR, BRI, and AFC in design
- 5 Sectors A through E (~\$8 Billion+)
 - Future projects
 - 23% on structure

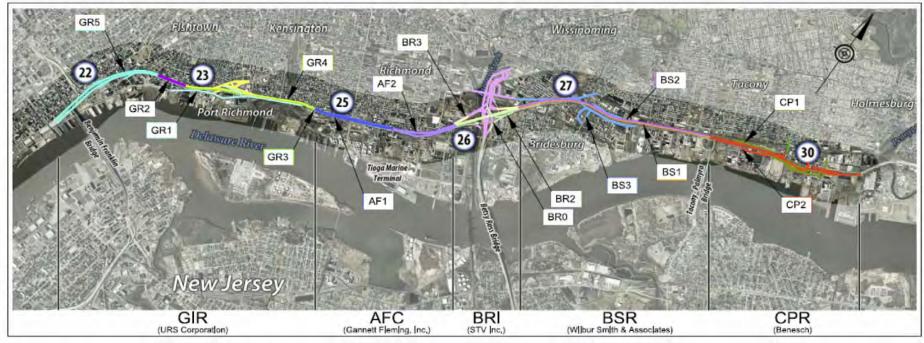


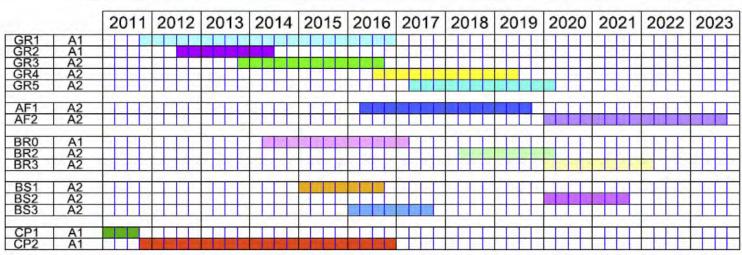






Sector A Reconstruction Schedule



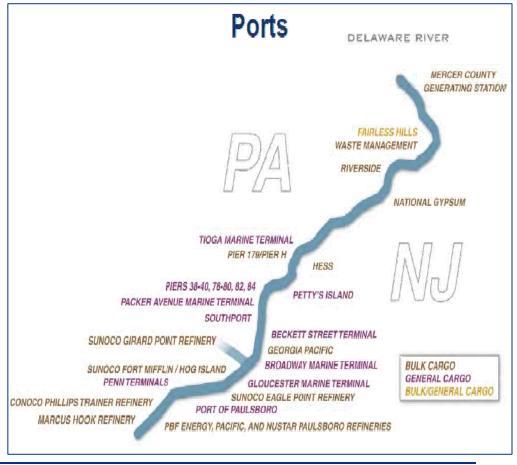


I-95 Program Potential Operational Strategies



Potential Strategies for efficient operation of Port Terminals

- Avoid traditional peak hours
- Provide staging areas for trucks during peaks
- Implement a truck arrival reservation system
- Develop preferred truck routes during construction





Potential Truck Safety Recommendations

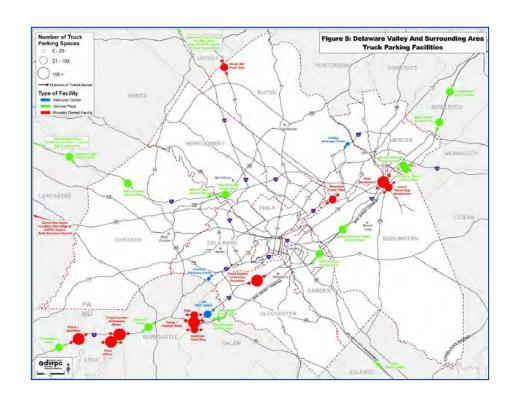
- Over-height warning detection to prevent infrastructure damage where restrictions exist
- Truck rollover warning system at curves, lane shifts, and exit ramps





Potential Operational Strategies

- I-95 Corridor Coalition Truck Parking Plan
 - ☐ Why is parking a safety initiative? Fatigue
 - ☐ Three steps:
 - Dissemination of real-time data on parking availability
 - Expansion of truck parking capacity
 - Augmentation of temp.
 Parking locations into long-term, self-sustaining programs





Real-Time Traffic Data to Drivers

- Allows drivers to plan route accordingly, because they know:
 - ■Where delays exist
 - Where closures are
 - ■Where parking availability exists

Real-Time Traffic Data to Drivers

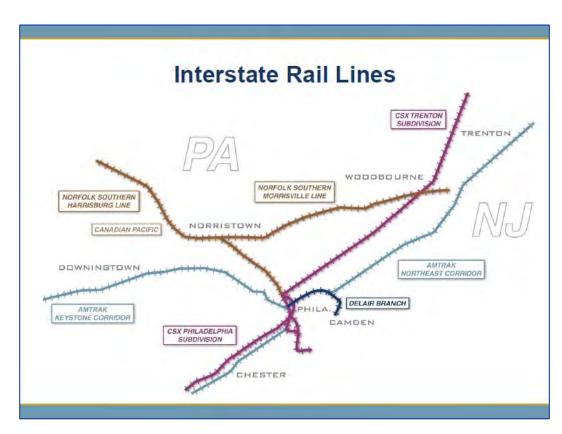
- How can drivers get information:
 - ☐ Global Positioning System (GPS) and cell phones
 - Existing 511 IVR system can be enhanced develop applications for iPhone, Droid, etc.
 - Real-time data kiosks at rest areas
 - PHILLYtraffic.com
 - Use DVRPC RIMIS as a multistate database of traveler information
 - Coordinate NJ and DE statewide travel data to inform long-haul truckers about route choices



Changing Demand on Highway

Remove short-haul truck trips from highway and convert to rail

Portland, OR, for example, removed 20,000 trucks per year from Interstate 5





Changing Demand on Highway

- Short Sea Shipping one barge to transport containers can remove 58 trucks from the roadway network
 - Need to build relationships between landside operators, financiers, and private-sector freight community
 - Outstanding issues, such as types of containers, market, and port pairing, financial viability, regulations, etc.

Changing Demand on Highway

- Short Sea Shipping can:
 - Strengthen and add stability to handling capacity
 - Create alternative commercial corridors away from congested urban centers
 - Increase the reliability and security of the transportation system



I-95 Program Plan Study

- Multi-disciplinary approach to 'plan the corridor' for the future
- Ensure comprehensive plan that addresses entire corridor
- Opportunity to rethink current access to/from I-95, particularly given land use changes and freight destinations
- Incorporate engineering design and construction innovations





DVRPC I-95 Closure Study

- DVRPC is currently conducting an "I-95 Closure Study" in coordination with PennDOT.
- Results will be potentially used to:
 - Optimize reconstruction planning
 - ☐ Minimize the negative effects on the motoring public, affected neighborhoods, and businesses
 - ☐ Provide guidance for multiyear planning, public information, engineering, and implementation of the reconstruction of I-95

Let's Work Together

- Let's Develop a Dialogue
 - Outlet for your Feedback and Input
 - □ Regular line of communication through Ted Dahlberg
- Key Contact Information:
 - □ Stephen Dilts <u>steve.dilts@ch2m.com</u> (908) 797-8317
 - □ Carolyn Washburn <u>carolyn.washburn@ch2m.com</u> (714) 227-5463

