2015

Quality/Level of Service Training

Planning Level Analysis

Solution Set

April 2015

Centennial FDOT
1915 ★ 2015

Data Sources Example 1

Answers

- Area Type =   Urbanized
- AADT =   183,500
- K-Factor =   8.0
- D-Factor =   52.3
- Peak Direction =   EB
- % Heavy Vehicles =   4.0

Data Sources Workshop 1

Answers

- Area Type = <u>Other Urbanized</u>
- AADT = <u>16,647</u>
- K-Factor = <u>9.0</u>
- D-Factor = <u>52.3</u>
- Peak Direction = <u>NB</u>
- % Heavy Vehicles = <u>1.0</u>
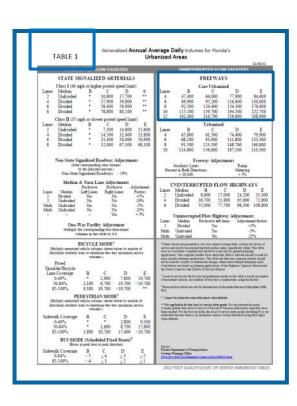
GSVT Example 1.A

Determine the max. service volume for LOS E:

- In terms of AADT
- In a core urbanized area
- For a 8-lane freeway

FREEWAYS

Core Urbanized

Lanes	B	C	D	E
4	47,400	64,000	77,900	84,600
6	69,900	95,200	116,600	130,600
8	92,500	126,400	154,300	176,600
10	115,100	159,700	194,500	222,700
12	162,400	216,700	256,600	268,900

LOS E ➡ 176,600

GSVT Example 1.B

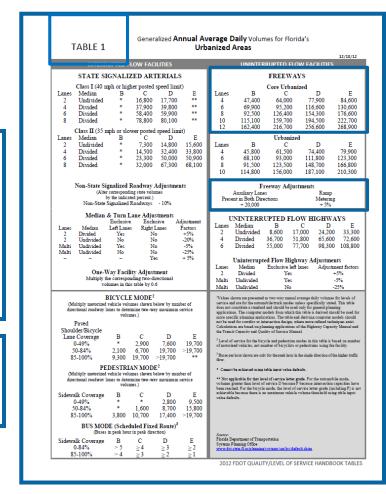## Determine the max. service volume for LOS E:

- In terms of AADT
- In a core urbanized area
- For a 8-lane freeway
- Auxiliary lanes in both directions

FREEWAYS

Core Urbanized

Lanes	B	C	D	E
4	47,400	64,000	77,900	84,600
6	69,900	95,200	116,600	130,600
8	92,500	126,400	154,300	176,600
10	115,100	159,700	194,500	222,700
12	162,400	216,700	256,600	268,900

Freeway Adjustments

Auxiliary Lanes Present in Both Directions	Ramp Metering
+ 20,000	+ 5%

176,600 + 20,000 = 196,600

Generalized **Annual Average Daily** Volumes for Florida's Urbanized Areas

2012 FDOT QUALITY/LEVEL OF SERVICE HANDBOOK TABLES

LOS E ➡ 196,600

GSVT Example 2.A

Determine the auto LOS:

Answer ➡ LOS D

- In terms of peak hour directional volumes

- In a rural undeveloped area

- For an uninterrupted flow highway with:
  - 2 lanes (one in each direction)
  - No median/undivided
  - No passing lanes
  - Peak hour directional volume is 450

UNINTERRUPTED FLOW HIGHWAYS

Rural Undeveloped

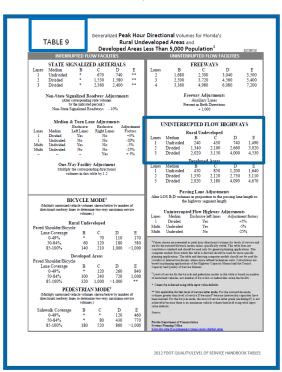| Lanes	Median	B	C	D	E
1	Undivided	240	430	740	1,490
2	Divided	1,340	2,100	2,660	3,020
3	Divided	2,020	3,150	4,000	4,530

GSVT Example 2.B

Determine the auto LOS:

- In terms of peak hour directional volumes
- In a rural undeveloped area
- For an uninterrupted flow highway with:
  - 2 lanes (one in each direction)
  - 20% passing lane
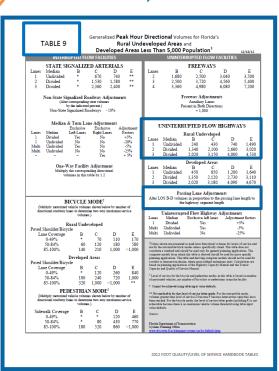 - No median/undivided
  - Peak hour directional volume is 450

$$430 * 1.2 \approx 540$$

Answer ⟹ LOS C

UNINTERRUPTED FLOW HIGHWAYS

Rural Undeveloped

Lanes	Median	B	C	D	E
1	Undivided	240	430	740	1,490
2	Divided	1,340	2,100	2,660	3,020
3	Divided	2,020	3,150	4,000	4,530

Passing Lane Adjustments
Alter LOS B-D volumes in proportion to the passing lane length to the highway segment length

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TABLE 9 — Generalized **Peak Hour Directional** Volumes for Florida's **Rural Undeveloped Areas** and **Developed Areas Less Than 5,000 Population**[1]   12/18/12

INTERRUPTED FLOW FACILITIES

STATE SIGNALIZED ARTERIALS

Lanes	Median	B	C	D	E
1	Undivided	*	670	740	**
2	Divided	*	1,530	1,580	**
3	Divided	*	2,360	2,400	**

Non-State Signalized Roadway Adjustments
(Alter corresponding state volumes by the indicated percent.)
Non-State Signalized Roadways - 10%

Median & Turn Lane Adjustments

Lanes	Median	Exclusive Left Lanes	Exclusive Right Lanes	Adjustment Factors
1	Divided	Yes	No	+5%
1	Undivided	No	No	-20%
Multi	Undivided	Yes	No	-5%
Multi	Undivided	No	No	-25%
–		No	Yes	+ 5%

One-Way Facility Adjustment
Multiply the corresponding directional volumes in this table by 1.2

BICYCLE MODE[2]
(Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Rural Undeveloped

Paved Shoulder/Bicycle

Lane Coverage	B	C	D	E
0-49%	*	70	110	170
50-84%	60	120	180	580
85-100%	140	210	1,000	>1,000

Developed Areas

Paved Shoulder/Bicycle

Lane Coverage	B	C	D	E
0-49%	*	120	260	840
50-84%	100	240	720	1,000
85-100%	320	1,000	>1,000	**

PEDESTRIAN MODE[2]
(Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Sidewalk Coverage

	B	C	D	E
0-49%	*	*	120	460
50-84%	*	80	430	770
85-100%	180	520	860	>1,000

UNINTERRUPTED FLOW FACILITIES

FREEWAYS

Lanes	B	C	D	E
2	1,680	2,500	3,040	3,500
3	2,500	3,720	4,560	5,400
4	3,360	4,980	6,080	7,200

Freeway Adjustments
Auxiliary Lanes
Present in Both Directions
+ 1,000

UNINTERRUPTED FLOW HIGHWAYS

Rural Undeveloped

Lanes	Median	B	C	D	E
1	Undivided	240	430	740	1,490
2	Divided	1,340	2,100	2,660	3,020
3	Divided	2,020	3,150	4,000	4,530

Developed Areas

Lanes	Median	B	C	D	E
1	Undivided	450	850	1,300	1,640
2	Divided	1,350	2,120	2,730	3,110
3	Divided	2,020	3,180	4,090	4,670

Passing Lane Adjustments
Alter LOS B-D volumes in proportion to the passing lane length to the highway segment length

Uninterrupted Flow Highway Adjustments

Lanes	Median	Exclusive left lanes	Adjustment factors
1	Divided	Yes	+5%
Multi	Undivided	Yes	-5%
Multi	Undivided	No	-25%

[1]Values shown are presented as peak hour directional volumes for levels of service and are for the automobile/truck modes unless specifically stated. This table does not constitute a standard and should be used only for general planning applications. The computer models from which this table is derived should be used for more specific planning applications. The table and deriving computer models should not be used for corridor or intersection design, where more refined techniques exist. Calculations are based on planning applications of the Highway Capacity Manual and the Transit Capacity and Quality of Service Manual.

[2]Level of service for the bicycle and pedestrian modes in this table is based on number of motorized vehicles, not number of bicyclists or pedestrians using the facility.

*   Cannot be achieved using table input value defaults.

** Not applicable for that level of service letter grade. For the automobile mode, volume greater than level of service D because F because intersection capacities have been reached. For the bicycle mode, the level of service letter grade (including F) is not achievable because there is no maximum vehicle threshold using table input value defaults.

Source:

Florida Department of Transportation
Systems Planning Office
www.dot.state.fl.us/planning/systems/sm/los/default.shtm

2012 FDOT QUALITY/LEVEL OF SERVICE HANDBOOK TABLES

GSVT Example 3

Determine the auto LOS:

- In terms of peak hour directional volumes
- In an urban/transitioning area
- For a non-state signalized roadway with:
  - 45 mph speed limit
  - 6 lanes (3 in each direction)
  - Peak hour directional volume of 2,500

Answer ➡ LOS F

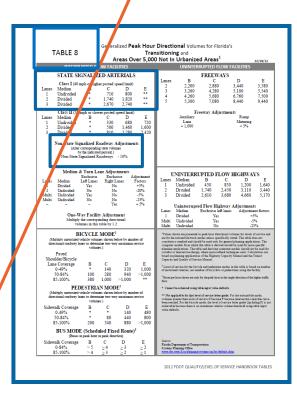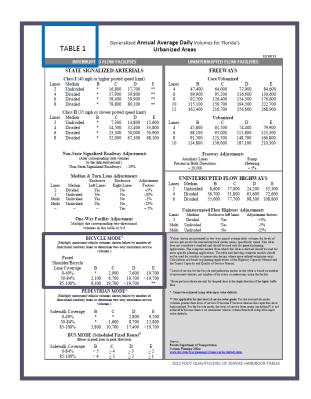2,740 * 0.9 ≈ 2,450

STATE SIGNALIZED ARTERIALS

Class I (40 mph or higher posted speed limit)

Lanes	Median	B	C	D	E
1	Undivided	*	710	800	**
2	Divided	*	1,740	1,820	**
3	Divided	*	2,670	2,740	**

Non-State Signalized Roadway Adjustments
(Alter corresponding state volumes by the indicated percent.)
Non-State Signalized Roadways - 10%

TABLE 8 — Generalized **Peak Hour Directional** Volumes for Florida's **Transitioning** and Areas Over 5,000 Not In Urbanized Areas [1] 12/18/12
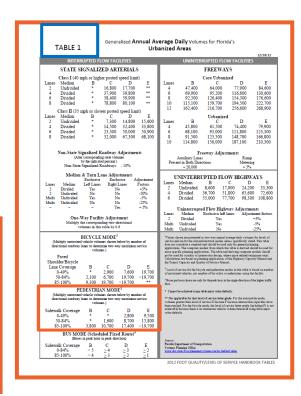
2012 FDOT QUALITY/LEVEL OF SERVICE HANDBOOK TABLES

GSVT Example 4.A

Determine the bicycle LOS:

- In terms of AADT
- In an urbanized area
- For a state signalized arterial with:
  - 2 lanes
  - AADT=13,000
  - 3 buses/hour
  - 90% bike lane coverage
  - 40% sidewalk coverage

BICYCLE MODE[2]

(Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Paved Shoulder/Bicycle Lane Coverage	B	C	D	E
0-49%	*	2,900	7,600	19,700
50-84%	2,100	6,700	19,700	>19,700
85-100%	9,300	19,700	>19,700	**

