Project Purpose

The transportation problem to be addressed is existing and future traffic operations and safety of the NJ 55/47/347 Corridor in Cumberland and Cape May Counties; such a project is expected to alleviate the associated impacts on corridor residents and businesses, emergency response and evacuation, motorists, and multi-modal users.

Project Need

Historical data shows that traffic volumes along Route 47 during summer weekends are 75% to 100% higher than non-summer weekends. NJDOT Management Systems travel time information indicates that southbound travel at the southern terminus of Route 55 can take 10 times longer during peak periods in the summer months. The same NJDOT data also shows that travel along Route 47 southbound can take more than 4.5 times longer and travel along Route 347 southbound can take more than 6 times longer during summer peak periods.

Traffic analysis results show that many of the signalized intersections along the NJ 55/47/347 corridor operate at their capacity or exceed their capacity during the Summer Saturday and Sunday peak hours. Queues along southbound Route 55 from the Route 47 intersection and lane merge extend for approximately 2 miles, adding nearly 45 minutes of travel time during peak times on Summer Saturdays. Poor traffic operations at the Route 47 intersections with Petersburg Road (CR 610) and Tyler Road (CR 611) negatively impact traffic operations at intersections located upstream, with queue spillbacks along Route 47 from these intersections often extending back through adjacent intersections. Between the signalized intersections of Route 47/347 and Route 47/Court House-Dennisville Road (CR 657) in Dennisville, a distance of approximately 4 miles, slowly moving queues result in high delays and extensive travel times for motorists. Observed southbound queues extended from the Petersburg Road and Tyler Road intersections, through the Route 47/347 intersection, and over an additional mile along both Route 47 and Route 347. These long queue spillbacks resulted in southbound travel times of approximately 45 minutes through Dennisville on Summer Saturdays.

By Design Year 2040, traffic volumes are expected to continue to increase, resulting in degrading traffic operations, longer queue spillbacks and further increased travel times. Increased congestion and idling vehicles will also further negatively impact noise and air quality along the corridor. Other concerns identified by local representatives and the general public that were confirmed through field observations included the following: unsafe passing, the inability for motorists to access driveways and unsignalized intersections, lack of turning lanes, high travel speeds and increased traffic diversions onto local streets to avoid traffic congestion along the corridor.

Traffic congestion during the summer months also impacts emergency evacuation and response times along the NJ 55/47/347 corridor. During summer months, emergency response to crashes is inhibited due to high delays and queues along the corridor and the lack of alternative routes for emergency vehicles. Data from NJDOT and feedback from local EMS providers also indicates that flooding along the corridor occasionally contributes to increased emergency response and evacuation times.

A crash investigation of the Route 55/47/347 corridor indicates several locations where crash rates, crash types and severity are overrepresented when compared to statewide averages for similar roadways. Along the section of Route 55 from the 4-lane to 2-lane merge location (milepost 20.8) to just north of the Schooner Landing Road interchange (milepost 21.75), crashes resulting in moderate injuries were nearly 7 times higher than the statewide average. All five (5) of the moderate injury crashes occurred in the southbound direction approaching the merge area. Additionally, the occurrence of Overturned crashes within this segment was more than 25 times

the statewide average which can be attributed to high travel speeds and driver inattention; four (4) Overturned crashes were reported in a 3-year period.

There are three (3) sections of Route 47 that have relatively high crash rates compared to statewide averages. Between mileposts 34.99 and 35.12, which is just south of the Route 55 intersection, the crash rate is more than 4 times the statewide average. The overrepresentation of Same Direction-Rear End crashes at this location can be attributed to traffic congestion during the summer months. Numerous Same Direction-Rear End crashes were reported on the Route 47 southbound approach to Tyler Road during the summer months and may be attributed to traffic congestion as well as the presence of horizontal curves. The crash rate on Route 47 in Rio Grande between mileposts 3.63 to 3.93 is more than 1.5 times the statewide average. Similarly, Route 47 between mileposts 3.94 and 4.20 (near Railroad Avenue) has a crash rate that is more than 2.75 times the statewide average. Same Direction-Rear End, Right Angle, Same Direction-Sideswipe and Left-turn crashes were predominant throughout the Rio Grande area. These can mainly be attributed to the presence of traffic congestion, the density of signalized and unsignalized street intersections as well as the high density of business/residential driveways.

