

December
2016



FDOT DISTRICT TWO Level of Service



Florida Model Task Force Meeting

Ameera F. Sayeed AICP, GISP
District Growth and Development/ Modeling Supervisor



DUVAL COUNTY OVERVIEW

2014 PEAK HOUR LEVEL OF SERVICE

- LOS A
- LOS B
- LOS C
- LOS D
- LOS E
- LOS F
- Segment Break
- Segment Map ID*
- SIS Roadway
- County Boundary
- City Limits
- Nature Preserve
- Water Body

Data Sources:

1. FDOT Office of Transportation Statistics
2. Florida Geographic Data Library (FGDL)

*Segment Map ID is referenced in LOS Report.

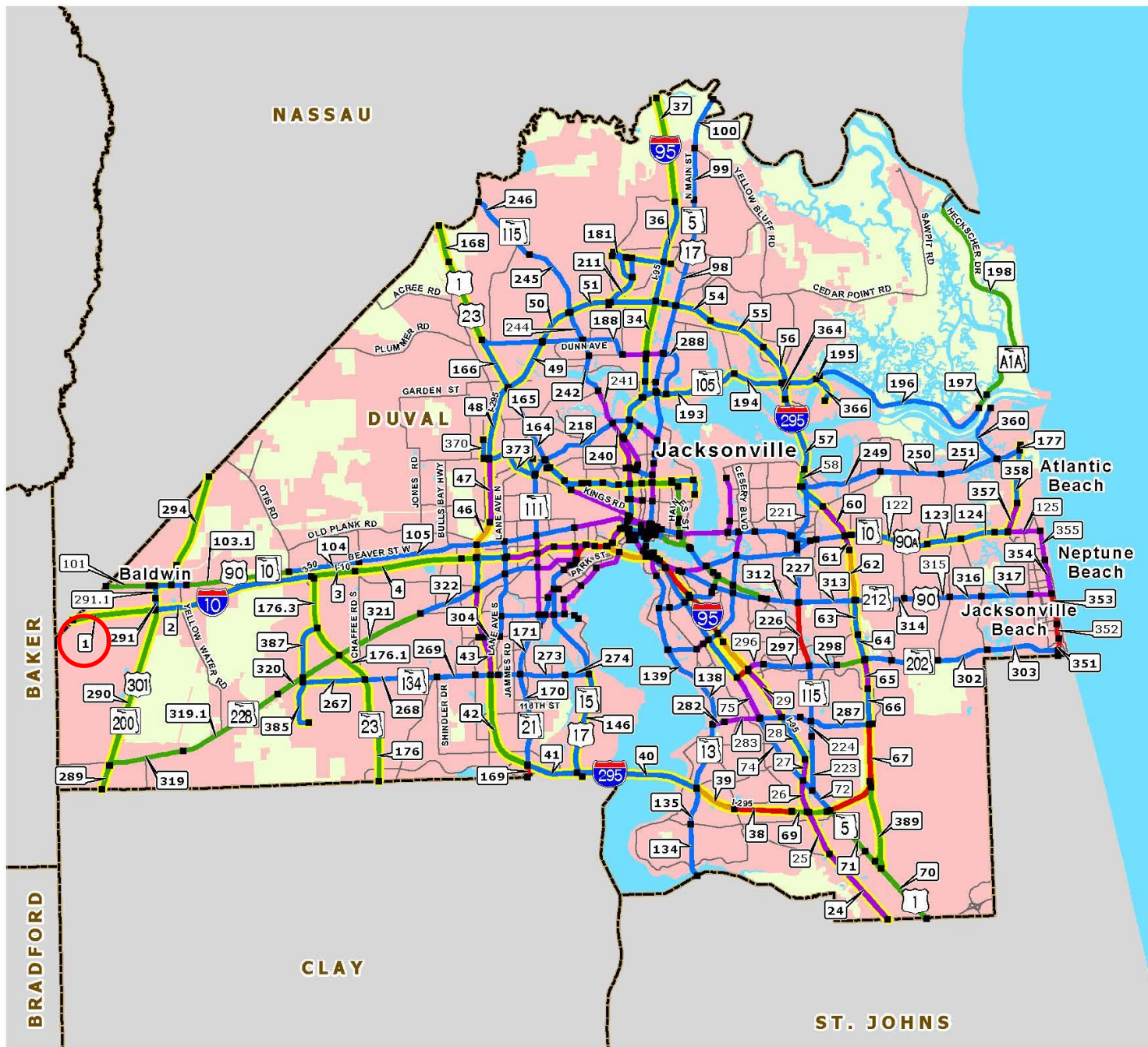
Disclaimer:

This document is for general planning purposes only. It is not intended for precise measurements.



DISTRICT TWO
LEVEL OF SERVICE REPORT

SEPTEMBER 2015



2014 DISTRICT TWO LOS ANALYSIS

Road	Map ID	Local	Segment Description																
Location		Lanes	Facility AreaType	Committed	Miles	Speed	Count Station	Std Source	LOS STD	MSV Adj.	MaxService Volume	2013 Traffic	2014 Traffic	LOS	Growth Rate	2019 Traffic	LOS	2035 Traffic	LOS
(All volumes are Peak Hour, Bidirectional)																			

Duval

I-10*	1	From Nassau Co. Line to US 301																K 10.50%
Jacksonville	4/D	Freeway Transition	<input type="checkbox"/>	3.22	70 MPH	273134	FDOT Local	C C		5,190 5,190	2,205	2,100	B	1%	2,468	B	2,835	B
I-10*	2	From US 301 to SR 23																K 9.00%
Jacksonville	4/D	Freeway Urbanized	<input type="checkbox"/>	6.29	70 MPH	720109c	FDOT Local	D D		6,700 6,700	4,005	4,256	C	Var 1%	4,257	C	4,824	C
I-10*	3	From SR 23 to Chaffee Rd																K 9.00%
Jacksonville	6/D	Freeway Urbanized	<input type="checkbox"/>	1.74	70 MPH	720109c	FDOT Local	D D		10,060 10,060	4,005	4,256	B	Var 1%	4,257	B	4,824	B
I-10*	4	From Chaffee Rd. to Greenland Ave																K 9.00%
Jacksonville	6/D	Freeway Urbanized	<input type="checkbox"/>	4.35	70 MPH	720832	FDOT Local	D D		10,060 10,060	4,545	5,985	B	Var 1%	5,985	B	6,309	C
I-10*	5	From Greenland Ave to I-295																K 9.00%
Jacksonville	6/D	Freeway Urbanized	<input type="checkbox"/>	0.59	55 MPH	725020	FDOT Local	D D		10,060 10,060	5,625	5,985	B	Var 1%	6,156	C	7,101	C
I-10*	6	From I-295 to Lane Ave																K 8.50%
Jacksonville	6/2	Freeway Urbanized	<input type="checkbox"/>	1.11	55 MPH	725519	FDOT Local	D D		11,860 11,860	7,565	7,990	C	1%	8,449	C	9,741	C

