



# Golden Glades Multimodal Transportation Facility Bike & Pedestrian Eastside Connectivity Study

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## Executive Summary

GPC-VII TWO#30

September 2022



# Introduction

The Golden Glades Interchange (GGI) and surrounding areas in northeast Miami-Dade County are undergoing a significant transformation. With the Florida Department of Transportation (FDOT) reconstructing the interchange and the Golden Glades Park-and-Ride, the area has been evaluated numerous times to maximize the return on investment. From these studies, a non-motorized vision has developed to increase access to the Golden Glades Multimodal Transportation Facility (GGMTF) by bicyclists and pedestrians. While the GGI is a major transportation node, the various roadways, ramps, canals, and railways that make up the interchange create extensive physical and psychological mobility barriers for non-motorized modes of transportation. This study aims to develop a significant link of the proposed non-motorized vision by determining a safe, convenient, and enticing bicycle and pedestrian connection between the GGMTF, the future Golden Glades Truck Travel Center (GGTTC), and surrounding neighborhoods east of I-95/SR 9A.

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Figure 1: Study Area



# Purpose & Need

**Through an extensive evaluation of existing conditions and literature review, this study determined that there is a need for the proposed link based on system linkage, capacity, social demand and economic development, and safety.**

## System Linkage

The Federal Transit Administration considers “all pedestrian improvements located within one-half mile and all bicycle improvements located within three miles of a public transportation stop or station [to have] a *de facto* physical and functional relationship to public transportation” (76 FR 52046, 2011). The barriers created by the GGI limit or eliminate potential connections in the roadway and bicycle/pedestrian networks as well as reduce the market share of potential users for existing and future transit services at the GGMTF. The GGMTF is a critical transportation hub providing multiple public transit services including intercity bus, local, limited-stop, express buses, local circulators, regional commuter rail (i.e., Tri-Rail), and ridesharing. The GGMTF has also been identified as a transit hub for the Miami-Dade TPO’s Strategic Miami Area Rapid Transit (SMART) Plan. Furthermore, Miami-Dade County is designing the Sunshine State Industrial Park Kiss and Ride/Transit Terminal Facility north of the South Florida Rail Corridor which will provide local bus and circulator services and will connect the City of Miami Gardens to Tri-Rail and the GGMTF via bicycle and pedestrian bridges.

## Capacity

East of I-95/SR 9A, most travelers within the study area do not have the option to perform short trips (i.e., 5-miles or less) to/from the GGMTF on alternative modes of transportation. This has an adverse effect on the existing roadway network because commuters have to make long and circuitous trips around the GGI which contribute to traffic congestion via reliance on motorized transportation. By providing a well-connected and complete bicycle and pedestrian network in the study area, citizens of the communities east of I-95/SR 9A benefit from unlocking new transportation options that are more socioeconomically equitable, energy-efficient, customizable, and direct.

## Social Demand and Economic Development

The proposed bridge will allow residents of Areas of Persistent Poverty (APP) and Historically Disadvantaged Communities (HDC) to affordably access central business districts in Miami-Dade, Broward, and Palm Beach County by allowing travelers to customize the cost and duration of individual trips through the use of transit and non-motorized transportation modes. USDOT defines APP as census tracts with a poverty rate of 20% as measured by the 2014 – 2018 5-year data available from the American Community Survey. USDOT definition of HDC is consistent with the Justice40 Initiative and considers a combination of variables including, but not limited to: low income, high/persistent poverty, high unemployment or underemployment, racial and ethnic residential segregation, linguistic isolation, distressed neighborhoods, high transportation cost burden or low transportation access, disproportionate environmental stressors, limited water and sanitation access and affordability, disproportionate impacts from climate change, high energy cost burden or low energy access, jobs lost through the energy transition, and low access to healthcare. According to the 2019 American Community Survey, the neighborhoods east of SR 9A/I-95 within the study area have a total population of 15,846 out of which an estimated 2,585 people (16.31%) live below poverty level. The study area's median household income (\$45,711) is lower than the rest of the County (\$53,998) as well as the study area's median home value (\$214,700) compared to the County (\$289,600). Of the 15,846 residents, only 2,375 (14.99%) have completed some level of higher education (Associates Degree or higher). These statistics depict the average

study area resident as modest earning with limited economic opportunities. Creating a bicycle and pedestrian connection to the GGMTF will exponentially increase the economic mobility of residents within the study area by providing cheap transportation to major business districts.

The construction of the proposed bridge will also leverage public and private investments by connecting planned high density residential developments to public transportation and creating walkable neighborhoods with unique community characteristics. The study area has numerous points of interest for walking and cycling trips. Points of interests include high-density residential, which are points of concentrated population mass, and secondary trip destinations such as post offices, educational facilities, parks, religious and medical institutions, and libraries. Overall, the study area has approximately 832 units in multi-family developments, 6 religious institutions, 3 medical centers, and 4 schools. With most businesses located north of NE 161<sup>st</sup> Street and west of NW 2<sup>nd</sup> Avenue, NW 2<sup>nd</sup> Avenue is undergoing significant economic redevelopment. Field reviews and research have also revealed plans for three high-density residential developments and one megachurch under construction within the study area.

