

DRAFT

BUILD ALTERNATIVE MATRIX

QUALITATIVE COMPARISON

Variables/Parameters	No-Build Alternative	Build Alternative 1	Build Alternative 2	Build Alternative 3
ENGINEERING				
Geometric Compliance to Design Criteria	No change	Meets criteria	Meets criteria	Meets criteria
Multimodal Facilities	No change	Provides the ability to enhance local bus service operations. Provides the ability to add Bus Rapid Transit. Improves bicycle and pedestrian facilities (at selected interchanges).	Provides the ability to enhance local bus service operations. Provides the ability to add Bus Rapid Transit. Improves bicycle and pedestrian facilities (at selected interchanges). Enhances mobility by connecting the express lanes to the US 1 Busway.	Provides the ability to enhance local bus service operations. Provides the ability to add Bus Rapid Transit. Improves bicycle and pedestrian facilities (at selected interchanges). Enhances mobility by connecting the express lanes to the US 1 Busway.
Mobility	Increased congestion	Adds capacity. Improves the traffic operations of the area. Connects to SR 826 express lanes north of SR 836.	Adds capacity. Improves the traffic operations of the area. Connects to SR 826 express lanes north of SR 836. Connects to US 1 Busway.	Adds capacity. Improves the traffic operations of the area. Connects to SR 826 express lanes north of SR 836. Connects to US 1 Busway. Proposes MDX direct connection between SR 874 and SR 836.
Safety Improvements	Includes planned/programmed improvements	Reduces long-term crashes related to heavy congestion, mainline weaving maneuvers, mainline and ramp speed differentials and interchange access.	Reduces long-term crashes related to heavy congestion, mainline weaving maneuvers, mainline and ramp speed differentials and interchange access.	Reduces long-term crashes related to heavy congestion, mainline weaving maneuvers, mainline and ramp speed differentials and interchange access. Separates SR 874-SR 836 traffic from SR 826. Proposes 2nd level roadway over SR 826 from SR 874 to SR 836.
Drainage Analysis	No impact	Additional right of way is not required beyond the proposed roadway right of way limits in order to meet minimum drainage and permitting criteria. Critical drainage areas are along SR 826 from SW 40th Street to the SR 826/SR 836 Interchange. Proposed drainage improvements are less than Alternatives 2 and 3.	Additional right of way may be required beyond the proposed roadway right of way limits in order to meet minimum drainage and permitting criteria. Critical drainage areas are along SR 826 from south of SW 112th Street to the SR 826/SR 836 Interchange. Proposed drainage improvements are more than Alternative 1, but less than Alternative 3.	Additional right of way may be required beyond the proposed roadway right of way limits in order to meet minimum drainage and permitting criteria. Critical drainage areas are along SR 826 from south of SW 112th Street to the SR 826/SR 836 Interchange and along SR 874 south of SW 56th Street. Proposed drainage improvements are more than Alternatives 1 and 2.
Structures Analysis	No change	New bridges = 10 Bridge widenings = 15 Less new bridges than Alternatives 2 and 3 Less widening bridges than Alternatives 2 and 3	New bridges = 13 Bridge widenings = 21 More new bridges than Alternatives 1 and 3 More widening bridges than Alternative 1	New bridges = 11 Bridge widenings = 21 More new bridges than Alternative 1, but less than Alternative 2 More widening bridges than Alternative 1, same as Alternative 2 Proposes a 4.5-mile second level bridge structure from SR 874 to SR 836.
Utility Impacts	No impact	Impacts 11 utilities at 38 potential locations	Impacts 13 utilities at 74 potential locations	Impacts 13 utilities at 74 potential locations
Maintenance of Traffic	No impact	Moderate impacts during construction Less impacts than Alternatives 2 and 3	Moderate impacts during construction More impacts than Alternative 1, but less than Alternative 3	Significant impacts during construction More impacts than Alternatives 1 and 2
Purpose and Need	Does not meet	Meets	Meets	Meets
Traffic	27 locations below LOS D Most of the corridor is above capacity	21 locations below LOS D Adds corridor capacity Processes 4% more traffic on average than the No-Build	15 locations below LOS D Adds corridor capacity Processes 10% more traffic on average than the No-Build	16 locations below LOS D Adds corridor capacity Separates SR 874-SR 836 traffic from SR 826 Adds more capacity than Alternatives 1 and 2 Processes 7% more traffic on average than the No-Build
SOCIO-ECONOMIC				
