

INTERSECTION CONTROL EVALUATION

Florida Department of Transportation

District 5

LPGA Boulevard PD&E Study

Limits of Project: From US 92 to Williamson Boulevard

Volusia, Florida

Financial Management Number: 448456-1

ETDM Number: 14332

Date: August 14, 2023

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by the Florida Department of Transportation (FDOT) pursuant to 23 U.S.C. § 327 and a Memorandum of Understanding dated May 26, 2022 and executed by the Federal Highway Administration and FDOT.

# Florida Department of Transportation Intersection Control Evaluation (ICE) Form Stage 1: Screening

Intersection Control Evaluation Form 750-010-003

To fulfill the requirements of Stage 1 (Screening) of FDOT's ICE procedures, complete the following form and append all supporting documentation. Completed forms can be submitted to the District Traffic Operations Engineer (DTOE) and District Design Engineer (DDE) for the project's approval. Selections must be made in the "Intersection Type" and "Project Funding Source" cells below for the appropriate Stage 1 and Stage 2 forms to fully populate.

Project Name	LPGA Blvd from US 92 (SR 600) to Williamson Blvd PD&E Study			FDOT Project #	448456-1-22-01	
Submitted By	L. Hess		Agency/Company	American Consulting Professionals	Date	5/31/2022
Email	<a href="mailto:Lhess@acp-fl.com">Lhess@acp-fl.com</a>		FDOT District	District 5	County	Volusia
Project Locality (City/Town/Village)			Daytona Beach			
Intersection Type	At-Grade Intersection		FDOT Context Classification	C3R - Suburban Residential		
Project Funding Source		Federal	Project Type	Corridor Improvement Project		
Project Purpose (What is the catalyst for this project and why is it being undertaken?)	The purpose of this study is to accommodate existing and projected future travel demand and enhance safety and operations for the LPGA Blvd corridor and the I-95 interchange. The need is based on existing and future transportation demand and existing high number of crashes along LPGA Blvd and the interchange. Improvements are needed to address unacceptable LOS (LOS E or F) and enhance the safety of travel conditions along LPGA Blvd and at the interchange, various intersections, and uncontrolled access points.					
Project Setting Description (Describe the area surrounding the intersection)	All parcels surrounding the intersection are vacant. The LPGA/US 92 intersection is currently signalized. There is a potential future development that would create a fourth (south) leg.					
Multimodal Context (Describe the pedestrian, bicycle, and transit activity in the area and the potential for activity based on surrounding land uses and development patterns)	There are no existing sidewalks or bike lanes present within the intersection. There are existing bus stops for Volusia Transit (Votran) Route 60 located just west of the intersection along westbound US 92 and just east of the intersection along eastbound US 92.					

Major Street Information								
Route #:	CR 4019	Route Name(s)	LPGA Blvd			Milepost		
Existing Control Type	Signal		Existing AADT	9,400	Design Year AADT	32,000		
Design Vehicle	Florida Interstate Semitrailer (WB-62FL)		Control Vehicle	Florida Interstate Semitrailer (WB-62FL)				
Primary Functional Classification			Urban Minor Arterial		Design Speed (mph)	45		
Secondary Functional Classification (if app.)					Target Speed (mph) [if app.]	45		
Approach #1	Direction	Southbound	Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes	
	Sidewalks along	Both sides of the approach	Left-Turn	2	Weekday AM Peak		Weekday PM Peak	
	Crosswalk on Approach?	Yes	Left-Through	0	Left	457	Left	564
	On-Street Bike Facilities?	No	Through	0	Through	0	Through	0
	Multi-Use Path?	Yes	Left-Through-Right	0	Right	669	Right	1,030
	Scheduled Bus Service?	No	Through-Right	0	Daily Truck %		6.8%	
	Bus Stop on Approach?	No	Right-Turn	2				
Approach #2	Direction		Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes	
	Sidewalks along:		Left-Turn		Weekday AM Peak		Weekday PM Peak	
	Crosswalk on Approach?		Left-Through		Left		Left	
	On-Street Bike Facilities?		Through		Through		Through	
	Multi-Use Path?		Left-Through-Right		Right		Right	
	Scheduled Bus Service?		Through-Right		Daily Truck %			
	Bus Stop on Approach?		Right-Turn					

Minor Street Information										
Route #:	600	Route Name(s)	US 92				Milepost (if app.)	13.97		
Existing Control Type	Signal		Existing AADT	28,750		Design Year AADT	38,000			
Design Vehicle	Florida Interstate Semitrailer (WB-62FL)		Control Vehicle	Florida Interstate Semitrailer (WB-62FL)						
Primary Functional Classification			Urban Principal Arterial - Other			Design Speed (mph)	55			
Secondary Functional Classification (if app.)						Target Speed (mph) [if app.]	55			
Approach #1	Direction	Eastbound	Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes			
	Sidewalks along:	Neither side of the approach	Left-Turn	2	Weekday AM Peak		Weekday PM Peak			
	Crosswalk on Approach?	No	Left-Through	0	Left	985	Left	669		
	On-Street Bike Facilities?	No	Through	2	Through	1,203	Through	961		
	Multi-Use Path?	No	Left-Through-Right	0	Right	0	Right	0		
	Scheduled Bus Service?	No	Through-Right	0	Daily Truck %		7.4%			
	Bus Stop on Approach?	No	Right-Turn	0						
Approach #2	Direction	Westbound	Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes			
	Sidewalks along:	Both sides of the approach	Left-Turn	0	Weekday AM Peak		Weekday PM Peak			
	Crosswalk on Approach?	Yes	Left-Through	0	Left	0	Left	0		
	On-Street Bike Facilities?	No	Through	2	Through	840	Through	1,329		
	Multi-Use Path?	No	Left-Through-Right	0	Right	609	Right	457		
	Scheduled Bus Service?	No	Through-Right	0	Daily Truck %		6.7%			
	Bus Stop on Approach?	No	Right-Turn	1						
Approach #3	Direction		Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes			
	Sidewalks along:		Left-Turn		Weekday AM Peak		Weekday PM Peak			
	Crosswalk on Approach?		Left-Through		Left		Left			
	On-Street Bike Facilities?		Through		Through		Through			
	Multi-Use Path?		Left-Through-Right		Right		Right			
	Scheduled Bus Service?		Through-Right		Daily Truck %					
	Bus Stop on Approach?		Right-Turn							

Crash History (Existing Intersections Only)

Append the most recent five-years of crash data for the intersection from the CAR System. If the crash data evidences any issues relating to safety performance, discuss briefly here:

The most recent five-year crash data (2015-2019) for the intersection of LPGA and US 92 had a report total of 83 crashes. The most predominant crash type was rear end crashes at 48 crashes. There was one (1) reported fatal crash and 43 injury crashes at this intersection for the analysis period.

Control Strategy Evaluation							
Provide a brief justification as to why each of the following control strategies should be advanced or not. Justification should consider potential environmental impacts.							
Control Strategy	CAP-X Outputs			SPICE Outputs		Strategy to Be Advanced?	Justification
	V/C Ratio		Multimodal Score	Crash Prediction Rank	SSI Rank		
	Weekday AM Peak	Weekday PM Peak					
Two-Way Stop-Controlled	N/A	N/A	N/A	N/A	N/A	No	Current intersection is a signal.
All-Way Stop-Controlled	N/A	N/A	N/A	N/A	N/A	No	Current intersection is a signal.
Signalized Control	0.76	0.79	4.8	4	5	Yes	Existing control type
Roundabout	1.46	2.50	5.6	5	1	No	2x2 V/C exceeds 1 for both peak periods.
Median U-Turn	1.50 (1.24)	1.30 (1.00)	6.3	1	N/A	No	MUT (Partial MUT) V/C exceeds 1 for both peak period.
RCUT (Signalized)	0.99	0.92	6.3	6	2	No	V/C nearly exceeds 1 for AM peak period.
RCUT (Unsignalized)	4.33	12.46	4.4	2	3	No	V/C exceeds 1 for both peak periods.
Jughandle				N/A	N/A	No	N/A
Displaced Left-Turn	N/A	N/A	N/A	N/A	N/A	No	N/A
Continuous Green Tee	0.72	0.78	3.0	3	4	No	Due to an adjacent PD&E study to extend LPGA Blvd south of US 92, this alternative was not advanced.
Quadrant Roadway	N/A	N/A	N/A			No	N/A
Thru-Cut	N/A	N/A	N/A	N/A	N/A	No	N/A
Other 1 (Type)	N/A	N/A	N/A	N/A	N/A	No	N/A
Other 2 (Type)	N/A	N/A	N/A	N/A	N/A	No	N/A

Resolution				
<i>To be filled out by FDOT District Traffic Operations Engineer and District Design Engineer</i>				
Project Determination		Identified Control Strategy Approved		
Comments				
DTOE Name	James E. wood, Jr.	Signature	DocuSigned by: <i>James E. Wood, Jr.</i>	Date 08/14/2023
DDE Name	Jeffrey Cicerello	Signature	DocuSigned by: <i>Jeffrey Cicerello</i>	Date 08/14/2023

# Florida Department of Transportation

## Intersection Control Evaluation (ICE) Form

### Stage 1: Screening

Intersection Control Evaluation Form 750-010-003

To fulfill the requirements of Stage 1 (Screening) of FDOT's ICE procedures, complete the following form and append all supporting documentation. Completed forms can be submitted to the District Traffic Operations Engineer (DTOE) and District Design Engineer (DDE) for the project's approval. Selections must be made in the "Intersection Type" and "Project Funding Source" cells below for the appropriate Stage 1 and Stage 2 forms to fully populate.



Project Name	LPGA Blvd from US 92 (SR 600) to Williamson Blvd PD&E Study			FDOT Project #	448456-1-22-01	
Submitted By	L. Hess		Agency/Company	American Consulting Professionals	Date	12/27/2022
Email	<a href="mailto:Lhess@acp-fl.com">Lhess@acp-fl.com</a>		FDOT District	District 5	County	Volusia
Project Locality (City/Town/Village)			Daytona Beach			
Intersection Type	At-Grade Intersection		FDOT Context Classification	C3R - Suburban Residential		
Project Funding Source		Federal	Project Type	Corridor Improvement Project		
Project Purpose (What is the catalyst for this project and why is it being undertaken?)	The purpose of this study is to accommodate existing and projected future travel demand and enhance safety and operations for the LPGA Blvd corridor and the I-95 interchange. The need is based on existing and future transportation demand and existing high number of crashes along LPGA Blvd and the interchange. Improvements are needed to address unacceptable LOS (LOS E or F) and enhance the safety of travel conditions along LPGA Blvd and at the interchange, various intersections, and uncontrolled access points.					
Project Setting Description (Describe the area surrounding the intersection)	The LPGA/Welshinger Butler South intersection is currently unsignalized. There is vacant land being developed into a residential community on the west side of LPGA Blvd and a football stadium on the east side. A school is located north of the intersection on the west side of LPGA Blvd. There is a water treatment plant located further to the north of the intersection on the east side of LPGA Blvd.					
Multimodal Context (Describe the pedestrian, bicycle, and transit activity in the area and the potential for activity based on surrounding land uses and development patterns)	There are no sidewalks or bike lanes present at the existing intersection. Note, Father Lopez Catholic High School is located on the northwest corner of the intersection and a stadium is located on the northeast corner. Planned future development for the area includes several residential communities.					