Motivation & Purpose

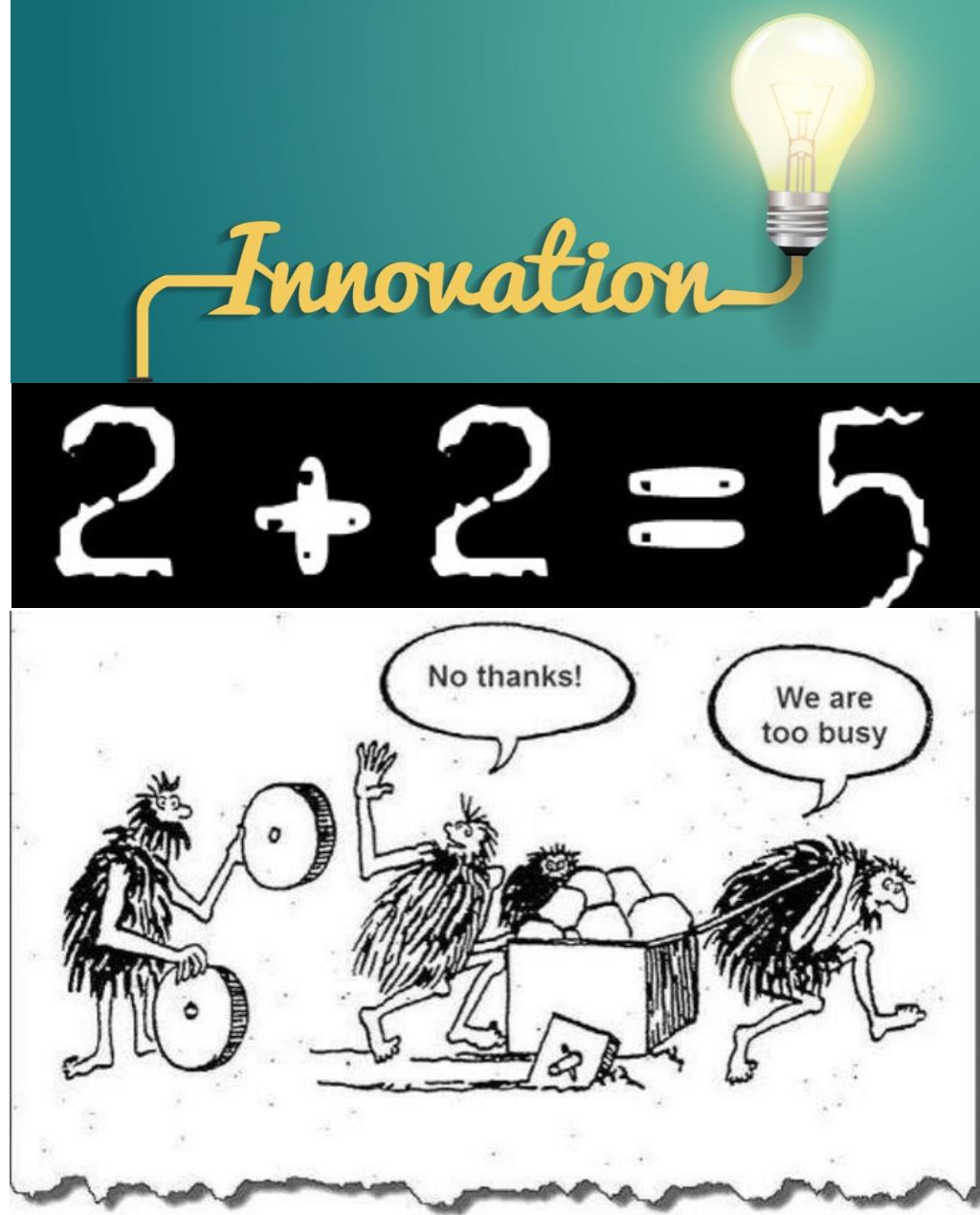
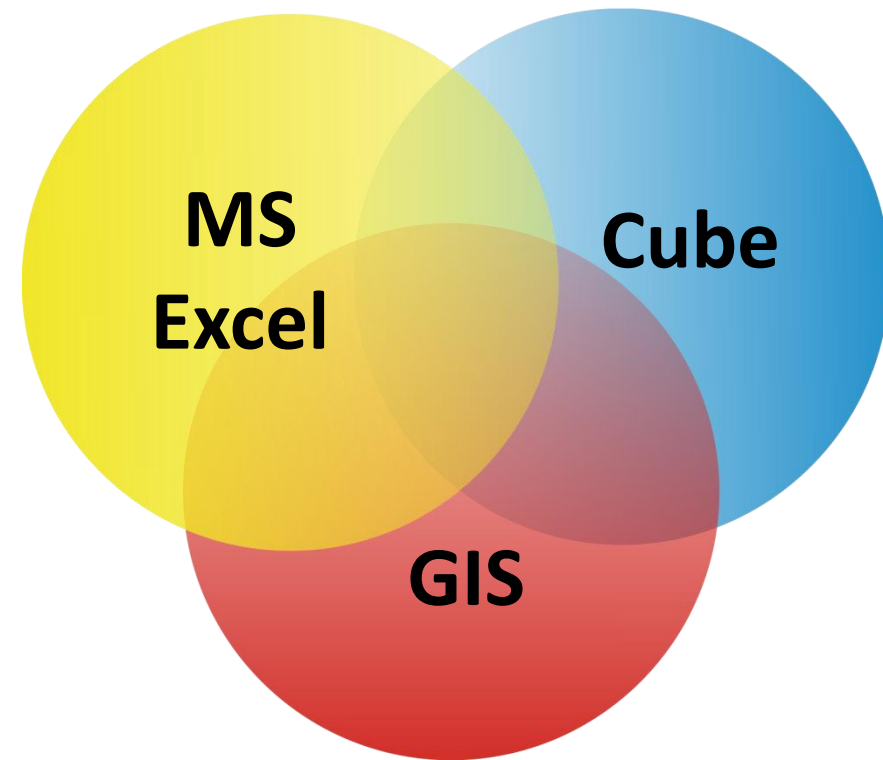
- Improve accuracy of results
 - Utilize travel demand model results
 - Consider auxiliary lanes in MSV
- Enhance user friendliness
 - Interactive mapping system as opposed to static pdfs
 - Ease of annual update and reporting