A fatal Head-On crash with two (2) fatalities was reported on Route 47 near Pumping Station Pond/Fishing Creek Curve (milepost 5.2), where existing broken back horizontal curves with substandard tangent lengths, unsafe travel speeds and illegal passing were contributing factors. A fatal Fixed Object crash occurred at milepost 10.40 between Woodcock Road and the Bay Shore Condominiums, and another fatal Head-On crash occurred at milepost 12.6, just north of Bucks Road. Driver inattention was the major contributing factor to both of these crashes. Unsafe travel speeds were contributing factors to fatal Fixed Object crashes at milepost 13.4, south of William Street, and at milepost 15.9 in the vicinity of Sluice Creek. At milepost 15.9, the horizontal curve approaching Sluice Creek was also a contributing factor. Driver inattention was cited as a factor at the fatal crash at milepost 29.60, which involved a southbound vehicle making a passing maneuver. The fatal fixed object crash at milepost 30.3 near Oak Hill Road was also caused by driver inattention. Finally, a fatal Same Direction-Rear End crash caused by driver inattention occurred at milepost 34.9 in the northbound direction approaching the Route 55 intersection.

Since 2011, five (5) fatal crashes have occurred on Route 347. One (1) fatal crash occurred at milepost 0.1, near the southern intersection of Route 47/347. Two (2) fatal crashes also occurred in the vicinity of the horizontal curve located 0.7 miles north of the southern Route 47/347 intersection. Finally, two (2) fatal crashes occurred near the curve at Hands Mill Road (between mileposts 3.2 to 3.4), where upgraded pavement markings have been recently installed to improve safety. High travel speeds and driver inattention may have been contributing factors to these crashes.

Five (5) pedestrian/bicycle crashes occurred since 2011 within a ¼-mile segment of Route 47 near Bay Shore Road, where outside shoulder widths are substandard by nearly 2 feet. Two (2) pedestrian fatalities were reported in Year 2012 within a ½-mile stretch of Route 47 between mileposts 3.2 and 3.62 in Rio Grande. The fatality at milepost 3.2 occurred just north of the Garden State Parkway ramps and south of 6th Street, and the fatality at milepost 3.62 occurred in the vicinity of 2nd Street. It should be noted that both crashes occurred in the evening during Dark conditions. Evaluation of geometric deficiencies in these areas indicates that the substandard acceleration lane from the Garden State Parkway, the undesirable location of the 6th Street unsignalized intersection, and lack of outside shoulders may be contributing factors to crashes. Heavy utilization of the 2nd Street bus stop may also contribute to pedestrian crashes in this area.

The study corridor is located primarily within the NJ Pinelands and/or CAFRA zone and is an environmentally-sensitive area. Freshwater wetlands and NJDEP-Mapped Coastal wetlands are mapped extensively throughout the project corridor and six Category One waterways were identified. Threatened & endangered species, migratory birds, State/County Open Space, Green Acres properties, and hazardous waste/contaminated sites were each identified to exist within the project area. Traffic congestion and long queues along the corridor also produce harmful emissions from idling vehicles, which will continue to rise as traffic volumes increase. These environmental issues present a unique challenge that must be considered with the safety and operational issues identified.

Goals and Objectives

The goals and objectives of any subsequently initiated project are identified below. The improvement alternatives should be developed to satisfy as many goals and objectives as possible.

- Improve the safety of motorists by reducing the frequency and severity of crashes along the corridor
- Create a safe and accessible environment for vehicles, pedestrians, and bicyclists
- Improve the safety and safety awareness of pedestrians and bicyclists along the southern section of Route 47 between Bay Shore Road and the Garden State Parkway
- Mitigate summer traffic congestion along the corridor by reducing travel time, overall delay, and queue spillbacks
- Reduce the negative impacts that corridor traffic congestion has on the local and regional economy, including the loss of business and the increased costs associated with the movement of goods and services
- Improve the quality of life for residents along the corridor during the summer months
- Minimize social, noise, and economic impacts to residents and businesses along the corridor
- Improve security by addressing emergency evacuation concerns and reducing evacuation clearance times for coastal counties
- Improve response times for emergency vehicles during the summer months
- Improve access to and from the coastal counties and Jersey Shore communities to encourage recreational travel and tourism as well as promoting economic development
- Increase, improve, enhance and encourage public transit service and usage to and from the shore communities.
- Enhance the integration and connectivity of the transportation system
- Reduce air and noise pollution resulting from summer traffic congestion along the corridor
- Minimize impacts to environmentally sensitive features including wetland areas, high quality waterways, Section 4(f)/Green Acres properties, threatened and endangered species, and cultural and archaeological resources
- Promote/ensure environmental justice
- Maintain the rural, scenic character of the corridor
- Encourage the use of new technologies and innovative techniques that are supportive of other goals