Right of Way Impacts	None	Total Number of Parcels Affected = 35 Commercial = 11 Residential = 20 Miscellaneous = 4 Alternative 1 has less right of way impacts than Alternatives 2 and 3	Total Number of Parcels Affected = 49 Commercial = 13 Residential = 30 Miscellaneous = 6 Alternative 2 has more right of way impacts than Alternatives 1 and 3	Total Number of Parcels Affected = 44 Commercial = 12 Residential = 29 Miscellaneous = 3 Alternative 3 has less right of way impacts than Alternative 2, but more than Alternative 1
Social and Neighborhood Impacts	None/No change	No anticipated impacts to existing access ways or routes. Provides the ability to enhance/improve bus service, which offers an alternative to auto travel and addresses needs of low-income users and disadvantaged groups.	No anticipated impacts to existing access ways or routes. Provides the ability to enhance/improve bus service, which offers an alternative to auto travel and addresses needs of low-income users and disadvantaged groups. Enhances mobility by connecting to the US 1 Busway.	No anticipated impacts to existing access ways or routes. Provides the ability to enhance/improve bus service, which offers an alternative to auto travel and addresses needs of low-income users and disadvantaged groups. Enhances mobility by connecting to the US 1 Busway. Potential impacts to viewshed due to the 2nd and 3rd level express lane bridge structure.
Economic, Mobility and Employment Impacts	No change	Improves mobility, throughput, travel speeds and travel time for this vital SIS facility and cross streets. Supports economic development and reduces congestion.	Improves mobility, throughput, travel speeds and travel time for this vital SIS facility and cross streets. Supports economic development and reduces congestion. Adds Bus Rapid Transit connecting US 1 and SR 826 via express lanes improving movement of people.	Improves mobility, throughput, travel speeds and travel time for this vital SIS facility and cross streets. Supports economic development and reduces congestion. Adds Bus Rapid Transit connecting US 1 and SR 826 via express lanes improving movement of people.
Community Services/Features	No change	No impacts to community services are anticipated (Fire, Police, Hospitals, churches, etc.)	No impacts to community services are anticipated (Fire, Police, Hospitals, churches, etc.)	No impacts to community services are anticipated (Fire, Police, Hospitals, churches, etc.) Impacts to Gulliver Preparatory School
ENVIRONMENT				
Noise Impacts	No effect Does not have the ability to add noise abatement	Noise abatement measures currently being evaluated. Lower number of impacted noise sensitive sites when compared to Alternatives 2 and 3.	Noise abatement measures currently being evaluated. Higher number of impacted noise sensitive sites when compared to Alternative 1, but lower than Alternative 3.	Noise abatement measures currently being evaluated. Higher number of impacted noise sensitive sites when compared to Alternatives 1 and 2.
Air Quality	Project is located within an attainment area. Minimal potential impacts may occur from increased congestion	The project is located within an attainment area. No significant air quality impacts are anticipated. Project is anticipated to decrease congestion.	The project is located within an attainment area. No significant air quality impacts are anticipated. Project is anticipated to decrease congestion.	The project is located within an attainment area. No significant air quality impacts are anticipated. Project is anticipated to decrease congestion.
Contamination	No change	0 - High Risk Sites 1 - Medium Risk Site 1 - Low Risk Site 4 - No Risk Sites	3 - High Risk Sites 3 - Medium Risk Sites 1 - Low Risk Site 7 - No Risk Sites	3 - High Risk Sites 3 - Medium Risk Sites 1 - Low Risk Site 7 - No Risk Sites
Listed Species	No impact	Low impacts anticipated to Florida Bonneted Bat habitat, West Indian Manatee habitat, and Wood Stork foraging habitat	Low-Moderate impacts anticipated to Florida Bonneted Bat habitat, West Indian Manatee habitat, and Wood Stork foraging habitat	Low-Moderate impacts anticipated to Florida Bonneted Bat habitat, West Indian Manatee habitat, and Wood Stork foraging habitat
Wetland Impacts	No impact	Impacts less natural/water features when compared to Alternatives 2 and 3	Impacts more natural/water features when compared to Alternatives 1 and 3	Impacts more natural/water features when compared to Alternative 1 and less natural/water features when compared to Alternative 2
Cultural/Historic/Archaeological Impacts	No impact	4 National Register-Eligible/Considered-Eligible Cultural Resources	4 National Register-Eligible/Considered-Eligible Cultural Resources	4 National Register-Eligible/Considered-Eligible Cultural Resources
COST				
Engineering, CEI and Construction	No construction. No cost involved = \$0	\$483 million	\$611 million	\$996 million
Right of Way/Business Damages	None = \$0	\$26 million	\$42 million	\$44 million