Major Street Information									
Route #:	CR 4019	Route Name(s)	LPGA Blvd			Milepost	N/A		
Existing Control Type	Two-way Stop-Control		Existing AADT	9,400	Design Year AADT	32,000			
Design Vehicle	Florida Interstate Semitrailer (WB-62FL)		Control Vehicle	Florida Interstate Semitrailer (WB-62FL)					
Primary Functional Classification			Urban Principal Arterial - Interstate		Design Speed (mph)	45			
Secondary Functional Classification (if app.)					Target Speed (mph) [if app.]	45			
Approach #1	Direction	Northbound		Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes	
	Sidewalks along	Neither side of the approach		Left-Turn	1	Weekday AM Peak		Weekday PM Peak	
	Crosswalk on Approach?	Yes		Left-Through	0	Left	31	Left	79
	On-Street Bike Facilities?	No		Through	2	Through	1,562	Through	1,047
	Multi-Use Path?	Yes		Left-Through-Right	0	Right	0	Right	0
	Scheduled Bus Service?	No		Through-Right	0	Daily Truck %		6.8%	
	Bus Stop on Approach?	No		Right-Turn	1				
Approach #2	Direction	Southbound		Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes	
	Sidewalks along:	Neither side of the approach		Left-Turn	0	Weekday AM Peak		Weekday PM Peak	
	Crosswalk on Approach?	Yes		Left-Through	0	Left	0	Left	0
	On-Street Bike Facilities?	No		Through	2	Through	1,108	Through	1,527
	Multi-Use Path?	Yes		Left-Through-Right	0	Right	18	Right	67
	Scheduled Bus Service?	No		Through-Right	0	Daily Truck %		6.8%	
	Bus Stop on Approach?	No		Right-Turn	1				

Minor Street Information										
Route #:	N/A	Route Name(s)	Welshinger Butler Circle South				Milepost (if app.)			
Existing Control Type	Two-way Stop-Control		Existing AADT	1,600	Design Year AADT		2,500			
Design Vehicle	Florida Interstate Semitrailer (WB-62FL)		Control Vehicle	Florida Interstate Semitrailer (WB-62FL)						
Primary Functional Classification			Rural Principal Arterial - Other			Design Speed (mph)		25		
Secondary Functional Classification (if app.)						Target Speed (mph) [if app.]		25		
Approach #1	Direction	Westbound	Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes			
	Sidewalks along:	Neither side of the approach	Left-Turn	0	Weekday AM Peak		Weekday PM Peak			
	Crosswalk on Approach?	Yes	Left-Through	0	Left	0	Left	0		
	On-Street Bike Facilities?	No	Through	0	Through	0	Through	0		
	Multi-Use Path?	No	Left-Through-Right	1	Right	0	Right	0		
	Scheduled Bus Service?	No	Through-Right	0	Daily Truck %					
	Bus Stop on Approach?	No	Right-Turn	0						
Approach #2	Direction	Eastbound	Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes			
	Sidewalks along:	Neither side of the approach	Left-Turn	0	Weekday AM Peak		Weekday PM Peak			
	Crosswalk on Approach?	Yes	Left-Through	1	Left	48	Left	34		
	On-Street Bike Facilities?	No	Through	0	Through	0	Through	0		
	Multi-Use Path?	No	Left-Through-Right	0	Right	76	Right	54		
	Scheduled Bus Service?	No	Through-Right	0	Daily Truck %					
	Bus Stop on Approach?	No	Right-Turn	1						
Approach #3	Direction		Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes			
	Sidewalks along:		Left-Turn		Weekday AM Peak		Weekday PM Peak			
	Crosswalk on Approach?		Left-Through		Left		Left			
	On-Street Bike Facilities?		Through		Through		Through			
	Multi-Use Path?		Left-Through-Right		Right		Right			
	Scheduled Bus Service?		Through-Right		Daily Truck %					
	Bus Stop on Approach?		Right-Turn							

Crash History (Existing Intersections Only)
Append the most recent five-years of crash data for the intersection from the CAR System. If the crash data evidences any issues relating to safety performance, discuss briefly here:
The most recent five-year crash data (2015-2019) for the intersection of LPGA Blvd and Welshinger Butler Circle South had a reported total of one crash. No fatal or injury crashes were reported at this intersection for the analysis period.

Control Strategy Evaluation							
Provide a brief justification as to why each of the following control strategies should be advanced or not. Justification should consider potential environmental impacts.							
Control Strategy	CAP-X Outputs			SPICE Outputs		Strategy to Be Advanced?	Justification
	V/C Ratio		Multimodal Score	Crash Prediction Rank	SSI Rank		
	Weekday AM Peak	Weekday PM Peak					
Two-Way Stop-Controlled	1.66	1.46	N/A	7	7	No	Existing Condition. V/C exceeds 1 for both peak periods.
All-Way Stop-Controlled	N/A	N/A	N/A	N/A	N/A	No	Currently intersection is two-way stop-controlled.
Signalized Control	0.49	0.52	4.8	5	4	No	V/C is under 1 for both peak periods. The projected volumes on the minor street are likely to not warrant a signal at this location.
Roundabout	0.65 (0.65)	0.67 (0.67)	5.6	6	1	Yes	2x2 (2x1) V/C is under 1. Major roadway exceeds 90/10 split, due to offset minor approaches and speed management roundabout is advanced.
Median U-Turn	0.53 (0.52)	0.51 (0.51)	6.3	2	2	No	MUT (Partial MUT) Due to a new development entrance on the west approach and stadium on the east, this strategy was not advanced.
RCUT (Signalized)	0.49	0.49	6.3	4	3	No	Due to a new development entrance on the west approach and stadium on the east, this strategy was not advanced.
RCUT (Unsignalized)	0.64	0.89	4.4	1	5	No	Due to a new development entrance on the west approach and stadium on the east, this strategy was not advanced.
Jughandle				N/A	N/A	No	N/A
Displaced Left-Turn	0.47 (0.49)	0.48 (0.48)	4.8	3	6	No	DLT (Partial DLT) Due to a new development entrance on the west approach and stadium on the east, this strategy was not advanced.
Continuous Green Tee	N/A	N/A	N/A	N/A	N/A	No	N/A
Quadrant Roadway	N/A	N/A	N/A			No	N/A
Thru-Cut	N/A	N/A	N/A	N/A	N/A	No	N/A
Partial Cloverleaf	N/A	N/A	N/A	N/A	N/A	No	N/A
Diverging Diamond Interchange	N/A	N/A	N/A	N/A	N/A	No	N/A

Resolution				
<i>To be filled out by FDOT District Traffic Operations Engineer and District Design Engineer</i>				
Project Determination		Identified Control Strategy Approved		
Comments				
DTOE Name	James E. wood, Jr.	Signature	<small>DocuSigned by:</small> 	Date 08/14/2023
DDE Name	Jeffrey Cicerello	Signature	<small>DocuSigned by:</small> 	Date 08/14/2023

# Florida Department of Transportation

## Intersection Control Evaluation (ICE) Form

### Stage 1: Screening

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Project Name	LPGA Blvd from US 92 (SR 600) to Williamson Blvd PD&E Study			FDOT Project #	448456-1-22-01	
Submitted By	L. Hess		Agency/Company	American Consulting Professionals	Date	5/31/2022
Email	<a href="mailto:Lhess@acp-fl.com">Lhess@acp-fl.com</a>		FDOT District	District 5	County	Volusia
Project Locality (City/Town/Village)			Daytona Beach			
Intersection Type	At-Grade Intersection		FDOT Context Classification	C3R - Suburban Residential		
Project Funding Source		Federal	Project Type	Corridor Improvement Project		
Project Purpose (What is the catalyst for this project and why is it being undertaken?)	The purpose of this study is to accommodate existing and projected future travel demand and enhance safety and operations for the LPGA Blvd corridor and the I-95 interchange. The need is based on existing and future transportation demand and existing high number of crashes along LPGA Blvd and the interchange. Improvements are needed to address unacceptable LOS (LOS E or F) and enhance the safety of travel conditions along LPGA Blvd and at the interchange, various intersections, and uncontrolled access points.					
Project Setting Description (Describe the area surrounding the intersection)	The LPGA/Welshinger Butler North intersection is currently unsignalized. Surrounding land use consists of a high school on the west side of LPGA Blvd and a community football stadium on the east side of LPGA Blvd. There is a water treatment plant located to the north of the intersection on the east side of LPGA Blvd.					
Multimodal Context (Describe the pedestrian, bicycle, and transit activity in the area and the potential for activity based on surrounding land uses and development patterns)	There are no sidewalks or bike lanes present at the existing intersection. Note, there is Father Lopez Catholic High School located on the southwest corner of the intersection.					

Major Street Information									
Route #:	CR 4019	Route Name(s)	LPGA Blvd			Milepost	N/A		
Existing Control Type	Two-way Stop-Control		Existing AADT	9,400	Design Year AADT	32,000			
Design Vehicle	Florida Interstate Semitrailer (WB-62FL)		Control Vehicle	Florida Interstate Semitrailer (WB-62FL)					
Primary Functional Classification			Urban Minor Arterial		Design Speed (mph)	45			
Secondary Functional Classification (if app.)					Target Speed (mph) [if app.]	45			
Approach #1	Direction	Northbound		Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes	
	Sidewalks along	Both sides of the approach		Left-Turn	1	Weekday AM Peak		Weekday PM Peak	
	Crosswalk on Approach?	Yes		Left-Through	0	Left	60	Left	74
	On-Street Bike Facilities?	No		Through	2	Through	1,534	Through	1,052
	Multi-Use Path?	Yes		Left-Through-Right	0	Right	0	Right	0
	Scheduled Bus Service?	No		Through-Right	0	Daily Truck %		6.8%	
	Bus Stop on Approach?	No		Right-Turn	1				
Approach #2	Direction	Southbound		Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes	
	Sidewalks along:	Both sides of the approach		Left-Turn	1	Weekday AM Peak		Weekday PM Peak	
	Crosswalk on Approach?	Yes		Left-Through	0	Left	0	Left	0
	On-Street Bike Facilities?	No		Through	2	Through	1,026	Through	1,505
	Multi-Use Path?	Yes		Left-Through-Right	0	Right	180	Right	59
	Scheduled Bus Service?	No		Through-Right	0	Daily Truck %		6.8%	
	Bus Stop on Approach?	No		Right-Turn	1				

Minor Street Information										
Route #:		Route Name(s)	Welshinger Butler Circle North				Milepost (if app.)			
Existing Control Type	Two-way Stop-Control		Existing AADT	1,000		Design Year AADT	6,500			
Design Vehicle	Florida Interstate Semitrailer (WB-62FL)		Control Vehicle	Florida Interstate Semitrailer (WB-62FL)						
Primary Functional Classification			Rural Minor Collector			Design Speed (mph)	25			
Secondary Functional Classification (if app.)						Target Speed (mph) [if app.]	25			
Approach #1	Direction	Eastbound		Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes		
	Sidewalks along:	Neither side of the approach		Left-Turn	0	Weekday AM Peak		Weekday PM Peak		
	Crosswalk on Approach?	Yes		Left-Through	1	Left		Left		
	On-Street Bike Facilities?	No		Through	0	Through		Through		
	Multi-Use Path?	No		Left-Through-Right	0	Right		Right		
	Scheduled Bus Service?	No		Through-Right	0	100		89		
	Bus Stop on Approach?	No		Right-Turn	1	Daily Truck %				
Approach #2	Direction	Westbound		Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes		
	Sidewalks along:	Neither side of the approach		Left-Turn	0	Weekday AM Peak		Weekday PM Peak		
	Crosswalk on Approach?	Yes		Left-Through	0	Left		Left		
	On-Street Bike Facilities?	No		Through	0	Through		Through		
	Multi-Use Path?	No		Left-Through-Right	1	Right		Right		
	Scheduled Bus Service?	No		Through-Right	0	0		0		
	Bus Stop on Approach?	No		Right-Turn	0	Daily Truck %				
Approach #3	Direction			Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes		
	Sidewalks along:			Left-Turn		Weekday AM Peak		Weekday PM Peak		
	Crosswalk on Approach?			Left-Through		Left		Left		
	On-Street Bike Facilities?			Through		Through		Through		
	Multi-Use Path?			Left-Through-Right		Right		Right		
	Scheduled Bus Service?			Through-Right						
	Bus Stop on Approach?			Right-Turn		Daily Truck %				

Crash History (Existing Intersections Only)
Append the most recent five-years of crash data for the intersection from the CAR System. If the crash data evidences any issues relating to safety performance, discuss briefly here:
The most recent five-year crash data (2015-2019) for the intersection of LPGA Blvd and Welshinger Butler Circle North had a reported total of eight (8) crashes. No fatal and three (3) injury crashes were reported at this intersection for the analysis period.