MOTIVATION

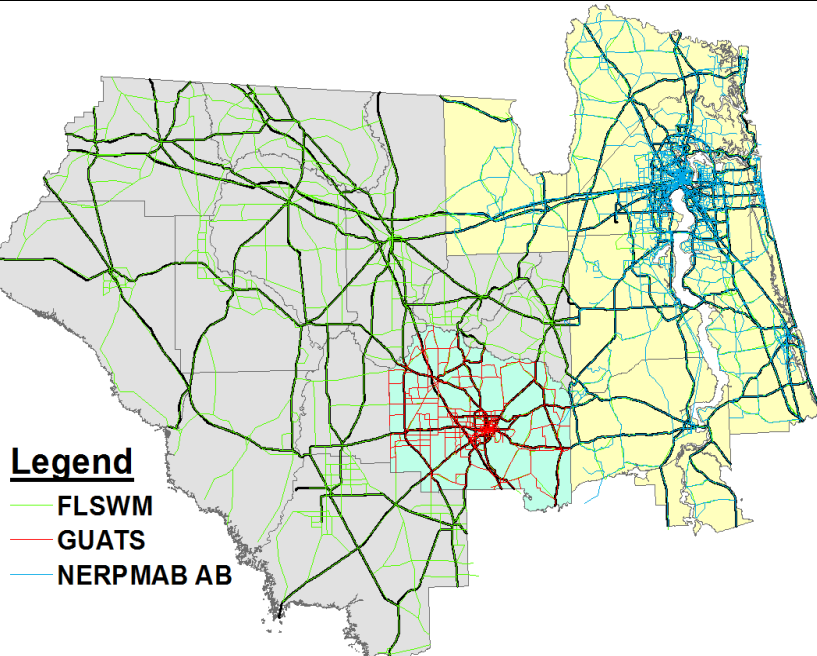


Conceptualization

- Leverage existing analysis and data
- Network conflation
- Integrated system



Implementation




Legend
FLSWM
GUATS
NERPMAB AB




Level of Service Report

NAVIGATION GUIDE






July 2016



FLORIDA DEPARTMENT OF TRANSPORTATION
DISTRICT TWO

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Level of Service

Map Legend

- ☒ Map Layer Transparency
- ☒ Level of Service Segment Breaks
- ☒ Level of Service Segments
 - A
 - B
 - C
 - D
 - E
 - F
- ☒ Strategic Intermodal System (SIS)
 - Existing SIS
 - Proposed SIS
- ☒ County Boundary

Location Search

Enter an address or landmark and click the Find Address button to verify the address and zoom to that location.

Sample address: 100 S Main St

Sample intersection: E Bay St & S Main St

Sample landmark: The Jacksonville Landing

Sample city: Jacksonville

Address, intersection or landmark:

City:

[Find Address](#)

Map layer:
- Search Visible Layers -

Search value:

[Search](#)

Attribute Search

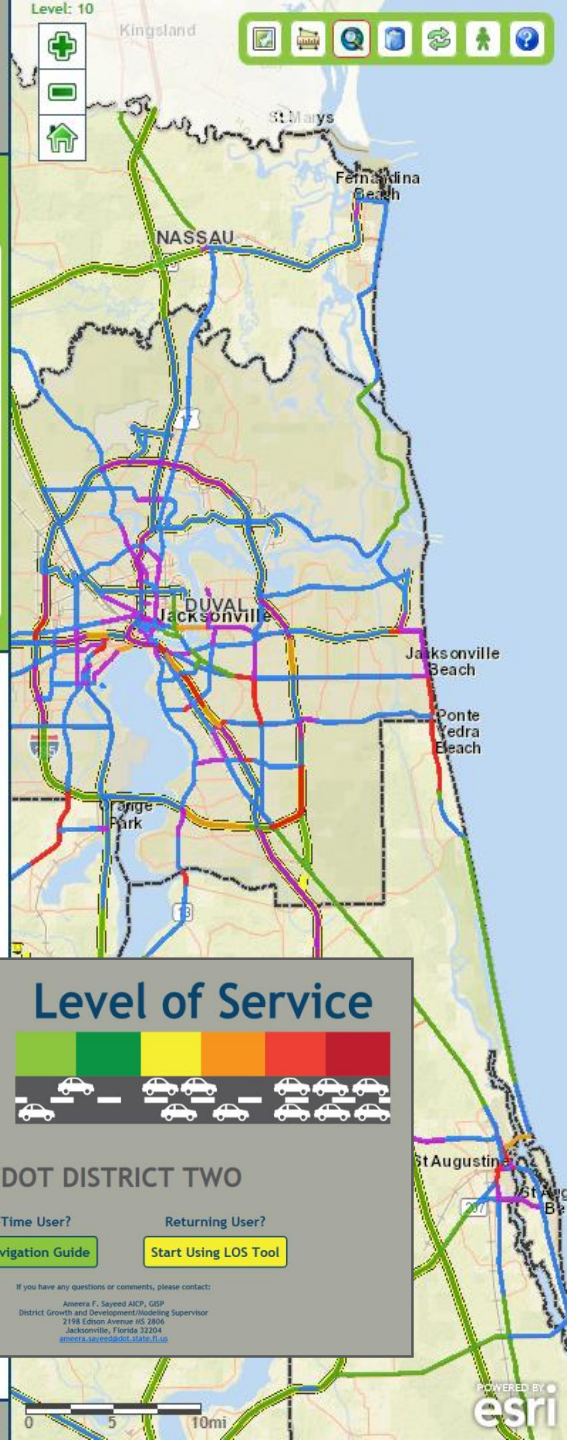
FDOT DISTRICT TWO

First-Time User? [View Navigation Guide](#)

Returning User? [Start Using LOS Tool](#)

If you have any questions or comments, please contact:
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FDOT DISTRICT TWO



Demo

Level of Service

FDOT DISTRICT TWO

First-Time User? [View Navigation Guide](#)

Returning User? [Start Using LOS Tool](#)

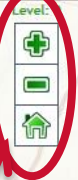
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<http://fdot-d2-los.hdrgateway.com/>



Level of Service



Measure Tool

Measurement Functions

Measurement Result

101.8 Miles

Clear Map Graphics

Reset Map Legend



Map Navigation Tools

Map Legend

Map Layer Transparency

Level of Service Segment Breaks

Level of Service Segments

Strategic Intermodal System (SIS)

Existing SIS

Proposed SIS

County Boundary

Location Search

Enter an address or landmark and click the Find Address button.

