



# Accessibility & Mobility Strategy Synthesis Strategy Profiles

Prepared for the North Jersey  
Transportation Planning Authority

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with support by AECOM and FHI Studio

June 2021  
(updated November 2021)



**NJTPA**

NORTH JERSEY  
TRANSPORTATION  
PLANNING AUTHORITY

# Table of Contents

Public Transit.....	3
Pedestrian, Bike and Micromobility.....	13
Travel Demand Management.....	17
Land Use.....	20
Transportation Systems Management and Operations.....	21
Roadway Capacity/Resiliency .....	25
Freight .....	31
Direct Safety .....	34

# A Menu of Strategies to Support Accessibility and Mobility Needs

As the northern New Jersey region works to enhance accessibility and mobility, it is important for the North Jersey Transportation Planning Authority (NJTPA) and partner agencies to consider what strategies are most effective and appropriate to address identified needs. This document provides a menu of strategies to considered to address identified regional needs. The strategies are grouped into eight categories:



## Strategy Profiles

For each strategy, this document includes a one-page profile. Each profile includes information on: needs addressed by the strategy, specific tactics or applications of the strategy; assessment factors to consider; benefits in relation to regional objectives; costs, qualitatively assessed; equity considerations; and organizations that are responsible or typically play a role in implementation. Each profile also includes information on locations to consider and related projects.

It is most valuable to look at problems holistically and to consider the most appropriate strategy or combination of strategies to apply to address specific needs. The NJTPA encourages partner organizations to look at the Regional Capital Investment Strategy and the analyses conducted as part of the Congestion Management Process – including the *Strategy Identification and Prioritization Report* (which includes matrices that connect regional needs to strategies) and the *Equity Assessment Report* (which identifies locations with vulnerable populations and particular needs) – as a guide to help in selecting strategies. These strategies often involve multiple partner agency implementers, and strategies may be advanced through the NJTPA's long-range transportation plan, through follow-up studies, by funding projects or programs in the Transportation Improvement Program (TIP), in other ongoing programs, or by coordinating with other agency implementers.



## Transit Priority / Transit-Supportive Roads (TR-1)

Public Transit

### Needs Addressed

Transit crowding, unreliable transit, long and uncompetitive transit travel times, congested and unreliable roadways (by encouraging shifts to transit)

### Specific Strategies

Dedicated lanes, business and access transit (BAT) lanes, bus on shoulder treatments, transit signal priority, queue jumps, and other bus rapid transit (BRT) support facilities; express/limited-stop service.

### Assessment Factors

- How many riders would benefit?
- What are the current peak traffic conditions and transit travel times?
- What is the potential for decreasing transit travel times and improving reliability?
- What is the physical feasibility of implementing improvements with manageable traffic impacts? What are impacts on on-street parking, loading zones, etc.?
- What is the potential for the improvements to attract new transit ridership?

### Benefits

- Improves accessibility to destination by reducing transit travel time (more destinations accessible in same travel time)
- Enhances transit reliability (on-time performance)
- Enhances usability of transit
- Optimizes existing roadway capacity by increasing transit ridership and passenger throughput

### Equity Considerations

Consider routes serving high levels of vulnerable populations that would benefit from faster and more reliable transit. Recognize important role to enhance jobs access via transit, rather than focusing on primarily road users.

### Locations to Consider

- Roadways with congestion, poor reliability, and high transit frequency
- Roadways serving transit routes with poor on-time performance
- *See CMP Analysis for areas to consider*

### Related Projects

- GO Bus 25 and 28 (current service)
- US 9 in Monmouth County (current and planned service)
- I-78 Corridor Transit Study
- Bergen County BRT (proposed)
- Greater New Brunswick area (Route 18) BRT (proposed)
- US 1 BRT, Middlesex County (proposed)

### Costs

- Relatively low for lane striping and other treatments
- Medium when incorporating BRT support facilities

### Responsible Organizations

Requires collaboration among many agencies:

- NJDOT – responsible for roadway construction, maintenance, and operations
- NJ TRANSIT – responsible for bus stations / stops, service planning, and operations
- Municipalities – responsible for station / stop location, design, and access; coordination with local businesses and communities





## Improve Bus Stop Infrastructure / Amenities (TR-2) *Public Transit*

### Needs Addressed

Need for supportive transit infrastructure; lack of shelter, shade, lighting, or other conditions that are important for transit riders, especially vulnerable population segments, such as older adults and persons with disabilities.

### Specific Strategies

Add benches, bus shelters, sidewalks and ADA improvements, lighting, improve placement and design of bus stops, schedule information, and/or real-time bus information.

### Assessment Factors

- What is level of current transit service?
- What is the current and potential ridership?
- What are the conditions of facilities?
- Are there safety/security issues?

### Benefits

- Enhances usability of transit, making transit more comfortable and attractive
- May increase transit ridership, helping to optimize roadway capacity
- May improve safety and security

### Costs

Relatively low (plus on-going maintenance costs)

### Equity Considerations

Strive for universal access to accommodate people with disabilities, seniors, and limited-English proficiency riders. Be aware that disadvantaged communities may not advocate or request bus shelters or supporting infrastructure to the same extent as other communities; consider ways to ensure these areas are not disadvantaged in terms of obtaining equitable quality of bus stops.

### Locations to Consider

- High transit ridership locations
- Areas with high numbers of disadvantaged / vulnerable populations
- Areas identified by local stakeholders
- Examples locations to consider include: South Kearny; Blackwell & Bergen Streets, Dover; Main & Day Streets, City of Orange; Essex & Huyler/State Streets, Hackensack; Fairmount & Newark Avenues, Elizabeth; U.S. Route 9 & Fairway Lane, Old Bridge; U.S. Route 9 & Adelphia Road, Freehold Township; 18th Street & Irvine Turner Boulevard, Newark

### Related Projects

- NJ TRANSIT Local Bus Shelter Modernization Program
- Route 126 improvements in Hoboken
- Planned bus terminal upgrades: Secaucus Junction, Hackensack, Passaic

### Responsible Organizations

Requires coordination between:

- NJ TRANSIT -- installs and maintains bus stop signs and poles, provides funding for shelters
- Municipalities -- approves stop locations, approves shelters and maintains, repairs, and replaces them, if needed



## Support Mobility-impaired Accessibility (TR-3)

*Public Transit*

### Needs Addressed

Need for additional services or multimodal connections to enable use of transit for entire trips. Reverse commute challenges. Need for supportive transit infrastructure.

### Specific Strategies

Americans with Disabilities Act (ADA) accessibility improvements, enhanced transit amenities (shelters, information, et al.), paratransit and targeted service, possible new service models

### Assessment Factors

- What are the locations / densities of older and disabled persons?
- What are key destinations, such as shopping areas, medical services, and community / civic uses?
- What are the current levels of transit service and amenities?