Control Strategy Evaluation							
Provide a brief justification as to why each of the following control strategies should be advanced or not. Justification should consider potential environmental impacts.							
Control Strategy	CAP-X Outputs			SPICE Outputs		Strategy to Be Advanced?	Justification
	V/C Ratio		Multimodal Score	Crash Prediction Rank	SSI Rank		
	Weekday AM Peak	Weekday PM Peak					
Two-Way Stop-Controlled	3.93	4.85	N/A	7	6	No	Existing Condition. V/C exceeds 1 for both peak periods.
All-Way Stop-Controlled	N/A	N/A	N/A	N/A	N/A	No	Currently intersection is two-way stop-controlled
Signalized Control	0.52	0.56	4.8	5	4	No	V/C is under 1 for both peak periods. Was not preferred by the school and local government
Roundabout	0.70 (0.70)	0.66 (0.66)	5.6	6	1	Yes	2x2 (2NSx1EW) V/C is under 1 for both peak periods, AADT split is 82/18 split. Father Lopez HS, County and City preferred roundabout.
Median U-Turn	0.60 (0.55)	0.57 (0.51)	6.3	2	2	No	MUT (Partial MUT) Due to the school entrance on the west approach and stadium on the east approach, this strategy was not advanced.
RCUT (Signalized)	0.53	0.57	6.3	4	3	No	Due to the school entrance on the west approach and stadium on the east approach, this strategy was not advanced.
RCUT (Unsignalized)	0.90	2.05	4.4	1	5	No	V/C exceeds 1 for the PM peak period.
Jughandle				N/A	N/A	No	N/A
Displaced Left-Turn	0.51 (0.52)	0.50 (0.51)	4.8	3	7	No	DLT (Partial DLT) Due to the school entrance on the west approach and stadium on the east approach, this strategy was not advanced.
Continuous Green Tee	N/A	N/A	N/A	N/A	N/A	No	N/A
Quadrant Roadway	N/A	N/A	N/A			No	N/A
Thru-Cut	N/A	N/A	N/A	N/A	N/A	No	N/A
Partial Cloverleaf	N/A	N/A	N/A	N/A	N/A	No	N/A
Diverging Diamond Interchange	N/A	N/A	N/A	N/A	N/A	No	N/A

Resolution				
<i>To be filled out by FDOT District Traffic Operations Engineer and District Design Engineer</i>				
Project Determination		Identified Control Strategy Approved		
Comments				
DTOE Name	James E. wood, Jr.	Signature	DocuSigned by: <i>James E. Wood, Jr.</i> 668E306EACE9466...	Date 08/14/2023   1
DDE Name	Jeffrey Cicerello	Signature	DocuSigned by: <i>Jeffrey Cicerello</i> F49D9D8820CD4A2...	Date 08/14/2023   1

# Florida Department of Transportation

## Intersection Control Evaluation (ICE) Form

### Stage 1: Screening

Intersection Control Evaluation Form 750-010-003

To fulfill the requirements of Stage 1 (Screening) of FDOT's ICE procedures, complete the following form and append all supporting documentation. Completed forms can be submitted to the District Traffic Operations Engineer (DTOE) and District Design Engineer (DDE) for the project's approval. Selections must be made in the "Intersection Type" and "Project Funding Source" cells below for the appropriate Stage 1 and Stage 2 forms to fully populate.

Project Name	LPGA Blvd from US 92 (SR 600) to Williamson Blvd PD&E Study			FDOT Project #	448456-1-22-01	
Submitted By	L. Hess		Agency/Company	American Consulting Professionals	Date	5/31/2022
Email	<a href="mailto:Lhess@acp-fl.com">Lhess@acp-fl.com</a>		FDOT District	District 5	County	Volusia
Project Locality (City/Town/Village)	Daytona Beach					
Intersection Type	At-Grade Intersection		FDOT Context Classification	C3R - Suburban Residential		
Project Funding Source	Federal		Project Type	Corridor Improvement Project		
Project Purpose (What is the catalyst for this project and why is it being undertaken?)	The purpose of this study is to accommodate existing and projected future travel demand and enhance safety and operations for the LPGA Blvd corridor and the I-95 interchange. The need is based on existing and future transportation demand and existing high number of crashes along LPGA Blvd and the interchange. Improvements are needed to address unacceptable LOS (LOS E or F) and enhance the safety of travel conditions along LPGA Blvd and at the interchange, various intersections, and uncontrolled access points.					
Project Setting Description (Describe the area surrounding the intersection)	The LPGA/Tennis-Golf intersection is currently unsignalized with N-S traffic free flow and E-W traffic stop controlled. The east approach gives access to a golfing center and residential and the west approach gives access to a tennis center and residential. Tennis courts are adjacent to the southwest corner of the intersection. The surrounding existing land use is predominately vacant, but developing, with vegetation and a pond on the northwest corner.					
Multimodal Context (Describe the pedestrian, bicycle, and transit activity in the area and the potential for activity based on surrounding land uses and development patterns)	On the east and west legs of the intersection, there are sidewalks on both sides going into the entrance of the golf and tennis centers. There is a crosswalk on the west leg of the intersection at the entrance of the tennis center. Currently no bike lanes are provided on the roadway. There are no existing crosswalks on LPGA Blvd.					

Major Street Information									
Route #:	CR 4019	Route Name(s)	LPGA Blvd			Milepost	N/A		
Existing Control Type	Two-way Stop-Control		Existing AADT	9,500	Design Year AADT	29,500			
Design Vehicle	Florida Interstate Semitrailer (WB-62FL)		Control Vehicle	Florida Interstate Semitrailer (WB-62FL)					
Primary Functional Classification	Urban Minor Arterial				Design Speed (mph)	45			
Secondary Functional Classification (if app.)					Target Speed (mph) [if app.]	45			
Approach #1	Direction	Northbound		Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes	
	Sidewalks along	Both sides of the approach		Left-Turn	1	Weekday AM Peak		Weekday PM Peak	
	Crosswalk on Approach?	Yes		Left-Through	0	Left	165	Left	251
	On-Street Bike Facilities?	No		Through	2	Through	1,190	Through	780
	Multi-Use Path?	Yes		Left-Through-Right	0	Right	264	Right	138
	Scheduled Bus Service?	No		Through-Right	0	Daily Truck %		6.8%	
	Bus Stop on Approach?	No		Right-Turn	1				
Approach #2	Direction	Southbound		Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes	
	Sidewalks along:	Both sides of the approach		Left-Turn	1	Weekday AM Peak		Weekday PM Peak	
	Crosswalk on Approach?	Yes		Left-Through	0	Left	81	Left	82
	On-Street Bike Facilities?	No		Through	2	Through	778	Through	1,185
	Multi-Use Path?	Yes		Left-Through-Right	0	Right	91	Right	178
	Scheduled Bus Service?	No		Through-Right	0	Daily Truck %		7.5%	
	Bus Stop on Approach?	No		Right-Turn	1				

Minor Street Information									
Route #:		Route Name(s)	International Tennis/Golf Drive				Milepost (if app.)	N/A	
Existing Control Type	Two-way Stop-Control		Existing AADT	1,350	Design Year AADT	6,500			
Design Vehicle	Florida Interstate Semitrailer (WB-62FL)		Control Vehicle	Florida Interstate Semitrailer (WB-62FL)					
Primary Functional Classification			Rural Minor Collector			Design Speed (mph)	30		
Secondary Functional Classification (if app.)						Target Speed (mph) [if app.]	30		
Approach #1	Direction	Westbound	Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes		
	Sidewalks along:	Both sides of the approach	Left-Turn	0	Weekday AM Peak		Weekday PM Peak		
	Crosswalk on Approach?	Yes	Left-Through	0	Left	198	Left	185	
	On-Street Bike Facilities?	No	Through	0	Through	26	Through	47	
	Multi-Use Path?	No	Left-Through-Right	1	Right	89	Right	202	
	Scheduled Bus Service?	No	Through-Right	0	Daily Truck %		3.2%		
	Bus Stop on Approach?	No	Right-Turn	0					
Approach #2	Direction	Eastbound	Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes		
	Sidewalks along:	Both sides of the approach	Left-Turn	1	Weekday AM Peak		Weekday PM Peak		
	Crosswalk on Approach?	Yes	Left-Through	0	Left	102	Left	178	
	On-Street Bike Facilities?	No	Through	0	Through	26	Through	10	
	Multi-Use Path?	No	Left-Through-Right	0	Right	230	Right	194	
	Scheduled Bus Service?	No	Through-Right	1	Daily Truck %		5.8%		
	Bus Stop on Approach?	No	Right-Turn	0					
Approach #3	Direction		Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes		
	Sidewalks along:		Left-Turn		Weekday AM Peak		Weekday PM Peak		
	Crosswalk on Approach?		Left-Through		Left		Left		
	On-Street Bike Facilities?		Through		Through		Through		
	Multi-Use Path?		Left-Through-Right		Right		Right		
	Scheduled Bus Service?		Through-Right		Daily Truck %				
	Bus Stop on Approach?		Right-Turn						

Crash History (Existing Intersections Only)
Append the most recent five-years of crash data for the intersection from the CAR System. If the crash data evidences any issues relating to safety performance, discuss briefly here:
The most recent five-year crash data (2015-2019) for the intersection of LPGA and International Tennis Dr/Intersection Golf Dr had a report total of six (6) crashes. No fatal and three (3) injury crashes were reported at this intersection for the analysis period.

