

SR 7 MULTIMODAL IMPROVEMENTS CORRIDOR STUDY

TECHNICAL APPENDIX D: TRAVEL MARKET ANALYSIS

May 3, 2016



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(954) 876-0036, ryanc@browardmpo.org**

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INTRODUCTION

In 2011, SR 7 Transit Survey data was collected by FDOT District 4 as a resource for understanding how existing customers use the transit system along the SR 7 corridor. In addition, origin-destination data from AirSage, an Atlanta-based wireless information and data provider, was analyzed to gain insight into the origins and destination of persons who travel along SR 7, regardless of mode. This chapter describes how these data were used and what conclusions were drawn about auto and transit travel patterns within the study area.

ORIGIN-DESTINATION ANALYSIS

Activity zones were originally established in the FDOT transit survey to facilitate the evaluation of origin/destination travel patterns. For consistency purposes, these zones were carried over into the AirSage study. In particular, the zones were developed to identify the magnitude of travel to and from major activity areas within the corridor study area. As illustrated in Figure 1, 27 zones were defined to support the assessment.

Zones 1 through 12 border the SR 7 corridor and zones 13 through 20 represent other areas of Broward County. Palm Beach County is included in Zones 21 and 24, while Zones 22, 23, 25, 26 and 27 represent areas of Miami-Dade County.

AirSage Observations

The Project Team worked with AirSage to conduct an analysis of travel patterns. AirSage has developed an approach to gathering data about mobility patterns throughout a region by analyzing the anonymous location and movement of mobile devices, derived from wireless signaling data. This information is used to provide new insights into where people are, were, or will be and how they move about over time and in response to special events or disruptions to the roadway network. Using aggregated cellular device data observations, average weekday travel patterns were evaluated for connectivity between the 27 designated zones for persons travelling within the SR 7 corridor.

Average weekday travel flows are illustrated in the origin-destination matrix in Table 1, with more detail provided in Appendix A. In addition, the top 10 average weekday travel flows between zones are illustrated in Figure 2 to summarize the demand for travel between zones within and adjacent to the SR 7 corridor.