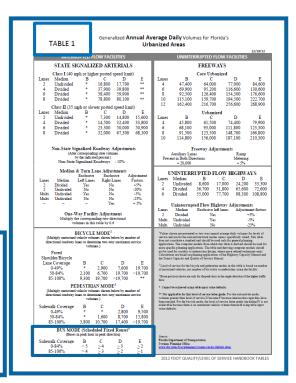TABLE 1 — Generalized **Annual Average Daily** Volumes for Florida's Urbanized Areas

GSVT Example 4.B

Determine the pedestrian LOS:

- In terms of AADT
- In an urbanized area
- For a state signalized arterial with:
  - 2 lanes
  - AADT=13,000
  - 3 buses/hour
  - 90% bike lane coverage
  - 40% sidewalk coverage

PEDESTRIAN MODE[2]

(Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Sidewalk Coverage	B	C	D	E
0-49%	*	*	2,800	9,500
50-84%	*	1,600	8,700	15,800
85-100%	3,800	10,700	17,400	>19,700

TABLE 1 — Generalized **Annual Average Daily** Volumes for Florida's Urbanized Areas

Pedestrian Mode ➡ LOS F

GSVT Example 4.C

Determine the bus LOS:

- In terms of AADT
- In an urbanized area
- For a state signalized arterial with:
  - 2 lanes
  - AADT=13,000
  - 3 buses/hour
  - 90% bike lane coverage
  - 40% sidewalk coverage

BUS MODE (Scheduled Fixed Route)[3]
(Buses in peak hour in peak direction)

Sidewalk Coverage	B	C	D	E
0-84%	> 5	≥ 4	≥ 3	≥ 2
85-100%	> 4	≥ 3	≥ 2	≥ 1

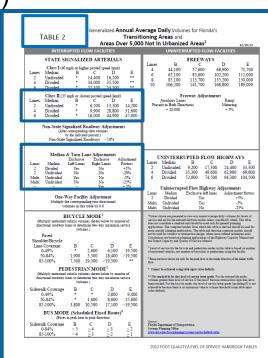TABLE 1 — Generalized **Annual Average Daily** Volumes for Florida's **Urbanized Areas**

Answer ➡ LOS D

Determine the auto LOS:

6,500 * 0.80 = 5,200

- In terms of AADT
- In an urban/transitioning area (pop. 12,000)
- For an <u>undivided</u> state arterial with:
  - 30 mph speed limit
  - 2 lanes
  - 6,000 AADT
  - No left turn lanes

Median & Turn Lane Adjustments

Lanes	Median	Exclusive Left Lanes	Exclusive Right Lanes	Adjustment Factors
2	Divided	Yes	No	+5%
2	Undivided	No	No	-20%
Multi	Undivided	Yes	No	-5%
Multi	Undivided	No	No	-25%
–	–	–	Yes	+5%

Class II (35 mph or slower posted speed limit)

Lanes	Median	B	C	D	E
2	Undivided	*	6,500	13,300	14,200
4	Divided	*	9,900	28,800	31,600
6	Divided	*	16,000	44,900	47,600

TABLE 2 — Generalized **Annual Average Daily** Volumes for Florida's **Transitioning Areas** and Areas Over 5,000 Not In Urbanized Areas[1]   12/18/12

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GSVT Example 6

Answer ➡ LOS E

28,800 * 0.95 = 27,360

Determine the auto LOS:
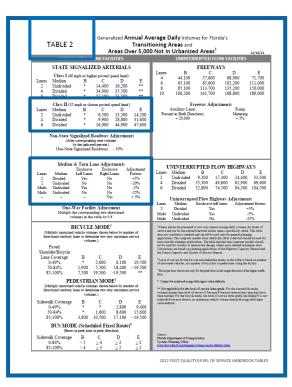
- In terms of AADT
- In an urban/transitioning area
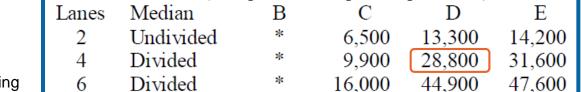- For a state signalized arterial with:
  - 4 lanes
  - No median
  - 35 mph speed limit
  - Exclusive left turn lanes
  - AADT of 28,000

Median & Turn Lane Adjustments

Lanes	Median	Exclusive Left Lanes	Exclusive Right Lanes	Adjustment Factors
2	Divided	Yes	No	+5%
2	Undivided	No	No	-20%
Multi	Undivided	Yes	No	-5%
Multi	Undivided	No	No	-25%
–	–	–	Yes	+ 5%

Class II (35 mph or slower posted speed limit)

Lanes	Median	B	C	D	E
2	Undivided	*	6,500	13,300	14,200
4	Divided	*	9,900	28,800	31,600
6	Divided	*	16,000	44,900	47,600

TABLE 2 — Generalized **Annual Average Daily** Volumes for Florida's **Transitioning Areas** and Areas Over 5,000 Not In Urbanized Areas [1]   12/18/12

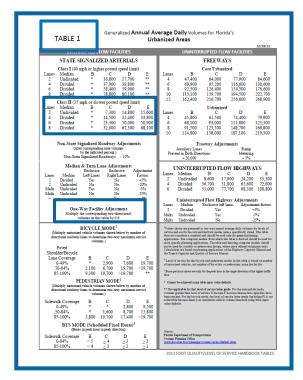2012 FDOT QUALITY/LEVEL OF SERVICE HANDBOOK TABLES

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GSVT Example 7

Determine the max. service volume for LOS E:

- In terms of AADT
- In an urbanized area
- For a state signalized arterial with:
  - One-way
  - 2 lanes in travel direction
  - 30 mph speed limit

33,800 * 0.6 = 20,280

One-Way Facility Adjustment
Multiply the corresponding two-directional volumes in this table by 0.6

LOS E ➡ **20,280**

Class II (35 mph or slower posted speed limit)

Lanes	Median	B	C	D	E
2	Undivided	*	7,300	14,800	15,600
4	Divided	*	14,500	32,400	33,800
6	Divided	*	23,300	50,000	50,900
8	Divided	*	32,000	67,300	68,100

HIGHPLAN

Example 1: Model Inputs

HIGHPLAN

Example 1: Model Results

HIGHPLAN

Workshop 1: Model Inputs

Roadway Information

Highway Name	SR 62
From	Saffold Rd To SR 37
Area Type	Rural Undeveloped
Peak Direction	Eastbound
Off Peak Direction	Westbound
Study Period	Standard K
Type of Analysis	Two-Lane Segment

Roadway Variables

Num. of Lanes (both dir.)	2	Left Turn/Blockage Impact	☐
Terrain	Level	Median	☐
Posted Speed	60	Passing Lanes	☐
Free-Flow Speed	65	Passing Lane Length	0.0
Segment Length	10.9	% No Passing Zones	11

Traffic Variables

AADT	3500	Peak Dir. Hr. Vol.	186	Base Capacity	1700
K factor (%)	9.5	Off-peak Dir. Hr. Vol.	147	Local Adj. Factor	0.84
D factor (%)	55.8	% Heavy Vehicles	5.0	Adj. Capacity	1428
PHF	1.000				

HIGHPLAN

Workshop 1: Model Results

LOS Results

v/c Ratio	0.13
% Time Spent Following	42.2
Average Speed (mi/h)	59.9
% Free Flow Speed	92.1
Free-Flow Delay (sec/veh)	51.8
LOS Threshold Delay (sec/veh)	0.0
LOS	B

HIGHPLAN

Workshop 2: Model Inputs

Roadway Information

Highway Name	US 19/27
From	Avalon Rd **To** CR 14 (Lamont)
Area Type	Rural Undeveloped
Peak Direction	Northbound
Off Peak Direction	Southbound
Study Period	Standard K
Type of Analysis	Multilane Segment

Roadway Variables

Num. of Lanes (both dir.)	4	Left Turn/Blockage Impact	☐
Terrain	Level	Median	☑
Posted Speed	65	Passing Lanes	☐
Free-Flow Speed	70	Passing Lane Length	0.0
Segment Length	12.6	% No Passing Zones	0

Traffic Variables

AADT	5056	Peak Dir. Hr. Vol.	268	Base Capacity	2300
K factor (%)	9.5	Off-peak Dir. Hr. Vol.	212	Local Adj. Factor	0.76
D factor (%)	55.8	% Heavy Vehicles	12.0	Adj. Capacity	0
PHF	1.000				

HIGHPLAN

Workshop 2: Model Results

LOS Results

v/c Ratio	0.08
Density	2.7
Average Speed (mi/h)	70.0
% Free Flow Speed	100.0
Free-Flow Delay (sec/veh)	0.0
LOS Threshold Delay (sec/veh)	0.0
LOS	A

ARTPLAN

Example 1: Model Inputs

Roadway Information

Road Name	Mahan Dr
Peak Direction	Eastbound
Off Peak Direction	Westbound
Area Type	Other Urbanized
Class	1

Analysis Information

Modal Analysis	Auto Only
Type of Analysis	Peak Direction
Study Period	Standard K

Facility-wide Values

Control Type: FullyActuated   Base Saturation Flow Rate (pc/h/ln): 1950

Peak Direction | Off-Peak Direction

	Cross Street Name	Cycle Length	Thru g/C	Arrival Type	# Thru Lanes	% Left Turns	% Right Turns	Excl. Left Turn Lane	LT Phasing	Number LT Lanes	Total Left Turn Storage	Left g/C	Excl. Right Turn Lane
▶ 1	Start							☐					☐
2	Buck Lake Rd	150	0.45	3	2	5	12	☑	Prot.	1	185	0.15	☑
3	Dempsey Mayo Rd	150	0.45	3	2	5	0	☑	Prot.	1	135	0.15	☐

Facility-wide Values

Arterial Length (mi): 0.532   K Factor (%): 9.0   D Factor (%): 71.3   Peak Hour Factor: 1.000   % Heavy Vehicles: 1.0

Peak Direction | Off-Peak Direction

	Segment	Length	AADT	Adj. Dir. Hourly Volume	# of Thru Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
▶ 1	Start-Buck Lake Rd	1040	18100	1161	2	45	50	Restrictive	☐	
2	Buck Lake Rd-Dempsey Mayo Rd	1650	18100	1161	2	45	50	Restrictive	☐	

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Example 1: Model Results

Peak Direction	Off-Peak Direction								
	Segment	Thru Mvmt Flow Rate (veh/h)	Adj. Sat. Flow Rate (veh/h)	v/c	Control Delay (s/veh)	Thru Mvmt Intersection LOS	Queue Storage Ratio	Average Speed (mi/h)	Segment LOS
▶ 1	Start-Buck Lake Rd	964	3338	0.641	32.4	C	0.30	15.2	E
2	Buck Lake Rd-Dempsey Mayo Rd	1103	3647	0.672	33.2	C	0.41	20.0	D

Facility Length (mi)   0.532

Free Flow Delay (sec/veh)   71.1   LOS Threshold Delay (sec/veh)   1.3   Wtd. g/C   0.45   Avg. Speed (mi/h)   17.8   LOS   E

<<-- | Properties | Intersection | Link (Auto) | Link (MM) | Ped SubLink | LOS Results (Auto) | LOS Results (MM) | Service Volumes | -->>

ARTPLAN

Workshop 1: Model Inputs

Roadway Information

Road Name	SR 22
Peak Direction	Eastbound
Off Peak Direction	Westbound
Area Type	Transitioning/Urban
Class	1