Control Strategy Evaluation							
Provide a brief justification as to why each of the following control strategies should be advanced or not. Justification should consider potential environmental impacts.							
Control Strategy	CAP-X Outputs			SPICE Outputs		Strategy to Be Advanced?	Justification
	V/C Ratio		Multimodal Score	Crash Prediction Rank	SSI Rank		
	Weekday AM Peak	Weekday PM Peak					
Two-Way Stop-Controlled	38.98	105.35	3.7	7	6	No	Existing Conditions. V/C exceeds 1 for both peak periods
All-Way Stop-Controlled	N/A	N/A	N/A	N/A	N/A	No	Current intersection is two-way stop-controlled.
Signalized Control	0.69	0.93	4.8	5	5	No	V/C is under 1 for both peak periods. Not preferred by County and City based on surrounding land use context
Roundabout	0.81 (0.94)	0.93 (1.07)	5.6	3	3	Yes	2x2 (2NSx1EW) Due to surrounding land use, speed management, and reductions of conflict points, justified to advance. Meets 90/10 split.
Median U-Turn	0.61 (0.67)	0.74 (0.76)	6.3	2	1	No	MUT (Partial MUT) Volumes for the U-turn movement would require dual lanes, additional pavement and possibly additional right-of-way.
RCUT (Signalized)	0.60	0.66	6.3	6	2	No	Volumes for the U-turn movement would require dual lanes and additional pavement which could require additional right-of-way.
RCUT (Unsignalized)	2.66	3.28	4.4	1	4	No	V/C exceeds 1 for both peak periods
Jughandle				N/A	N/A	No	N/A
Displaced Left-Turn	0.48 (0.62)	0.56 (0.74)	4.8	4	7	No	Full (Partial) DLT would be over designed, require additional ROW, and a lot more impervious area for LT movements that are not that heavy.
Continuous Green Tee	N/A	N/A	N/A	N/A	N/A	No	N/A
Quadrant Roadway	N/A	N/A	N/A			No	N/A
Thru-Cut	N/A	N/A	N/A	N/A	N/A	No	N/A
Partial Cloverleaf	N/A	N/A	N/A	N/A	N/A	No	N/A
Diverging Diamond Interchange	N/A	N/A	N/A	N/A	N/A	No	N/A

Resolution				
<i>To be filled out by FDOT District Traffic Operations Engineer and District Design Engineer</i>				
Project Determination		Identified Control Strategy Approved		
Comments	Roundabout was needed here as one of the speed management strategies. Additionally, the City of Daytona Beach and Volusia County preferred roundabout at this location.			
DTOE Name	James E. Wood, Jr.	Signature	DocuSigned by: <i>James E. Wood, Jr.</i>	Date
			668E998FA0F9466...	08/14/2023
DDE Name	Jeffrey Cicerello	Signature	DocuSigned by: <i>Jeffrey Cicerello</i>	Date
			F43D9D8820C0142	08/14/2023

# Florida Department of Transportation

## Intersection Control Evaluation (ICE) Form

### Stage 1: Screening

Intersection Control Evaluation Form 750-010-003

To fulfill the requirements of Stage 1 (Screening) of FDOT's ICE procedures, complete the following form and append all supporting documentation. Completed forms can be submitted to the District Traffic Operations Engineer (DTOE) and District Design Engineer (DDE) for the project's approval. Selections must be made in the "Intersection Type" and "Project Funding Source" cells below for the appropriate Stage 1 and Stage 2 forms to fully populate.

Project Name	LPGA Blvd from US 92 (SR 600) to Williamson Blvd PD&E Study			FDOT Project #	448456-1-22-01	
Submitted By	L. Hess		Agency/Company	American Consulting Professionals	Date	5/31/2022
Email	<a href="mailto:Lhess@acp-fl.com">Lhess@acp-fl.com</a>		FDOT District	District 5	County	Volusia
Project Locality (City/Town/Village)	Daytona Beach					
Intersection Type	At-Grade Intersection		FDOT Context Classification	C3R - Suburban Residential		
Project Funding Source	Federal		Project Type	Corridor Improvement Project		
Project Purpose (What is the catalyst for this project and why is it being undertaken?)	The purpose of this study is to accommodate existing and projected future travel demand and enhance safety and operations for the LPGA Blvd corridor and the I-95 interchange. The need is based on existing and future transportation demand and existing high number of crashes along LPGA Blvd and the interchange. Improvements are needed to address unacceptable LOS (LOS E or F) and enhance the safety of travel conditions along LPGA Blvd and at the interchange, various intersections, and uncontrolled access points.					
Project Setting Description (Describe the area surrounding the intersection)	The LPGA/Tournament intersection is currently signalized and the surrounding adjacent land use is vacant. The east leg of the intersection is an entrance to a residential community (LPGA International) and the west leg leads towards a residential area and an elementary school.					
Multimodal Context (Describe the pedestrian, bicycle, and transit activity in the area and the potential for activity based on surrounding land uses and development patterns)	On the east leg of the intersection, there is a sidewalk on the right side of Tournament Drive. On the west leg, there are sidewalks on both sides of the street. No sidewalks are provided on LPGA Blvd. There are existing crosswalks on the south and west approaches on the intersection. No existing bike lanes are provided. There is an elementary school on the west side of the intersection so the sidewalks and crosswalks provide access to the school from the residential areas.					

Major Street Information									
Route #:	CR 4019	Route Name(s)	LPGA Blvd			Milepost	N/A		
Existing Control Type	Signal		Existing AADT	9,500	Design Year AADT	31,500			
Design Vehicle	Florida Interstate Semitrailer (WB-62FL)		Control Vehicle	Florida Interstate Semitrailer (WB-62FL)					
Primary Functional Classification	Urban Minor Arterial				Design Speed (mph)	45			
Secondary Functional Classification (if app.)					Target Speed (mph) [if app.]	45			
Approach #1	Direction	Northbound		Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes	
	Sidewalks along	Both sides of the approach		Left-Turn	1	Weekday AM Peak		Weekday PM Peak	
	Crosswalk on Approach?	Yes		Left-Through	0	Left	77	Left	46
	On-Street Bike Facilities?	No		Through	2	Through	1,267	Through	1,042
	Multi-Use Path?	Yes		Left-Through-Right	0	Right	37	Right	72
	Scheduled Bus Service?	No		Through-Right	0	Daily Truck %		7.5%	
	Bus Stop on Approach?	No		Right-Turn	1				
Approach #2	Direction	Southbound		Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes	
	Sidewalks along:	Both sides of the approach		Left-Turn	1	Weekday AM Peak		Weekday PM Peak	
	Crosswalk on Approach?	Yes		Left-Through	0	Left	172	Left	160
	On-Street Bike Facilities?	No		Through	2	Through	848	Through	1,373
	Multi-Use Path?	Yes		Left-Through-Right	0	Right	355	Right	360
	Scheduled Bus Service?	No		Through-Right	0	Daily Truck %		5.7%	
	Bus Stop on Approach?	No		Right-Turn	1				

Minor Street Information										
Route #:		Route Name(s)	Tournament Drive				Milepost (if app.)			
Existing Control Type	Signal		Existing AADT	2,200		Design Year AADT		7,000		
Design Vehicle	Florida Interstate Semitrailer (WB-62FL)		Control Vehicle	Florida Interstate Semitrailer (WB-62FL)						
Primary Functional Classification			Rural Minor Collector			Design Speed (mph)		35		
Secondary Functional Classification (if app.)						Target Speed (mph) [if app.]		35		
Approach #1	Direction	Eastbound		Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes		
	Sidewalks along:	Both sides of the approach		Left-Turn	1	Weekday AM Peak		Weekday PM Peak		
	Crosswalk on Approach?	Yes		Left-Through	0	Left		Left		
	On-Street Bike Facilities?	No		Through	0	333		257		
	Multi-Use Path?	No		Left-Through-Right	0	Through		Through		
	Scheduled Bus Service?	No		Through-Right	1	Right		Right		
	Bus Stop on Approach?	No		Right-Turn	0	Daily Truck %		1.9%		
Approach #2	Direction	Westbound		Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes		
	Sidewalks along:	One side of the approach		Left-Turn	0	Weekday AM Peak		Weekday PM Peak		
	Crosswalk on Approach?	Yes		Left-Through	1	Left		Left		
	On-Street Bike Facilities?	No		Through	0	51		33		
	Multi-Use Path?	No		Left-Through-Right	0	Through		Through		
	Scheduled Bus Service?	No		Through-Right	0	Right		Right		
	Bus Stop on Approach?	No		Right-Turn	1	Daily Truck %		4.9%		
Approach #3	Direction			Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes		
	Sidewalks along:			Left-Turn		Weekday AM Peak		Weekday PM Peak		
	Crosswalk on Approach?			Left-Through		Left		Left		
	On-Street Bike Facilities?			Through		Through		Through		
	Multi-Use Path?			Left-Through-Right		Right		Right		
	Scheduled Bus Service?			Through-Right		Daily Truck %				
	Bus Stop on Approach?			Right-Turn						

Crash History (Existing Intersections Only)

Append the most recent five-years of crash data for the intersection from the CAR System. If the crash data evidences any issues relating to safety performance, discuss briefly here:

The most recent five-year crash data (2015-2019) for the intersection of LPA and Tournament Drive had a report total of 50 crashes. The highest crash types were rear end crashes at 22 crashes and left turn crashes at 11 crashes. No fatal and 13 injury crashes were reported at this intersection for the analysis period.

Control Strategy Evaluation							
Provide a brief justification as to why each of the following control strategies should be advanced or not. Justification should consider potential environmental impacts.							
Control Strategy	CAP-X Outputs			SPICE Outputs		Strategy to Be Advanced?	Justification
	V/C Ratio		Multimodal Score	Crash Prediction Rank	SSI Rank		
	Weekday AM Peak	Weekday PM Peak					
Two-Way Stop-Controlled	N/A	N/A	N/A	N/A	N/A	No	Current intersection is a signal.
All-Way Stop-Controlled	N/A	N/A	N/A	N/A	N/A	No	Current intersection is a signal.
Signalized Control	0.77	0.69	4.8	5	5	Yes	Existing Condition.
Roundabout	0.92 (0.92)	0.93 (0.93)	5.6	3	1	No	2x2 (2NSx1EW) West approach could be extended further west in the future and could generate more traffic, causing an imbalance of volumes.
Median U-Turn	1.18 (0.72)	1.16 (0.79)	6.3	2	2	No	MUT (Partial MUT) Volumes for the U-turn movement would require dual lanes and additional pavement which could encroach pass existing right-of-way.
RCUT (Signalized)	0.66	0.61	6.3	6	3	No	Volumes for the U-turn movement would require dual lanes and additional pavement which could encroach pass existing right-of-way.
RCUT (Unsignalized)	2.82	2.69	4.4	1	4	No	V/C exceeds 1 for both peak periods.
Jughandle				N/A	N/A	No	N/A
Displaced Left-Turn	1.05 (0.64)	0.95 (0.64)	4.8	4	6	No	DLT (Partial DLT) DLT geometry would be an over design and require a lot more impervious area for left turn movements that are not that heavy.
Continuous Green Tee	N/A	N/A	N/A	N/A	N/A	No	N/A
Quadrant Roadway	N/A	N/A	N/A			No	N/A
Thru-Cut	N/A	N/A	N/A	N/A	N/A	No	N/A
Partial Cloverleaf	N/A	N/A	N/A	N/A	N/A	No	N/A
Diverging Diamond Interchange	N/A	N/A	N/A	N/A	N/A	No	N/A

Resolution					
<i>To be filled out by FDOT District Traffic Operations Engineer and District Design Engineer</i>					
Project Determination	Identified Control Strategy Approved				
Comments					
DTOE Name	James E. wood, Jr.	Signature	<small>DocuSigned by:</small> <i>James E. Wood, Jr.</i>	Date	08/14/2023
DDE Name	Jeffrey Cicereello	Signature	<small>DocuSigned by:</small> <i>Jeffrey Cicereello</i>	Date	08/14/2023

# Florida Department of Transportation Intersection Control Evaluation (ICE) Form Stage 1: Screening

Intersection Control Evaluation Form 750-010-003

To fulfill the requirements of Stage 1 (Screening) of FDOT's ICE procedures, complete the following form and append all supporting documentation. Completed forms can be submitted to the District Traffic Operations Engineer (DTOE) and District Design Engineer (DDE) for the project's approval. Selections must be made in the "Intersection Type" and "Project Funding Source" cells below for the appropriate Stage 1 and Stage 2 forms to fully populate.