Figure 1: Activity Zones

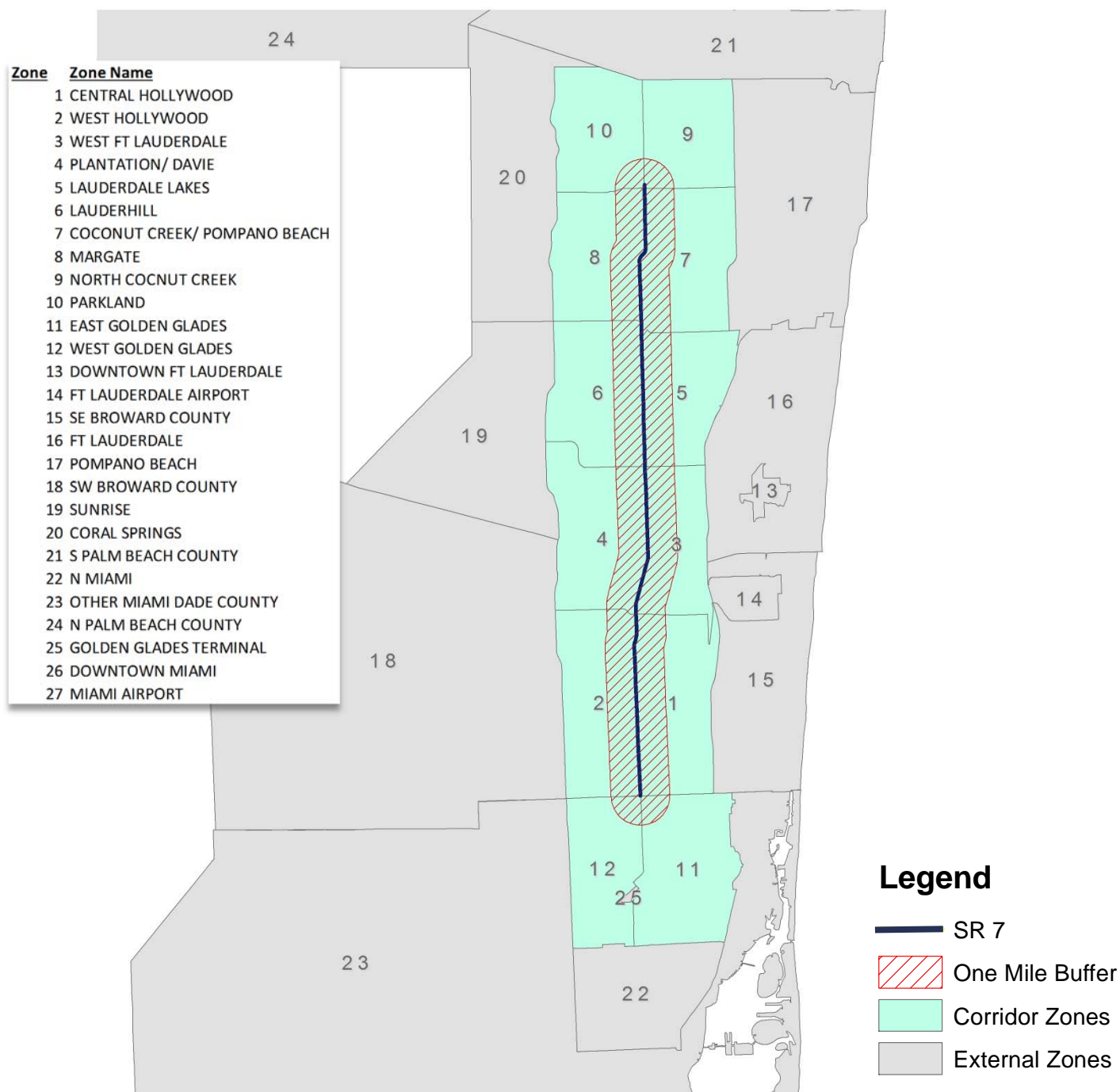


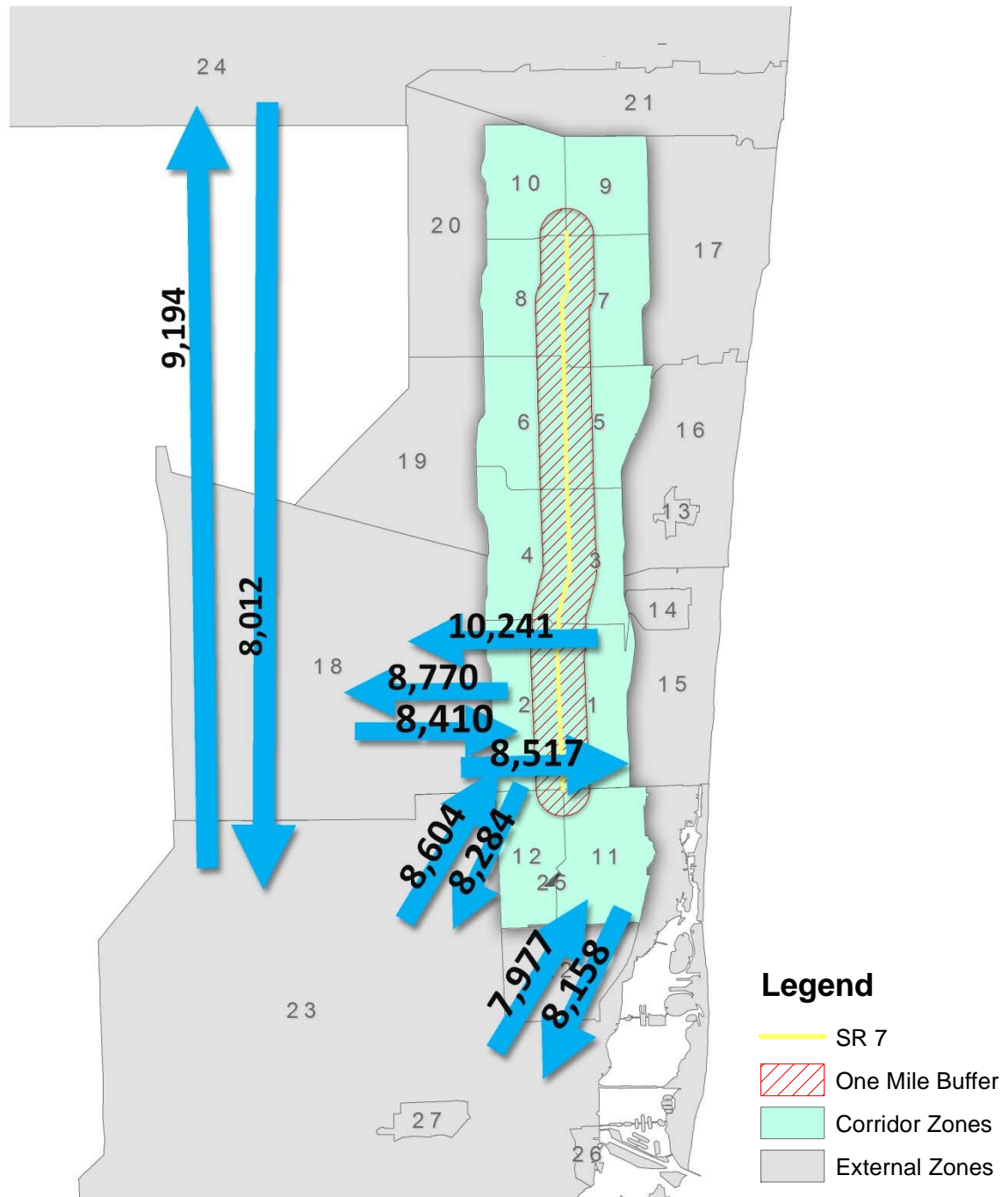
Table 1: AirSage Cellular Data Analysis—Top 10 Trips