### Benefits

- Equitable access, including increased mobility and access for vulnerable populations to a wide variety of destinations (jobs, health care, groceries, etc.)
- May improve multi-modal safety

### Costs

Relatively low to moderate

### Equity Considerations

Strive for universal access to accommodate people with mobility, vision, and hearing disabilities

### Locations to Consider

- 30 commuter rail stations with identified ADA access limitations
- Access to VA hospitals in East Orange and Lyons, among others

### Related Projects

- NJ TRANSIT Access Link
- NJ TRANSIT bus shelter replacement program
- County-based paratransit and shuttle services
- NJ TRANSIT Regional Rail Station Modernization & Access Program
- NJ TRANSIT Local Bus Shelter Modernization Program
- NJTPA's Coordinated Human Services Transportation Plan

### Responsible Organizations

Many different agencies are responsible for different facilities and may need to coordinate:

- NJDOT – responsible for state roadways
- NJ TRANSIT – responsible for rail stations, bus and paratransit operations
- Port Authority of New York and New Jersey – responsible for rail stations and ferry terminals
- Counties – responsible for county roads; provide shared-ride paratransit services
- Municipalities – responsible for municipal roadways, shelter maintenance; provide shared-ride paratransit services
- Transportation Management Associations – may provide on-demand services





## Add/Improve First-Last Mile Access (TR-4)

Public Transit

### Needs Addressed

Need for additional services or multimodal connections to enable use of transit for entire trips. Reverse commute challenges.

### Specific Strategies

Feeder bus / shuttle services, enhanced pedestrian, bicycle, or micromobility connections to transit stations and stops

### Assessment Factors

- What are the current transit services?
- What are the key origins and destinations that may not be fully served?
- What is the estimated demand for supplemental services?

### Benefits

- Improves accessibility to destinations by transit
- Supports equitable access
- Enhances the usability of public transit
- Encourages increased transit ridership, helping to optimize roadway capacity
- Supports pedestrian and bicycle activity, which may benefit non-transit users as well

### Costs

Relatively low to moderate

### Equity Considerations

First-mile last-mile access is often a particular barrier for low-income and zero vehicle households, who cannot access jobs or other destinations in suburban areas, particularly during off-peak hours. In prioritizing services, consider needs for these populations, particularly at employment outside of central business districts.

### Locations to Consider

- Rail stations with limited bus service frequency or multimodal connections
- Bus stops at major activity centers or along corridors with frequent service
- *See CMP Analysis for areas to consider*
- Areas identified by stakeholders include near Rutgers University New Brunswick/Piscataway Campuses, Freehold area, and downtown Morristown

### Related Projects

- EZ Ride shuttles serve Secaucus Junction rail station
- DASH 851 and 852 run between New Brunswick rail station and employment locations
- South Orange rail station is served by South Orange jitney routes and West Orange shuttle routes

### Responsible Organizations

Many different organizations can play a role in supporting first-mile/last-mile access, including:

- NJ TRANSIT – operates and provides funding for local services
- NJTPA – administers CMAQ program and Local Mobility Initiatives program in coordination with NJ TRANSIT
- Private transportation service providers -- operate some local transit services
- Transportation Management Associations - -- some assist in planning and operating local shuttle services



## Fare, System Interconnectivity (TR-5)

*Public Transit*

### Needs Addressed

Lack of connectivity between transit services, challenges transferring between different service providers

### Specific Strategies

Improve coordination of scheduling, fares, and transfers; increase use of passes and automated fare purchase and payment; unified one-payment fare system

### Assessment Factors

- What is the location of key connection / transfer points among transit services?
- What is the usage for transfers among services?
- What is the potential demand for increased transfers among services?
- How can fare policy and pricing help serve travelers that must use multiple services?

### Benefits

- Supports equitable access, reducing costs to riders
- Enhances the usability of public transit, including connectivity of services and efficiency and convenience of transfers
- Encourages increased transit ridership, helping to optimize roadway capacity

### Costs

Potentially high; requires fare policy, revenue stream, and jurisdictional coordination.

### Equity Considerations

Could consider fare policies that offer lower fares for low-income populations. Consider how fare transfer policies affect different socio-economic groups.

### Locations to Consider

- Systemwide, addressing connections between NJ TRANSIT rail and bus, PATH, MTA subways, ferries, and other options

### Related Projects

- NJ TRANSIT MyTix allows for automated fare purchase and payment.
- NJ TRANSIT rail riders with passes can ride light rail and bus for free.
- NJ TRANSIT offers continuous trip tickets on some bus routes.
- PATH has Smart Link fare payment option and is planning to integrate with OMNY, which will enable seamless transfer to MTA subways

### Responsible Organizations

Many partners would need to work together, including:

- NJ TRANSIT -- establishes fare structures and payment mechanisms and options
- Port Authority of New York and New Jersey -- establishes fare structure and payment mechanisms and options
- Private bus operators and other service providers -- establish fare structures and payment mechanisms and options





## Park-and-Ride Enhancement/Expansion (TR-6)

Public Transit

### Needs Addressed

Limited available capacity to support potential public transit and carpooling options. Many current facilities are near or at capacity.

### Specific Strategies

Expand capacity of existing park-and-ride facilities, add new facilities, enhance amenities at or near facilities, adjust transit schedules as needed to serve facilities, improve multi-modal connections, provide enhanced real-time information on parking availability and next train/bus information

### Assessment Factors

- What is the presence of current transit services that serve the park-and-ride facility?
- What is the nearby residential population who may use the facility?
- What is the potential use of the facility and increase in transit ridership?
- What other options, such as pedestrian, bicycle, micromobility options, shuttles, or micro-transit could be applied instead of adding parking capacity?

### Benefits

- Improves accessibility to destinations
- Supports alternatives to driving alone and the usability of public transit
- Encourages increased transit ridership, helping to optimize roadway capacity
- May support pedestrian and bicycle activity, which may benefit non-transit users as well

### Costs

Low to Medium-high (depend on station context, available land, types of enhancements)

### Locations to Consider

- Existing locations with over capacity demand for parking – approximately 20 locations identified
- Potential new locations in suburban/rural areas with potential for demand for commuter bus services
- *See CMP Analysis for areas to consider with overcapacity parking*

### Related Projects

- Pompton Lakes Study Transit Access Study
- I-78 Corridor Transit Study

### Equity Considerations

Ensure universal access so people with disabilities can access transit from parking spaces. Balance parking demand with other ways to access transit that may benefit households without vehicles.

### Responsible Organizations

- NJDOT – may own property for current or potential park-and-ride facilities
- NJ TRANSIT – provides services to and from park-and-ride facilities
- Private bus operators – provide services to and from park-and-ride facilities
- Municipalities – may need to revise plans / ordinances to authorize and support park-and-ride facilities
- Private property owners – may own property for potential park-and-ride facilities



## Expand / Enhance Bus Service (TR-7)

Public Transit

### Needs Addressed

Trans-Hudson capacity, transit crowding, transit reliability issues, long and uncompetitive transit travel times, reverse commute challenges

### Specific Strategies

Increase service frequency, extend hours of operation, extend routes, add stops, add new routes, consider new service models, e.g., specialized or dynamic reverse commute services.

### Assessment Factors

- What are the current transit services and what are the expansion possibilities?
- What is the current peak transit ridership, and what is the potential for attracting new ridership?
- Is there sufficient demand for fixed route service?
- What are the development densities and the key origins and destinations for potential service?
- What is the potential for linking increased service with multi-modal access including park-and-rides,

### Benefits

- Improves accessibility to destinations
- Enhances equitable access
- Enhances usability of public transit
- Encourages increased transit ridership, helping to address traffic congestion

### Equity Considerations

Many transit services are geared toward typical rush-hour commuters, and do not effectively serve low-income workers and other populations that work during off-peak hours/late night or have reverse commutes. Affordable, convenient local and intercity access is needed for a variety of trip types (e.g., employment centers, medical centers, recreational opportunities, schools). Consider these population needs.