Analysis Information

Modal Analysis	Auto Only
Type of Analysis	Peak Direction
Study Period	Standard K

Facility-wide Values

Control Type: FullyActuated   Base Saturation Flow Rate (pc/h/ln): 1950

Peak Direction | Off-Peak Direction

	Cross Street Name	Cycle Length	Thru g/C	Arrival Type	# Thru Lanes	% Left Turns	% Right Turns	Excl. Left Turn Lane	LT Phasing	Number LT Lanes	Total Left Turn Storage	Left g/C	Excl. Right Turn Lane
▶ 1	Start							☐					☐
2	Transmitter Rd	120	0.44	3	1	12	12	☑	Prot.	1	325	0.15	☐
3	Bob Little Rd	120	0.44	3	1	12	12	☑	Prot.	1	125	0.15	☐

Facility-wide Values

Arterial Length (mi): 1.028   K Factor (%): 9.0   D Factor (%): 57.0   Peak Hour Factor: 1.000   % Heavy Vehicles: 3.0

Peak Direction | Off-Peak Direction

	Segment	Length	AADT	Adj. Dir. Hourly Volume	# of Thru Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
▶ 1	Start-Transmitter Rd	2735	10500	539	1	45	50	None	☐	
2	Transmitter Rd-Bob Little Rd	2620	11300	580	1	45	50	None	☐	

ARTPLAN

Workshop 1: Model Results

	Segment	Thru Mvmt Flow Rate (veh/h)	Adj. Sat. Flow Rate (veh/h)	v/c	Control Delay (s/veh)	Thru Mvmt Intersection LOS	Queue Storage Ratio	Average Speed (mi/h)	Segment LOS
▶ 1	Start-Transmitter Rd	474	1539	0.700	29.0	C	0.15	27.6	C
2	Transmitter Rd-Bob Little Rd	510	1545	0.751	30.8	C	0.43	26.3	C

Facility Length (mi) 1.028

Free Flow Delay (sec/veh) 64.3   LOS Threshold Delay (sec/veh) 0.0   Wtd. g/C 0.44   Avg. Speed (mi/h) 26.9   LOS C
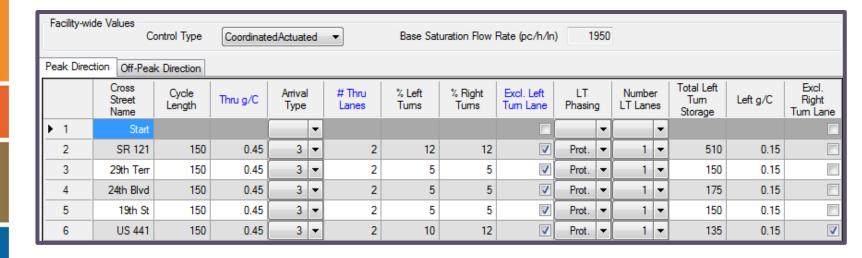
ARTPLAN

Workshop 2: Model Inputs

Roadway Information

Road Name	SR 222
Peak Direction	Eastbound
Off Peak Direction	Westbound
Area Type	Other Urbanized
Class	1

Analysis Information

Modal Analysis	Auto Only
Type of Analysis	Peak Direction
Study Period	Standard K

Facility-wide Values

Control Type: CoordinatedActuated   Base Saturation Flow Rate (pc/h/ln): 1950

Peak Direction / Off-Peak Direction

	Cross Street Name	Cycle Length	Thru g/C	Arrival Type	# Thru Lanes	% Left Turns	% Right Turns	Excl. Left Turn Lane	LT Phasing	Number LT Lanes	Total Left Turn Storage	Left g/C	Excl. Right Turn Lane
▶ 1	Start							☐					☐
2	SR 121	150	0.45	3	2	12	12	☑	Prot.	1	510	0.15	☐
3	29th Terr	150	0.45	3	2	5	5	☑	Prot.	1	150	0.15	☐
4	24th Blvd	150	0.45	3	2	5	5	☑	Prot.	1	175	0.15	☐
5	19th St	150	0.45	3	2	5	5	☑	Prot.	1	150	0.15	☐
6	US 441	150	0.45	3	2	10	12	☑	Prot.	1	135	0.15	☑

ARTPLAN

Workshop 2: Model Inputs

Facility-wide Values											

Arterial Length (mi) **3.055**　K Factor (%) **9.0**　D Factor (%) **56.5**　Peak Hour Factor **1.000**　% Heavy Vehicles **2.0**

Peak Direction | Off-Peak Direction

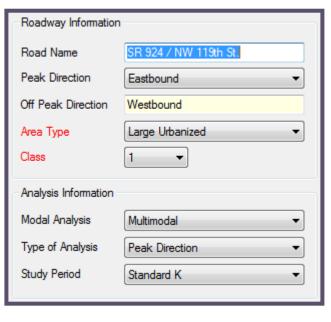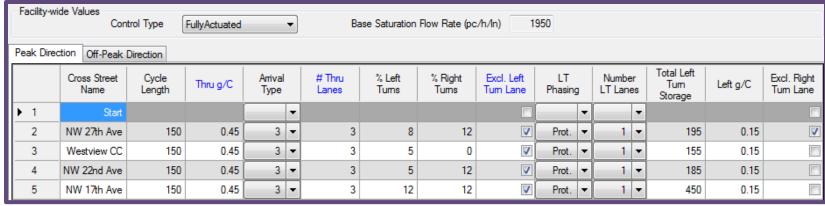|	Segment	Length	AADT	Adj. Dir. Hourly Volume	# of Thru Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
▶ 1	Start-SR 121	5270	27000	1373	2 ▾	45 ▾	50 ▾	Non-Restrictive ▾	☐	▾
2	SR 121-29th Terr	2020	27000	1373	2 ▾	45 ▾	50 ▾	Non-Restrictive ▾	☐	▾
3	29th Terr-24th Blvd	2415	25000	1271	2 ▾	45 ▾	50 ▾	Non-Restrictive ▾	☐	▾
4	24th Blvd-19th St	3500	25000	1271	2 ▾	45 ▾	50 ▾	Non-Restrictive ▾	☐	▾
5	19th St-US 441	2625	25500	1297	2 ▾	45 ▾	50 ▾	Non-Restrictive ▾	☐	▾

ARTPLAN

Workshop 2: Model Results

		Segment	Thru Mvmt Flow Rate (veh/h)	Adj. Sat. Flow Rate (veh/h)	v/c	Control Delay (s/veh)	Thru Mvmt Intersection LOS	Queue Storage Ratio	Average Speed (mi/h)	Segment LOS
▶	1	Start-SR 121	1208	3596	0.747	36.1	D	0.34	32.3	B
	2	SR 121-29th Terr	1304	3637	0.797	37.8	D	0.44	20.8	D
	3	29th Terr-24th Blvd	1207	3613	0.743	35.7	D	0.34	23.6	C
	4	24th Blvd-19th St	1207	3613	0.743	35.9	D	0.40	27.9	C
	5	19th St-US 441	1012	3306	0.680	34.2	C	0.98	25.1	C

Tabs: Peak Direction | Off-Peak Direction

Facility Length (mi) 3.055

Free Flow Delay (sec/veh) 196.4   LOS Threshold Delay (sec/veh) 0.0   Wtd. g/C 0.45   Avg. Speed (mi/h) 26.7   LOS C

ARTPLAN

Workshop 3: Model Inputs

Roadway Information

Road Name	SR 924 / NW 119th St.
Peak Direction	Eastbound
Off Peak Direction	Westbound
Area Type	Large Urbanized
Class	1

Analysis Information

Modal Analysis	Multimodal
Type of Analysis	Peak Direction
Study Period	Standard K

Facility-wide Values

Control Type: FullyActuated   Base Saturation Flow Rate (pc/h/ln): 1950

Peak Direction | Off-Peak Direction

	Cross Street Name	Cycle Length	Thru g/C	Arrival Type	# Thru Lanes	% Left Turns	% Right Turns	Excl. Left Turn Lane	LT Phasing	Number LT Lanes	Total Left Turn Storage	Left g/C	Excl. Right Turn Lane
1	Start							☐					☐
2	NW 27th Ave	150	0.45	3	3	8	12	☑	Prot.	1	195	0.15	☑
3	Westview CC	150	0.45	3	3	5	0	☑	Prot.	1	155	0.15	☐
4	NW 22nd Ave	150	0.45	3	3	5	12	☑	Prot.	1	185	0.15	☐
5	NW 17th Ave	150	0.45	3	3	12	12	☑	Prot.	1	450	0.15	☐

ARTPLAN

Workshop 3: Model Inputs

Facility-wide Values

Arterial Length (mi)	1.165	K Factor (%)	9.0	D Factor (%)	56.5	Peak Hour Factor 1.000 % Heavy Vehicles 2.0

Peak Direction | Off-Peak Direction

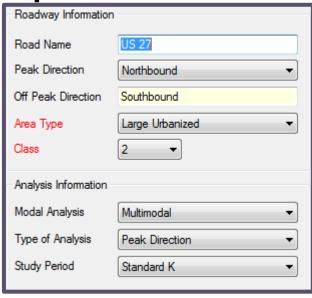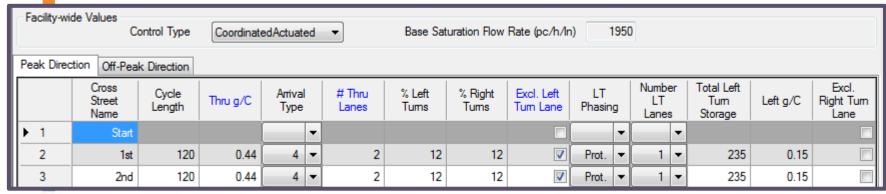|	Segment	Length	AADT	Adj. Dir. Hourly Volume	# of Thru Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
▶ 1	Start-NW 27th Ave	540	41500	2110	3	40	45	Non-Restrictive	☐	
2	NW 27th Ave-Westview CC	1050	41500	2110	3	40	45	Restrictive	☐	
3	Westview CC-NW 22nd Ave	1685	41500	2110	3	40	45	Restrictive	☐	
4	NW 22nd Ave-NW 17th Ave	2635	41500	2110	3	40	45	Restrictive	☐	

ARTPLAN

Workshop 3: Model Results

	Segment	Thru Mvmt Flow Rate (veh/h)	Adj. Sat. Flow Rate (veh/h)	v/c	Control Delay (s/veh)	Thru Mvmt Intersection LOS	Queue Storage Ratio	Average Speed (mi/h)	Segment LOS
▶ 1	Start-NW 27th Ave	1688	4984	0.753	35.1	D	0.93	8.7	F
2	NW 27th Ave-Westview CC	2005	5472	0.814	37.0	D	0.67	13.5	F
3	Westview CC-NW 22nd Ave	2005	5426	0.821	37.0	D	0.56	18.1	D
4	NW 22nd Ave-NW 17th Ave	1857	5390	0.766	35.2	D	0.71	23.3	C

Peak Direction | Off-Peak Direction

Facility Length (mi) 1.165

Free Flow Delay (sec/veh) 158.3   LOS Threshold Delay (sec/veh) 14.9   Wtd. g/C 0.45   Avg. Speed (mi/h) 16.9   LOS E

ARTPLAN

Bicycle LOS Example 1: Model Inputs

Roadway Information

Road Name	US 27
Peak Direction	Northbound
Off Peak Direction	Southbound
Area Type	Large Urbanized
Class	2

Analysis Information

Modal Analysis	Multimodal
Type of Analysis	Peak Direction
Study Period	Standard K

Facility-wide Values

Control Type: CoordinatedActuated   Base Saturation Flow Rate (pc/h/ln): 1950

Peak Direction / Off-Peak Direction

	Cross Street Name	Cycle Length	Thru g/C	Arrival Type	# Thru Lanes	% Left Turns	% Right Turns	Excl. Left Turn Lane	LT Phasing	Number LT Lanes	Total Left Turn Storage	Left g/C	Excl. Right Turn Lane
▶ 1	Start							☐					☐
2	1st	120	0.44	4	2	12	12	☑	Prot.	1	235	0.15	☐
3	2nd	120	0.44	4	2	12	12	☑	Prot.	1	235	0.15	☐

ARTPLAN

Bicycle LOS Example 1: Model Inputs

What is the Bicycle LOS?

