1.2 Purpose and Need

1.2.1 Purpose

The primary purpose of this project is to enhance overall traffic operations through Design Year (2040) at the study interchanges through implementation of operational and capacity improvements that will maintain and improve mobility, improve safety, support existing and future development, and enhance emergency evacuation and response times.

1.2.2 Need

The SR 804/Boynton Beach Boulevard and Gateway Boulevard interchanges with SR 9/I-95 are an important component of the Strategic Intermodal System (SIS) in Palm Beach County, Florida and provide a key transportation element. These interchanges are an important connection for commuters and freight traffic in the region.

The goal of this project is to improve traffic operations at the study interchanges through implementation of operational and capacity improvements that will maintain and improve mobility, improve safety, support existing and future development, and enhance emergency evacuation and response times.

The need for the project is based on the following factors:

Transportation Capacity

The study area was initially evaluated by the SR 9/I-95 at SR 804/Boynton Beach Boulevard interchange in Palm Beach County, Interchange Concept Development Report (June 2014) and the SR 9/I-95 at Gateway Boulevard interchange in Palm Beach County, Interchange Concept Development Report (June 2014) [CD Reports].

Based on the traffic operations analysis documented in the CD Reports for the two study area interchanges and adjacent signalized intersections, the existing operational capacity and overall traffic operations (Level of Service) are deficient. These deficiencies are based on existing and future AM and PM peak hour traffic conditions for ramp terminal intersections. Without improvements, these intersections will continue to experience excessive delays and queue lengths, and will continue to operate below acceptable LOS standards and the two study interchanges will have insufficient capacity to accommodate the projected travel demand.

Economic Development

The area surrounding the SR 9/I-95 at SR 804/Boynton Beach Boulevard interchange is urbanized containing a mixture of commercial, industrial, and residential land uses. According to the City of Boynton Beach Future Land Use Map, the SR 9/I-95 at SR 804/Boynton Beach Boulevard interchange falls within the designated Community Redevelopment Area (CRA). The residential neighborhoods and business districts within the CRA are intended to be redeveloped by implementing compact, more intensive urban growth patterns that provide opportunities for more efficient use and development of infrastructure, land, and other resources and services. The area surrounding the SR 9/I-95 at Gateway Boulevard interchange is urbanized containing a mixture of residential and recreational land uses to the east and commercial, office, industrial, and residential activities to the west as part of the Quantum Park Development of Regional Impact (DRI). According to the City of Boynton Beach Future Land Use Map, the area will continue to support the noted land uses.
Population within the vicinity of the SR 804/Boynton Beach Boulevard interchange is anticipated to grow by approximately 10 percent primarily in the areas northeast and southwest of the interchange during the period from 2005 to 2035. Anticipated population growth within the vicinity of the Gateway Boulevard interchange is 46 percent, with expected growth primarily east of Seacrest Boulevard and within the Quantum Park DRI during the same period.

Employment in the vicinity of SR 804/Boynton Beach Boulevard is projected to increase approximately 147 percent primarily in the areas northeast, east, and southwest of the interchange during the period from 2005 to 2035. In the vicinity of Gateway Boulevard, employment is expected to increase by approximately 173 percent primarily in the areas west and southeast of the interchange during the same period.

Improving the transportation infrastructure at the study area interchanges and adjacent intersections will support the redevelopment efforts in the vicinity of these interchanges and the overall vision of the City of Boynton Beach growth and economic development as identified in the Heart of Boynton Community Redevelopment Plan Update (April 2014).

**Safety**

MAP-21 establishes national performance goals for Federal highway programs including:

- Safety - to achieve a significant reduction in traffic fatalities and serious injuries on all public roads.
- System Reliability – to improve the efficiency of the surface transportation system.

MAP-21 continued the Highway Safety Improvement Program (HSIP) as a core Federal program. To receive funding under this program, States were required to develop Strategic Highway Safety Plans (SHSP). The SHSP is a data-driven, four to five-year comprehensive plan that establishes statewide goals and objectives to reduce fatalities and serious injuries.

If no operational and safety improvements are made within the project limits, traffic operations within the interchange area will progressively worsen, increasing the number of crashes, and deteriorating the access to and from SR 9/I-95 for users.

**Emergency Evacuation and Response Times**

SR 9/I-95 and SR 804/Boynton Beach Boulevard serve as part of the emergency evacuation route network designated by the Florida Division of Emergency Management and Palm Beach County. As designated evacuation facilities, these roadways are critical in facilitating traffic flow during emergency evacuation periods. SR 804/Boynton Beach Boulevard is a major east-west corridor in eastern Palm Beach County providing linkage between SR 9/I-95 and Florida’s Turnpike. Both SR 804/Boynton Beach and Gateway Boulevards connect to other major arterials and highways of the State’s designated evacuation route network.

**1.3 Project Location**

The project is located in eastern Palm Beach County within the City of Boynton Beach and the project study area consists of SR 9/I-95, SR 804/Boynton Beach Boulevard and Gateway Boulevard arterial roadways and the on/off-ramps to/from SR 9/I-95 along these arterials.

SR 9/I-95 at Woolbright Road interchange (MP 13.75) to the south and SR 9/I-95 at Hypoluxo Road interchange (MP