### Locations to Consider

- Areas with potential for relatively high transit demand (based on land use and other factors) with relatively long transit commutes
- *See CMP Analysis for areas to consider.*
- Areas identified by stakeholders include: Routes serving Journal Square Transportation Center, routes along major Newark corridors including Broad Street, Market Street, and Raymond Boulevard; and access to Middlesex County suburban destinations and employment centers

### Related Projects

- Greater Newark Bus Study
- Route 202 Corridor Assessment and Multi-Modal Mobility Plan
- Southern Middlesex County Transit Needs and Service Enhancement Study
- NewBus Newark

### Costs

Medium (depends on level of enhancement, new services)

### Responsible Organizations

- NJ TRANSIT – responsible for stations and stops, service planning, and operations
- Municipalities – responsible for station and stop location, design, and access





## Expand / Enhance Rail Service (TR-8)

Public Transit

### Needs Addressed

Trans-Hudson capacity, transit crowding, transit reliability issues, long and uncompetitive transit travel times in some locations, reverse commute challenges

### Specific Strategies

Add new tunnels (Trans-Hudson capacity), increase service frequency, extend lines, add stations, add new lines.

### Assessment Factors

- What are the current services and what are the expansion possibilities?
- What is the current peak ridership, and what is the potential for attracting new ridership?
- What are the development densities and the key origins and destinations for potential service?
- What is the potential for linking increased service with multi-modal access including park-and-rides, bus / shuttle service, and bike-ped facilities?

### Benefits

- Improves accessibility to destinations
- Enhances equitable access
- Enhances reliability of travel
- Enhances usability of public transit
- Encourages increased transit ridership, helping to address traffic congestion

### Costs

High

### Equity Considerations

Provide connecting bus/shuttle service to and from rail stations to expand access to high-capacity transit.

### Locations to Consider

- Hudson River rail crossing / Northeast Corridor
- Raritan Valley Line
- Northeastern Bergen County
- Potential rail expansions to outer suburbs

### Related Projects

- Northeast Corridor, Gateway Program
- Lackawanna Cutoff
- Raritan Valley Line extension to Phillipsburg
- West Trenton Line
- Middlesex – Ocean – Monmouth Line

### Responsible Organizations

- NJ TRANSIT – responsible for lines and stations, service planning, and operations
- Port Authority of New York and New Jersey – responsible for lines and stations, service planning, and operations
- Municipalities – may be responsible for items relative to station location, design, and access





## Expand/Enhance Ferry Service (TR-9)

*Public Transit*

### Needs Addressed

Trans-Hudson capacity, transit crowding

### Specific Strategies

Increase fleet size, improve terminal facilities, improve multi-modal connections

### Assessment Factors

- What are the current ferry services and what are the expansion possibilities?
- What is the current peak transit ridership, and what is the potential for attracting new ridership?
- What are the development densities and the key origins and destinations for potential service?
- What is the potential for linking increased service with multi-modal access including buses, shuttles, pedestrian facilities, and bicycle facilities?

### Benefits

- Improves accessibility to destinations
- Enhances usability of public transit, including improved rider comfort
- Enhances reliability / provides service redundancy
- Encourages increased transit ridership, helping to address traffic congestion

### Costs

Medium

### Equity Considerations

Consider service affordability and access to low-income waterfront communities

### Locations to Consider

- Potential route origins include Jersey City, Bayonne, Elizabeth, Carteret, Englewood Cliffs, South Amboy, and Alpine.
- Other potential sites for expanded or new ferry service include Edgewater, Long Branch, Newark, Elizabeth, and Belford / Highlands / Atlantic Highlands.

### Related Projects

- Hudson Ferry Study
- NJTPA Inventory and Assessment of Waterborne Transportation Resources
- NJ TRANSIT Ferry Customer Study Report
- Port Authority of New York and New Jersey Trans-Hudson Commuting Capacity Study

### Responsible Organizations

- NJ TRANSIT – responsible for some terminals, service planning, and operations
- Port Authority of New York and New Jersey – responsible for some terminals, service planning, and operations
- Private operators – responsible for other terminals, service planning, and operations
- Municipalities – may be responsible for items relating to terminal location, design, and access



## Transit Preservation/Resilience (TR-10)

*Public Transit*

### Needs Addressed

Disruptions to service due to infrastructure conditions, impacts of extreme weather events; rehabilitation and maintenance needs

### Specific Strategies

New bridges with higher vertical profiles, track rehabilitation and elevation, signal and communication system protection, rolling stock rehabilitation and replacement

### Assessment Factors

- What is the current condition of facilities?
- What is the current service frequency and ridership on those facilities?
- What are the threats associated with extreme weather impacts? What infrastructure is most vulnerable?
- What is the lowest life-cycle cost?

### Benefits

- Improved service reliability / fewer delays
- Reduced bridge and track deterioration

### Costs

High but necessary, and important for overall preservation of the system

### Equity Considerations

Needs of transit dependent, Title VI, and environmental justice populations must be considered for full community resiliency

### Locations to Consider

- NJ TRANSIT and PATH facilities including rail system bridges, tracks and other facilities in low-lying areas and those vulnerable to climate change

### Related Projects

- Long Slip Fill and Rail Enhancement
- Signals and Communications Resilience project
- Rail bridge projects: Raritan River Bridge replacement, Brielle Draw Bridge replacement, HX Draw Bridge replacement, Shark River Draw Bridge replacement, Morgan Draw Bridge replacement

### Responsible Organizations

- NJ TRANSIT – owns and maintains rail system infrastructure and rolling stock
- Port Authority of New York and New Jersey – owns and maintains infrastructure and rolling stock





## Sidewalks/Pedestrian Improvements (PB-1)

*Pedestrian, Bike & Micromobility*

### Needs Addressed

Lack of pedestrian access, comfort, and safety

### Specific Strategies

Sidewalks, crosswalks, trails, safer street crossings, pedestrian countdown signals *[May be part of a broader complete streets strategy (PB-3)]*

### Assessment Factors

- What are key nearby destinations, such as transit stations / stops, schools, shopping areas, etc. ?
- What is current or anticipated potential for pedestrian activity?
- What is the crash history or identified safety hazards?

### Benefits

- Improves accessibility to destinations
- Supports equitable access
- Enhances the usability of public transit
- Increases the viability of walking, bicycling, and other micromobility options
- Improves safety
- May reduce vehicle trips, and reduce traffic congestion and emissions
- May enhance economic vitality

### Costs

Relatively low in many locations

### Equity Considerations

Provides an affordable transportation option but needs to be designed with consideration of all abilities. Designs should consider strollers and people in wheelchairs (i.e., ample widths, ADA-accessible ramps). Prioritization may consider needs of zero-vehicle households/vulnerable populations.

### Locations to Consider

- Locations accessing transit and connecting to activity centers, areas with high pedestrian crashes, areas with high walkability potential based on land use patterns, and gaps in sidewalk networks
- Examples from Needs Assessment include Market St. / Broad St. area of downtown Newark; Bloomfield Ave. in Newark through Bloomfield, Glen Ridge, and Montclair; JFK Blvd. and Bergenline Ave.; and New Brunswick Ave. in Perth Amboy

### Related Projects

- Safe Routes to School and Walkability in Elizabeth
- Complete Streets Concept Plan for Morris Avenue
- Pedestrian Bridge over Route 440 (TIP project)
- Essex County Complete Streets Implementation Action Plan
- Borough of Keyport Complete Streets Policy and Implementation Plan
- Complete Streets Design and Implementation Plan: City of Hoboken

### Responsible Organizations

- NJDOT – administers grant programs including Safe Routes to Schools
- NJ TRANSIT – provides pedestrian safety education
- Counties and municipalities -- incorporate pedestrian accommodations into roadway improvement projects





## Bicycle Facilities/Improvements (PB-2)

Pedestrian, Bike & Micromobility

### Needs Addressed

Lack of bicycle access, comfort, and safety

### Specific Strategies

Bicycle routes, on-street bike lanes, lane markings, cycle tracks, trails, signage *[May be part of a broader complete streets strategy (PB-3)]*

### Assessment Factors

- What are the origins and destinations of current and potential future bicycle trips?
- What are the current / potential links to other multi-modal facilities?
- What is the crash history, identified safety factors?