Facility-wide Values						
Arterial Length (mi) 0.402	K Factor (%) 9.0	D Factor (%) 55.0	Peak Hour Factor 1.000	% Heavy Vehicles 2.0		

Peak Direction / Off-Peak Direction

	Segment	Length	AADT	Adj. Dir. Hourly Volume	# of Thru Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
▶ 1	Start-1st	1000	30000	1485	2	30	35	Restrictive	☐	
2	1st-2nd	1000	30000	1485	2	30	35	Restrictive	☐	

Peak Direction / Off-Peak Direction

	Segment	Auto Outside Lane Width	Specific Lane Width	Bike Pavement Condition	Paved Shoulder / Bike Lane	Side Path	Side Path Separation	Sidewalk	Sidewalk/ Roadway Separation	Sidewalk/ Roadway Barrier	Bus Frequency	Passenger Load Factor	Amenities	Bus Stop
▶ 1	Start-1st	Typ...		Typ...	☐	☐		☑	Typi...	☐	2	0.8	Exc...	Typical
2	1st-2nd	Typ...		Typ...	☐	☐		☑	Typi...	☐	2	0.8	Exc...	Typical

ARTPLAN

Bicycle LOS Example 1: Model Results

	Segment	Bike Link Score	Bike Link LOS	Bike Side Path Score	Bike Side Path LOS	Ped SubLink (1) LOS		Ped Link Score	Ped Link LOS	Bus Mod. Freq.	Bus LOS	Bike Int Score	Bike Int LOS	Bike Seg Score	Bike Seg LOS	Ped Int Score	Ped Int LOS	Ped Seg Score	Ped Seg LOS
▶ 1	Start-1st	4.27	E	NA	N/A	C		3.47	C	2.07	D	3.70	D	4.24	D	2.67	B	3.30	C
2	1st-2nd	4.27	E	NA	N/A	C		3.47	C	2.07	D	3.70	D	4.24	D	2.67	B	3.30	C

Peak Direction / Off-Peak Direction

Bike Score: 4.27   Pedestrian Score: 3.47   Bus Mod. Freq.: 2.07

Bike LOS: E   Pedestrian LOS: C   Bus LOS: D

ARTPLAN

Bicycle LOS Example 1: Model Inputs

What is the Bicycle LOS if a bike lane were added?

Facility-wide Values: Arterial Length (mi) 0.402, K Factor (%) 9.0, D Factor (%) 55.0, Peak Hour Factor 1.000, % Heavy Vehicles 2.0

Peak Direction | Off-Peak Direction

	Segment	Length	AADT	Adj. Dir. Hourly Volume	# of Thru Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
▶ 1	Start-1st	1000	30000	1485	2 ▼	30 ▼	35 ▼	Restrictive ▼	☐	▼
2	1st-2nd	1000	30000	1485	2 ▼	30 ▼	35 ▼	Restrictive ▼	☐	▼

	Segment	Auto Outside Lane Width	Specific Lane Width	Bike Pavement Condition	Paved Shoulder / Bike Lane	Side Path	Side Path Separation	Sidewalk	Sidewalk/ Roadway Separation	Sidewalk/ Roadway Barrier	Bus Frequency	Passenger Load Factor	Amenities	Bus Stop
▶ 1	Start-1st	Typi... ▼		Typi... ▼	☑	☐		☑	Typi... ▼	☐	2	0.8	Exc... ▼	Typical ▼
2	1st-2nd	Typi... ▼		Typi... ▼	☑	☐		☑	Typi... ▼	☐	2	0.8	Exc... ▼	Typical ▼

ARTPLAN

Bicycle LOS Example 1: Model Results

What is the Bicycle LOS if a bike lane were added?

	Segment	Bike Link Score	Bike Link LOS	Bike Side Path Score	Bike Side Path LOS	Ped SubLink (1) LOS		Ped Link Score	Ped Link LOS	Bus Mod. Freq.	Bus LOS	Bike Int Score	Bike Int LOS	Bike Seg Score	Bike Seg LOS	Ped Int Score	Ped Int LOS	Ped Seg Score	Ped Seg LOS
▶ 1	Start-1st	2.57	B	NA	N/A	C		3.27	C	2.07	D	2.63	B	3.68	D	2.67	B	3.23	C
2	1st-2nd	2.57	B	NA	N/A	C		3.27	C	2.07	D	2.63	B	3.68	D	2.67	B	3.23	C

Peak Direction | Off-Peak Direction

Bike Score: 2.57   Pedestrian Score: 3.27   Bus Mod. Freq.: 2.07

Bike LOS: B   Pedestrian LOS: C   Bus LOS: D

ARTPLAN

Bicycle LOS Example 1: Model Inputs

What is the Bicycle LOS if the speed limit was changed to 25 mph and there was no bike lane?

Facility-wide Values

Arterial Length (mi)	0.402	K Factor (%)	9.0	D Factor (%)	55.0	Peak Hour Factor	1.000	% Heavy Vehicles	2.0

Peak Direction | Off-Peak Direction

	Segment	Length	AADT	Adj. Dir. Hourly Volume	# of Thru Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
▶ 1	Start-1st	1000	30000	1485	2	25	30	Restrictive	☐	
2	1st-2nd	1000	30000	1485	2	25	30	Restrictive	☐	

Peak Direction | Off-Peak Direction

	Segment	Auto Outside Lane Width	Specific Lane Width	Bike Pavement Condition	Paved Shoulder / Bike Lane	Side Path	Side Path Separation	Sidewalk	Sidewalk/ Roadway Separation	Sidewalk/ Roadway Barrier	Bus Frequency	Passenger Load Factor	Amenities	Bus Stop
▶ 1	Start-1st	Typ...		Typ...	☐	☐		☑	Typi...	☐	2	0.8	Exc...	Typical
2	1st-2nd	Typ...		Typ...	☐	☐		☑	Typi...	☐	2	0.8	Exc...	Typical

ARTPLAN

Bicycle LOS Example 1: Model Results

What is the Bicycle LOS if the speed limit was changed to 25 mph and there was no bike lane?

	Segment	Bike Link Score	Bike Link LOS	Bike Side Path Score	Bike Side Path LOS	Ped SubLink (1) LOS	Ped Link Score	Ped Link LOS	Bus Mod. Freq.	Bus LOS	Bike Int Score	Bike Int LOS	Bike Seg Score	Bike Seg LOS	Ped Int Score	Ped Int LOS	Ped Seg Score	Ped Seg LOS
1	Start-1st	4.10	D	NA	N/A	C	3.37	C	2.30	D	3.70	D	4.22	D	2.62	B	3.25	C
2	1st-2nd	4.10	D	NA	N/A	C	3.37	C	2.30	D	3.70	D	4.22	D	2.62	B	3.25	C

Peak Direction / Off-Peak Direction

Bike Score	4.10	Pedestrian Score	3.37	Bus Mod. Freq.	2.30
Bike LOS	D	Pedestrian LOS	C	Bus LOS	D

ARTPLAN

Pedestrian LOS Example 1: Model Inputs

Roadway Information

Road Name	US 98
Peak Direction	Northbound
Off Peak Direction	Southbound
Area Type	Large Urbanized
Class	2

Analysis Information

Modal Analysis	Multimodal
Type of Analysis	Peak Direction
Study Period	Standard K

Peak Direction | Off-Peak Direction

	Cross Street Name	Cycle Length	Thru g/C	Arrival Type	# Thru Lanes	% Left Turns	% Right Turns	Excl. Left Turn Lane	LT Phasing	Number LT Lanes	Total Left Turn Storage	Left g/C	Excl. Right Turn Lane
▶ 1	Start							☐					☐
2	1st	120	0.44	4	2	12	12	☑	Prot.	1	235	0.15	☐
3	2nd	120	0.44	4	2	12	12	☑	Prot.	1	235	0.15	☐

ARTPLAN

Pedestrian LOS Example 1: Model Inputs

What is the Pedestrian LOS?

Facility-wide Values

Arterial Length (mi)	K Factor (%)	D Factor (%)	Peak Hour Factor	% Heavy Vehicles
0.402	9.0	56.5	1.000	2.0

Peak Direction / Off-Peak Direction

	Segment	Length	AADT	Adj. Dir. Hourly Volume	# of Thru Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
▶ 1	Start-1st	1000	34000	1729	2	30	35	Restrictive	☐	
2	1st-2nd	1000	34000	1729	2	30	35	Restrictive	☐	

Peak Direction / Off-Peak Direction

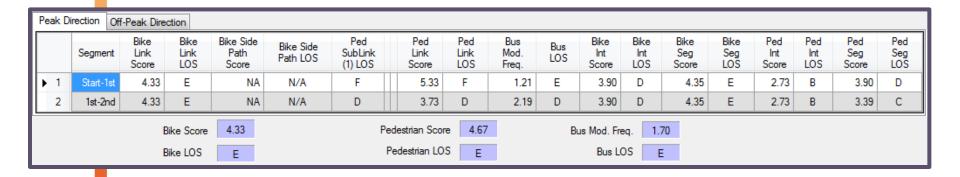|	Segment	Auto Outside Lane Width	Specific Lane Width	Bike Pavement Condition	Paved Shoulder / Bike Lane	Side Path	Side Path Separation	Sidewalk	Sidewalk/ Roadway Separation	Sidewalk/ Roadway Barrier	Bus Frequency	Passenger Load Factor	Amenities	Bus Stop
▶ 1	Start-1st	Typ...		Typ...	☐	☐		☐		☐	2	0.8	Exc...	Typical
2	1st-2nd	Typ...		Typ...	☐	☐		☐		☐	2	0.8	Exc...	Typical

Peak Direction / Off-Peak Direction

	Segment	Pct. Sublink Length (1)	Pct. Sublink Length (2)	Pct. Sublink Length (3)	Sidewalk (1)	Sidewalk (2)	Sidewalk (3)	Sidewalk/ Roadway Separation (1)	Sidewalk/ Roadway Separation (2)	Sidewalk/ Roadway Separation (3)	Sidewalk/ Roadway Protective Barrier (1)	Sidewalk/ Roadway Protective Barrier (2)	Sidewalk/ Roadway Protective Barrier (3)
▶ 1	Start-1st	100			☐	☐	☐				☐	☐	☐
2	1st-2nd	100			☐	☐	☐				☐	☐	☐

ARTPLAN

Pedestrian LOS Example 1: Model Results

What is the Pedestrian LOS?