Project Name	LPGA Blvd from US 92 (SR 600) to Williamson Blvd PD&E Study			FDOT Project #	448456-1-22-01	
Submitted By	L. Hess		Agency/Company	American Consulting Professionals	Date	5/31/2022
Email	<a href="mailto:Lhess@acl-fl.com">Lhess@acl-fl.com</a>		FDOT District	District 5	County	Volusia
Project Locality (City/Town/Village)			Daytona Beach			
Intersection Type	At-Grade Intersection		FDOT Context Classification	C3R - Suburban Residential		
Project Funding Source		Federal	Project Type	Corridor Improvement Project		
Project Purpose (What is the catalyst for this project and why is it being undertaken?)	The purpose of this study is to accommodate existing and projected future travel demand and enhance safety and operations for the LPGA Blvd corridor and the I-95 interchange. The need is based on existing and future transportation demand and existing high number of crashes along LPGA Blvd and the interchange. Improvements are needed to address unacceptable LOS (LOS E or F) and enhance the safety of travel conditions along LPGA Blvd and at the interchange, various intersections, and uncontrolled access points.					
Project Setting Description (Describe the area surrounding the intersection)	There is a Publix shopping center on the northeast corner of the LPGA/Tymer Creek intersection. There is a large residential community under development north of the intersection along LPGA Blvd.					
Multimodal Context (Describe the pedestrian, bicycle, and transit activity in the area and the potential for activity based on surrounding land uses and development patterns)	Existing sidewalks are only provided on Tymer Creek Rd. There are no existing bike lanes or transit activity provided within the intersection.					

Major Street Information								
Route #:	CR 4019	Route Name(s)	LPGA Blvd			Milepost	N/A	
Existing Control Type	Signal		Existing AADT	22,600	Design Year AADT	43,000		
Design Vehicle	Florida Interstate Semitrailer (WB-62FL)		Control Vehicle	Florida Interstate Semitrailer (WB-62FL)				
Primary Functional Classification			Urban Minor Arterial		Design Speed (mph)	45		
Secondary Functional Classification (if app.)					Target Speed (mph) [if app.]	45		
Approach #1	Direction	Westbound	Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes	
	Sidewalks along	Both sides of the approach	Left-Turn	1	Weekday AM Peak		Weekday PM Peak	
	Crosswalk on Approach?	Yes	Left-Through	0	Left	66	Left	100
	On-Street Bike Facilities?	No	Through	2	Through	852	Through	1,198
	Multi-Use Path?	Yes	Left-Through-Right	0	Right	906	Right	1,236
	Scheduled Bus Service?	No	Through-Right	0	Daily Truck %		3.9%	
	Bus Stop on Approach?	No	Right-Turn	2				
Approach #2	Direction	Eastbound	Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes	
	Sidewalks along:	Both sides of the approach	Left-Turn	2	Weekday AM Peak		Weekday PM Peak	
	Crosswalk on Approach?	Yes	Left-Through	0	Left	398	Left	507
	On-Street Bike Facilities?	No	Through	2	Through	1,315	Through	989
	Multi-Use Path?	Yes	Left-Through-Right	0	Right	36	Right	57
	Scheduled Bus Service?	No	Through-Right	0	Daily Truck %		5.7%	
	Bus Stop on Approach?	No	Right-Turn	1				

Minor Street Information										
Route #:		Route Name(s)	Tymber Creek Rd				Milepost (if app.)			
Existing Control Type	Signal		Existing AADT	13,400		Design Year AADT	20,200			
Design Vehicle	Florida Interstate Semitrailer (WB-62FL)		Control Vehicle	Florida Interstate Semitrailer (WB-62FL)						
Primary Functional Classification			Rural Minor Collector				Design Speed (mph)			
Secondary Functional Classification (if app.)							Target Speed (mph) [if app.]			
Approach #1	Direction	Southbound		Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes		
	Sidewalks along:	Both sides of the approach		Left-Turn	2	Weekday AM Peak		Weekday PM Peak		
	Crosswalk on Approach?	Yes		Left-Through	0	Left		Left		
	On-Street Bike Facilities?	Yes		Through	0	1,184		834		
	Multi-Use Path?	No		Left-Through-Right	0	Through		Through		
	Scheduled Bus Service?	No		Through-Right	1	Right		Right		
	Bus Stop on Approach?	No		Right-Turn	0	Daily Truck %		5.9%		
Approach #2	Direction	Northbound		Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes		
	Sidewalks along:	Both sides of the approach		Left-Turn	1	Weekday AM Peak		Weekday PM Peak		
	Crosswalk on Approach?	Yes		Left-Through	0	Left		Left		
	On-Street Bike Facilities?	Yes		Through	0	108		100		
	Multi-Use Path?	No		Left-Through-Right	0	Through		Through		
	Scheduled Bus Service?	No		Through-Right	1	Right		Right		
	Bus Stop on Approach?	No		Right-Turn	0	Daily Truck %		2.0%		
Approach #3	Direction			Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes		
	Sidewalks along:			Left-Turn		Weekday AM Peak		Weekday PM Peak		
	Crosswalk on Approach?			Left-Through		Left		Left		
	On-Street Bike Facilities?			Through		Through		Through		
	Multi-Use Path?			Left-Through-Right		Right		Right		
	Scheduled Bus Service?			Through-Right		Right		Right		
	Bus Stop on Approach?			Right-Turn		Daily Truck %				

Crash History (Existing Intersections Only)

Append the most recent five-years of crash data for the intersection from the CAR System. If the crash data evidences any issues relating to safety performance, discuss briefly here:  
 The most recent five-year crash data (2015-2019) for the intersection of LPGA and Tymber Creek Road had a report total of three (3) crashes. All three (3) crashes were reported as rear end crashes. No fatal and two (2) injury crashes were reported at this intersection for the analysis period.

Control Strategy Evaluation							
Provide a brief justification as to why each of the following control strategies should be advanced or not. Justification should consider potential environmental impacts.							
Control Strategy	CAP-X Outputs			SPICE Outputs		Strategy to Be Advanced?	Justification
	V/C Ratio		Multimodal Score	Crash Prediction Rank	SSI Rank		
	Weekday AM Peak	Weekday PM Peak					
Two-Way Stop-Controlled	N/A	N/A	N/A	N/A	N/A	No	Current intersection is a signal.
All-Way Stop-Controlled	N/A	N/A	N/A	N/A	N/A	No	Current intersection is a signal.
Signalized Control	0.91	0.98	4.8	4	5	Yes	Existing Condition.
Roundabout	2.60 (3.20)	2.51 (3.45)	5.6	5	1	No	2x2 (2NSx1EW) V/C exceeds 1 for both peak periods.
Median U-Turn	1.43 (0.94)	1.17 (1.10)	6.3	2	2	No	MUT (Partial MUT) V/C exceeds 1 for both peak periods. (V/C exceeds 1 for PM peak period.)
RCUT (Signalized)	1.42	1.08	6.3	6	3	No	V/C exceeds 1 for both peak periods.
RCUT (Unsignalized)	11.22	10.61	4.4	1	4	No	V/C exceeds 1 for both peak periods.
Jughandle				N/A	N/A	No	N/A
Displaced Left-Turn	0.78 (0.82)	0.71 (0.79)	4.8	3	6	No	DLT (Partial DLT) Insufficient right-of-way to provide displaced left turns for all 4 approaches of the intersection.
Continuous Green Tee	N/A	N/A	N/A	N/A	N/A	No	N/A
Quadrant Roadway	N/A	N/A	N/A			No	N/A
Thru-Cut	N/A	N/A	N/A	N/A	N/A	No	N/A
Other 1 (Type)	N/A	N/A	N/A	N/A	N/A	No	N/A
Other 2 (Type)	N/A	N/A	N/A	N/A	N/A	No	N/A

Resolution					
<i>To be filled out by FDOT District Traffic Operations Engineer and District Design Engineer</i>					
Project Determination	Identified Control Strategy Approved				
Comments					
DTOE Name	James E. wood, Jr.	Signature	<small>DocuSigned by:</small> <i>James E. Wood, Jr.</i> <small>668E998FA0F9466...</small>	Date	08/14/2023   1
DDE Name	Jeffrey Cicerello	Signature	<small>DocuSigned by:</small> <i>Jeffrey Cicerello</i> <small>E49B9B8828C8172...</small>	Date	08/14/2023   1

# Florida Department of Transportation Intersection Control Evaluation (ICE) Form Stage 1: Screening

Intersection Control Evaluation Form 750-010-003

To fulfill the requirements of Stage 1 (Screening) of FDOT's ICE procedures, complete the following form and append all supporting documentation. Completed forms can be submitted to the District Traffic Operations Engineer (DTOE) and District Design Engineer (DDE) for the project's approval. Selections must be made in the "Intersection Type" and "Project Funding Source" cells below for the appropriate Stage 1 and Stage 2 forms to fully populate.

Project Name	LPGA Blvd from US 92 (SR 600) to Williamson Blvd PD&E Study		FDOT Project #	448456-1-22-01	
Submitted By	Tarek Lotfy Kamal	Agency/Company	HDR	Date	6/28/2022
Email	<a href="mailto:Tarek.lotfykamal@hdrinc.com">Tarek.lotfykamal@hdrinc.com</a>	FDOT District	District 5	County	Volusia
Project Locality (City/Town/Village)	Daytona Beach				
Intersection Type	At-Grade Intersection	FDOT Context Classification	C3C - Suburban Commercial		
Project Funding Source	Federal	Project Type	Corridor Improvement Project		
Project Purpose <i>(What is the catalyst for this project and why is it being undertaken?)</i>	The purpose of this study is to accommodate existing and projected future travel demand and enhance safety and operations for the LPGA Blvd corridor and the I-95 interchange. The need is based on existing and future transportation demand and existing high number of crashes along LPGA Blvd and the interchange. Improvements are needed to address unacceptable LOS (LOS E or F) and enhance the safety of travel conditions along LPGA Blvd and at the interchange, various intersections, and uncontrolled access points.				
Project Setting Description <i>(Describe the area surrounding the intersection)</i>	The LPGA Blvd/Champions Dr intersection is currently a Signalized intersection. All four quadrants adjacent to the intersection are vacant, but there's a Publix Liquors along the northeast quadrant.				
Multimodal Context <i>(Describe the pedestrian, bicycle, and transit activity in the area and the potential for activity based on surrounding land uses and development patterns)</i>	Sidewalk exists along LPGA Blvd on the northern side of the west left and along Champions Dr on the western side of the north leg. There are no bike lanes at this intersection. Marked crosswalks available to cross all four legs of the intersection.				

