

Conceptual Improvement Plan

June 2013



Pennsylvania Department of Transportation PA 41 Corridor Improvement Project Summary of Needs & Potential Options

- Map Key**
- PA 926/PA 41 Intersection
 - PA 841/PA 41 Intersection
 - US Route 1 Ramps/PA 41
 - PA 41/State St to Baltimore Pike
 - Newark Rd/PA 41 Intersection
 - Newark Rd/Starr Rd Intersection
 - Starr Rd/PA 41 Intersection
 - Limestone Rd/Southwood Rd Intersection
- LOS = Level of Service**

PA 841/PA 41 INTERSECTION		
Improve Safety Conditions	Improve Intersection Operation	Improve the Existing Infrastructure
Need: To reduce the possibility of a vehicular crash.	Need: While PA 41 flows freely (LOS A), PA 841 would operate with major delays (or at LOS F) in 2030 peak No Build conditions.	Need: Sidewalk missing or deteriorated.
Option: Signalizing the intersection and adding left-turn lanes should reduce probability and severity of crashes.	Option: Signalizing the intersection would reduce delays on PA 841 (LOS C) at 2030 Peak hour and present reasonably free flow of the intersection overall (LOS A/B).	Option: Replace curb, provide pavement overlay, rebuild portion of sidewalk in Chatham.
Potential Historic Impacts: Minor curb widening may impact the Chatham Village Historic District.		
Potential Environmental Impacts: Two potential sensitive waste sites border the proposed improvement area.		

US ROUTE 1 RAMPS/PA 41	
Accommodate Future Corridor Mobility	Improve Intersection Operation
Need: Northbound PA 41 would operate in over-capacity conditions by 2030 at PM peak.	Need: Northbound PA 41 would operate with major delays (or at LOS D) in 2030 No Build PM peak conditions.
Option: Addition of PA 41 northbound right-turn lane onto US Route 1 northbound ramp would eliminate delays at this already signalized intersection.	Option: Addition of northbound right-turn lane onto US Route 1 northbound ramp would eliminate delays and reduce congestion at this already signalized intersection.
Potential Historic Impacts: None.	
Potential Environmental Impacts: Proposed improvement area may impact approximately 0.5 acres of active farmland.	

NEWARK RD/STARR RD
Improve Intersection Operation
Need: Current four-way stop-controlled intersection would operate with major delays (or at LOS F) in 2030 No Build peak conditions.
Option: Signalization of the intersection would keep intersection at a stable flow (or would operate at LOS B).
Potential Historic Impacts: None.
Potential Environmental Impacts: None.

STARR RD/PA 41
Improve Intersection Operation
Need: While PA 41 flows freely, Starr Rd would operate with major delays (or at LOS D/F) in 2030 No Build Conditions at peak period.
Option: Signalization and addition of north and southbound through lanes on PA 41 would reduce congestion in 2030 peak conditions and would widen PA 41 into a four-lane highway from Starr Rd. south to Limestone Rd.
Potential Historic Impacts: None.
Potential Environmental Impacts: Three potential sensitive waste sites border the proposed improvement area.

PA 41 @ PA 841: traffic calming



PA 41 @ PA 926: roundabout

PA 926/ PA 41 INTERSECTION	
Improve Safety Conditions	Improve Intersection Operation
Need: To reduce the possibility of a vehicular crash.	Need: While PA 41 flows freely, PA 926 operates with major delays (or at LOS E/F) in 2030 No Build conditions.
Option: Adding intersection control - signal or roundabout should reduce probability and severity of crashes.	Option: Adding intersection control - signal or roundabout would reduce PA 926 delays to LOS C at 2030 Peak hour and present reasonably free flow of the intersection overall (LOS A).
Potential Historic Impacts: Proposed signal pole may impact a historic property, The Blue Ball Tavern.	
Potential Environmental Impacts: None.	

PA 41/STATE ST TO BALTIMORE PIKE			
Improve Safety Conditions	Accommodate Future Corridor Mobility	Improve Intersection Operation	Improve the Existing Infrastructure
Need: To reduce the possibility of a vehicular crash.	Need: Travel time studies: Avondale intersections cause delay for through traffic.	Need: Both State St. and Baltimore Pike intersections on PA 41 would operate at over-capacity by 2030 No Build in peak conditions.	Need: Deteriorated sidewalks, structurally deficient bridge over White Clay Creek.
Option: Widening PA 41 with an additional through lane should reduce the number of crashes through this area.	Option: Widening PA 41 with an additional through lane should decrease delays by allowing more through traffic capacity and removing a key corridor bottleneck.	Option: Widening PA 41 with additional through/left-turn lanes will improve both the State St. and Baltimore Pike intersections to LOS C at 2030 peak hour.	Option: Provide new curb and sidewalk through improvement area as part of pavement widening and overlays. Bridge would be replaced.
Potential Historic Impacts: Widening may impact the Avondale Historic District and the Phila. & Balt. Central RR.			
Potential Environmental/Socioeconomic Impacts: Floodplain and stream impacts associated with the bridge replacement; eight potential sensitive waste sites border the proposed improvement area; five potential commercial/residential displacements.			

PA 41 @ Newark RD: turning lanes

NEWARK RD/PA 41 INTERSECTION		
Improve Safety Conditions	Accommodate Future Corridor Mobility	Improve Intersection Operation
Need: To reduce the probability of a vehicular crash.	Need: Travel time studies show delay for through traffic.	Need: The overall intersection would operate with major delays (or at LOS E/F) by 2030 No Build conditions.
Option: Adding turn lanes and having dedicated through, left and right turn lanes at each approach should reduce probability of crashes at this intersection.	Option: Adding turn lanes to all approaches should improve through traffic travel times.	Option: Adding turn lanes to all approaches would maintain a stable traffic flow at peak hour (or would improve peak period to LOS C).
Potential Historic Impacts: None.		
Potential Environmental Impacts: Two potential sensitive waste sites border the proposed improvement area and proposed improvements may impact less than 0.5 acres of active mushroom farmland.		

LIMESTONE RD/SOUTHWOOD RD
Improve Intersection Operation
Need: The intersection would operate with major delays (or LOS D/F) in 2030 No Build Conditions at peak period.
Option: Adding left-turn lanes would reduce congestion during the 2030 peak periods.
Potential Historic Impacts: None.
Potential Environmental Impacts: Two potential sensitive waste sites border the proposed improvement.