PERFORMANCE EVALUATION CRITERIA

Engineering
Geometric Compliance to Design Criteria: Assesses the compliance of the alternatives with FDOT and AASHTO design standards.
Multimodal Facilities: Measures the availability of multi-modal facilities and their amenities and how each alternative enhances the ability to promote other transportation modes.
Mobility: Measures the ability of an alternative to provide adequate capacity and minimize travel time delay through the corridor.
Safety Improvements: Provides consideration for an alternative's physical, geometric and operational features identifying to what extent they would minimize actual or potential safety hazards.
Drainage Analysis: Evaluates storm water treatment and attenuation within the project limits. Determines and estimates the storm water management facility requirements to serve the drainage needs of the proposed improvements.
Structures Analysis: Evaluates the needed structural improvements of all the bridges within the project limits. This analysis also determines if new bridges are required to accommodate the proposed improvements.
Utility Impacts: Measures the utility impacts of the alternatives. This includes potential conflicts and relocation of the utility lines that are located within the FDOT right of way.
Maintenance of Traffic: Measures the effectiveness of the proposed traffic control schemes during construction to minimize effects on the local residents, business, and traveling public and emergency management services.
Purpose and Need: Measures the ability of an alternative to comply with the purpose and need of the project.
Traffic: Measures the level of service along the corridor.
Socio-Economic
Right of Way Impacts: Identifies the level and type of any residential and/or business disruptions associated with an alternative.
Social and Neighborhood Impacts: Identifies whether an alternative has impacts on social and neighborhood issues, including visual and aesthetic concerns.
Economic and Employment Impacts: Identifies whether an alternative impacts economic issues along the corridor.
Community Services/Features: Measures the effect and/or compatibility of an alternative to meet the surrounding visual environment needs from both the roadway user and the supporting community. Also provides a degree of impact to the community's services (Fire, Police, Parks, etc.)
Environmental
Noise Impacts: Measures the ability of an alternative to meet pre-established noise standards.
Air Quality: Measures the ability of an alternative to meet pre-established air quality standards.
Contamination: Measures the potential impact on existing or potential hazardous material sites and/or generators.
Listed Species: Identifies the degree of potential effect of threatened and endangered species.
Wetland Impacts: Identifies the degree of potential impacts to wetland habitat.
Cultural/Historic/Archaeological Impacts: Measures the degree of impact associated with historic structures or archaeological sites that may be caused by the development of a specific corridor or concept.
Project Cost
Engineering, Construction Engineering Inspection, and Construction: Compares each alternative based on design and construction costs.
Right of Way/Business Damages: Addresses variations in right of way costs between alternatives.



SR 826/PALMETTO EXPRESSWAY EXPRESS LANES PD&E STUDY

From US 1/SR 5/Dixie Highway to SR 836/Dolphin Expressway
FPID No.: 432639-1-22-02 • ETOM No.: 14308