### Benefits

- Improves accessibility to destinations
- Supports equitable access
- Enhances the usability of public transit
- Increases the viability of walking, bicycling, and other micromobility options
- Improves safety
- May reduce vehicle trips, and reduce traffic congestion and emissions

### Costs

Relatively low

### Equity Considerations

Provides an affordable transportation option but needs to be designed with consideration of all abilities. Prioritization may consider needs of disadvantaged populations.

### Locations to Consider

- Locations accessing transit and connecting to activity centers, areas with high bicycle crashes, and areas with few facilities with high bicycle level of comfort or to fill gaps in networks, and based on local priorities
- Examples include Newark; Hackensack, along Prospect Street; Essex Street; Polifly Road and Summit Avenue; Palisades Avenue and Anderson Avenue in Cliffside Park and Fort Lee

### Related Projects

- Morris Canal Greenway Study
- Middlesex Greenways Wayfinding and Middlesex Greenways Access Plan
- Exploration of Public Bike Share Program in Hudson County
- City of Newark Pedestrian & Bicycle Safety Action Plan
- Newark Riverfront Bicycle-Pedestrian Access Plan (TIP project)
- New York, Susquehanna & Western Bicycle-Pedestrian Path (TIP project)

### Responsible Organizations

- NJDOT – administers bikeway grant program and bicycle safety initiatives
- NJ TRANSIT -- allows bicycles on trains and buses, provides bicycle parking at most train stations
- Counties and municipalities -- incorporate bicycle accommodations into road improvement projects



## Complete Streets/Safety Measures (PB-3)

*Pedestrian, Bike & Micromobility*

### Needs Addressed

Lack of pedestrian and bicycle access, comfort, and safety, first-mile/last-mile transit needs

### Specific Strategies

Traffic calming and road diets, intersection improvements for pedestrians, pedestrian plazas, turning restrictions, protected lanes

### Assessment Factors

- Is the corridor an important connection between residential areas, retail centers, community / civic uses, multi-modal transportation connections, et al.?
- What is the presence and frequency of bus service along the corridor?
- Are there high crash rates, high traffic volumes, cut-through traffic, frequent turning movements, speeding, parking violations, and other dangerous driving behavior?
- Is the corridor frequently used by emergency vehicles, and are there alternative vehicular travel routes?

### Benefits

- Improves accessibility to destinations
- Supports equitable access
- Enhances the usability of public transit
- Increases the viability of walking, bicycling, and other micromobility options
- Improves safety
- May reduce vehicle trips, and reduce traffic congestion and emissions
- May enhance economic vitality

### Costs

Relatively low

### Equity Considerations

Complete streets promote beneficial health outcomes and affordable transportation options

### Locations to Consider

- See CMP Analysis for areas to consider.
- Based on stakeholder identified needs, examples include within urban areas: Market St. / Broad St. area of downtown Newark; Bloomfield Ave. in Newark through Bloomfield, Glen Ridge, and Montclair; JFK Blvd. and Bergenline Ave.; New Brunswick Ave. in Perth Amboy; Hackensack, along Prospect Street, Essex Street, Polifly Road and Summit Avenue; and Palisades Avenue and Anderson Avenue in Cliffside Park and Fort Lee
- Examples between / within suburban areas include: Near Rutgers U. New Brunswick/Piscataway Campuses, Freehold area, downtown Morristown, along NJ-27 and NJ-28 in Somerset County

### Related Projects

- NJTPA Technical Assistance projects
- Together North Jersey Demonstration projects

### Responsible Organizations

- NJDOT – responsible for state roadways
- NJ TRANSIT – responsible for rail stations, bus operations
- Counties – responsible for county roadways
- Municipalities – responsible for municipal roadways, planning / zoning for adjacent land uses





## Micromobility Options (PB-4)

*Pedestrian, Bike & Micromobility*

### Needs Addressed

Congestion on urban streets, lack of travel options, opportunity to substitute for short transit trips

### Specific Strategies

Bike share, electronic scooters, dockless bikes, etc. with supporting infrastructure such as lane and curb management [See strategy SM-4]

### Assessment Factors

- What are likely locations for demand?
- What are key origins and destinations?
- What safety issues need to be considered?

### Benefits

- Improves accessibility to destinations
- Supports equitable access
- Enhances the usability of public transit
- Increases the potential for multi-modal travel options
- May reduce vehicle trips, and reduce traffic congestion and emissions
- May enhance economic vitality

### Costs

Relatively low

### Equity Considerations

Micromobility has the potential to benefit low-income communities with a new, affordable transportation options; special pricing for low-income members of the community can boost participation. Note that micromobility options may not serve all facets of the community (e.g., individuals with disabilities)

### Locations to Consider

- Urbanized areas with a density of land uses, activity centers, transit station areas

### Related Projects

- Jersey City and Hoboken joint bicycle share program – Lyft / Citi Bike
- Plainfield bike share program
- Elizabeth – pilot electric scooter share program (terminated)
- Asbury Park – pilot electric scooter share program

### Responsible Organizations

May involve coordination among agencies

- Counties and municipalities – for roads under local jurisdiction
- Municipalities – typically responsible for entering into legal agreements with service providers and enforcing regulations
- Transportation Management Associations – may play a role
- NJDOT – for roads under state jurisdiction





## Employer-Based TDM (DM-1)

Travel Demand  
Management

### Needs Addressed

Bottlenecks and unreliable roadways, overcrowded and unreliable bus transit, opportunities to reduce single-occupant vehicle travel

### Specific Strategies

Encourage telework, encourage ridesharing, vanpool assistance, shuttles, commuter benefits ordinances, employer outreach and incentive programs

### Assessment Factors

- Where are the major employment and residential concentrations, and flows of commuters driving alone that could be matched ?
- What is the willingness of employers to support, participate, and contribute to programs?
- What is the estimated effectiveness of various programs and incentives to workers to participate?

### Benefits

- Improves accessibility to destinations
- Supports equitable access
- Enhances the usability of public transit
- Increases the potential for multi-modal travel options
- Reduces vehicle trips, and may reduce traffic congestion and emissions
- May enhance economic vitality

### Costs

Relatively low

### Equity Considerations

Providing transportation options or helping lower transportation costs to job sites not on fixed-route transit could expand job opportunities for low-income workers.