Choose from a variety of Esri Base Maps

Basemap Gallery

ArcGIS Streets

ArcGIS Aerial

ArcGIS Hybrid

ArcGIS Topo

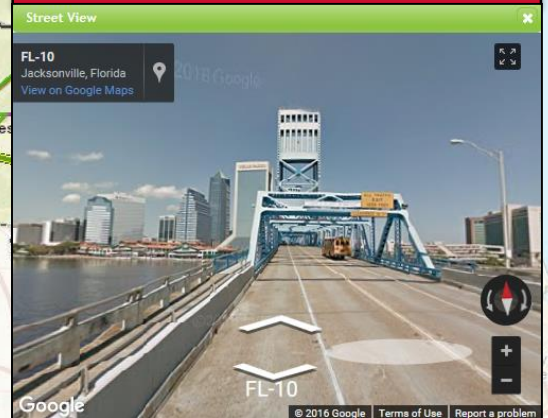
ArcGIS Light Gray

ArcGIS Dark Gray

Overview Map Tool



Google Street View



Interactive Map Tools



Level of Service



Map Legend

☒ Map Layer Transparency

☐
☐

☒ Level of Service Segment Breaks

☒ Level of Service Segments

A
B
C
D
E
F

☒ Strategic Intermodal System (SIS)

Existing SIS
Proposed SIS

☒ County Boundary

Location Search

Enter an address or landmark and click the Find Address button to verify the address and zoom to that location.

Sample address: 100 S Main St
 Sample intersection: E Bay St & S Main St
 Sample landmark: The Jacksonville Landing
 Sample city: Jacksonville

Address, intersection or landmark:

City:

Find Address

Attribute Search

Map layer:
 - Search Visible Layers -

Search value:

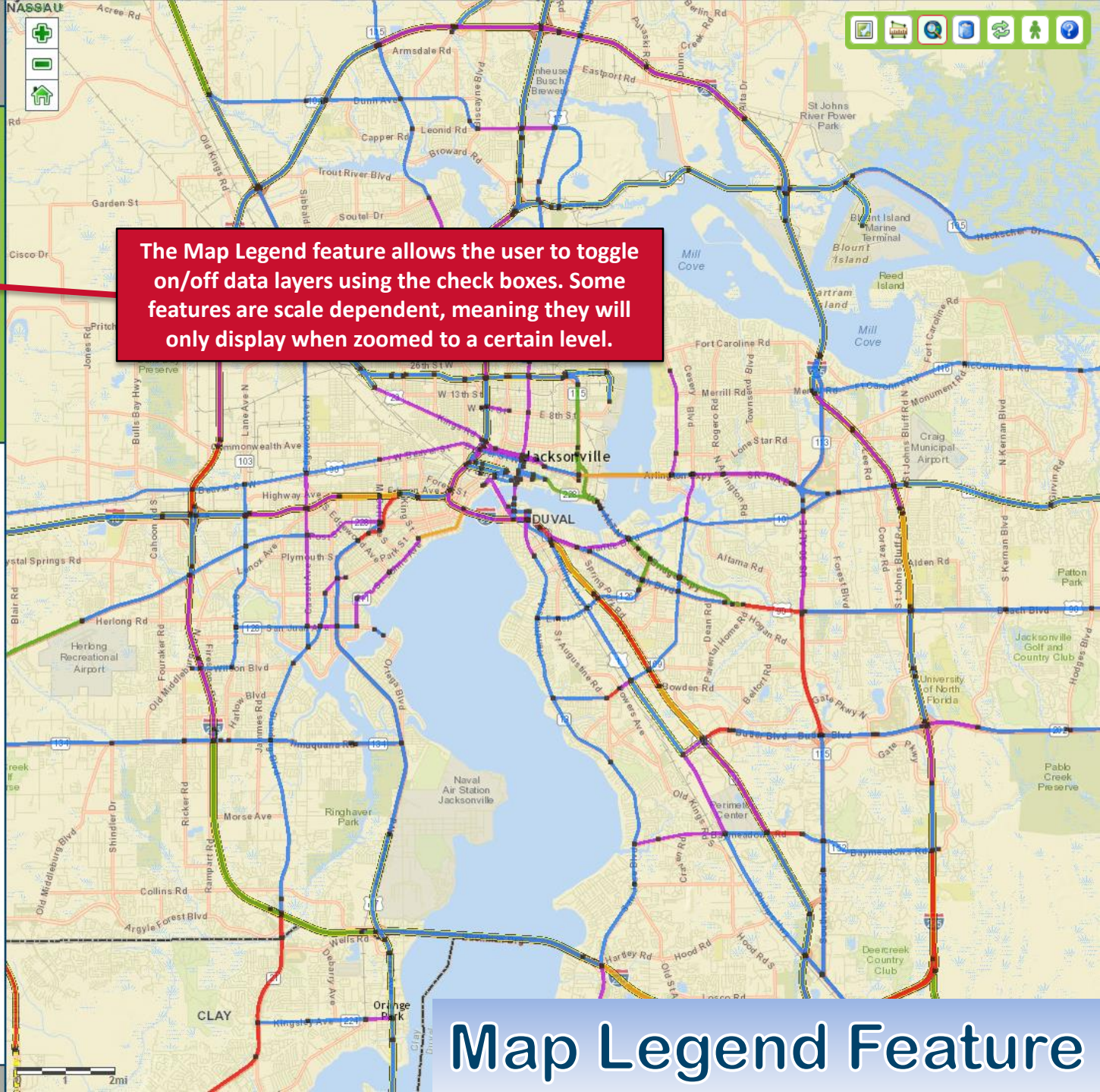
Search

Map Information

Click a map feature to see its attribute values.


Level of Service Segments

FDOT DISTRICT TWO




The Map Legend feature allows the user to toggle on/off data layers using the check boxes. Some features are scale dependent, meaning they will only display when zoomed to a certain level.

Map Legend Feature



Level of Service



Map Legend

☒ Map Layer Transparency

☒ Level of Service Segment Breaks

☒ Level of Service Segments

A

B

C

D

E

F

☒ Strategic Intermodal System (SIS)

Existing SIS

Proposed SIS

☒ County Boundary

Location Search

Enter an address or landmark and click the Find Address button to verify the address and zoom to that location.

