NJTPA - Local Concept Development Study
Monmouth County Route 537 Corridor Improvements

PUBLIC INFORMATION CENTER
February 26, 2013
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Project Overview and Background

- MC Route 537 – a major east-west transportation corridor serving regional travel needs between Burlington, Ocean, and Monmouth Counties
- Project Study area - 2.8 miles (Milepost 48.65 – 51.65) in Freehold Township & Freehold Borough
- Areas of concern within the corridor: substandard design elements, traffic congestion, and traffic movement capacity
- NJTPA/Monmouth County Local Concept Development (LCD) Study undertaken
- New program and opportunity to advance a project which includes public input into the Selection of a PPA
### Local Project Delivery Process

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*NEPA* stands for *National Environmental Policy Act*. This act requires federal agencies to consider the environmental impacts of their actions.
Local Concept Development Process

Conduct Data Collection

- Initial Right of Way
- Survey

- Design Communication Report
- Community Outreach
- Evaluate Deficiencies
  - Existing Conditions / Purpose and Need Statement
    - Development of Alternatives
      - Cost Estimate Preliminary Preferred Alternate
        - Preliminary Engineering Scope Statement
        - Obtain Resolutions of Support
        - NEPA Classification
      - Concept Development Report
Environmental Process

- Federally funded project requires NEPA (National Environmental Policy Act) documentation
- Identify environmental resources and concerns
- Avoid, minimize and or mitigate impacts with Preferred Alternative
- Coordination with permitting agencies
- Includes public input and community involvement
Route 537 Corridor Existing Conditions

- More than 4,000 vehicles per hour at some intersections during highest peak period
- Multiple intersections along corridor operate at or near capacity during peak travel periods which causes traffic congestion and lengthy delays
- 761 reported crashes within the limits of the corridor study during the three year period 2009-2011
- Numerous conflicting access points including driveways and roads creating traffic operational issues
- Insufficient or lack of outside shoulders for entire length
- Lack of bicycle compatibility
- Gaps in existing sidewalk network
Route 537 Corridor Existing Conditions

• Few auxiliary lanes, deceleration lanes or shoulders for turning movements at intersections as well as into various business/shopping complexes
• Substandard vertical stopping sight distance at two locations
• Substandard sight distance at Enright Avenue intersection (NB onto CR 537)
• Substandard acceleration and deceleration lane lengths at Route 33 Freeway interchange
• Numerous substandard design elements at Route 537 and Route 9 Interchange
Site Location Map

SITE LOCATION MAP
Concept Development Study
County Route 537 Corridor
Borough of Freehold, Township of Freehold
Monmouth County

2.8 MILE STUDY AREA
Route 537 Corridor Existing Conditions

Looking East, approaching Iron Bridge Road; Note Access Management, No Bicycle/Pedestrian compatibility at businesses

Looking East, approaching Redwood Lane/Village Center Road; Note Substandard vertical curve (WB), Sidewalk gaps, No Bicycle Access
Route 537 & Village Center Road/Redwood Lane Intersection, Site of 44 crashes in 2009-2011; majority same direction (rear-end)

Looking East, East of Village Road; Note conflicting turning movements, Access Management, No Bicycle/Pedestrian compatibility Eastbound side
Route 537 Corridor Existing Conditions

Rt.537 Eastbound approaching Wemrock Road/Stillwells Corner Road Intersection

Rt.537 & Wemrock Road/Stillwells Corner Road Intersection – Site of lowest level of service of all intersections within the corridor study, 62 crashes from 2009-2011 (majority rear-end)
Route 537 Corridor Existing Conditions

Rt.537 Wemrock/Stillwells Corner Road Intersection; looking South along Stillwells Corner Road

Evidence for sidewalk need along Rt.537 Eastbound, east of Wemrock Road/Stillwells Corner Road Intersection
Route 537 Corridor Existing Conditions

Rt.537 Looking East Approaching Bridge over Route 33 Freeway, substandard acceleration & deceleration lanes, gaps in sidewalk network, no bicycle compatibility, substandard vertical curve