### Locations to Consider

- Systemwide
- Prioritize major employment centers and congested commute corridors

### Related Projects

- EZ Ride, Hudson TMA, RideWise, goHunterdon, KMM, TransOptions, Greater Mercer TMA – sponsors shuttles, carpools/vanpools, and/or related services
- NJTPA TMA Program
- NJ TRANSIT TMA Program

### Responsible Organizations

- NJDOT – provides funding to Transportation Management Associations (TMAs)
- TMAs (EZ Ride, Hudson TMA, RideWise, goHunterdon, KMM, TransOptions, Greater Mercer TMA) – administer various alternative commute programs
- NJ TRANSIT – funds the TMAs to promote transit and vanpooling
- Municipalities – adopt TDM ordinances
- Private sector – employers, developers implement programs



## Regional/Local TDM Programs & Incentives (DM-2)

*Travel Demand Management*

### Needs Addressed

Bottlenecks and unreliable roadways (including weekend and seasonal locations), opportunities to reduce single-occupant vehicle travel

### Specific Strategies

Regional ridesharing support, programs to encourage biking/walking, incentives for ridesharing or transit for special events or seasonal events, promotions, discount/ reward programs, targeting bus and shuttle service, mobility on demand

### Assessment Factors

- What kinds of options are feasible to shift travel behavior (e.g., spread time of trips, shift to transit or other modes)?
- What are opportunities and willingness of the business community, venues, and others to sponsor or participate in programs?
- Where are areas with high travel peaks and bottlenecks for seasonal activities and special events?

### Benefits

- Improves accessibility to destinations
- Enhances the usability of public transit
- Increases the potential for multi-modal travel options
- Reduces vehicle trips, and may reduce traffic congestion and emissions
- May enhance economic vitality, including attractiveness of resorts and special event destinations

### Costs

Relatively low

### Locations to Consider

- Systemwide
- Shore areas in Monmouth and Ocean Counties and other tourism locations.
- Event locations, including Meadowlands Sports Complex, Prudential Center, Rutgers University sports facilities, Monmouth Park, and PNC Bank Arts Center
- Schools and community centers

### Related Projects

- Bicycle and Pedestrian Ambassadors
- Safe Routes to Schools programs
- NJ TRANSIT special event service to and from Meadowlands Sports Complex
- Long Beach Island Shuttles
- Gameday shuttle service between downtown New Brunswick and SHI Stadium

### Equity Considerations

Affordable transportation options can help reduce financial burdens on low-income families.

### Responsible Organizations

- NJ TRANSIT – schedules, promotes, and provides special transit service
- TMAs – develop and promote programs
- Municipalities – provide local shuttle services
- Private sector – venue operators, business associations
- Schools and other public/private organizations





## Pricing Strategies (DM-3)

*Travel Demand  
Management*

### Needs Addressed

Bottlenecks and unreliable roadways, overcrowded and unreliable bus transit, opportunities to reduce single-occupant vehicle travel

### Specific Strategies

Peak hour road / bridge tolls, other road pricing, discounted transit fares, other transit pricing policies, parking pricing (peak hour pricing, dynamic pricing)

### Assessment Factors

- Where are areas with high travel peaks / bottlenecks?
- How much does the peak travel demand exceed transportation system capacity?
- What is the estimated impact of pricing in reducing peak hour travel or parking demand?
- What is anticipated impact on other facilities?

### Benefits

- Increases use of multi-modal options
- Improves reliability
- Reduces vehicle trips, traffic congestion, and emissions

### Costs

Relatively low

### Equity Considerations

Consider who is affected by pricing and in what ways, particularly low-income populations. Consider equitable distribution of revenue and how it might work to increase or improve transit options in low-income communities.

### Locations to Consider

- Major activity centers
- Congested roadways

### Related Projects

- Peak hour toll rates for Port Authority bridge and tunnel crossings
- Off-peak toll discounts on NJ Turnpike and Garden State Parkway
- Free light rail and bus service for NJ TRANSIT rail riders with passes
- Continuous trip tickets on some NJ TRANSIT bus routes

### Responsible Organizations

- NJ Turnpike Authority – manages NJ Turnpike and Garden State Parkway
- NJ TRANSIT – provides transit services
- Port Authority of New York and New Jersey – manages bridge and tunnel crossings, PATH
- Delaware River Joint Toll Bridge Commission – manages bridge crossings
- Municipalities – responsible for parking policies





Source: NJTPA

## Land Use/Urban Design/Transit-supportive Development

Land Use

### Needs Addressed

Preponderance of single-occupancy vehicle (SOV) travel

### Specific Strategies

Municipal planning and zoning that enables high-density mixed-use development; municipal redevelopment planning; Transit Village designation

### Assessment Factors

- What is the presence of current transit services, and how much new service possibly could be justified by increased station-area development?
- What is current ridership and how much new ridership could station-area development generate?
- What is the development and redevelopment potential in the station area?

### Benefits

- Improves accessibility to destinations
- Supports equitable access
- Enhances feasibility of increased public transit
- Increases the potential for multi-modal travel options
- Reduces vehicle trips, and may reduce traffic congestion and emissions
- May enhance economic vitality

### Costs

May yield cost savings

### Equity Considerations

Potential to pair affordable housing with transit-oriented uses

### Locations to Consider

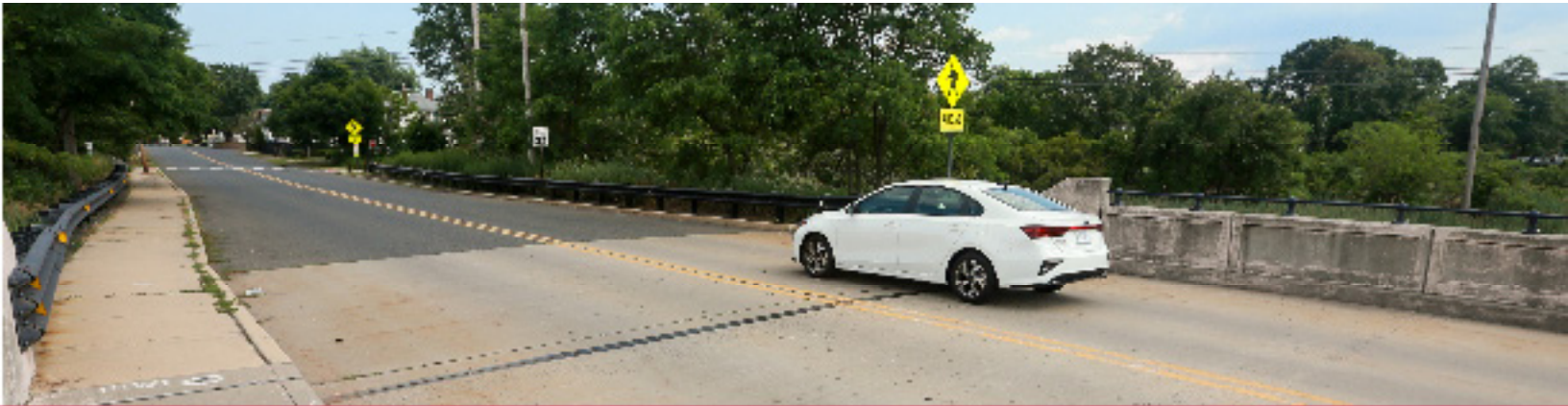
- Systemwide
- Prioritize locations near transit stations and major activity centers, consistent with community plans

### Related Projects

- Town of Boonton Transit Village Initiative Planning
- Borough of Freehold Transit Village Initiative Planning
- Green Brook Township Village Center Re-zoning Project
- Bound Brook Urban Design Plan Implementation Project
- Passaic Eastside TOD Strategic Plan

### Responsible Organizations

- Municipalities – responsible for conducting planning and preparing planning documents in support of transit-oriented development, e.g., authorizing mixed-use development
- NJDOT – along with NJ TRANSIT, responsible for administering Transit Village program
- NJ TRANSIT – responsible for transit service planning and station maintenance / improvements



## Arterial Operations (SM-1)

*Transportation Systems  
Management & Operations*

### Needs Addressed

Bottlenecks and unreliable major roadways

### Specific Strategies

Traffic signal upgrades, signal coordination and optimization, active traffic management, adjustable lanes

### Assessment Factors

- What are the current congestion levels, and what is the potential for reducing congestion?
- What are the current peak hour traffic volumes; how many vehicles would benefit from improvements?