The proposed bridge proactively creates a new connection to reconnect segregated communities and pave a path for future multimodal improvements such as a potential shared-use path on NW 159<sup>th</sup> Street connecting

## Safety

the proposed bridge to the residential corridor of NW 2<sup>nd</sup> Avenue, Biscayne Gardens Park, and Oak Grove School and Park. Moreover, the neighborhoods east of I-95/SR 9A in the Golden Glades CDP and cities of North Miami Beach and North Miami may benefit from increased tourism as a result of increased transportation options since these neighborhoods are centrally located between popular destinations such as Hard Rock Stadium, Aventura Mall, Gulfstream Park Racing and Casino, Oleta River State Park, Haulover Park, St. Thomas University, and FIU Biscayne Bay Campus.

In the project area, a total of 24 bicycle and pedestrian crashes were reported between April 29, 2016 and April 29, 2021. Of these 24 crashes, 2 were fatal, and 3 resulted in incapacitating injuries. The construction of a pedestrian bridge is estimated to have a Crash Reduction Factor between 86 – 100 percent<sup>1</sup>.



<sup>1</sup> Albert Gan, Joan Shen, and Adriana Rodriguez (2005) Update of Florida Crash Reduction Factors and Countermeasures to improve the Development of District Safety Improvement Projects. Contract BD015-04, Florida Department of Transportation Safety Office, Tallahassee. Available at <https://ctr.eng.fiu.edu/Documents/CRFFinalReport.pdf>

# Recommendation

To fulfill the study purpose and need, the study team began by performing a connectivity assessment to determine the logical termini of the bicycle/pedestrian connection. Within the GGMTF, the team determined the best point of connection is at the Orange Lot adjacent to US-441/SR 7/NW 7<sup>th</sup> Avenue and south of the main driveway into the GGMTF. This location provides direct access to the shared-use path constructed within the GGMTF that connects SR 9 to US-441/SR 7/NW 7<sup>th</sup> Avenue. At the GGTC, the best connection point is straight across US-441/SR 7/NW 7<sup>th</sup> Avenue, creating a direct path between the GGTC driveway and the GGMTF shared-use path. East of SR 9A/I-95, the best connection point was determined to be the intersection of NW 159<sup>th</sup> Street and NW 6<sup>th</sup> Avenue. Adjacent to two lots that are planned as future multi-residential developments, this connection point leads bicyclists and pedestrians to NW 159<sup>th</sup> Street which has ample right-of-way for a future shared-use path with direct connection to NW 2<sup>nd</sup> Avenue, Biscayne Gardens Park, and Oak Grove Park.

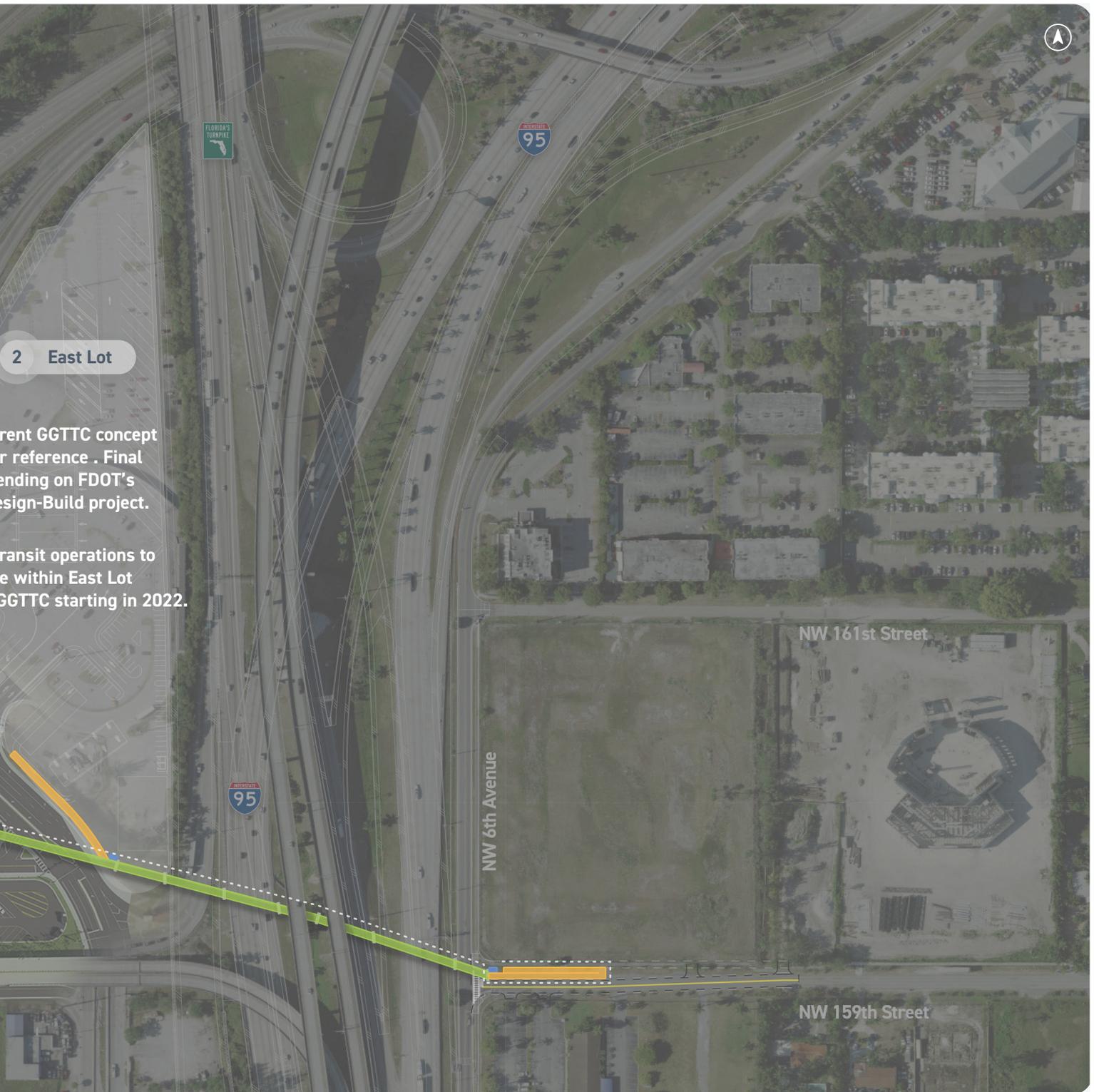
With the logical termini selected, the next step in the analysis was to determine the engineering feasibility of connecting these points in a cost-effective manner. Given that the most challenging connection to conceptualize was across SR 9A/I-95, the study team began by reviewing the ongoing Golden Glades Interchange Enhancement Project which will reconstruct the entire GGI interchange. Based on the future condition of the interchange and through extensive coordination and alternative