Another example of need for bicycle & pedestrian compatibility
Route 537 Corridor Existing Conditions

Evidence for sidewalk need along Rt.537 Westbound in vicinity of Route 33 Freeway

Another example of no bicycle compatibility – Rt.537 Westbound in vicinity of Route 33 Freeway
Route 537 Corridor Existing Conditions

Eastbound Approaching Trotter’s Way Intersection (access to Freehold Raceway Mall), Site of 123 crashes from 2009-2011 (predominantly rear-end and sideswipes)

Route 537 & Trotter’s Way Intersection looking west
Route 537 Corridor Existing Conditions

Evidence for sidewalk need along Route 537 Eastbound between Trotter’s Way and Route 9

Route 537 Eastbound Approaching Route 9 Interchange
Route 537 Corridor Existing Conditions

Route 537 Looking East at Bridge over Route 9 - No dedicated turning lanes, No Bicycle Compatibility, No Sidewalk on Eastbound Side, Site of 95 Crashes 2009-2011 (predominantly rear-end and with left turn movements of Route 537 WB onto Route 9)

Route 537 Eastbound Approaching Route 9 Interchange
Route 537 Corridor Existing Conditions

Route 9 Northbound Access Ramps to Route 537 – Site of 170 Crashes from 2009-2011 (highest rate along corridor study with 95% rear-end and worst movement being right turn/U-turn from ramp moving SB past the Barkalow Avenue junction and onto Route 9 Northbound

Route 537 Eastbound Approaching Route 33 Business Intersection (Park Avenue)
Route 537 Corridor Existing Conditions

Route 537 & Route 33 Business (Park Avenue) Intersection, Site of 49 crashes at or near intersection during 2009-2011 (predominantly same direction and with left turn movement from Rt. 537 EB onto Park Avenue Westbound)

Route 537 & Route 33 Business Intersection looking West
Project Status

• Commenced work November 2011
• Completed Data collection: field survey; environmental screening; utilities verification; reviewed bridge reports, traffic data & crash data; identified existing substandard design elements; conducted new traffic counts (April/May 2012)
• Obtained Local Officials input (1/20/12), Community Stakeholders input (3/20/12) and Public input (4/24/12)
• Developed Project Purpose and Need Statement
• Developed Alternative Concepts; presented to Community Stakeholders (12/17/12)
• Evaluated Alternatives & Impacts (ROW, Environmental, Traffic, costs, etc)
• Selection of Preliminary Preferred Alternative (PPA)
Project Purpose & Need Statement

- **Purpose:** Improve traffic safety, reduce traffic congestion, and provide better accommodations for various modes of transportation along the CR 537 Corridor.

- **Need:** CR 537 is a major east-west transportation corridor that serves regional travel needs. Significant commercial development along the corridor over the last several years has lead to growing traffic volumes and congestion. The corridor has traffic operational and safety deficiencies; and limited pedestrian and bicycle accessibility. There were 761 reported crashes within the project limits from 2009 through 2011. Multiple intersections operate at or near capacity during peak travel periods.
• Minimize current traffic signal congestion; especially during peak hours
• Address the high crashes along the corridor
• Address driver confusion and/or expectation with cited turning movements at intersection and interchanges
• Correct the controlling substandard design elements
• Provide opportunities for other modes of transportation where feasible within the project area
• Address gaps in existing sidewalk system along the corridor
• Avoid or minimize social, economic and environmental impacts
Project Goals & Objectives (continued)

- Enhance public transportation services along the corridor
- Develop access management strategies to reduce conflict points and congestion
- Develop Intelligent Transportation System (ITS) improvements to better utilize roadway capacity
- Coordinate improvements with proposed local development plans
- Minimize disruption and delays during construction
Levels of Service for Signalized Intersections

- Level of Service (LOS) relates expected traffic delay to critical movement at intersections
- Level of Service ranges from “A” (relatively free flow with average delay from 0 to 10 seconds per vehicle; to “F” (failed condition or “gridlock”, average delay over 80 seconds per vehicle; most vehicles require more than one cycle to clear an intersection)
- Monmouth County Engineer’s Office considers Level of Service “D” the minimum acceptable for the design of intersection improvements (a major desirable goal for this project)
- Level of Service “D” - average delays between 35 and 55 seconds; very long queues create lengthy but tolerable delays
Development of Alternatives