Sample address: 100 S Main St

Sample intersection: E Bay St & S Main St

Sample landmark: The Jacksonville Landing

Sample city: Jacksonville

Address, intersection or landmark:
University of Florida

City:
Gainesville

Find Address

Attribute Search

Map layer:
- Search Visible Layers -

Search value:

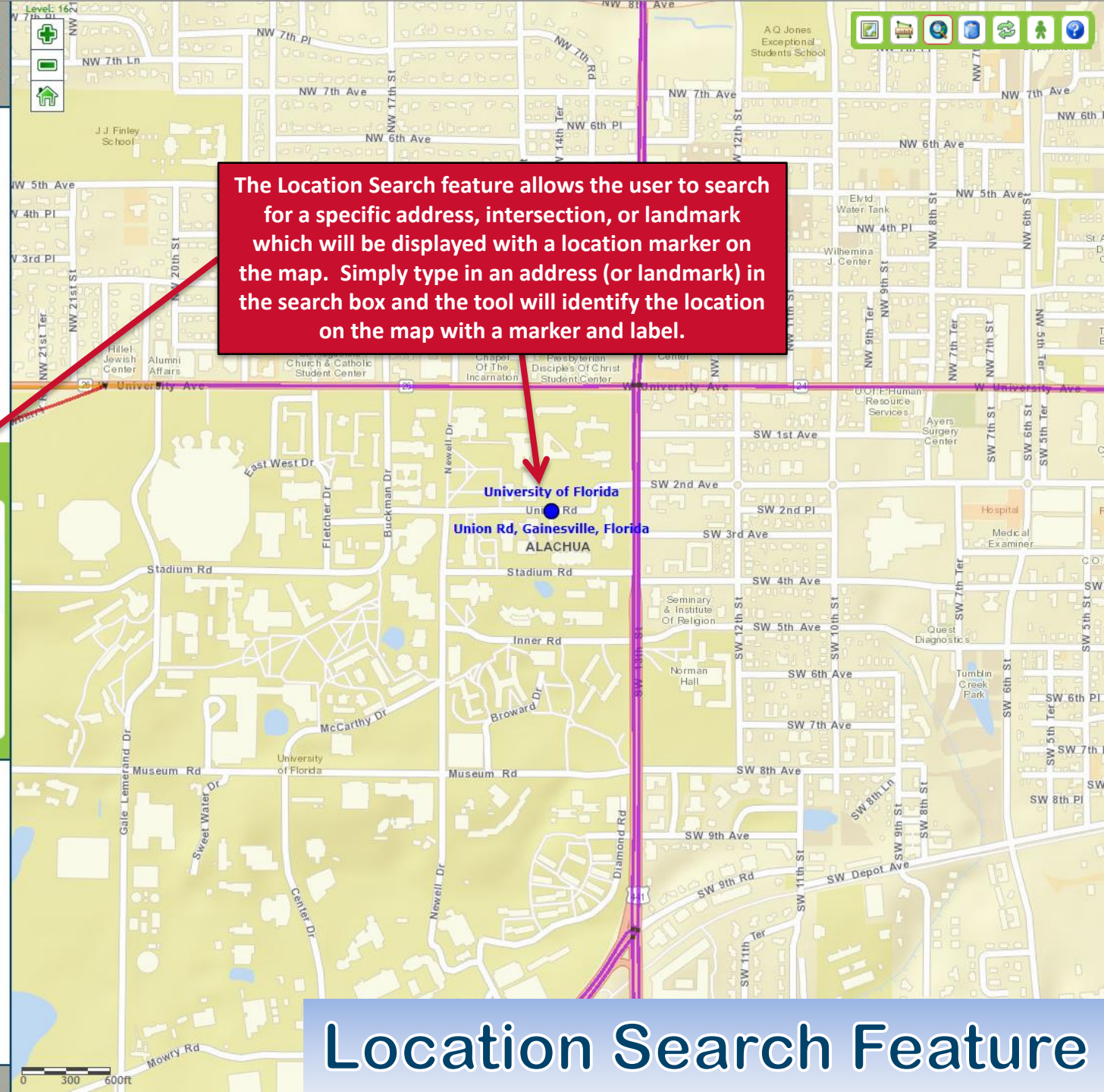
Search

Map Information

Click a map feature to see its attribute values.

Level of Service Segments

FDOT DISTRICT TWO



The Location Search feature allows the user to search for a specific address, intersection, or landmark which will be displayed with a location marker on the map. Simply type in an address (or landmark) in the search box and the tool will identify the location on the map with a marker and label.

Location Search Feature



Attribute Search

Map layer:
Level of Service Segments

Fields:
Roadway ID

Search value:
71070000

Search

Level of Service Segments (7 features)

#	Segment Description	Map Location
▶ 1)	SR 21 / Blanding Blvd. from CR 215 to CR 218	Highlight
▶ 2)	SR 21 / Blanding Blvd. from CR 218 to N. City Limit (Palmetto St)	Highlight
▶ 3)	SR 21 / Blanding Blvd. from N. City Limit of Middleburg to Old Jennings Rd	Highlight
▶ 4)	SR 21 / Blanding Blvd. from Old Jennings Rd to College Dr	Highlight
▶ 5)	SR 21 / Blanding Blvd. from College Dr to Suzanne Ave	Highlight
▶ 6)	SR 21 / Blanding Blvd. from Suzanne Ave to SR 224/Kingsley Ave	Highlight
▶ 7)	SR 21 / Blanding Blvd. from SR 224/Kingsley Ave (SR-224) to Duval Co. Line	Highlight

Map Information

Click a map feature to see its attribute values.

Level of Service Segments

Highlight this feature on the map	
Print attribute table	
Export attribute table	
Create LOS segment report	
Segment Description	SR 21 / Blanding Blvd. from SR 224/Kingsley Ave (SR-224) to Duval Co. Line
Segment ID	282
Location	Clay County

FDOT DISTRICT TWO

The Attribute Search feature allows the user to conduct a screen of one specific map layer, the visible layers only, or all layers contained in the Map Legend based on a search definition put into the search value box. The search can be conducted on all attribute fields or limited to one specific field picked from a list. The map will automatically zoom to the feature(s) returned by the search and can be highlighted by the user as needed.