### Benefits

- Improves reliability
- Reduces congestion delay, optimizing existing capacity
- Reduces bus travel times
- Reduces vehicle emissions

### Costs

Relatively low

### Equity Considerations

Consider operations strategies that support multimodal mobility, rather than just vehicle mobility (e.g., improvements to transit operations, walking, bicycling). Ensure that local movements and accessibility are not hindered by emphasis on regional mobility.

### Locations to Consider

- See *CMP Analysis* for areas to consider.
- Roadways with poor reliability
- Examples from Needs Assessment include:
  - Urban: Locations along NJ-21 south of downtown Newark; Broad St., Newark; Paterson Plank Rd, and NJ-440 in Jersey City; along CR-675/Willow Avenue in Hoboken
  - Suburban: NJ-10 in Morris Plains/Hanover/ Parsippany, NJ-208 from Midland Park to Fairlawn, NJ-18 in No. Brunswick and East Brunswick

### Related Projects

- Meadowlands Adaptive Signal System for Traffic Reduction
- Coordinated signal timing for NJ 72 corridor
- Adaptive signal timing control technology along NJ 70 corridor
- US 1 peak hour shoulder use in South Brunswick
- Newark Broad Street Traffic Signal Optimization (in TIP)

### Responsible Organizations

- NJ Turnpike Authority – responsible for NJ Turnpike and Garden State Parkway
- NJDOT – responsible for roadway construction, maintenance, and operations
- Counties and municipalities – responsible for roads under their jurisdiction





## Freeway Operations/Regional System Management (SM-2)

## Transportation Systems Management & Operations

### Needs Addressed

Bottlenecks and unreliable highways/major roadways

### Specific Strategies

Traffic incident management, work zone management, special events management, central reporting, coordinated responses, ramp control, dynamic junction control, lane control, shoulder use, variable/dynamic speed limits, queue warning, real-time information to travelers

### Assessment Factors

- What existing operational strategies are in place?
- What are primary causes of delay?
- How do the high-crash locations relate to traffic volumes?

### Benefits

- Improves reliability (improves incident clearance time)
- Reduces travel time and congestion delay, optimizing existing capacity
- Reduces bus travel times
- Reduces vehicle emissions

### Costs

Relatively low

### Equity Considerations

The need for affordable, convenient travel alternatives

### Responsible Organizations


- NJ Turnpike Authority – responsible for NJ Turnpike and Garden State Parkway
- NJDOT – responsible for state roads

### Locations to Consider

- See CMP Analysis for areas to consider.
- To and from NYC: Tunnels and bridges accessing NYC, Garden State Parkway, NJ-17 South toward I-80, I-95/New Jersey Turnpike into Newark, I-287 into Edison
- Urban: Locations along NJ-21 south of downtown Newark; Broad St., Newark; NJ-139, Paterson Plank Rd, and NJ-440 in Jersey City; along NJ-495/NJ-3 in Secaucus, North Bergen, Union City, Weehawken; along CR-675/Willow Avenue in Hoboken
- Suburban: Several locations along I-287, I-80 between Parsippany and Roxbury, NJ-10 in Morris Plains/Hanover/ Parsippany, NJ-208 from Midland Park to Fairlawn, near American Dream, NJ-18 in No. Brunswick and East Brunswick

### Related Projects

- NJDOT programs – Traffic operations centers, central dispatch unit, safety service patrols, variable message signs, real-time information
- TRANSCOM TRANSMIT



STARTING MONDAY  
CONSTRUCTION  
11 PM - 5 AM

Source: NJDOT

## Traveler Information/Trip Planning (SM-3)

*Transportation Systems  
Management & Operations*

### Needs Addressed

Bottlenecks and unreliable highways/ major roadways; transit reliability; opportunities to reduce single-occupant vehicle travel

### Specific Strategies

Web-based real-time multimodal information, traffic camera video, variable message signs, construction project information

### Assessment Factors

- What are ways in which travelers access travel information pre-trip? While en-route?
- What private sector and other opportunities are there?

### Benefits

- Reduces travel time and congestion delay, optimizing existing capacity
- Encourages multimodal options
- Reduces vehicle emissions

### Costs

Relatively low

### Equity Considerations

Information should be accessible to limited English proficiency populations and populations without access to web/mobile technology

### Locations to Consider

- Systemwide
- Particularly prioritize for congested corridors, routes, and for multimodal travel information
- Targeted applications for special events, road weather management, and work zones

### Related Projects

- 511NJ.org
- I-78, Route 22 to Drift Road/Dale Road ITS: dynamic message signs, camera surveillance systems, travel time sensors, and traffic signal systems (in TIP)
- Route 46, I-287 to CR 644 ITS: dynamic message signs, camera surveillance systems, travel time sensors, and traffic signal systems (in TIP)

### Responsible Organizations

- NJ Turnpike Authority – responsible for NJ Turnpike and Garden State Parkway
- NJDOT – responsible for state roads





## Parking/Lane/Curb Management (SM-4)

*Transportation Systems  
Management & Operations*

### Needs Addressed

Opportunities for micro-mobility options

### Specific Strategies

New parking management approaches, including dynamic parking pricing; designation of short-term and off-street passenger and freight loading zones; bicycle and scooter parking facilities; charging stations; mobility hubs that co-locate bus stops, ridehailing locations, and package delivery zones; flex lanes for parklets, bike corrals, in-street dining, markets, and special events.

### Assessment Factors

- Physical dimensions of travel lanes, cartway, on-street parking, and right-of-way
- Location of driveways / curb cuts
- Location of parking signs / regulations, including loading zones
- Current on-street parking and loading zone usage
- Location of multi-modal facilities, including bus stops and bicycle lanes
- Location of stormwater management infrastructure, including manholes and drains / grates, and fire hydrants
- Adjacent and nearby land uses

### Benefits

- Improves parking utilization
- Improves vehicular traffic flow and less congestion
- Increases utilization of multi-modal options including micromobility
- Increases efficiency of freight deliveries
- Improves multi-modal safety.

### Costs

Relatively low

### Locations to Consider

- Within urban and suburban activity center areas, including Newark, Jersey City, and Hoboken

### Related Projects

- Jersey City parking study
- New York City, PARK Smart, on-street parking pricing strategy, and Off-Hours Delivery pilot

### Equity Considerations

Affordable modes of transportation (e.g., buses, bicycles) often compete for street space with on-street parking. Consider the needs of these users.

### Responsible Organizations

- NJDOT – for streets under state jurisdiction
- Counties – for streets under county jurisdiction
- Municipalities – program management, inventory and mapping, et al.



## Road Geometry (RC-1)

## Roadway Capacity/Resiliency

### Needs Addressed

Bottlenecks and unreliable highways/ major roadways

### Specific Strategies

Bottleneck removal: lane reconfiguration, clearance widening, interchange modifications, intersection improvements / turning lanes, roundabouts, other geometric elements.

### Assessment Factors

- What is the extent of current congestion and the potential for reducing the congestion?
- What are the peak period traffic volumes, i.e., how many travelers are affected by current delays and could benefit from improvements?
- What is the availability of alternative travel routes?

### Benefits

- Improves vehicular traffic flow and less congestion
- Reduces bus travel times
- Potential for increased utilization of multi-modal options including micromobility
- Improves multi-modal safety
- Reduces vehicle emissions

### Costs

Medium

### Locations to Consider

- See CMP Analysis for areas to consider.