- Western project limit re-defined as just west of Iron Bridge Road intersection with improvements recently completed at Gravel Hill Road
- All Concepts include providing: missing sidewalks along both sides of the corridor; 15 foot outside lanes (to provide bicycle compatibility); enhanced public transportation services; ITS improvements; improved substandard vertical curve just west of Redwood Lane & Village Center Drive intersection; and improved substandard sight distance for Enright Avenue and CR 537
Development of Alternatives (continued)

• 3 Alternative Concepts developed, in comparison to a No Build, for intersection improvements that achieve a Level of Service “D” or better at all approaches (using future peak period traffic volumes)

• Some intersections required only one Concept to achieve LOS “D”; whereas Wemrock and Stillwells Corner Road required three Concepts

• Generally, for Level of Service to improve at an intersection, often further widening is needed that involves additional Right of Way and environmental impacts
Three break-out table discussions were used to present, discuss, and gather feedback on the Alternative Concepts

Total agreement that a No Build does not meet the Project Purpose & Need

Total agreement for adding missing sidewalks, providing 15 outside lanes for bicycle compatibility, providing ITS improvements, public transportation enhancements, and correcting substandard design elements

Total agreement for all proposed intersection improvements

General agreement that the proposed intersection improvements did not do enough to improve the corridor and that additional widening is needed; especially at Wemrock & Stillwells Corner Road
Summary of Stakeholders Meeting (continued)

- Prior to conclusion of meeting, Community Stakeholders asked to complete a Questionnaire to assist Project Team in prioritizing corridor improvements
- Results – Highest priorities are improvements to Wemrock & Stillwells Corner Road intersection; improvement to CR 537 & NJ Route 33 and NJ Route 9 interchanges; adding missing sidewalks and bicycle compatibility; and access management strategies
- The greatest concerns for needed safety improvements: Stillwell & Wemrock Road, CR 537 & Rt. 33, and CR 537 & Trotter’s Way
No Build does not meet Project Purpose & Need

Two Concepts for Iron Bridge Road/CentraState Hospital intersection improvements

Concept 2 achieves goal of LOS “D” for all movements which requires adding an exclusive right turn lane on CR 537 EB and converting the center NB Iron Bridge Road lane from an exclusive through lane to a shared left/through lane (estimated ROW impacts = 0.275 acres)
Alternatives Analysis Matrix Results (continued)

• Two Concepts for improvements at Village Center Drive and Redwood Lane intersection
• Concept 2 achieves goal of LOS “D” for all movements which requires adding a left and right turn lane on northbound Redwood Lane (estimated Right of Way impacts = 0.48 acres)
Alternatives Analysis Matrix Results (continued)

- Three Concepts for improvements at Stillwells Corner Road and Wemrock Road intersection
- Concept 3 achieves goal of LOS “D” for all movements which requires widening the intersection to 5 lanes (2 left turn lanes, 2 through lanes, and one exclusive right turn lane) for all approaches; with an additional through lane also provided in both directions on CR 537 (between this intersection and Castronova Way/Wal-Mart Drive EB and from Gibson Place WB)
- Estimated ROW impacts = 3.7 acres; including 7 entire residential and 2 entire commercial acquisitions; 13 business relocations; also results in loss of left turns along CR 537 to and from businesses for this corridor segment
Alternatives Analysis Matrix Results (continued)

- Three Concepts for improvements at Castronova Way/Wal-Mart Drive intersection
- Concept 3 achieves goal of LOS “D” for all movements which requires the provision of three travel lanes in each direction on CR 537 between this intersection and Wemrock/Stillwells EB and to Gibson Place WB); and the addition of a second left turn lane on the SB Castronova Way approach (Estimated ROW impacts = 0.57 acres)
Alternatives Analysis Matrix Results (continued)