Attribute Search Feature



Level of Service















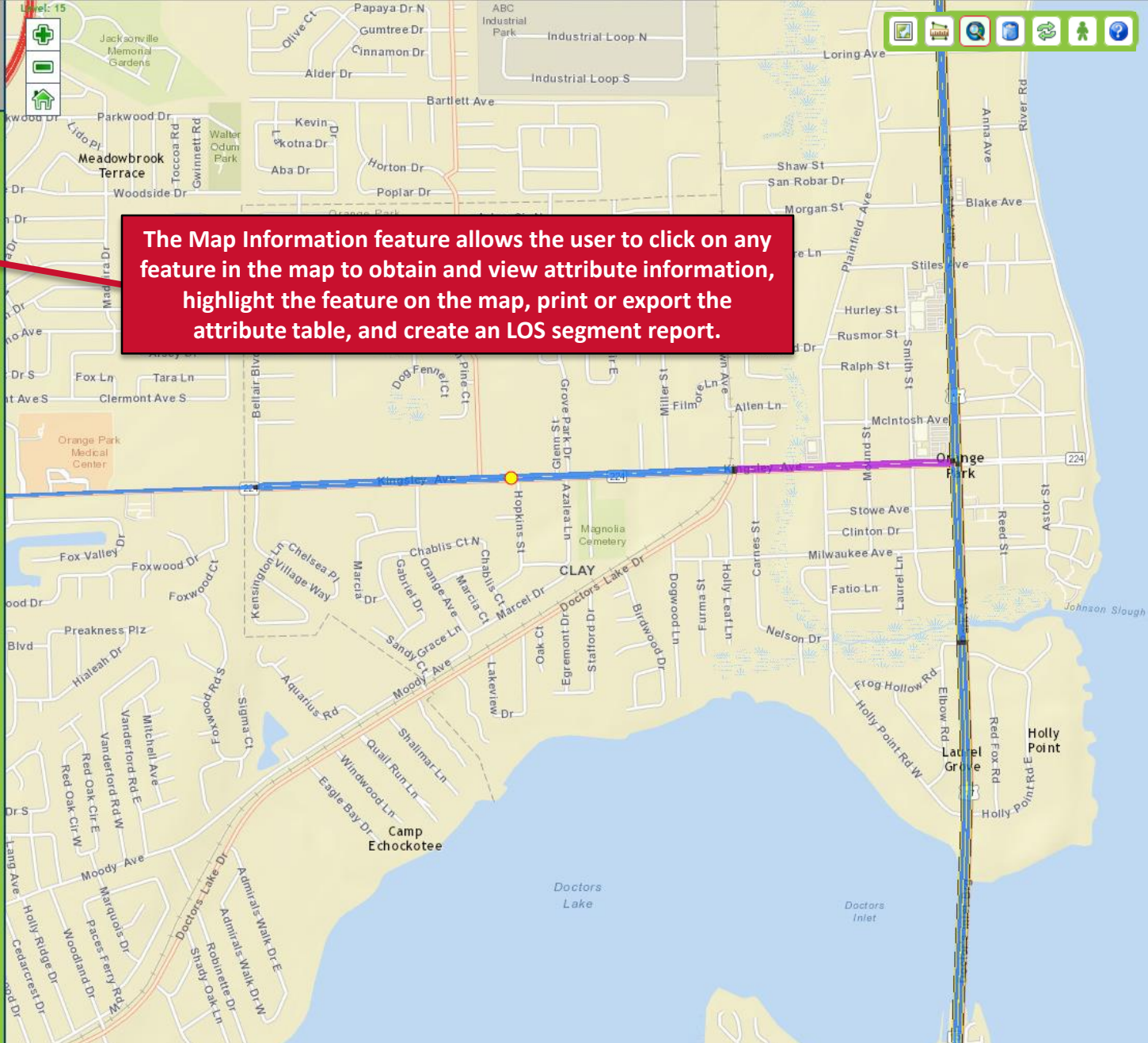
Map Information

Click a map feature to see its attribute values.

Level of Service Segments

[Highlight this feature on the map](#)
[Print attribute table](#)
[Export attribute table](#)
[Create LOS Segment Report](#)

Segment Description	SR 224 / Kingsley Ave. from Bellair Blvd to Doctors Lake Drive
Segment ID	7284
Location	Orange Park
Roadway	SR 224 / Kingsley Ave.
County	Clay
Roadway ID	71130000
Begin MP	1.044
End MP	2.234
Segment Extent	Bellair Blvd to Doctors Lake Drive
Median Treatment	Divided
Directionality	Two-Way
SIS	No
SIS Type	Non SIS
Area Type	Urbanized
Facility Type	Arterial
Max. Service Vol. Adjustment Factor	0
Local LOS Standard	E
Standard K-Factor	0.09
FDOT LOS Standard	D
Segment Length (mi)	1.19
GOOGLE STREET VIEW	http://maps.google.com/maps?q=81ayer=c&cbll=30.1652508149295,-81.7201645478826
Lanes 2015	4
Lanes 2020	4
Lanes 2025	4
Lanes 2030	4
Lanes 2035	4
Lanes 2040	4
AADT 2015	25000
AADT 2020	26250
AADT 2025	27500
AADT 2030	28750
AADT 2035	30000
AADT 2040	31250
Peak Volume 2015	2250
Peak Volume 2020	2363
Peak Volume 2025	2475
Peak Volume 2030	2588
Peak Volume 2035	2700
Peak Volume 2040	2813
Peak Max. Service Vol. 2015	3580



The Map Information feature allows the user to click on any feature in the map to obtain and view attribute information, highlight the feature on the map, print or export the attribute table, and create an LOS segment report.

Map Information Feature



Level of Service

LOS Report

Switch to Map Selection

Current Selection is From a List

Print report glossary

Counties:

Baker

Print County Report

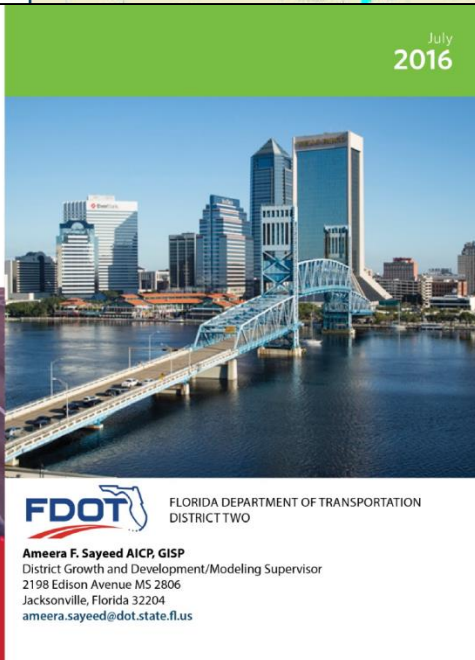
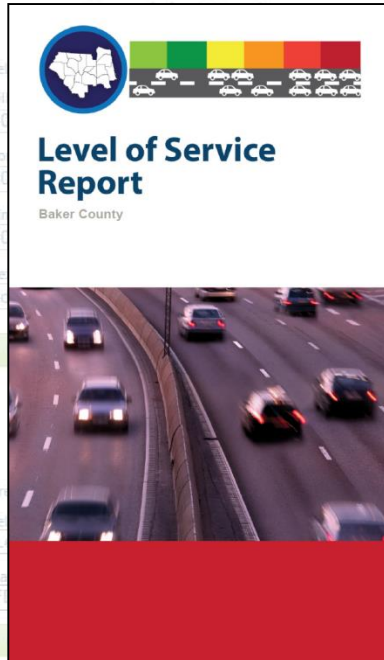
LOS Segments:

- Select a Segment -

The LOS Report feature provides the user with the ability to create LOS reports for an entire county, a single segment or a custom selection of segments. The reports are created in PDF format and can be viewed and downloaded by the user.