### Related Projects

- US 1 widening in Middlesex County
- NJ 31 widening in Hunterdon County (in TIP)
- Roundabout at intersection of CR 31 & CR 639 in Ocean County (planned)

### Equity Considerations

Wide roadways create longer pedestrian crossing times, especially for people with lower mobility.

### Responsible Organizations

- New Jersey Turnpike Authority – responsible for NJ Turnpike and Garden State Parkway
- NJDOT – responsible for state roadway construction, maintenance, and operations
- Counties and municipalities – responsible for roads under their jurisdiction





Source: Google Streetview

## Managed Lanes (RC-2)

## Roadway Capacity/Resiliency

### Needs Addressed

Bottlenecks and unreliable highways/ major roadways

### Specific Strategies

High-occupancy vehicle (HOV) lanes, high-occupancy toll (HOT) lanes, reversible / adjustable lanes

### Assessment Factors

- What are the current congestion levels, and what is the potential for reducing congestion?
- What are the current peak hour traffic volumes; how many vehicles would benefit from improvements?
- What are the physical requirements of the lane, relative to existing travel lanes and available right-of-way?

### Benefits

- Enhances reliability
- Improves vehicular traffic flow and less congestion
- Reduces bus travel times
- Encourages alternatives to single-occupant vehicles
- May reduce vehicle emissions

### Costs

Potentially high, may consider public-private partnership opportunities

### Equity Considerations

Consider benefits for transit vehicles to provide more reliable, efficient transit service. Consider implications of tolling/pricing on low-income and disadvantaged population groups.

### Locations to Consider

- Roadways with congestion, poor reliability, and high transit frequency
- *See CMP Analysis for areas to consider*
- Examples for consideration include:  
Tunnels and bridges accessing NYC, Garden State Parkway, NJ-17 South toward I-80, I-95/New Jersey Turnpike into Newark, I-287 into Edison

### Related Projects

- Lincoln Tunnel reversible lanes
- NJ Turnpike HOV lane between Exits 11 and 14
- I-80 between Exits 34 and 43 (discontinued)
- I-287 between I-78 and I-80 (discontinued)

### Responsible Organizations

- NJ Turnpike Authority – responsible for NJ Turnpike and Garden State Parkway
- NJDOT – responsible for state roads
- Private sector – may play role in developing managed lanes



## New Road Capacity (RC-3)

*Roadway Capacity/Resiliency*

### Needs Addressed

Bottlenecks and unreliable highways/ major roadways

### Specific Strategies

New roadway connections, add lanes, widen lanes

### Assessment Factors

- What is the extent of current congestion and the potential for reducing the congestion?
- What are the peak period traffic volumes, i.e., how many travelers are affected by current delays and could benefit from improvements?
- What is the availability of alternative travel routes and travel modes?

### Benefits

- Improves vehicular traffic flow and less congestion
- May reduce vehicle emissions

### Costs

Potentially high

### Equity Considerations

Consider the full range of air quality, noise, traffic, and safety impacts roadway expansion can have on surrounding community, especially environmental justice communities.

### Locations to Consider

- Last resort – to consider only if travel demand management, alternate mode, operations, or geometric improvement solutions are insufficient; consider managed lane capacity before general capacity
- May be needed for areas with significant bottlenecks, or anticipated growth and development needs that cannot be accommodated by other strategies
- Must include complementary operations and demand management strategies

### Related Projects

- NJ Turnpike and Garden State Parkway widening, various projects
- US 206 – new road in Somerset County
- US 1 widening in Middlesex County
- NJ 31 widening in Hunterdon County (in TIP)

### Responsible Organizations

- New Jersey Turnpike Authority – responsible for NJ Turnpike and Garden State Parkway
- NJDOT – responsible for state roadway construction, maintenance, and operations
- Counties and municipalities – responsible for roads under their jurisdiction





Source: Google Streetview

## Expand Bridge, New Bridge (RC-4)

Roadway Capacity/Resiliency

### Needs Addressed

Bottlenecks and unreliable highways/ major roadways

### Specific Strategies

Widen bridge, build replacement bridge, add new span

### Assessment Factors

- What is the extent of current congestion and the potential for reducing the congestion?
- What are the peak period traffic volumes, i.e., how many travelers are affected by current delays and could benefit from improvements?
- What is the availability of alternative travel routes and travel modes?

### Benefits

- Improves vehicular traffic flow and less congestion
- May reduce vehicle emissions

### Costs

Potentially high

### Equity Considerations

Build bridges with pedestrians, cyclists, and transit users in mind; consider ways bridges can enhance connectivity among environmental justice communities

### Responsible Organizations

- NJ Turnpike Authority – responsible for NJ Turnpike and Garden State Parkway
- NJDOT – responsible for bridge construction, maintenance, and operations
- Counties and municipalities – responsible for bridges under their jurisdiction

### Locations to Consider

- Last resort – to consider only if operations or geometric improvement solutions are insufficient; consider managed lane capacity before general capacity
- May be needed for areas with significant bottlenecks, or anticipated growth and development needs that cannot be accommodated by other strategies
- Must include complementary operations and demand management strategies

### Related Projects

- Route 3 Passaic River Bridge
- Route 52 Causeway Bridge
- Pulaski Skyway
- Wittpenn Bridge



## Road and Bridge Preservation/Resilience (RC-5)

*Road Capacity/Resiliency*

### Needs Addressed

Disruptions to service due to infrastructure conditions, impacts of extreme weather events; rehabilitation and maintenance needs

### Specific Strategies

New bridges with higher vertical profiles and improved design (to prevent scour), raised roadway profiles, sheet piling, increased pavement overlay thickness, maintenance activity such as culvert clearing

### Assessment Factors

- What are the threats due to inland flooding, sea level rise / storm surge, and temperature extremes?
- What facilities may be vulnerable: roads, bridges, signals, other?
- What is the current condition of facilities, and what is their vulnerability?
- What are the current and projected traffic volumes?
- What is the availability of alternative emergency travel routes?

### Benefits

- Improved reliability / fewer delays due to road closures and related impacts
- Reduced road and bridge deterioration

### Costs

High but necessary, and important for overall preservation of the system

### Equity Considerations

Consider full community resiliency, such as the travel needs of transit dependent, Title VI, and environmental justice populations, when selecting roads for resiliency improvements

### Locations to Consider

- Roads, bridges, and other facilities in areas vulnerable to extreme weather impacts
- Identified needs based on pavement and bridge management systems; asset management plan

### Related Projects

- NJDOT Transportation Asset Management Plan (TAMP)
- NJ 72 bridge over Manahawkin Bay
- Route 7 drainage improvements, Kearny (in TIP)

### Responsible Organizations

- NJDOT – responsible for state roads and bridges
- Port Authority of New York and New Jersey – responsible for six crossings
- Counties and municipalities – responsible for roads and bridges under their jurisdiction





Source: MKSK

## Reduce or Remove Highway Capacity/Barriers (RC-6)

## Road Capacity/Resiliency

### Needs Addressed

Roadway reliability and safety issues, lack of safe and comfortable pedestrian and bicycle connections, opportunities to reduce single-occupant vehicle travel through transit-oriented development and other strategies

### Specific Strategies

Remove highway, convert highway to urban boulevard, tunnel the highway, cap the highway, reduce number of lanes

### Assessment Factors

- To what extent is the highway creating barriers to local accessibility and connectivity?
- What are the peak period traffic volumes, and how could the volumes be redistributed?
- What are the multi-modal circulation opportunities?
- What are the redevelopment opportunities?
- How would removal of the highway compare to rehabilitating it in terms of costs and benefits?
- How can past adverse impacts to disadvantaged communities be addressed?