• Rt. 537 & Trotter’s Way - No intersection/capacity improvements are proposed for the north side of the intersection, since as a private property roadway, federal funding is not allowable

• Concept 1 improvements include widening and lengthening the CR 537 EB jug handle and straightening/widening the CR 537 WB alignment between Trotter’s way and Route 33 to improve safety (estimated ROW impacts = 1.5 acres)
• Two Concepts for improvements at CR 537 and Park Ave (Business Rt. 33) intersection
• Concept 1 achieves the goal of LOS “D” for all movements which provides for the addition of left turns on CR 537 in each direction (estimated Right of Way impacts = 0.39 acres)
CR 537 & NJ Route 33 & 9 Interchanges

• Improvements proposed at these interchanges cannot be part of this project as these interchanges are under the jurisdiction of NJDOT.

• These interchanges are currently not recognized by NJDOT as high priorities and are not in their Capital Program.

• Problem Statements to be developed and submitted to NJDOT for initiating the interchange improvements being incorporated into their Capital Program.

• Interim improvement to the interchange - A sidewalk will be added to the bridge over Rt. 33 on the CR 537 Westbound side as part of the Preliminary Preferred Alternative.
The Project Team recommendation for the Preliminary Preferred Alternative (PPA) for the Route 537 Corridor Improvements:

- Add the missing sidewalks on both sides for the entire length
- Provide 15 feet outside lanes for bicycle compatibility on both sides for the entire length
- Provide the 4 proposed new bus stops for enhanced public transportation service
- Provide an interconnected traffic signal system to coordinate green time intervals between the various signals (improve ITS)
Project Team Recommendation (continued)

• Develop Access Management Strategies in coordination with the proposed intersection improvements
• Raise the CR 537 profile approx. one foot just west of the Redwood Lane & Village Drive intersection to eliminate/improve the substandard vertical curve
• Remove trees obstructing sight distance and widen CR 537 slightly to improve sight distance for turning vehicles from Enright Avenue onto CR 537
• Provide the missing sidewalk on the bridge over Route 33 on the CR 537 Westbound side
The Project Team recommendation for the Preliminary Preferred Alternative (PPA) for the intersection improvements:

• Iron Bridge Road/CentraState Medical Center: Concept 2 (add right turn lane on CR 537 EB)
• Village Center Drive/Redwood Lane: Concept 2 (add left and right turn lanes on northbound Redwood Lane)
• Wemrock Road & Stillwells Corner Road: Concept 3 (provide 5 lane approach at all four legs of intersection and additional through lane on CR 537 in both directions to Wal-Mart Drive EB & Gibson Place WB)
Project Team Recommendation (continued)

- Castronova Way/Wal-Mart Drive: Concept 3 (provide three lanes in each direction for CR 537 to Wemrock/Stillwells Road intersection and add second left turn lane from Castronova Way onto CR 537 EB)
- CR 537 & Trotter’s Way: Concept 1 (widen and lengthen CR 537 EB jug handle and straighten/widen the CR 537 WB alignment between Trotter’s way and Route 33)
- CR 537 & Park Avenue: Concept 1 (provide left turn lanes on CR 537 in each direction onto Park Ave)
NEXT STEPS

- Receive comments from Local Officials (briefing held 2/22/13), communities and the general public on the Preliminary Preferred Alternative (PPA)
- Review/Finalize Preliminary Preferred Alternative
- Prelim. Preferred Alternative Selection Determination
- Obtain Resolutions of Support for PPA
- Complete Concept Development (CD) Report
- Hold Inter-Agency (FHWA, NJTPA, NJDOT) Review Meeting for approval of PPA & CD Report
- Concept Development Phase completed (April 2013)
Project Contact Information

• Daria Jakimowska, Monmouth County Project Manager, (732) 431-7768
• Monmouth County Web site address:
  – visitmonmouth.com
  – Click “Departments”
  – Click “Engineering”
  – Click “Bridge & Road Projects”
  Note: This Power Point Presentation will be posted on the Monmouth County website
• Written comments will be received until Friday, March 29, 2013
Thank you!
Questions & Comments