	Segment	Bike Link Score	Bike Link LOS	Bike Side Path Score	Bike Side Path LOS	Ped SubLink (1) LOS		Ped Link Score	Ped Link LOS	Bus Mod. Freq.	Bus LOS	Bike Int Score	Bike Int LOS	Bike Seg Score	Bike Seg LOS	Ped Int Score	Ped Int LOS	Ped Seg Score	Ped Seg LOS
▶ 1	Start-1st	4.33	E	NA	N/A	F		5.33	F	1.21	E	3.90	D	4.35	E	2.73	B	3.90	D
2	1st-2nd	4.33	E	NA	N/A	F		5.33	F	1.21	E	3.90	D	4.35	E	2.73	B	3.90	D

Bike Score	4.33	Pedestrian Score	5.33	Bus Mod. Freq.	1.21
Bike LOS	E	Pedestrian LOS	F	Bus LOS	E

Peak Direction | Off-Peak Direction

ARTPLAN

Pedestrian LOS Example 1: Model Inputs

What is the Pedestrian LOS if sidewalks with typical separation were added to the 2nd segment?
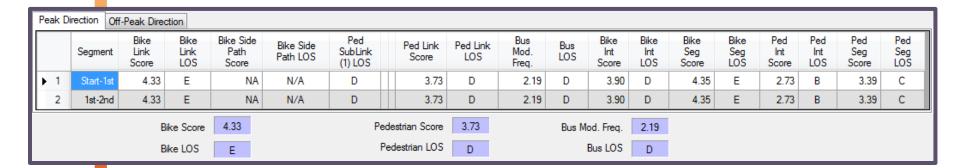

Facility-wide Values						
Arterial Length (mi)	0.402	K Factor (%)	9.0	D Factor (%)	56.5	Peak Hour Factor	1.000	% Heavy Vehicles	2.0

Peak Direction / Off-Peak Direction

	Segment	Length	AADT	Adj. Dir. Hourly Volume	# of Thru Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
▶ 1	Start-1st	1000	34000	1729	2	30	35	Restrictive	☐	
2	1st-2nd	1000	34000	1729	2	30	35	Restrictive	☐	

Peak Direction / Off-Peak Direction

	Segment	Auto Outside Lane Width	Specific Lane Width	Bike Pavement Condition	Paved Shoulder / Bike Lane	Side Path	Side Path Separation	Sidewalk	Sidewalk/ Roadway Separation	Sidewalk/ Roadway Barrier	Bus Frequency	Passenger Load Factor	Amenities	Bus Stop
▶ 1	Start-1st	Typ...		Typ...	☐	☐		☐		☐	2	0.8	Exc...	Typical
2	1st-2nd	Typ...		Typ...	☐	☐		☑	Typ...	☐	2	0.8	Exc...	Typical

Peak Direction / Off-Peak Direction

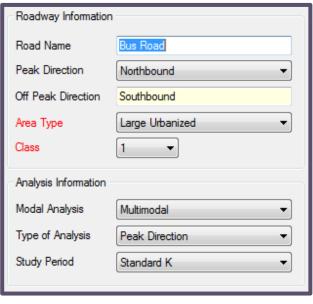|	Segment	Pct. Sublink Length (1)	Pct. Sublink Length (2)	Pct. Sublink Length (3)	Sidewalk (1)	Sidewalk (2)	Sidewalk (3)	Sidewalk/ Roadway Separation (1)	Sidewalk/ Roadway Separation (2)	Sidewalk/ Roadway Separation (3)	Sidewalk/ Roadway Protective Barrier (1)	Sidewalk/ Roadway Protective Barrier (2)	Sidewalk/ Roadway Protective Barrier (3)
▶ 1	Start-1st	100			☐	☐	☐				☐	☐	☐
2	1st-2nd	100			☑	☐	☐	Typical			☐	☐	☐

ARTPLAN

Pedestrian LOS Example 1: Model Results

What is the Pedestrian LOS if sidewalks with typical separation were added to the 2nd segment?

	Segment	Bike Link Score	Bike Link LOS	Bike Side Path Score	Bike Side Path LOS	Ped SubLink (1) LOS	Ped Link Score	Ped Link LOS	Bus Mod. Freq.	Bus LOS	Bike Int Score	Bike Int LOS	Bike Seg Score	Bike Seg LOS	Ped Int Score	Ped Int LOS	Ped Seg Score	Ped Seg LOS
▶ 1	Start-1st	4.33	E	NA	N/A	F	5.33	F	1.21	E	3.90	D	4.35	E	2.73	B	3.90	D
2	1st-2nd	4.33	E	NA	N/A	D	3.73	D	2.19	D	3.90	D	4.35	E	2.73	B	3.39	C

Bike Score	4.33	Pedestrian Score	4.67	Bus Mod. Freq.	1.70
Bike LOS	E	Pedestrian LOS	E	Bus LOS	E

Peak Direction | Off-Peak Direction
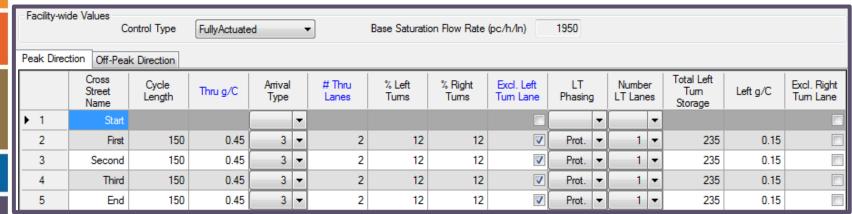
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Pedestrian LOS Example 1: Model Inputs

What is the Pedestrian LOS if sidewalks with typical separation were added to the entire facility?

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Pedestrian LOS Example 1: Model Results

What is the Pedestrian LOS if sidewalks with typical separation were added to the entire facility?

	Segment	Bike Link Score	Bike Link LOS	Bike Side Path Score	Bike Side Path LOS	Ped SubLink (1) LOS	Ped Link Score	Ped Link LOS	Bus Mod. Freq.	Bus LOS	Bike Int Score	Bike Int LOS	Bike Seg Score	Bike Seg LOS	Ped Int Score	Ped Int LOS	Ped Seg Score	Ped Seg LOS
▶ 1	Start-1st	4.33	E	NA	N/A	D	3.73	D	2.19	D	3.90	D	4.35	E	2.73	B	3.39	C
2	1st-2nd	4.33	E	NA	N/A	D	3.73	D	2.19	D	3.90	D	4.35	E	2.73	B	3.39	C

Bike Score	4.33	Pedestrian Score	3.73	Bus Mod. Freq.	2.19
Bike LOS	E	Pedestrian LOS	D	Bus LOS	D

Peak Direction | Off-Peak Direction

ARTPLAN

Bus LOS Example 1: Model Inputs

Roadway Information

Road Name	Bus Road
Peak Direction	Northbound
Off Peak Direction	Southbound
Area Type	Large Urbanized
Class	1

Analysis Information

Modal Analysis	Multimodal
Type of Analysis	Peak Direction
Study Period	Standard K

Facility-wide Values

Control Type: FullyActuated   Base Saturation Flow Rate (pc/h/ln): 1950

Peak Direction | Off-Peak Direction

	Cross Street Name	Cycle Length	Thru g/C	Arrival Type	# Thru Lanes	% Left Turns	% Right Turns	Excl. Left Turn Lane	LT Phasing	Number LT Lanes	Total Left Turn Storage	Left g/C	Excl. Right Turn Lane
▶ 1	Start							☐					☐
2	First	150	0.45	3	2	12	12	☑	Prot.	1	235	0.15	☐
3	Second	150	0.45	3	2	12	12	☑	Prot.	1	235	0.15	☐
4	Third	150	0.45	3	2	12	12	☑	Prot.	1	235	0.15	☐
5	End	150	0.45	3	2	12	12	☑	Prot.	1	235	0.15	☐

ARTPLAN

Bus LOS Example 1: Model Inputs

Facility-wide Values

Arterial Length (mi) 2.697 K Factor (%) 9.0 D Factor (%) 56.5 Peak Hour Factor 1.000 % Heavy Vehicles 2.0

Peak Direction | Off-Peak Direction

	Segment	Length	AADT	Adj. Dir. Hourly Volume	# of Thru Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
▶ 1	Start-First	3500	34000	1729	2	45	50	Restrictive	☐	
2	First-Second	3500	34000	1729	2	45	50	Restrictive	☐	
3	Second-Third	3500	34000	1729	2	45	50	Restrictive	☐	
4	Third-End	3500	34000	1729	2	45	50	Restrictive	☐	

	Segment	Auto Outside Lane Width	Specific Lane Width	Bike Pavement Condition	Paved Shoulder / Bike Lane	Side Path	Side Path Separation	Sidewalk	Sidewalk/ Roadway Separation	Sidewalk/ Roadway Barrier	Bus Frequency	Passenger Load Factor	Amenities	Bus Stop
▶ 1	-	Typi...		Typi...	☐	☐		☑	Typi...	☐	3	0.8	Exc...	Typical
2	-	Typi...		Typi...	☐	☐		☑	Typi...	☐	3	0.8	Exc...	Typical
3	-	Typi...		Typi...	☐	☐		☑	Typi...	☐	3	0.8	Exc...	Typical

ARTPLAN

Bus LOS Example 1: Model Results

	Segment	Bike Link Score	Bike Link LOS	Bike Side Path Score	Bike Side Path LOS	Ped SubLink (1) LOS	Ped SubLink (2) LOS	Ped SubLink (3) LOS	Ped Link Score	Ped Link LOS	Bus Mod. Freq.	Bus LOS	Bike Int Score	Bike Int LOS	Bike Seg Score	Bike Seg LOS	Ped Int Score	Ped Int LOS	Ped Seg Score	Ped Seg LOS
▶ 1	-	4.64	E	NA	N/A	D			4.23	D	3.29	C	3.90	D	4.41	E	2.95	C	3.60	D
2	-	4.64	E	NA	N/A	D			4.23	D	3.29	C	3.90	D	4.41	E	2.95	C	3.60	D
3	-	4.64	E	NA	N/A	D			4.23	D	3.29	C	3.90	D	4.41	E	2.95	C	3.60	D

Bike Score	4.64	Pedestrian Score	4.23	Bus Mod. Freq.	3.29
Bike LOS	E	Pedestrian LOS	D	Bus LOS	C

ARTPLAN

Workshop 4: Model Inputs

Roadway Information

Road Name	Bus Road
Peak Direction	Northbound
Off Peak Direction	Southbound
Area Type	Large Urbanized
Class	1

Analysis Information

Modal Analysis	Multimodal
Type of Analysis	Peak Direction
Study Period	Standard K

Facility-wide Values

Control Type: FullyActuated   Base Saturation Flow Rate (pc/h/ln): 1950

Peak Direction | Off-Peak Direction

	Cross Street Name	Cycle Length	Thru g/C	Arrival Type	# Thru Lanes	% Left Turns	% Right Turns	Excl. Left Turn Lane	LT Phasing	Number LT Lanes	Total Left Turn Storage	Left g/C	Excl. Right Turn Lane
1	Start							☐					☐
2	First	150	0.45	3	2	12	12	☑	Prot.	1	235	0.15	☐
3	Second	150	0.45	3	2	12	12	☑	Prot.	1	235	0.15	☐
4	Third	150	0.45	3	2	12	12	☑	Prot.	1	235	0.15	☐
5	End	150	0.45	3	2	12	12	☑	Prot.	1	235	0.15	☐

Facility-wide Values

Arterial Length (mi): 2.697   K Factor (%): 9.0   D Factor (%): 56.5   Peak Hour Factor: 1.000   % Heavy Vehicles: 2.0

Peak Direction | Off-Peak Direction

	Segment	Length	AADT	Adj. Dir. Hourly Volume	# of Thru Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
1	Start-First	3500	34000	1729	2	45	50	Restrictive	☐	
2	First-Second	3500	34000	1729	2	45	50	Restrictive	☐	
3	Second-Third	3500	34000	1729	2	45	50	Restrictive	☐	
4	Third-End	3500	34000	1729	2	45	50	Restrictive	☐	

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Workshop 4.A: Model Inputs & Results

	Peak Direction	Off-Peak Direction												
	Segment	Auto Outside Lane Width	Specific Lane Width	Bike Pavement Condition	Paved Shoulder / Bike Lane	Side Path	Side Path Separation	Sidewalk	Sidewalk/ Roadway Separation	Sidewalk/ Roadway Barrier	Bus Frequency	Passenger Load Factor	Amenities	Bus Stop
▶ 1	Start-First	Typical ▾		Typical ▾	☐	☐		☑	Typical ▾	☐	3	0.5	Excell... ▾	Typical ▾
2	First-Second	Typical ▾		Typical ▾	☐	☐		☑	Typical ▾	☐	2	0.6	Excell... ▾	Typical ▾
3	Second-Third	Typical ▾		Typical ▾	☐	☐		☐	▾	☐	2	0.6	Excell... ▾	Typical ▾
4	Third-End	Typical ▾		Typical ▾	☐	☐		☐	▾	☐	1	0.7	Excell... ▾	Typical ▾