Switch between List Selection and Map Selection.

Pick a county from the drop down list and print a comprehensive LOS report for the respective county. The report will be displayed in a new browser tab.



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DISTRICT TWO

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LOS Report

Switch to Map Selection

Current Selection is From a List

Print report glossary

Counties:

Baker

Print County Report

LOS Segments:

Baker - I-10 - 84

Desc: Columbia Co. Line to SR 10/US 90

County: Baker

Road: I-10

Segment Id: 84

Roadway Id: 27090000

[Export attribute table](#)

Create Segment Report

Creating segment report.
Generating map image...
Adjusting map extent to fit s
Generating map image...
Saving map image...
Loading saved map image...
Generating report content...
Merging final report content.
Report is available to open o
at the bottom of the browser

Graphic

Select the type of graphic to as

Fill color:

#00ff00

Border color:

#007f00

Line color:

#0000bf

Text color:

#dc303e

Clear All Graphics

Print Map

FDOT DISTRICT TWO



0 0.5 1mi

Pick a specific LOS segment from a dropdown list which contains only segments for the selected county. The map will automatically zoom to and highlight the selected feature.

Create a single-page report for the selected feature and/or export the attributes to an Excel file.



SEG_DESCRIPTION	LOS_SEG_ID	AREA_NAME	FACILITY	CNTY_NAME	ROADWAY	BEGIN_POST	END_POST
SR 121 from NE FLA Hospital Ent to Jeff Starling Rd (S. City Limit of Macclenny)	80	Baker County	SR 121	Baker	27030000	7.245	8.611

LOS Report Feature



Level of Service

LOS Report

Switch to List Selection

Current Selection is From the Map

Print report glossary

Selection:

New Add Remove

Selected features:

Baker - US 90 - 212
Baker - US 90 - 213
Baker - SR 121 / S 6th St. - 215
Baker - SR 121 / N 6th St. - 1012
Baker - US 90 - 4213
Baker - SR 228 / S 5th St. - 4216
Baker - US 90 - 7212

Export attributes

Clear Selection

Create Selection Report

Select segments on the map by pressing down the left mouse button to start and letting it go to finish. The selected features will be displayed in a list. The user can add and/or remove features from the selection or clear the entire selection as needed.

Create a multi-page segment report for the selected features and/or export attributes for all segments to an Excel file.

US 90 from W. City Limit (St. Mary's Dr) to Lower St	
Segment ID	212
Segment Length (miles)	0.003
Location	Baker
County	Macclesenny
Roadway ID	US 90
Begin MP	21.000
End MP	21.003
SSS	No
SSS Type	Medium Treatment
Directionality	Two-Way
Facility Type	Arterial
Area Type	Urban
Standard K	D
Local LOS Standard	D
FDOT LOS Standard	C
Max. Service Vol. Adj. Factor	0.88
Google Street View	http://www.google.com/maps/@30.2000000,-81.8000000,15z
Notes:	

SR 121 / S 6th St. from Lower St to SR 10/US 90	
Segment ID	215
Segment Length (miles)	0.003
Location	Baker
County	Macclesenny
Roadway ID	SR 121
Begin MP	21.000
End MP	21.003
SSS	No
SSS Type	Medium Treatment
Directionality	Two-Way
Facility Type	Arterial
Area Type	Urban
Standard K	D
Local LOS Standard	D
FDOT LOS Standard	C
Max. Service Vol. Adj. Factor	0.88
Google Street View	http://www.google.com/maps/@30.2000000,-81.8000000,15z
Notes:	

US 90 from SR 121 to SR 228	
Segment ID	213
Segment Length (miles)	0.003
Location	Baker
County	Macclesenny
Roadway ID	US 90
Begin MP	21.000
End MP	21.003
SSS	No
SSS Type	Medium Treatment
Directionality	Two-Way
Facility Type	Arterial
Area Type	Urban
Standard K	D
Local LOS Standard	D
FDOT LOS Standard	C
Max. Service Vol. Adj. Factor	0.88
Google Street View	http://www.google.com/maps/@30.2000000,-81.8000000,15z
Notes:	

SEG_DESCRIPTION	LOS_SEG_ID	AREA_NAME	FACILITY	CNTY_NAME	ROADWAY	BEGIN_POST	END_POST
US 90 from W. City Limit (St. Mary's Dr) to Lower St	212	157 Polyline	Macclesenny	US 90	Baker	27010000	
US 90 from SR 121 to SR 228	213	158 Polyline	Macclesenny	US 90	Baker	27010000	
SR 121 / S 6th St. from Lower St to SR 10/US 90	215	159 Polyline	Macclesenny	SR 121 / S 6th St.	Baker	27030000	
SR 121 / N 6th St. from SR 10/US 90 to N. City Limit (Margaret St)	1012	787 Polyline	Macclesenny	SR 121 / N 6th St.	Baker	27030000	
US 90 from SR 228 to E. City Limit (3000' E of Dugger St)	4213	873 Polyline	Macclesenny	US 90	Baker	27010000	
SR 228 / S 5th St. from SE City Limit (Wolfe Dr) to SR 10/US 90	4216	874 Polyline	Macclesenny	SR 228 / S 5th St.	Baker	27070000	
US 90 from Lower St to SR-121	7212	1014 Polyline	Macclesenny	US 90	Baker	27010000	

Adjusting map extent to fit segment...
Generating map image for segment 5...
Adjusting map extent to fit segment...
Generating map image for segment 5...
Adjusting map extent to fit segment...
Generating map image for segment 5...
Saving map image...
Loading saved map image...
Generating report content...
Processing next segment...
Generating map image for segment 5...
Adjusting map extent to fit segment...
Generating map image for segment 5...
Adjusting map extent to fit segment...
Generating map image for segment 5...
Saving map image...
Loading saved map image...
Generating report content...
Processing next segment...
Generating map image for segment 6...
Adjusting map extent to fit segment...
Generating map image for segment 6...
Adjusting map extent to fit segment...