### Benefits

- New walkable urban space
- Improved street and multi-modal connectivity
- Increased community development and redevelopment opportunities
- Reduced environmental and public health impacts.

### Costs

High

### Locations to Consider

- Highways running through urban centers and neighborhoods

### Related Projects

- West Side Highway, New York City
- Sheridan Expressway, New York
- Inner Loop, Rochester, NY
- Robert Moses Parkway, Niagara Falls, NY
- Route 29, Trenton (proposed)

### Equity Considerations

Reducing or removing highway capacity and enhancing connectivity has the potential to restore communities (often environmental justice communities) disrupted by the original highway construction and on-going effects

### Responsible Organizations

- NJDOT – responsible for state roadway construction, maintenance, and operations
- Counties and municipalities – responsible for local street network, land use planning, and redevelopment



Source: Google Streetview

## First Mile, Last Mile Truck Access (FR-1)

Freight

### Needs Addressed

Trucks may not have efficient access between employment centers and main roads, truck traffic may have negative impact on local roads

### Specific Strategies

Planning and zoning regarding location of centers relative to main roads, traffic impact analysis, designated truck routes, physical improvements to truck routes, address geometric deficiencies, e.g., tight turns, low clearances.

### Assessment Factors

- What are the local land use patterns relative to the current / potential location of warehouses and distribution centers?
- What is the estimated size of the employment center, number of employees, number of truck trips?
- What are the truck travel patterns relative to the local roadway network, and what are the impacts to local roads, other transportation system users, and surrounding land uses?
- What are the physical / geometric constraints of the local roadway network?

### Benefits

- Reduced truck travel time between centers and main roads while also mitigating increases in congestion, impacts on local roads, and adjacent land uses

### Costs

Varies but generally low to medium

### Locations to Consider

- Close to I-95 in rural Middlesex County
- North of I-195 in Monmouth County
- Sussex County
- Between I-80 and I-78 in Warren County
- South of I-78 in Hunterdon County

### Related Projects

- Industrial Highway improvements, Carteret
- Union County Truck Mobility Study
- Secaucus Road Preservation Project, Secaucus
- Edgeboro Road Improvements, East Brunswick

### Equity Considerations

Consider noise and air quality impacts of congested freight on surrounding communities, particularly environmental justice communities; consider workforce development opportunities.

### Responsible Organizations

- NJDOT -- for state roads
- Counties/municipalities -- for roads under their jurisdiction
- Municipalities -- for land use planning and development approval decisions





## Rail Freight (FR-2)

*Freight*

### Needs Addressed

Rail capacity needs, congested and unreliable freight corridors

### Specific Strategies

Improve system connections, address weight / clearance issues, improve track and bridge conditions, upgrade / add sidings, provide grade crossing / safety improvements

### Assessment Factors

- What is the current condition of facilities, what is the extent of physical restrictions?
- What are current and potential rail freight volumes?
- Who are the current customers, and what are the economic / business development opportunities?
- What are potential issues associated with access to rail yards and localized traffic congestion?

### Benefits

- Improve rail operating speeds and service reliability
- Reduce traffic congestion by increasing goods movement by rail
- Reduce roadway noise and emissions from trucks in communities

### Costs

Varies medium to high

### Equity Considerations

Consider grade crossing delays, safety, air quality, and noise impacts on surrounding community; consider workforce development opportunities, particularly in underrepresented communities.

### Locations to Consider

- Priority areas from New Jersey Freight Rail Strategic Plan. Examples include:
  - HX Corridor
  - Raritan Valley Corridor
  - Amboy Corridor
  - Coast Line Corridor
  - Morris/Warren Corridor
  - Black River & Western Corridor
  - Northeast Corridor

### Related Projects

- NJTPA Rail Freight Capacity and Needs Assessment to the Year 2040
- NJTPA Freight Rail Industrial Opportunities Corridors program
- Morris / Warren County Rail Corridor Study
- Improved rail freight service to Port Newark and Port Elizabeth
- Rehabilitation of Kenvil Team Track in Morris County

### Responsible Organizations

- Private operators – responsible for rail infrastructure and operations
- Counties – some counties (e.g., Morris) may own lines
- NJDOT – provides funding for selected strategic improvements



## Freight Operations / Off-Hours Delivery (FR-3)

Freight

### Needs Addressed

Congested freight corridors, bottlenecks and unreliable highways/ major roadways

### Specific Strategies

Attended deliveries (received by business staff), unattended deliveries, freight lockers, urban distribution

### Assessment Factors

- What is the extent of current truck traffic and its impact?
- What is the current availability and use of on-street loading zones?
- How many potential receiving businesses (retail, food stores, restaurants) are there, and how many shippers / carriers are involved?
- How many deliveries potentially could be shifted?
- What is the potential for unattended deliveries?

### Locations to Consider

- Within urban areas

### Related Projects

- New York City, Off-Hours Delivery pilot program

### Benefits

- Reduces delivery times
- Reduces on-street congestion in immediate area of business and surrounding roadway network
- Improves multi-modal safety
- Reduces emissions

### Costs

Low, policy-based

### Equity Considerations

Consider impacts of congested freight on surrounding communities, particularly communities with poor air quality. Collaborate with communities, educational organizations, agencies, and private sector companies to market, recruit, and retain workers from under-represented demographics and communities.

### Responsible Organizations

- Private businesses – willing to accept off-hour deliveries
- Suppliers / trucking companies – willing to make off-hour deliveries
- Public agencies – coordinate with businesses and suppliers, provide information and education, possibly provide financial incentives





## Safety Countermeasures

*Direct Safety*

### Needs Addressed

Bottlenecks and unreliable highways/ major roadways, roadway reliability issues, pedestrian safety issues, bicycle safety issues, roadway safety

### Specific Strategies

For roadway departures, design improvements at curves; for intersections, turning lanes at stop-controlled intersections; for bike-ped, medians and refuge islands; enforcement; and education.

### Assessment Factors

- What are the most frequent crash factors?
- What factors involve roadway design and what factors involve driver/bicyclist/pedestrian behavior?

### Benefits

- Improved safety – reduced crashes, fatalities, injuries, and property damage
- Improves reliability
- Enhances the usability of public transit
- Increases the viability of walking, bicycling, and other micromobility options

### Costs

Generally low

### Equity Considerations

Consider disproportionate number of crashes in environmental justice communities and the need to equitably implement safety countermeasures

### Locations to Consider

- Areas with identified high numbers of crashes.
- Examples include:
  - Hudson County – JFK Boulevard
  - Monmouth County – Memorial Drive
  - Morristown - Intersection of Morris Street and Ridgedale Avenue
  - Newark - Bergen Street
  - Toms River - Intersection of Hooper Ave. and Church Road/Kettle Creek Road
  - Paterson - Lakeview Avenue
  - Franklin (Somerset Co.) - Hamilton Street

### Related Projects

- NJDOT Highway Safety Improvement Program
- NJTPA Local Safety and High Risk Rural Roads Program
- NJ TRANSIT Safety Education Program

### Responsible Organizations

- NJDOT – responsible for state roadways
- NJ TRANSIT – responsible for rail stations, bus operations
- Counties – responsible for county roadways
- Municipalities – responsible for municipal roadways