	Peak Direction	Off-Peak Direction																		
	Segment	Bike Link Score	Bike Link LOS	Bike Side Path Score	Bike Side Path LOS	Ped SubLink (1) LOS	Ped SubLink (2) LOS	Ped SubLink (3) LOS	Ped Link Score	Ped Link LOS	Bus Mod. Freq.	Bus LOS	Bike Int Score	Bike Int LOS	Bike Seg Score	Bike Seg LOS	Ped Int Score	Ped Int LOS	Ped Seg Score	Ped Seg LOS
▶ 1	Start-First	4.64	E	NA	N/A	D			4.23	D	3.47	C	3.90	D	4.41	E	2.95	C	3.60	D
2	First-Second	4.64	E	NA	N/A	D			4.23	D	2.31	D	3.90	D	4.41	E	2.95	C	3.60	D
3	Second-Third	4.64	E	NA	N/A	F			5.82	F	1.27	E	3.90	D	4.41	E	2.95	C	4.11	D
4	Third-End	4.64	E	NA	N/A	F			5.82	F	0.60	F	3.90	D	4.41	E	2.95	C	4.11	D

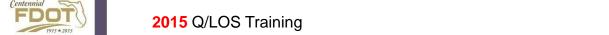| Bike Score	4.64		Pedestrian Score	5.15		Bus Mod. Freq.	1.91
Bike LOS	E		Pedestrian LOS	F		Bus LOS	E

ARTPLAN

Workshop 4.B: Model Inputs & Results

Peak Direction | Off-Peak Direction

	Segment	Auto Outside Lane Width	Specific Lane Width	Bike Pavement Condition	Paved Shoulder / Bike Lane	Side Path	Side Path Separation	Sidewalk	Sidewalk/ Roadway Separation	Sidewalk/ Roadway Barrier	Bus Frequency	Passenger Load Factor	Amenities	Bus Stop
▶ 1	Start-First	Typi...		Typi...	☐	☐		☑	Typi...	☐	2	1.1	Exc...	Typical
2	First-Second	Typi...		Typi...	☐	☐		☑	Typi...	☐	2	0.8	Exc...	Typical
3	Second-Third	Typi...		Typi...	☐	☐		☐		☐	2	0.8	Exc...	Typical
4	Third-End	Typi...		Typi...	☐	☐		☐		☐	2	1.1	Exc...	Typical

Peak Direction | Off-Peak Direction

	Segment	Bike Link Score	Bike Link LOS	Bike Side Path Score	Bike Side Path LOS	Ped SubLink (1) LOS	Ped SubLink (2) LOS	Ped SubLink (3) LOS	Ped Link Score	Ped Link LOS	Bus Mod. Freq.	Bus LOS	Bike Int Score	Bike Int LOS	Bike Seg Score	Bike Seg LOS	Ped Int Score	Ped Int LOS	Ped Seg Score	Ped Seg LOS
▶ 1	Start-First	4.64	E	NA	N/A	D			4.23	D	1.96	E	3.90	D	4.41	E	2.95	C	3.60	D
2	First-Second	4.64	E	NA	N/A	D			4.23	D	2.19	D	3.90	D	4.41	E	2.95	C	3.60	D
3	Second-Third	4.64	E	NA	N/A	F			5.82	F	1.21	E	3.90	D	4.41	E	2.95	C	4.11	D
4	Third-End	4.64	E	NA	N/A	F			5.82	F	1.08	E	3.90	D	4.41	E	2.95	C	4.11	D

Bike Score 4.64   Pedestrian Score 5.15   Bus Mod. Freq. 1.61

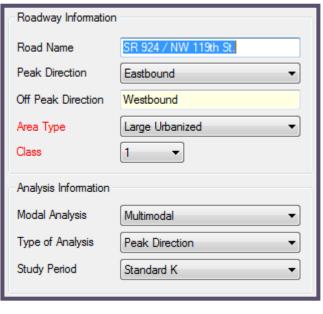Bike LOS E   Pedestrian LOS F   Bus LOS E

ARTPLAN

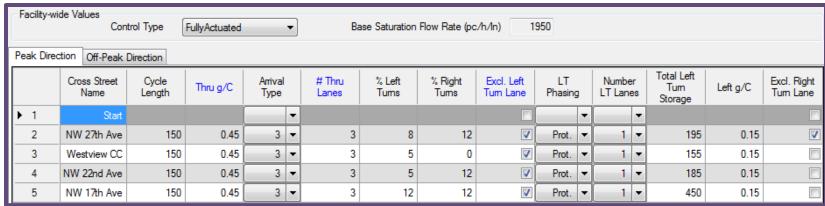## Workshop 4.C: Model Inputs & Results

Peak Direction | Off-Peak Direction

	Segment	Auto Outside Lane Width	Specific Lane Width	Bike Pavement Condition	Paved Shoulder / Bike Lane	Side Path	Side Path Separation	Sidewalk	Sidewalk/ Roadway Separation	Sidewalk/ Roadway Barrier	Bus Frequency	Passenger Load Factor	Amenities	Bus Stop
1	Start-First	Typi... ▼		Typical ▼	☐	☐		☑	Typical ▼	☐	3	0.5	Exce... ▼	Typical ▼
2	First-Second	Typi... ▼		Typical ▼	☐	☐		☑	Typical ▼	☐	2	0.6	Good ▼	Typical ▼
3	Second-Third	Typi... ▼		Typical ▼	☐	☐		☐	▼	☐	2	0.6	Fair ▼	Typical ▼
▶ 4	Third-End	Typi... ▼		Typical ▼	☐	☐		☐	▼	☐	1	0.7	Poor ▼	Typical ▼

Peak Direction | Off-Peak Direction

	Segment	Bike Link Score	Bike Link LOS	Bike Side Path Score	Bike Side Path LOS	Ped SubLink (1) LOS	Ped SubLink (2) LOS	Ped SubLink (3) LOS	Ped Link Score	Ped Link LOS	Bus Mod. Freq.	Bus LOS	Bike Int Score	Bike Int LOS	Bike Seg Score	Bike Seg LOS	Ped Int Score	Ped Int LOS	Ped Seg Score	Ped Seg LOS
▶ 1	Start-First	4.64	E	NA	N/A	D			4.23	D	3.47	C	3.90	D	4.41	E	2.95	C	3.60	D
2	First-Second	4.64	E	NA	N/A	D			4.23	D	2.10	D	3.90	D	4.41	E	2.95	C	3.60	D
3	Second-Third	4.64	E	NA	N/A	F			5.82	F	1.16	E	3.90	D	4.41	E	2.95	C	4.11	D
4	Third-End	4.64	E	NA	N/A	F			5.82	F	0.49	F	3.90	D	4.41	E	2.95	C	4.11	D

Bike Score 4.64   Pedestrian Score 5.15   Bus Mod. Freq. 1.80

Bike LOS E   Pedestrian LOS F   Bus LOS E

ARTPLAN

Workshop 5: Model Inputs

Roadway Information

Road Name	SR 924 / NW 119th St.
Peak Direction	Eastbound
Off Peak Direction	Westbound
Area Type	Large Urbanized
Class	1

Analysis Information

Modal Analysis	Multimodal
Type of Analysis	Peak Direction
Study Period	Standard K

Facility-wide Values

Control Type: FullyActuated   Base Saturation Flow Rate (pc/h/ln): 1950

Peak Direction | Off-Peak Direction

	Cross Street Name	Cycle Length	Thru g/C	Arrival Type	# Thru Lanes	% Left Turns	% Right Turns	Excl. Left Turn Lane	LT Phasing	Number LT Lanes	Total Left Turn Storage	Left g/C	Excl. Right Turn Lane
▶ 1	Start							☐					☐
2	NW 27th Ave	150	0.45	3	3	8	12	☑	Prot.	1	195	0.15	☑
3	Westview CC	150	0.45	3	3	5	0	☑	Prot.	1	155	0.15	☐
4	NW 22nd Ave	150	0.45	3	3	5	12	☑	Prot.	1	185	0.15	☐
5	NW 17th Ave	150	0.45	3	3	12	12	☑	Prot.	1	450	0.15	☐

ARTPLAN

Workshop 5: Model Inputs

Auto Inputs

Facility-wide Values

| Arterial Length (mi) | 1.165 | K Factor (%) | 9.0 | D Factor (%) | 56.5 | Peak Hour Factor | 1.000 | % Heavy Vehicles | 2.0 |

Peak Direction | Off-Peak Direction

	Segment	Length	AADT	Adj. Dir. Hourly Volume	# of Thru Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
▶ 1	Start-NW 27th Ave	540	41500	2110	3	40	45	Non-Restrictive	☐	
2	NW 27th Ave-Westview CC	1050	41500	2110	3	40	45	Restrictive	☐	
3	Westview CC-NW 22nd Ave	1685	41500	2110	3	40	45	Restrictive	☐	
4	NW 22nd Ave-NW 17th Ave	2635	41500	2110	3	40	45	Restrictive	☐	

ARTPLAN

Workshop 5: Model Inputs

Multimodal Inputs

	Segment	Auto Outside Lane Width	Specific Lane Width	Bike Pavement Condition	Paved Shoulder / Bike Lane	Side Path	Side Path Separation	Sidewalk	Sidewalk/ Roadway Separation	Sidewalk/ Roadway Barrier	Bus Frequency	Passenger Load Factor	Amenities	Bus Stop
▸ 1	Start-NW 27th Ave	Typi... ▼		Typi... ▼	☐	☐		☑	Typi... ▼	☐	2	0.8	Exc... ▼	Typical ▼
2	NW 27th Ave-Westview CC	Typi... ▼		Typi... ▼	☐	☐		☑	Typi... ▼	☐	2	0.8	Exc... ▼	Typical ▼
3	Westview CC-NW 22nd Ave	Typi... ▼		Typi... ▼	☐	☐		☐	▼	☐	3	0.6	Exc... ▼	Typical ▼
4	NW 22nd Ave-NW 17th Ave	Typi... ▼		Typi... ▼	☐	☐		☑	Typi... ▼	☐	3	0.6	Exc... ▼	Typical ▼

Peak Direction / Off-Peak Direction

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Workshop 5: Model Results

Peak Direction | Off-Peak Direction
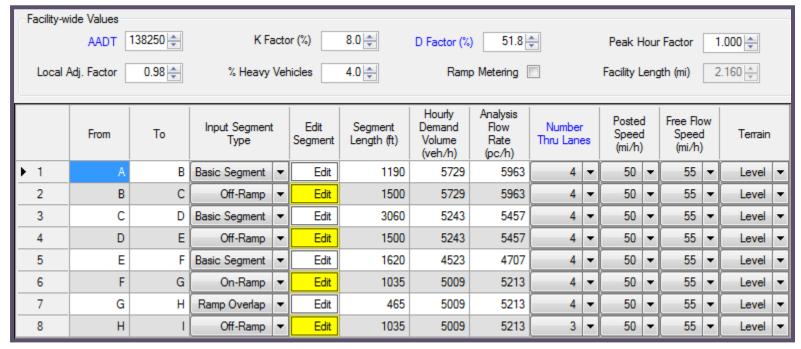
	Segment	Thru Mvmt Flow Rate (veh/h)	Adj. Sat. Flow Rate (veh/h)	v/c	Control Delay (s/veh)	Thru Mvmt Intersection LOS	Queue Storage Ratio	Average Speed (mi/h)	Segment LOS
1	Start-NW 27th Ave	1688	4984	0.753	35.1	D	0.93	8.7	F
2	NW 27th Ave-Westview CC	2005	5472	0.814	37.0	D	0.67	13.5	F
3	Westview CC-NW 22nd Ave	2005	5426	0.821	37.0	D	0.56	18.1	D
4	NW 22nd Ave-NW 17th Ave	1857	5390	0.766	35.2	D	0.71	23.3	C