Major Street Information										
Route #:	CR 4019	Route Name(s)	LPGA Blvd				Milepost	N/A		
Existing Control Type	Two-way Stop-Control		Existing AADT	16,900	Design Year AADT	51,000				
Design Vehicle	Florida Interstate Semitrailer (WB-62FL)		Control Vehicle	Florida Interstate Semitrailer (WB-62FL)						
Primary Functional Classification	Urban Minor Arterial				Design Speed (mph)	35				
Secondary Functional Classification (if app.)					Target Speed (mph) [if app.]	35				
Approach #1	Direction	Eastbound		Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes		
	Sidewalks along	Neither side of the approach		Left-Turn	1	Weekday AM Peak		Weekday PM Peak		
	Crosswalk on Approach?	No		Left-Through	0	Left	77	Left	106	
	On-Street Bike Facilities?	No		Through	1	Through	2,366	Through	1,684	
	Multi-Use Path?	No		Left-Through-Right	0	Right	96	Right	94	
	Scheduled Bus Service?	No		Through-Right	0	Daily Truck %		3.9%		
	Bus Stop on Approach?	No		Right-Turn	1					
Approach #2	Direction	Westbound		Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes		
	Sidewalks along:	Neither side of the approach		Left-Turn	1	Weekday AM Peak		Weekday PM Peak		
	Crosswalk on Approach?	No		Left-Through	0	Left	90	Left	314	
	On-Street Bike Facilities?	No		Through	1	Through	1,639	Through	2,028	
	Multi-Use Path?	No		Left-Through-Right	0	Right	68	Right	124	
	Scheduled Bus Service?	No		Through-Right	0	Daily Truck %		4.8%		
	Bus Stop on Approach?	No		Right-Turn	1					

Minor Street Information									
Route #:		Route Name(s)	Champions Dr				Milepost (if app.)	N/A	
Existing Control Type	Two-way Stop-Control		Existing AADT	1,600	Design Year AADT	4,000			
Design Vehicle	Florida Interstate Semitrailer (WB-62FL)		Control Vehicle	Florida Interstate Semitrailer (WB-62FL)					
Primary Functional Classification			Urban Local			Design Speed (mph)	30		
Secondary Functional Classification (if app.)						Target Speed (mph) [if app.]			
Approach #1	Direction	Northbound		Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes	
	Sidewalks along:	Neither side of the approach		Left-Turn	1	Weekday AM Peak		Weekday PM Peak	
	Crosswalk on Approach?	No		Left-Through	0	Left	21	Left	196
	On-Street Bike Facilities?	No		Through	0	Through	16	Through	29
	Multi-Use Path?	No		Left-Through-Right	0	Right	166	Right	142
	Scheduled Bus Service?	No		Through-Right	0	Daily Truck %		2.5%	
	Bus Stop on Approach?	No		Right-Turn	1				
Approach #2	Direction	Southeastbound		Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes	
	Sidewalks along:	One side of the approach		Left-Turn	0	Weekday AM Peak		Weekday PM Peak	
	Crosswalk on Approach?	No		Left-Through	0	Left	58	Left	245
	On-Street Bike Facilities?	No		Through	0	Through	19	Through	26
	Multi-Use Path?	No		Left-Through-Right	1	Right	164	Right	310
	Scheduled Bus Service?	No		Through-Right	0	Daily Truck %		2.8%	
	Bus Stop on Approach?	No		Right-Turn	0				
Approach #3	Direction			Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes	
	Sidewalks along:			Left-Turn		Weekday AM Peak		Weekday PM Peak	
	Crosswalk on Approach?			Left-Through		Left		Left	
	On-Street Bike Facilities?			Through		Through		Through	
	Multi-Use Path?			Left-Through-Right		Right		Right	
	Scheduled Bus Service?			Through-Right		Daily Truck %			
	Bus Stop on Approach?			Right-Turn					

Crash History (Existing Intersections Only)
<p>Append the most recent five-years of crash data for the intersection from the CAR System. If the crash data evidences any issues relating to safety performance, discuss briefly here:</p> <p>The most recent five-year crash data (2015-2019) for the intersection of LPGA Boulevard at Champions Drive had ten (10) reported crashes. The most predominant crash were animal crashes at four (4) crashes. There were no fatal crashes reported but there were three (3) injury crashes at this intersection for the analysis period.</p>

Control Strategy Evaluation							
Provide a brief justification as to why each of the following control strategies should be advanced or not. Justification should consider potential environmental impacts.							
Control Strategy	CAP-X Outputs			SPICE Outputs		Strategy to Be Advanced?	Justification
	V/C Ratio		Multimodal Score	Crash Prediction Rank	SSI Rank		
	Weekday AM Peak	Weekday PM Peak					
Two-Way Stop-Controlled	N/A	N/A	N/A	N/A	N/A	No	Current intersection is a signal.
All-Way Stop-Controlled	N/A	N/A	N/A	N/A	N/A	No	Current intersection is a signal.
Signalized Control	0.73	0.95	4.8	4	4	Yes	Existing Conditions, projected to have a V/C ratio less than 1 by 2050
Roundabout	N/A	N/A	N/A	N/A	N/A	No	LPGA Blvd is planned to be widened to a 6-lane corridor at this intersection.
Median U-Turn	0.65	0.77	6.3	2	3	No	Partial MUT. Intersection is constraint by ROW and bridge east of the intersection, and could require additional right-of-way.
RCUT (Signalized)	0.60	0.81	6.3	5	2	No	Intersection is constraint by ROW and bridge east of the intersection, and could require additional right-of-way.
RCUT (Unsignalized)	12.11	25.80	4.4	1	5	No	V/C exceeds 1 for both peak periods
Jughandle				N/A	N/A	No	N/A
Displaced Left-Turn	0.58	0.71	4.8	3	6	No	Partial DLT. Intersection is constraint by ROW and bridge east of the intersection, and could require additional right-of-way.
Continuous Green Tee	N/A	N/A	N/A	N/A	N/A	No	N/A
Quadrant Roadway	N/A	N/A	N/A			No	N/A
Thru-Cut	0.90	1.15	5.2	N/A	1	No	V/C exceeds 1 for PM peak.
Other 1 (Type)	N/A	N/A	N/A	N/A	N/A	No	N/A
Other 2 (Type)	N/A	N/A	N/A	N/A	N/A	No	N/A

Resolution				
<i>To be filled out by FDOT District Traffic Operations Engineer and District Design Engineer</i>				
Project Determination		Identified Control Strategy Approved		
Comments				
DTOE Name	James E. wood, Jr.	Signature	DocuSigned by: <i>James E. Wood, Jr.</i> 888E390FACF9408...	Date 08/14/2023   1
DDE Name	Jeffrey Cicerello	Signature	DocuSigned by: <i>Jeffrey Cicerello</i> F48D9D8830CD4A2...	Date 08/14/2023   1

# Florida Department of Transportation

## Intersection Control Evaluation (ICE) Form

### Stage 1: Screening

Intersection Control Evaluation Form 750-010-003

To fulfill the requirements of Stage 1 (Screening) of FDOT's ICE procedures, complete the following form and append all supporting documentation. Completed forms can be submitted to the District Traffic Operations Engineer (DTOE) and District Design Engineer (DDE) for the project's approval. Selections must be made in the "Intersection Type" and "Project Funding Source" cells below for the appropriate Stage 1 and Stage 2 forms to fully populate.

Project Name	LPGA Blvd from US 92 (SR 600) to Williamson Blvd PD&E Study		FDOT Project #	448456-1-22-01	
Submitted By	Tarek Lotfy Kamal	Agency/Company	HDR	Date	6/28/2022
Email	<a href="mailto:Tarek.lotfykamal@hdrinc.com">Tarek.lotfykamal@hdrinc.com</a>	FDOT District	District 5	County	Volusia
Project Locality (City/Town/Village)	Daytona Beach				
Intersection Type	At-Grade Intersection	FDOT Context Classification	C3C - Suburban Commercial		
Project Funding Source	Federal	Project Type	Corridor Improvement Project		
Project Purpose (What is the catalyst for this project and why is it being undertaken?)	The purpose of this study is to accommodate existing and projected future travel demand and enhance safety and operations for the LPGA Blvd corridor and the I-95 interchange. The need is based on existing and future transportation demand and existing high number of crashes along LPGA Blvd and the interchange. Improvements are needed to address unacceptable LOS (LOS E or F) and enhance the safety of travel conditions along LPGA Blvd and at the interchange, various intersections, and uncontrolled access points				
Project Setting Description (Describe the area surrounding the intersection)	The LPGA Blvd/Tokoma Farms Rd intersection is currently a signalized intersection. All four quadrants adjacent to the intersection are vacant, but there's a hotel/resort along the northeast quadrant.				
Multimodal Context (Describe the pedestrian, bicycle, and transit activity in the area and the potential for activity based on surrounding land uses and development patterns)	There are no sidewalks or bike lane facility along LPGA Boulevard. No sidewalks along Tomoka Farms Road. No marked crosswalks at this intersection.				

Major Street Information										
Route #:	CR 4019	Route Name(s)	LPGA Blvd				Milepost	N/A		
Existing Control Type	Two-way Stop-Control		Existing AADT	22,900	Design Year AADT	54,000				
Design Vehicle	Florida Interstate Semitrailer (WB-62FL)		Control Vehicle	Florida Interstate Semitrailer (WB-62FL)						
Primary Functional Classification	Urban Minor Arterial				Design Speed (mph)	35				
Secondary Functional Classification (if app.)					Target Speed (mph) [if app.]	35				
Approach #1	Direction	Eastbound		Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes		
	Sidewalks along	Neither side of the approach		Left-Turn	1	Weekday AM Peak		Weekday PM Peak		
	Crosswalk on Approach?	No		Left-Through	0	Left	263	Left	327	
	On-Street Bike Facilities?	No		Through	0	Through	2,191	Through	1,562	
	Multi-Use Path?	No		Left-Through-Right	0	Right	136	Right	182	
	Scheduled Bus Service?	No		Through-Right	1	Daily Truck %		4.8%		
	Bus Stop on Approach?	No		Right-Turn	0					
Approach #2	Direction	Westbound		Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes		
	Sidewalks along:	Neither side of the approach		Left-Turn	0	Weekday AM Peak		Weekday PM Peak		
	Crosswalk on Approach?	No		Left-Through	1	Left	302	Left	293	
	On-Street Bike Facilities?	No		Through	0	Through	1,493	Through	2,087	
	Multi-Use Path?	No		Left-Through-Right	0	Right	131	Right	169	
	Scheduled Bus Service?	No		Through-Right	0	Daily Truck %		5.3%		
	Bus Stop on Approach?	No		Right-Turn	1					

Minor Street Information										
Route #:	CR 415	Route Name(s)	Tomoka Farms Road				Milepost (if app.)	N/A		
Existing Control Type	Two-way Stop-Control		Existing AADT	2,950	Design Year AADT	10,100				
Design Vehicle	Florida Interstate Semitrailer (WB-62FL)		Control Vehicle	Florida Interstate Semitrailer (WB-62FL)						
Primary Functional Classification			Urban Major Collector			Design Speed (mph)	35			
Secondary Functional Classification (if app.)						Target Speed (mph) [if app.]				
Approach #1	Direction	Northbound		Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes		
	Sidewalks along:	Neither side of the approach		Left-Turn	1	Weekday AM Peak		Weekday PM Peak		
	Crosswalk on Approach?	No		Left-Through	0	Left		144		
	On-Street Bike Facilities?	No		Through	1	Through		11		
	Multi-Use Path?	No		Left-Through-Right	0	Right		205		
	Scheduled Bus Service?	No		Through-Right	0	Right-Turn		1		
	Bus Stop on Approach?	No		Right-Turn	1	Daily Truck %		8.2%		
Approach #2	Direction	Southbound		Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes		
	Sidewalks along:	Neither side of the approach		Left-Turn	0	Weekday AM Peak		Weekday PM Peak		
	Crosswalk on Approach?	No		Left-Through	0	Left		358		
	On-Street Bike Facilities?	No		Through	0	Through		4		
	Multi-Use Path?	No		Left-Through-Right	1	Right		160		
	Scheduled Bus Service?	No		Through-Right	0	Right-Turn		0		
	Bus Stop on Approach?	No		Right-Turn	0	Daily Truck %		3.3%		
Approach #3	Direction			Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes		
	Sidewalks along:			Left-Turn		Weekday AM Peak		Weekday PM Peak		
	Crosswalk on Approach?			Left-Through		Left				
	On-Street Bike Facilities?			Through		Through				
	Multi-Use Path?			Left-Through-Right		Right				
	Scheduled Bus Service?			Through-Right		Right-Turn				
	Bus Stop on Approach?			Right-Turn		Daily Truck %				

Crash History (Existing Intersections Only)

Append the most recent five-years of crash data for the intersection from the CAR System. If the crash data evidences any issues relating to safety performance, discuss briefly here:

The most recent five-year crash data (2015-2019) for the intersection of LPGA Boulevard at Tomoka Farms Road had 49 reported crashes. The most predominant crash were rear end crashes at 16 crashes. There were no fatal crashes reported but there were 14 injury crashes at this intersection for the analysis period.