FDOT DISTRICT TWO

LOS Report Feature



Segment characteristics

SR 121 / S 6th St. from Lowder St to SR 10/US 90

Segment description

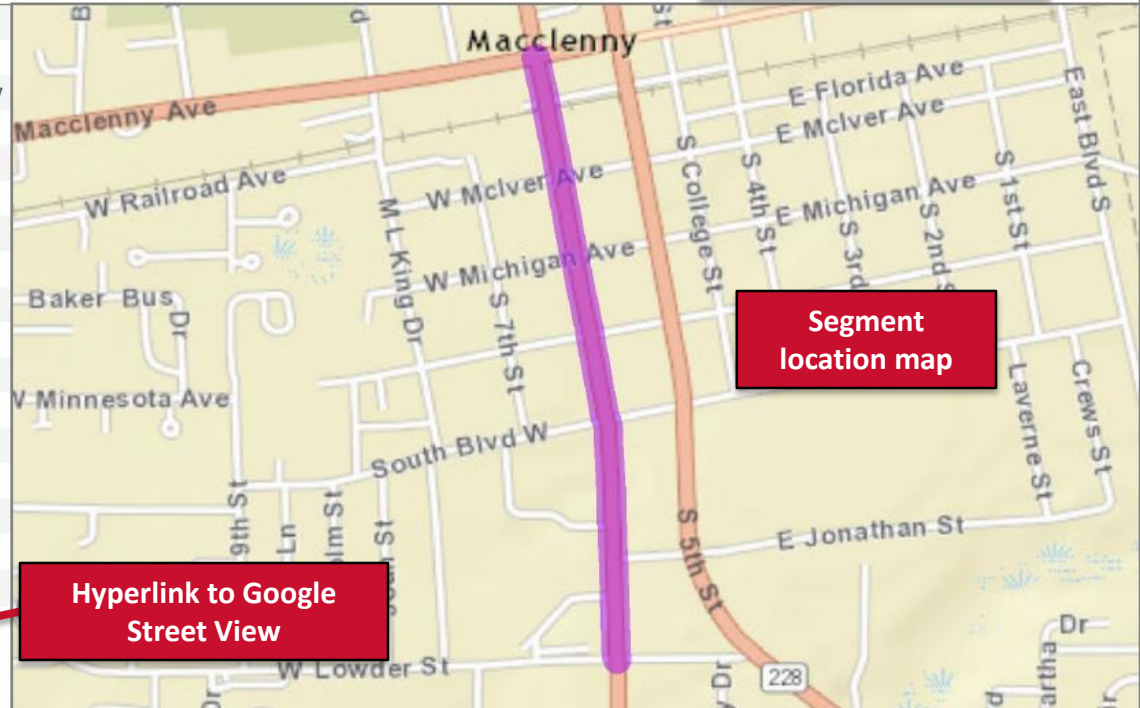
Segment Id:	215
Segment Length (miles):	0.658
Location:	Macclenny
County:	Baker
Roadway Id:	27030000
Begin MP:	10.137
End MP:	10.796
SIS:	No
SIS Type:	Non SIS
Median Treatment:	Divided
Directionality:	Two-Way
Facility Type:	Arterial
Area Type:	Transition
Standard K:	0.090
Local LOS Standard:	D
FDOT LOS Standard:	C
Max. Service Vol. Adj. Factor:	0.05

Google Street View:

<http://maps.google.com/maps?q=&layer=c&cbll=30.2768639406483,-82.1225709376396>

Hyperlink to Google Street View

Segment location map



Projected Values	2015	2020	2025	2030	2035	2040
Number of Lanes	2	2	2	2	2	2
AADT	11,481	12,789	14,098	15,406	16,714	18,023
Peak Hour Traffic Volume	1,033	1,104	1,175	1,246	1,317	1,388
Peak Hour Maximum Service Volume at LOS Standard	609	609	609	609	609	609
Peak Hour LOS	D	D	D	D	D	F
Volume to Capacity Ratio at LOS Standard	1.70	1.89	2.08	2.28	2.47	2.66
Volume to Capacity Ratio at LOS E	0.77	0.86	0.94	1.03	1.12	1.21

Existing and projected service volumes and LOS analysis results

Notes: Facility is an Divided Two-Lane Arterial with left turn lanes causing a +5% adjustment factor to be applied.

Segment specific notes/comments

LOS Segment Report

Graphic Markup

Select the type of graphic to add to the map.

Fill color:

#00ff00

Border color:

#007f00

Line color:

#0000bf

Text color:

#dc303e

Graphic Types:

- ☐ Point
- ☐ Line Segment
- ☐ Multi-point Line
- ☐ Freehand Multi-point Line
- ☐ Polygon
- ☐ Freehand Polygon
- ☐ Rectangle
- ☒ Text

FDOT

Clear All Graphics

Theme Colors



Standard Colors



Web Colors History

#ff0000 #000000

The Graphic Markup feature allows the user to draw specific features on top of the map such as points, lines, polygons, and text.

Use the Graphic Themes menu to define the color palette for the specific graphics to be drawn on the map.

Graphic Markup Tool



Print Map

Create a PDF of the current map view.

Select a print template:

Letter ANSI A Landscape

Map title:

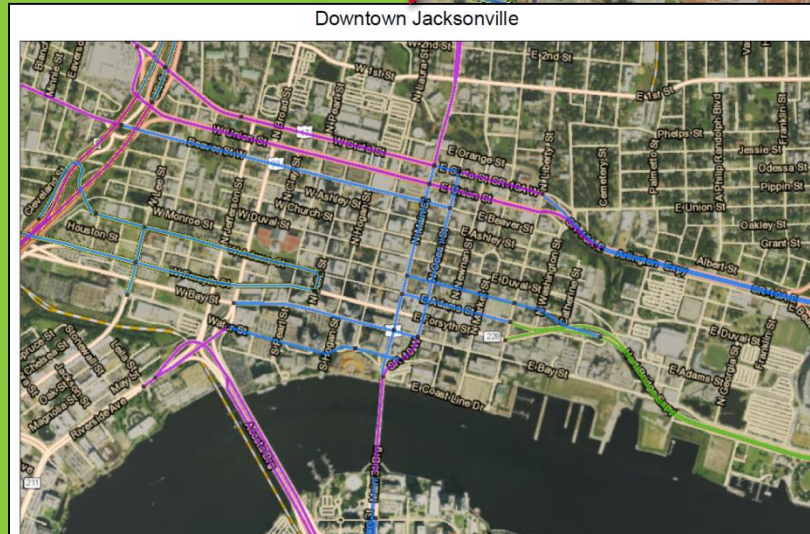
Downtown Jacksonville

A PDF of the current map has been created.

[Click here to view the PDF](#)

Create PDF Map

The Print Map feature allows the user to create a static PDF map of the current extent that includes all layers, legend, graphics and selections present on the screen at the time of export. Choose from a list of available template sizes and enter a custom map title.



1:10,446
0 0.125 0.25 0.5 mi
0 0.225 0.45 0.9 km
FDOT: HDR
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus



FLORIDA DEPARTMENT OF TRANSPORTATION
DISTRICT TWO

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