Facility Length (mi) 1.165

Free Flow Delay (sec/veh) 158.3   LOS Threshold Delay (sec/veh) 14.9   Wtd. g/C 0.45   Avg. Speed (mi/h) 16.9   LOS E

Peak Direction | Off-Peak Direction

	Segment	Bike Link Score	Bike Link LOS	Bike Side Path Score	Bike Side Path LOS	Ped SubLink (1) LOS	Ped SubLink (2) LOS	Ped SubLink (3) LOS	Ped Link Score	Ped Link LOS	Bus Mod. Freq.	Bus LOS	Bike Int Score	Bike Int LOS	Bike Seg Score	Bike Seg LOS	Ped Int Score	Ped Int LOS	Ped Seg Score	Ped Seg LOS
1	Start-NW 27th Ave	4.33	E	NA	N/A	C			3.46	C	1.98	E	3.64	D	3.96	D	3.03	C	3.37	C
2	NW 27th Ave-Westview CC	4.44	E	NA	N/A	D			3.63	D	2.19	D	3.64	D	4.24	D	2.83	C	3.38	C
3	Westview CC-NW 22nd Ave	4.47	E	NA	N/A	F			5.28	F	1.91	E	3.64	D	4.25	E	3.03	C	3.95	D
4	NW 22nd Ave-NW 17th Ave	4.48	E	NA	N/A	D			3.71	D	3.47	C	3.64	D	4.26	E	3.03	C	3.45	C

Bike Score 4.46   Pedestrian Score 4.25   Bus Mod. Freq. 2.65

Bike LOS E   Pedestrian LOS E   Bus LOS D

FREEPLAN

Example 1: Model Inputs

Roadway Information

Freeway Name	I-4
From	Princeton St To Lee Rd
Area Type	Large Urbanized
Peak Direction	Northbound
Off Peak Direction	Southbound
Study Period	Kother

Facility-wide Values

AADT 138250 | K Factor (%) 8.0 | D Factor (%) 51.8 | Peak Hour Factor 1.000

Local Adj. Factor 0.98 | % Heavy Vehicles 4.0 | Ramp Metering ☐ | Facility Length (mi) 2.160

	From	To	Input Segment Type	Edit Segment	Segment Length (ft)	Hourly Demand Volume (veh/h)	Analysis Flow Rate (pc/h)	Number Thru Lanes	Posted Speed (mi/h)	Free Flow Speed (mi/h)	Terrain
▶ 1	A	B	Basic Segment	Edit	1190	5729	5963	4	50	55	Level
2	B	C	Off-Ramp	Edit	1500	5729	5963	4	50	55	Level
3	C	D	Basic Segment	Edit	3060	5243	5457	4	50	55	Level
4	D	E	Off-Ramp	Edit	1500	5243	5457	4	50	55	Level
5	E	F	Basic Segment	Edit	1620	4523	4707	4	50	55	Level
6	F	G	On-Ramp	Edit	1035	5009	5213	4	50	55	Level
7	G	H	Ramp Overlap	Edit	465	5009	5213	4	50	55	Level
8	H	I	Off-Ramp	Edit	1035	5009	5213	3	50	55	Level

Centennial FDOT 1915★2015

FREEPLAN

Example 1: Model Inputs

Ramp Characteristics

	Demand (veh/h)	% Heavy Vehicles	Number of Lanes	Accel/Decel Length	Free Flow Speed	Off-Ramp Analysis	Edit
▶	486	4	1 ▾	740	40	☐	Edit

Ramp Characteristics

	Demand (veh/h)	% Heavy Vehicles	Number of Lanes	Accel/Decel Length	Free Flow Speed	Off-Ramp Analysis	Edit
▶	720	4	1 ▾	600	40	☐	Edit

Ramp Characteristics

	Demand (veh/h)	% Heavy Vehicles	Number of Lanes	Accel/Decel Length	Free Flow Speed	Off-Ramp Analysis	Edit
▶	486	4	1 ▾	600	40	☐	Edit

Ramp Characteristics

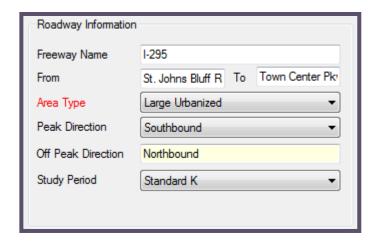|	Demand (veh/h)	% Heavy Vehicles	Number of Lanes	Accel/Decel Length	Free Flow Speed	Off-Ramp Analysis	Edit
▶	945	4	1 ▾	1500	40	☐	Edit

FREEPLAN

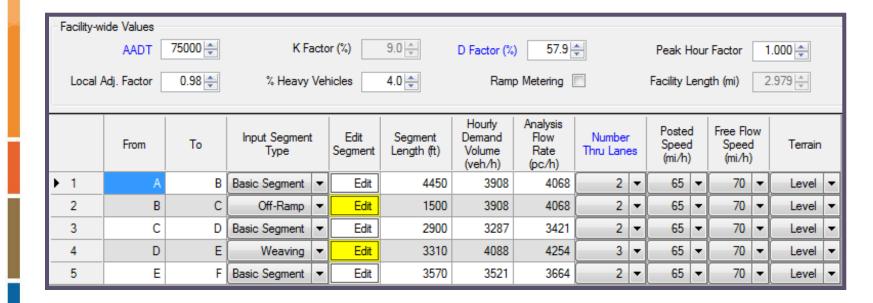## Example 1: Model Results

	Segment	Input Segment Type	Analysis Segment Type	Analysis Flow Rate (pc/h)	Adj. Capacity (pc/h)	v/c Ratio	Average Speed (mi/h)	Density (pc/mi/ln)	Segment LOS (density)	Additional Off-Ramp/Toll Outputs
▶ 1	A-B	Basic	Basic	5963	9000	0.66	55.0	27.1	D	View
2	B-C	OffRamp	OffRamp	5963	8600	0.69	53.8	24.4	C	View
3	C-D	Basic	Basic	5457	9000	0.61	55.0	24.8	C	View
4	D-E	OffRamp	OffRamp	5457	8600	0.63	53.7	22.7	C	View
5	E-F	Basic	Basic	4707	9000	0.52	54.9	21.4	C	View
6	F-G	OnRamp	OnRamp	5213	8800	0.59	51.3	23.7	C	View
7	G-H	RampOverlap	RampOverlap	5213	7916	0.66	52.5	24.0	C	View
8	H-I	OffRamp	OffRamp	5213	7916	0.66	52.5	24.0	C	View

Length (mi) 2.1600   Free Flow Delay (sec/veh) 2.8   LOS Threshold Delay (sec/veh) 2.0   Avg. Speed (mi/h) 53.9   Density (pc/mi/ln) 24.0   LOS D

FREEPLAN

Workshop 1: Model Inputs

Roadway Information

Freeway Name	I-295
From	St. Johns Bluff R To Town Center Pk
Area Type	Large Urbanized
Peak Direction	Southbound
Off Peak Direction	Northbound
Study Period	Standard K

Facility-wide Values

AADT	75000	K Factor (%)	9.0	D Factor (%) 57.9 Peak Hour Factor 1.000
Local Adj. Factor	0.98	% Heavy Vehicles	4.0	Ramp Metering ☐ Facility Length (mi) 2.979

	From	To	Input Segment Type	Edit Segment	Segment Length (ft)	Hourly Demand Volume (veh/h)	Analysis Flow Rate (pc/h)	Number Thru Lanes	Posted Speed (mi/h)	Free Flow Speed (mi/h)	Terrain
▶ 1	A	B	Basic Segment	Edit	4450	3908	4068	2	65	70	Level
2	B	C	Off-Ramp	Edit	1500	3908	4068	2	65	70	Level
3	C	D	Basic Segment	Edit	2900	3287	3421	2	65	70	Level
4	D	E	Weaving	Edit	3310	4088	4254	3	65	70	Level
5	E	F	Basic Segment	Edit	3570	3521	3664	2	65	70	Level

FREEPLAN

Workshop 1: Model Inputs

Weave Configuration

- ⦿ One-Sided ○ Two-Sided

Short Length (ft)	2800
# of Weaving Lanes	2
Min. Lane Changes Freeway-Ramp	1
Min. Lane Changes Ramp-Freeway	1
Min. Lane Changes Ramp-Ramp	0

	On-Ramp Roadway				Off-Ramp Roadway				
	Free Flow Speed (mi/h)	% Trucks	Demand (veh/h)	Ramp To Ramp Proportion	Free Flow Speed (mi/h)	% Trucks	Demand (veh/h)	Off-Ramp Analysis	Edit
▶	40	4.00	801	0.05	40	4.00	567	☐	Edit

Ramp Characteristics

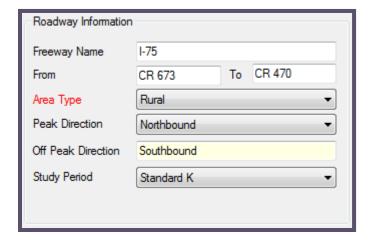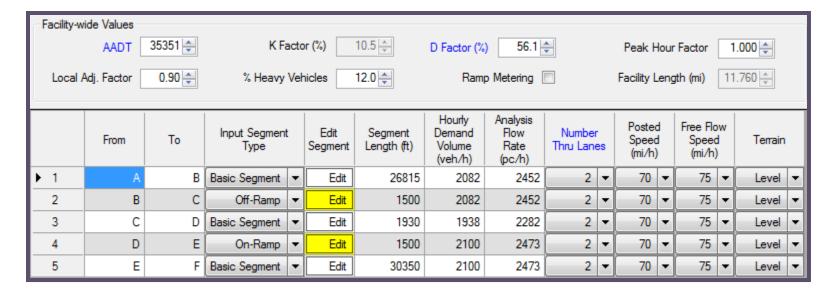|	Demand (veh/h)	% Heavy Vehicles	Number of Lanes	Accel/Decel Length	Free Flow Speed	Off-Ramp Analysis	Edit
▶	621	4	1	220	40	☐	Edit

FREEPLAN

Workshop 1: Model Results

	Segment	Input Segment Type	Analysis Segment Type	Analysis Flow Rate (pc/h)	Adj. Capacity (pc/h)	v/c Ratio	Average Speed (mi/h)	Density (pc/mi/ln)	Segment LOS (density)	Additional Off-Ramp/Toll Outputs
▶ 1	A-B	Basic	Basic	4068	4800	0.85	61.9	32.8	D	View
2	B-C	OffRamp	OffRamp	4068	4400	0.92	58.2	37.2	E	View
3	C-D	Basic	Basic	3421	4800	0.71	67.0	25.5	C	View
4	D-E	Weaving	Weaving	4254	6525	0.65	55.2	25.7	C	View
5	E-F	Basic	Basic	3664	4800	0.76	65.4	28.0	D	View

Length (mi) 2.9792   Free Flow Delay (sec/veh) 21.0   LOS Threshold Delay (sec/veh) 0.0   Avg. Speed (mi/h) 61.6   Density (pc/mi/ln) 29.0   LOS D

FREEPLAN

Workshop 2: Model Inputs

Roadway Information

Freeway Name	I-75
From	CR 673	To	CR 470
Area Type	Rural
Peak Direction	Northbound
Off Peak Direction	Southbound
Study Period	Standard K