Control Strategy Evaluation							
Provide a brief justification as to why each of the following control strategies should be advanced or not. Justification should consider potential environmental impacts.							
Control Strategy	CAP-X Outputs			SPICE Outputs		Strategy to Be Advanced?	Justification
	V/C Ratio		Multimodal Score	Crash Prediction Rank	SSI Rank		
	Weekday AM Peak	Weekday PM Peak					
Two-Way Stop-Controlled	N/A	N/A	N/A	N/A	N/A	No	Current intersection is a signal.
All-Way Stop-Controlled	N/A	N/A	N/A	N/A	N/A	No	Current intersection is a signal.
Signalized Control	1.11	1.22	4.8	4	5	Yes	Existing Condition. V/C > 1. However, the public preferred to have all traditional movements served at this location, keep existing.
Roundabout	N/A	N/A	N/A	N/A	N/A	No	LPGA Blvd is planned to be widened to a 8-lane corridor at this intersection.
Median U-Turn	1.42	1.13	6.3	2	3	No	Partial MUT. V/C exceeds 1 for both peak periods
RCUT (Signalized)	0.72	0.68	6.3	5	1	No	Adjacent intersections are approx. 1000ft apart. Heavy left turn movements difficult to accommodate at adjacent intersection. Additional ROW required for this Alt.
RCUT (Unsignalized)	18.97	79.18	4.4	1	4	No	V/C exceeds 1 for both peak periods
Jughandle				N/A	N/A	No	N/A
Displaced Left-Turn	0.81	0.76	4.8	3	6	No	Partial DLT. This alternative would require additional right-of-way for implementation.
Continuous Green Tee	N/A	N/A	N/A	N/A	N/A	No	N/A
Quadrant Roadway	N/A	N/A	N/A			No	N/A
Thru-Cut	0.95	1.20	5.2	N/A	2	No	Provides better V/C ratios over existing conditions. Based on comments received from the public meeting, this option was dismissed
Other 1 (Type)	N/A	N/A	N/A	N/A	N/A	No	N/A
Other 2 (Type)	N/A	N/A	N/A	N/A	N/A	No	N/A

Resolution			
To be filled out by FDOT District Traffic Operations Engineer and District Design Engineer			
Project Determination	Identified Control Strategy Approved		
Comments	The proposed control type was coordinated with the City of Daytona Beach, Volusia County. Public sentiments obtained from 02/28/23 Open house and subsequent community meetings is to provide all traditional movement and not to implement any control type that will re-route some movements to adjacent intersections.		
DTOE Name	James E. Wood, Jr.	Signature	DocuSigned by: <i>James E. Wood, Jr.</i> 008E390FACF9408... Date 08/14/2023   1
DDE Name	Jeffrey Cicereello	Signature	DocuSigned by: <i>Jeffrey Cicereello</i> E18D3D8830C81A3... Date 08/14/2023   1

# Florida Department of Transportation

## Intersection Control Evaluation (ICE) Form

### Stage 1: Screening

Intersection Control Evaluation Form 750-010-003

To fulfill the requirements of Stage 1 (Screening) of FDOT's ICE procedures, complete the following form and append all supporting documentation. Completed forms can be submitted to the District Traffic Operations Engineer (DTOE) and District Design Engineer (DDE) for the project's approval. Selections must be made in the "Intersection Type" and "Project Funding Source" cells below for the appropriate Stage 1 and Stage 2 forms to fully populate.

Project Name	LPGA Blvd from US 92 (SR 600) to Williamson Blvd PD&E Study		FDOT Project #	448456-1-22-01	
Submitted By	Tarek Lotfy Kamal	Agency/Company	HDR	Date	6/28/2022
Email	<a href="mailto:Tarek.lotfykamal@hdrinc.com">Tarek.lotfykamal@hdrinc.com</a>	FDOT District	District 5	County	Volusia
Project Locality (City/Town/Village)	Daytona Beach				
Intersection Type	At-Grade Intersection	FDOT Context Classification	C3C - Suburban Commercial		
Project Funding Source	Federal	Project Type	Corridor Improvement Project		
Project Purpose (What is the catalyst for this project and why is it being undertaken?)	The purpose of this study is to accommodate existing and projected future travel demand and enhance safety and operations for the LPGA Blvd corridor and the I-95 interchange. The need is based on existing and future transportation demand and existing high number of crashes along LPGA Blvd and the interchange. Improvements are needed to address unacceptable LOS (LOS E or F) and enhance the safety of travel conditions along LPGA Blvd and at the interchange, various intersections, and uncontrolled access points				
Project Setting Description (Describe the area surrounding the intersection)	The LPGA Blvd/Technology Blvd/Outlet Blvd is currently a signalized intersection. The surrounding adjacent lane uses are commercial on the northeast and south east quadrants, while the northwest and southwest quadrants are currently vacant.				
Multimodal Context (Describe the pedestrian, bicycle, and transit activity in the area and the potential for activity based on surrounding land uses and development patterns)	No bike lane facility along LPGA Blvd. Some sidewalk available along LPGA Blvd on the east leg. Sidewalks available on both side along the north leg of Technology Boulevard and on one side along the south leg. Marked crosswalks crossing the west leg in the north-south direction and crossing the south leg in the east-west direction.				

Major Street Information										
Route #:	CR 4019	Route Name(s)	LPGA Blvd				Milepost	N/A		
Existing Control Type	Signal		Existing AADT	38,000	Design Year AADT	69,000				
Design Vehicle	Florida Interstate Semitrailer (WB-62FL)		Control Vehicle	Florida Interstate Semitrailer (WB-62FL)						
Primary Functional Classification		Urban Minor Arterial				Design Speed (mph)	35			
Secondary Functional Classification (if app.)						Target Speed (mph) [if app.]	35			
Approach #1	Direction	Eastbound		Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes		
	Sidewalks along	Neither side of the approach		Left-Turn	1	Weekday AM Peak		Weekday PM Peak		
	Crosswalk on Approach?	Yes		Left-Through	0	Left	870	Left	612	
	On-Street Bike Facilities?	No		Through	2	Through	2,193	Through	1,477	
	Multi-Use Path?	No		Left-Through-Right	0	Right	449	Right	870	
	Scheduled Bus Service?	No		Through-Right	0	Daily Truck %		2.4%		
	Bus Stop on Approach?	No		Right-Turn	1					
Approach #2	Direction	Westbound		Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes		
	Sidewalks along:	Both sides of the approach		Left-Turn	1	Weekday AM Peak		Weekday PM Peak		
	Crosswalk on Approach?	No		Left-Through	0	Left	121	Left	338	
	On-Street Bike Facilities?	No		Through	2	Through	1,450	Through	2,022	
	Multi-Use Path?	No		Left-Through-Right	0	Right	306	Right	205	
	Scheduled Bus Service?	No		Through-Right	0	Daily Truck %		3.3%		
	Bus Stop on Approach?	No		Right-Turn	1					

Minor Street Information										
Route #:		Route Name(s)	Technology Boulevard/Outlet Boulevard				Milepost (if app.)	N/A		
Existing Control Type	Signal		Existing AADT	9,000		Design Year AADT	23,500			
Design Vehicle	Florida Interstate Semitrailer (WB-62FL)		Control Vehicle	Florida Interstate Semitrailer (WB-62FL)						
Primary Functional Classification			Urban Local			Design Speed (mph)	35			
Secondary Functional Classification (if app.)						Target Speed (mph) [if app.]				
Approach #1	Direction	Northbound		Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes		
	Sidewalks along:	One side of the approach		Left-Turn	2	Weekday AM Peak		Weekday PM Peak		
	Crosswalk on Approach?	Yes		Left-Through	0	Left	187	Left	548	
	On-Street Bike Facilities?	No		Through	1	Through	5	Through	179	
	Multi-Use Path?	No		Left-Through-Right	0	Right	20	Right	339	
	Scheduled Bus Service?	No		Through-Right	0	Daily Truck %		3.7%		
	Bus Stop on Approach?	No		Right-Turn	1					
Approach #2	Direction	Southbound		Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes		
	Sidewalks along:	Both sides of the approach		Left-Turn	0	Weekday AM Peak		Weekday PM Peak		
	Crosswalk on Approach?	No		Left-Through	1	Left	116	Left	243	
	On-Street Bike Facilities?	No		Through	0	Through	35	Through	112	
	Multi-Use Path?	No		Left-Through-Right	0	Right	879	Right	765	
	Scheduled Bus Service?	No		Through-Right	0	Daily Truck %		3.7%		
	Bus Stop on Approach?	No		Right-Turn	1					
Approach #3	Direction			Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes		
	Sidewalks along:			Left-Turn		Weekday AM Peak		Weekday PM Peak		
	Crosswalk on Approach?			Left-Through		Left		Left		
	On-Street Bike Facilities?			Through		Through		Through		
	Multi-Use Path?			Left-Through-Right		Right		Right		
	Scheduled Bus Service?			Through-Right		Daily Truck %				
	Bus Stop on Approach?			Right-Turn						

Crash History (Existing Intersections Only)

Append the most recent five-years of crash data for the intersection from the CAR System. If the crash data evidences any issues relating to safety performance, discuss briefly here:

The most recent five-year crash data (2015-2019) for the intersection of LPGA Boulevard at Outlet boulevard/Technology Boulevard had a 36 reported crashes. The most predominant crash were rear end crashes at 27 crashes. There were no fatal crashes reported but there were 8 injury crashes at this intersection for the analysis period.