design process with FDOT, the study team secured a recommended alternative and envelope through the ongoing Golden Glades Interchange Enhancement Project that provides a 930-foot long bicycle and pedestrian bridge across US-441/SR 7/NW 7<sup>th</sup> Avenue, SR 821/Florida's Turnpike Southbound Connector, I-95/SR 9A, and NW 6<sup>th</sup> Avenue. The recommended alternative impacts the GGMTF Orange Lot, requiring the removal of 18 surface parking spaces and includes roadway improvements on NW 159<sup>th</sup> Street to accommodate the bridge landing and pedestrian ramps. Table 1 presents a summarized conceptual cost estimates for the recommended alternative which totals approximately \$18,907,000. This alternative includes three elevator towers at each side of US-441/SR 7/NW 7<sup>th</sup> Avenue and at the intersection of NW 6<sup>th</sup> Avenue and NW 159<sup>th</sup> Street and the reconstruction of the GGMTF Orange Lot. The addition of a shared-use path from NW 6<sup>th</sup> Avenue to Biscayne Gardens Park along NW 159<sup>th</sup> Street is estimated to cost \$1,806,000 more (see Table 2).



Figure 2: Recommended Alternative





2 East Lot

urrent GGTTC concept  
r reference . Final  
ending on FDOT's  
esign-Build project.

ransit operations to  
e within East Lot  
GGTTC starting in 2022.

Table 1: Proposed Bike-Ped Bridge Conceptual Cost Estimate

ITEM	AMOUNT
<b>Structures</b>	<b>\$10,648,948.06</b>
Reconstruction of GGMTF Orange Lot	\$271,000.00
Mobilization	\$745,426.36
Maintenance of Traffic	\$1,064,894.81
Utilities	\$212,978.96
Lighting	\$1,064,894.81
Drainage	\$1,064,894.81
Design	\$1,064,894.81
Geotechnical	\$159,734.22
Survey	\$159,734.22
CEI	\$851,915.84
Contingency	\$1,597,342.21
<b>Total (Rounded to Nearest Thousand)</b>	<b>\$18,907,000.00</b>

Table 2: Proposed Shared-Use Path on NW 159<sup>th</sup> Street Conceptual Cost Estimate

ITEM	AMOUNT
<b>Subtotal</b>	<b>\$1,031,851.11</b>
Roadway	\$766,479.43
Signing and Pavement Markings	\$49,839.86
Structures	\$211,083.23
<b>Mobilization</b>	<b>\$72,229.58</b>
<b>Maintenance of Traffic</b>	<b>\$103,185.11</b>
<b>Utilities</b>	<b>\$20,637.02</b>
<b>Lighting</b>	<b>\$103,185.11</b>
<b>Drainage</b>	<b>\$103,185.11</b>
<b>Design</b>	<b>\$103,185.11</b>
<b>Geotechnical</b>	<b>\$15,477.77</b>
<b>Survey</b>	<b>\$15,477.77</b>
<b>CEI</b>	<b>\$82,548.09</b>
<b>Contingency</b>	<b>\$154,777.67</b>
<b>Total (Rounded to Nearest Thousand)</b>	<b>\$1,806,000.00</b>



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