Facility-wide Values

AADT: 35351 K Factor (%): 10.5 D Factor (%): 56.1 Peak Hour Factor: 1.000

Local Adj. Factor: 0.90 % Heavy Vehicles: 12.0 Ramp Metering: ☐ Facility Length (mi): 11.760

	From	To	Input Segment Type	Edit Segment	Segment Length (ft)	Hourly Demand Volume (veh/h)	Analysis Flow Rate (pc/h)	Number Thru Lanes	Posted Speed (mi/h)	Free Flow Speed (mi/h)	Terrain
▶ 1	A	B	Basic Segment	Edit	26815	2082	2452	2	70	75	Level
2	B	C	Off-Ramp	Edit	1500	2082	2452	2	70	75	Level
3	C	D	Basic Segment	Edit	1930	1938	2282	2	70	75	Level
4	D	E	On-Ramp	Edit	1500	2100	2473	2	70	75	Level
5	E	F	Basic Segment	Edit	30350	2100	2473	2	70	75	Level

FREEPLAN

Workshop 2: Model Inputs

Ramp Characteristics

	Demand (veh/h)	% Heavy Vehicles	Number of Lanes	Accel/Decel Length	Free Flow Speed	Off-Ramp Analysis	Edit
▶	144	12	1	610	40	☐	Edit

Ramp Characteristics

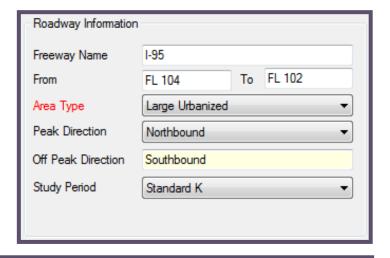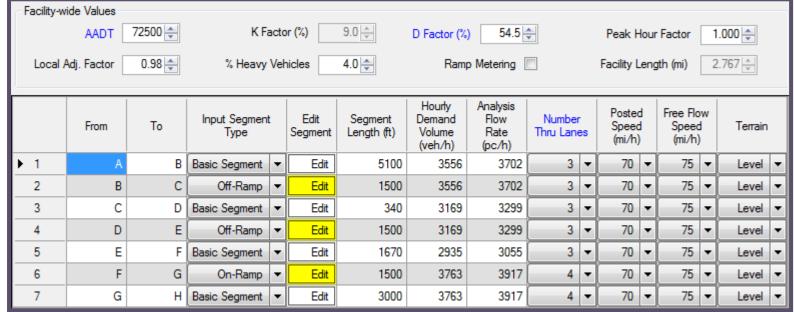|	Demand (veh/h)	% Heavy Vehicles	Number of Lanes	Accel/Decel Length	Free Flow Speed	Off-Ramp Analysis	Edit
▶	162	12	1	630	40	☐	Edit

FREEPLAN

Workshop 2: Model Results

	Segment	Input Segment Type	Analysis Segment Type	Analysis Flow Rate (pc/h)	Adj. Capacity (pc/h)	v/c Ratio	Average Speed (mi/h)	Density (pc/mi/ln)	Segment LOS (density)	Additional Off-Ramp/Toll Outputs
▶ 1	A-B	Basic	Basic	2452	4800	0.51	74.4	16.5	C	View
2	B-C	OffRamp	OffRamp	2452	4400	0.56	62.5	19.8	B	View
3	C-D	Basic	Basic	2282	4800	0.48	74.2	15.4	C	View
4	D-E	OnRamp	OnRamp	2473	4600	0.54	64.5	20.7	C	View
5	E-F	Basic	Basic	2473	4800	0.52	74.4	16.6	C	View

Length (mi) 11.760 Free Flow Delay (sec/veh) 9.3 LOS Threshold Delay (sec/veh) 0.0 Avg. Speed (mi/h) 73.8 Density (pc/mi/ln) 16.7 LOS C

FREEPLAN

Workshop 3: Model Inputs

Roadway Information

Freeway Name	I-95
From	FL 104 — To — FL 102
Area Type	Large Urbanized
Peak Direction	Northbound
Off Peak Direction	Southbound
Study Period	Standard K

Facility-wide Values

AADT	72500
K Factor (%)	9.0
D Factor (%)	54.5
Peak Hour Factor	1.000
Local Adj. Factor	0.98
% Heavy Vehicles	4.0
Ramp Metering	☐
Facility Length (mi)	2.767

	From	To	Input Segment Type	Edit Segment	Segment Length (ft)	Hourly Demand Volume (veh/h)	Analysis Flow Rate (pc/h)	Number Thru Lanes	Posted Speed (mi/h)	Free Flow Speed (mi/h)	Terrain
▶ 1	A	B	Basic Segment	Edit	5100	3556	3702	3	70	75	Level
2	B	C	Off-Ramp	Edit	1500	3556	3702	3	70	75	Level
3	C	D	Basic Segment	Edit	340	3169	3299	3	70	75	Level
4	D	E	Off-Ramp	Edit	1500	3169	3299	3	70	75	Level
5	E	F	Basic Segment	Edit	1670	2935	3055	3	70	75	Level
6	F	G	On-Ramp	Edit	1500	3763	3917	4	70	75	Level
7	G	H	Basic Segment	Edit	3000	3763	3917	4	70	75	Level

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Workshop 3: Model Inputs

Ramp Characteristics

	Demand (veh/h)	% Heavy Vehicles	Number of Lanes	Accel/Decel Length	Free Flow Speed	Off-Ramp Analysis	Edit
▶	387	4	1	260	45	☐	Edit

Ramp Characteristics

	Demand (veh/h)	% Heavy Vehicles	Number of Lanes	Accel/Decel Length	Free Flow Speed	Off-Ramp Analysis	Edit
▶	234	4	1	830	45	☐	Edit

Ramp Characteristics

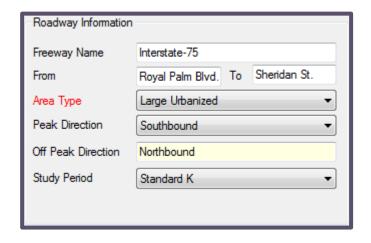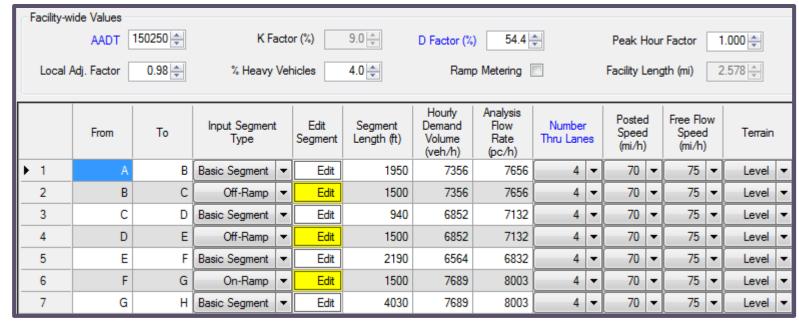|	Demand (veh/h)	% Heavy Vehicles	Number of Lanes	Accel/Decel Length	Free Flow Speed	Off-Ramp Analysis	Edit
▶	828	4	2	975	45	☐	Edit

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Workshop 3: Model Results

	Segment	Input Segment Type	Analysis Segment Type	Analysis Flow Rate (pc/h)	Adj. Capacity (pc/h)	v/c Ratio	Average Speed (mi/h)	Density (pc/mi/ln)	Segment LOS (density)	Additional Off-Ramp/Toll Outputs
▶ 1	A-B	Basic	Basic	3702	7200	0.51	74.4	16.6	B	View
2	B-C	OffRamp	OffRamp	3702	6800	0.54	68.6	20.6	C	View
3	C-D	Basic	Basic	3299	7200	0.46	73.6	14.9	B	View
4	D-E	OffRamp	OffRamp	3299	6800	0.49	68.3	15.3	B	View
5	E-F	Basic	Basic	3055	7200	0.42	74.5	13.7	B	View
6	F-G	OnRamp	Basic	3917	9600	0.41	75.0	13.1	B	View
7	G-H	Basic	Basic	3917	9600	0.41	75.0	13.1	B	View

| Length (mi) | 2.7670 | Free Flow Delay (sec/veh) | 3.2 | LOS Threshold Delay (sec/veh) | 0.0 | Avg. Speed (mi/h) | 73.3 | Density (pc/mi/ln) | 15.2 | LOS | B |

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Workshop 4: Model Inputs

Roadway Information

Freeway Name	Interstate-75
From	Royal Palm Blvd. To Sheridan St.
Area Type	Large Urbanized
Peak Direction	Southbound
Off Peak Direction	Northbound
Study Period	Standard K

Facility-wide Values

AADT 150250	K Factor (%) 9.0	D Factor (%) 54.4	Peak Hour Factor 1.000
Local Adj. Factor 0.98	% Heavy Vehicles 4.0	Ramp Metering ☐	Facility Length (mi) 2.578

	From	To	Input Segment Type	Edit Segment	Segment Length (ft)	Hourly Demand Volume (veh/h)	Analysis Flow Rate (pc/h)	Number Thru Lanes	Posted Speed (mi/h)	Free Flow Speed (mi/h)	Terrain
▶ 1	A	B	Basic Segment	Edit	1950	7356	7656	4	70	75	Level
2	B	C	Off-Ramp	Edit	1500	7356	7656	4	70	75	Level
3	C	D	Basic Segment	Edit	940	6852	7132	4	70	75	Level
4	D	E	Off-Ramp	Edit	1500	6852	7132	4	70	75	Level
5	E	F	Basic Segment	Edit	2190	6564	6832	4	70	75	Level
6	F	G	On-Ramp	Edit	1500	7689	8003	4	70	75	Level
7	G	H	Basic Segment	Edit	4030	7689	8003	4	70	75	Level

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Workshop 4: Model Inputs

Ramp Characteristics

	Demand (veh/h)	% Heavy Vehicles	Number of Lanes	Accel/Decel Length	Free Flow Speed	Off-Ramp Analysis	Edit
▶	504	4	1 ▼	460	35	☐	Edit

Ramp Characteristics

	Demand (veh/h)	% Heavy Vehicles	Number of Lanes	Accel/Decel Length	Free Flow Speed	Off-Ramp Analysis	Edit
▶	288	4	1 ▼	1500	30	☐	Edit

Ramp Characteristics

	Demand (veh/h)	% Heavy Vehicles	Number of Lanes	Accel/Decel Length	Free Flow Speed	Off-Ramp Analysis	Edit
▶	1125	4	1 ▼	1500	35	☐	Edit

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Workshop 4: Model Results

	Segment	Input Segment Type	Analysis Segment Type	Analysis Flow Rate (pc/h)	Adj. Capacity (pc/h)	v/c Ratio	Average Speed (mi/h)	Density (pc/mi/ln)	Segment LOS (density)	Additional Off-Ramp/Toll Outputs
▶ 1	A-B	Basic	Basic	7656	9600	0.80	65.8	29.1	D	View
2	B-C	OffRamp	OffRamp	7656	9200	0.83	68.0	28.5	D	View
3	C-D	Basic	Basic	7132	9600	0.74	68.2	26.1	D	View
4	D-E	OffRamp	OffRamp	7132	9400	0.76	67.5	21.7	C	View
5	E-F	Basic	Basic	6832	9600	0.71	69.5	24.6	C	View
6	F-G	OnRamp	OnRamp	8003	9500	0.84	66.1	28.3	D	View
7	G-H	Basic	Basic	8003	9600	0.83	63.9	31.3	D	View

| Length (mi) | 2.5777 | Free Flow Delay (sec/veh) | 16.1 | LOS Threshold Delay (sec/veh) | 0.0 | Avg. Speed (mi/h) | 66.4 | Density (pc/mi/ln) | 27.9 | LOS | D |