Control Strategy Evaluation							
Provide a brief justification as to why each of the following control strategies should be advanced or not. Justification should consider potential environmental impacts.							
Control Strategy	CAP-X Outputs			SPICE Outputs		Strategy to Be Advanced?	Justification
	V/C Ratio		Multimodal Score	Crash Prediction Rank	SSI Rank		
	Weekday AM Peak	Weekday PM Peak					
Two-Way Stop-Controlled	N/A	N/A	N/A	N/A	N/A	No	Current intersection is a signal.
All-Way Stop-Controlled	N/A	N/A	N/A	N/A	N/A	No	Current intersection is a signal.
Signalized Control	1.11	1.22	4.8	4	5	Yes	Existing Condition. V/C ratios over 1. However, the public preferred to have all traditional movements served at this location, keep existing.
Roundabout	N/A	N/A	N/A	N/A	N/A	No	LPGA Blvd is planned to be widened to a 8-lane corridor at this intersection.
Median U-Turn	1.42	1.13	6.3	2	3	No	Partial MUT. V/C exceeds 1 for both peak periods
RCUT (Signalized)	0.72	0.68	6.3	5	1	No	Adjacent intersections are approx. 1000ft apart. Heavy left turn movements difficult to accommodate at adjacent intersection. Additional ROW required for this Alt.
RCUT (Unsignalized)	18.97	79.18	4.4	1	4	No	V/C exceeds 1 for both peak periods
Jughandle				N/A	N/A	No	N/A
Displaced Left-Turn	0.81	0.76	4.8	3	6	No	Partial DLT. This alternative would require additional right-of-way for implementation.
Continuous Green Tee	N/A	N/A	N/A	N/A	N/A	No	N/A
Quadrant Roadway	N/A	N/A	N/A			No	N/A
Thru-Cut	0.95	1.20	5.2	N/A	2	No	Provides better V/C ratios over existing conditions. However, it was dismissed since public, the City and the County preferred to allow all movements here.
Other 1 (Type)	N/A	N/A	N/A	N/A	N/A	No	N/A
Other 2 (Type)	N/A	N/A	N/A	N/A	N/A	No	N/A

Resolution			
To be filled out by FDOT District Traffic Operations Engineer and District Design Engineer			
Project Determination	Identified Control Strategy Approved		
Comments	The proposed control type was coordinated with the City of Daytona Beach, Volusia County. Public sentiments obtained from 02/28/23 Open House and subsequent community meetings is to provide all traditional movement and not to implement any control type that will re-route through movements to Williamson Boulevard.		
DTOE Name	James E. Wood, Jr.	Signature	DocuSigned by: <i>James E. Wood, Jr.</i> 668E296FACF0466... Date 08/14/2023   1
DDE Name	Jeffrey Ciccerello	Signature	DocuSigned by: <i>Jeffrey Ciccerello</i> E49D9D8820CD4A2 Date 08/14/2023   1

# Florida Department of Transportation

## Intersection Control Evaluation (ICE) Form

### Stage 1: Screening

Intersection Control Evaluation Form 750-010-003

To fulfill the requirements of Stage 1 (Screening) of FDOT's ICE procedures, complete the following form and append all supporting documentation. Completed forms can be submitted to the District Traffic Operations Engineer (DTOE) and District Design Engineer (DDE) for the project's approval. Selections must be made in the "Intersection Type" and "Project Funding Source" cells below for the appropriate Stage 1 and Stage 2 forms to fully populate.

Project Name	LPGA Blvd from US 92 (SR 600) to Williamson Blvd PD&E Study		FDOT Project #	448456-1-22-01	
Submitted By	Tarek Lotfy Kamal	Agency/Company	HDR	Date	6/28/2022
Email	<a href="mailto:Tarek.lotfykamal@hdrinc.com">Tarek.lotfykamal@hdrinc.com</a>	FDOT District	District 5	County	Volusia
Project Locality (City/Town/Village)	Daytona Beach				
Intersection Type	At-Grade Intersection	FDOT Context Classification	C3C - Suburban Commercial		
Project Funding Source	Federal	Project Type	Corridor Improvement Project		
Project Purpose (What is the catalyst for this project and why is it being undertaken?)	The purpose of this study is to accommodate existing and projected future travel demand and enhance safety and operations for the LPGA Blvd corridor and the I-95 interchange. The need is based on existing and future transportation demand and existing high number of crashes along LPGA Blvd and the interchange. Improvements are needed to address unacceptable LOS (LOS E or F) and enhance the safety of travel conditions along LPGA Blvd and at the interchange, various intersections, and uncontrolled access points.				
Project Setting Description (Describe the area surrounding the intersection)	The LPGA Blvd/Williamson Blvd is currently a signalized intersection. The surrounding adjacent lane uses are commercial.				
Multimodal Context (Describe the pedestrian, bicycle, and transit activity in the area and the potential for activity based on surrounding land uses and development patterns)	The west leg of the intersection has sidewalks on both sides, the east leg has a sidewalk on only one side, while the south and north legs have sidewalks on both sides of the road. There are marked crosswalks on all legs of the intersection. There are no existing Bike lanes or transit activity provided at this intersection.				

Major Street Information										
Route #:	CR 4019	Route Name(s)	LPGA Blvd				Milepost	N/A		
Existing Control Type	Signal		Existing AADT	33,000	Design Year AADT	56,000				
Design Vehicle	Florida Interstate Semitrailer (WB-62FL)		Control Vehicle	Florida Interstate Semitrailer (WB-62FL)						
Primary Functional Classification		Urban Minor Arterial				Design Speed (mph)	55			
Secondary Functional Classification (if app.)						Target Speed (mph) [if app.]	35			
Approach #1	Direction	Eastbound		Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes		
	Sidewalks along	Both sides of the approach		Left-Turn	2	Weekday AM Peak		Weekday PM Peak		
	Crosswalk on Approach?	Yes		Left-Through	0	Left	578	Left	509	
	On-Street Bike Facilities?	No		Through	2	Through	1,497	Through	1,211	
	Multi-Use Path?	No		Left-Through-Right	0	Right	444	Right	339	
	Scheduled Bus Service?	No		Through-Right	0	Daily Truck %		3.3%		
	Bus Stop on Approach?	No		Right-Turn	1					
Approach #2	Direction	Westbound		Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes		
	Sidewalks along:	One side of the approach		Left-Turn	2	Weekday AM Peak		Weekday PM Peak		
	Crosswalk on Approach?	Yes		Left-Through	0	Left	259	Left	370	
	On-Street Bike Facilities?	No		Through	2	Through	1,128	Through	1,615	
	Multi-Use Path?	No		Left-Through-Right	0	Right	161	Right	164	
	Scheduled Bus Service?	No		Through-Right	0	Daily Truck %		3.0%		
	Bus Stop on Approach?	No		Right-Turn	1					

Minor Street Information										
Route #:	CR 4009	Route Name(s)	Williamson Blvd				Milepost (if app.)	N/A		
Existing Control Type	Signal		Existing AADT	18,150	Design Year AADT	35,500				
Design Vehicle	Florida Interstate Semitrailer (WB-62FL)		Control Vehicle	Florida Interstate Semitrailer (WB-62FL)						
Primary Functional Classification			Urban Principal Arterial - Other			Design Speed (mph)	45			
Secondary Functional Classification (if app.)						Target Speed (mph) [if app.]				
Approach #1	Direction	Northbound		Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes		
	Sidewalks along:	Both sides of the approach		Left-Turn	2	Weekday AM Peak		Weekday PM Peak		
	Crosswalk on Approach?	Yes		Left-Through	0	Left		619		
	On-Street Bike Facilities?	No		Through	1	Through		789		
	Multi-Use Path?	No		Left-Through-Right	0	Right		279		
	Scheduled Bus Service?	No		Through-Right	1	Daily Truck %		3.6%		
	Bus Stop on Approach?	No		Right-Turn	0					
Approach #2	Direction	Southbound		Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes		
	Sidewalks along:	Both sides of the approach		Left-Turn	2	Weekday AM Peak		Weekday PM Peak		
	Crosswalk on Approach?	Yes		Left-Through	0	Left		246		
	On-Street Bike Facilities?	No		Through	1	Through		593		
	Multi-Use Path?	No		Left-Through-Right	0	Right		331		
	Scheduled Bus Service?	No		Through-Right	1	Daily Truck %		3.6%		
	Bus Stop on Approach?	No		Right-Turn	0					
Approach #3	Direction			Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes		
	Sidewalks along:			Left-Turn		Weekday AM Peak		Weekday PM Peak		
	Crosswalk on Approach?			Left-Through		Left				
	On-Street Bike Facilities?			Through		Through				
	Multi-Use Path?			Left-Through-Right		Right				
	Scheduled Bus Service?			Through-Right		Daily Truck %				
	Bus Stop on Approach?			Right-Turn						

Crash History (Existing Intersections Only)

Append the most recent five-years of crash data for the intersection from the CAR System. If the crash data evidences any issues relating to safety performance, discuss briefly here:

The most recent five-year crash data (2015-2019) for the intersection of LPGA Blvd and Williamson Blvd had a report total of 139 crashes. The most predominant crash were rear end crashes at 88 crashes. There was one (1) reported fatal crash and 26 injury crashes at this intersection for the analysis period.

Control Strategy Evaluation							
Provide a brief justification as to why each of the following control strategies should be advanced or not. Justification should consider potential environmental impacts.							
Control Strategy	CAP-X Outputs			SPICE Outputs		Strategy to Be Advanced?	Justification
	V/C Ratio		Multimodal Score	Crash Prediction Rank	SSI Rank		
	Weekday AM Peak	Weekday PM Peak					
Two-Way Stop-Controlled	N/A	N/A	N/A	N/A	N/A	No	Current intersection is a signal.
All-Way Stop-Controlled	N/A	N/A	N/A	N/A	N/A	No	Current intersection is a signal.
Signalized Control	1.07	1.07	4.8	4	5	Yes	Existing Condition. Despite V/C ratios exceeding 1, other alternatives are constrained by ROW.
Roundabout	N/A	N/A	N/A	N/A	N/A	No	LPGA Blvd is planned to be widened to a 8-lane corridor at this intersection.
Median U-Turn	0.78 (0.86)	0.70 (0.80)	6.3	2	3	No	Full MUT (Partial MUT). A full MUT or partial MUT could require additional right-of-way.
RCUT (Signalized)	1.09	0.85	6.3	5	1	No	V/C exceeds 1 for PM peak period.
RCUT (Unsignalized)	31.65	95.40	4.4	1	4	No	V/C exceeds 1 for both peak periods
Jughandle				N/A	N/A	No	N/A
Displaced Left-Turn	0.61 (0.75)	0.51 (0.72)	4.8	3	6	No	Full DLT (Partial DLT). A full DLT or partial DLT could require additional right-of-way.
Continuous Green Tee	N/A	N/A	N/A	N/A	N/A	No	N/A
Quadrant Roadway	N/A	N/A	N/A			No	N/A
Thru-Cut	1.24	1.15	5.2	N/A	2	No	V/C exceeds 1 for AM peak period.
Hybrid MUT/RCUT/DLT	N/A	N/A	N/A	N/A	N/A	No	This Alt was evaluated and eliminated from further consideration, as the County and City expressed concerns with regards to access management.
Other 2 (Type)	N/A	N/A	N/A	N/A	N/A	No	N/A

Resolution				
<i>To be filled out by FDOT District Traffic Operations Engineer and District Design Engineer</i>				
Project Determination		Identified Control Strategy Approved		
Comments				
DTOE Name	James E. Wood, Jr.	Signature	DocuSigned by: <i>James E. Wood, Jr.</i> 668E206FACF0466...	Date 08/14/2023   1
DDE Name	Jeffrey Cicerello	Signature	DocuSigned by: <i>Jeffrey Cicerello</i> E49D08820CD4A2...	Date 08/14/2023   1