Rank	Origin Zone #	Origin Zone Description	Destination Zone #	Destination Zone Description	Count	Percent Distribution
1	1	Central Hollywood	18	SW Broward County	10,241	11.9%
2	23	Other Miami-Dade County	24	North Palm Beach County	9,194	10.7%
3	2	West Hollywood	18	SW Broward County	8,770	10.2%
4	23	Other Miami-Dade County	2	West Hollywood	8,604	10.0%
5	18	SW Broward County	1	Central Hollywood	8,517	9.9%
6	18	SW Broward County	2	West Hollywood	8,410	9.8%
7	2	West Hollywood	23	Other Miami-Dade County	8,284	9.6%
8	11	East Golden Glades	23	Other Miami-Dade County	8,158	9.5%
9	24	North Palm Beach County	23	Other Miami-Dade County	8,012	9.3%
10	23	Other Miami-Dade County	11	East Golden Glades	7,977	9.3%
Total	--		--		86,197	100%

The following observations about the origins and destinations of travelers along the SR 7 corridor are apparent:

- > 54% of trips begin and end outside of the study area.
- > 8% of trips begin and end within the study area.
- > Most people are traveling outside of the corridor and using SR 7 to pass through.
- > The second largest trip-pair includes regional trips occurring from Miami-Dade County to Palm Beach County (9,194 trips, or nearly 12 percent of all trips).

Figure 2: AirSage Cellular Data Analysis – Top 10 Trips



FDOT Survey Assessment

The results from the SR 7 Transit Survey provided by FDOT was also reviewed and compared to the AirSage flow data. The average weekday travel flows for BCT Route 18 and 441 Breeze are illustrated in Tables 2 and 3. It should be noted that this survey was completed prior to Route 18 being split into two routes (Routes 18 and 19). In addition, the top 10 average weekday travel flows between zones are illustrated in Maps 3 and 4. In reviewing this information, the following observations about the travel flow of transit riders along SR 7:

- > 5% of transit trips begin and end outside of the study area for both routes.
- > 62% and 64% of transit trips begin and end within the study area for route 18 and route 441, respectively. The remainder of trips have either an origin or destination outside of the study corridor zones.
- > Most transit travel occurs between internal zones along the SR 7 corridor, indicating transit service is primarily used for short, local trips rather than longer, regional trips or commuting outside of the study area. Based on the FDOT's Transit Survey data trips for Route 18 tend to be shorter trips than 441 Breeze trips which is a limited stop/commuter route.

Table 2: FDOT Transit Survey Summary—Top 10 Trips (Route 18)

Rank	Origin Zone #	Origin Zone Description	Destination Zone #	Destination Zone Description	Count	Percent Distribution
1	6	Lauderhill	6	Lauderhill	560	17.6%
2	6	Lauderhill	8	Margate	438	13.7%
3	2	West Hollywood	2	West Hollywood	387	12.1%
4	8	Margate	6	Lauderhill	286	9.0%
5	8	Margate	8	Margate	278	8.7%
6	6	Lauderhill	5	Lauderdale Lakes	262	8.2%
7	4	Plantation/ Davie	6	Lauderhill	255	8.0%
8	6	Lauderhill	4	Plantation/ Davie	243	7.6%
9	5	Lauderdale Lakes	6	Lauderhill	243	7.6%
10	2	West Hollywood	1	Central Hollywood	238	7.5%
Total	--		--		3,190	100%

Figure 3: FDOT Transit Survey Summary—Top 10 Trips (Route 18)

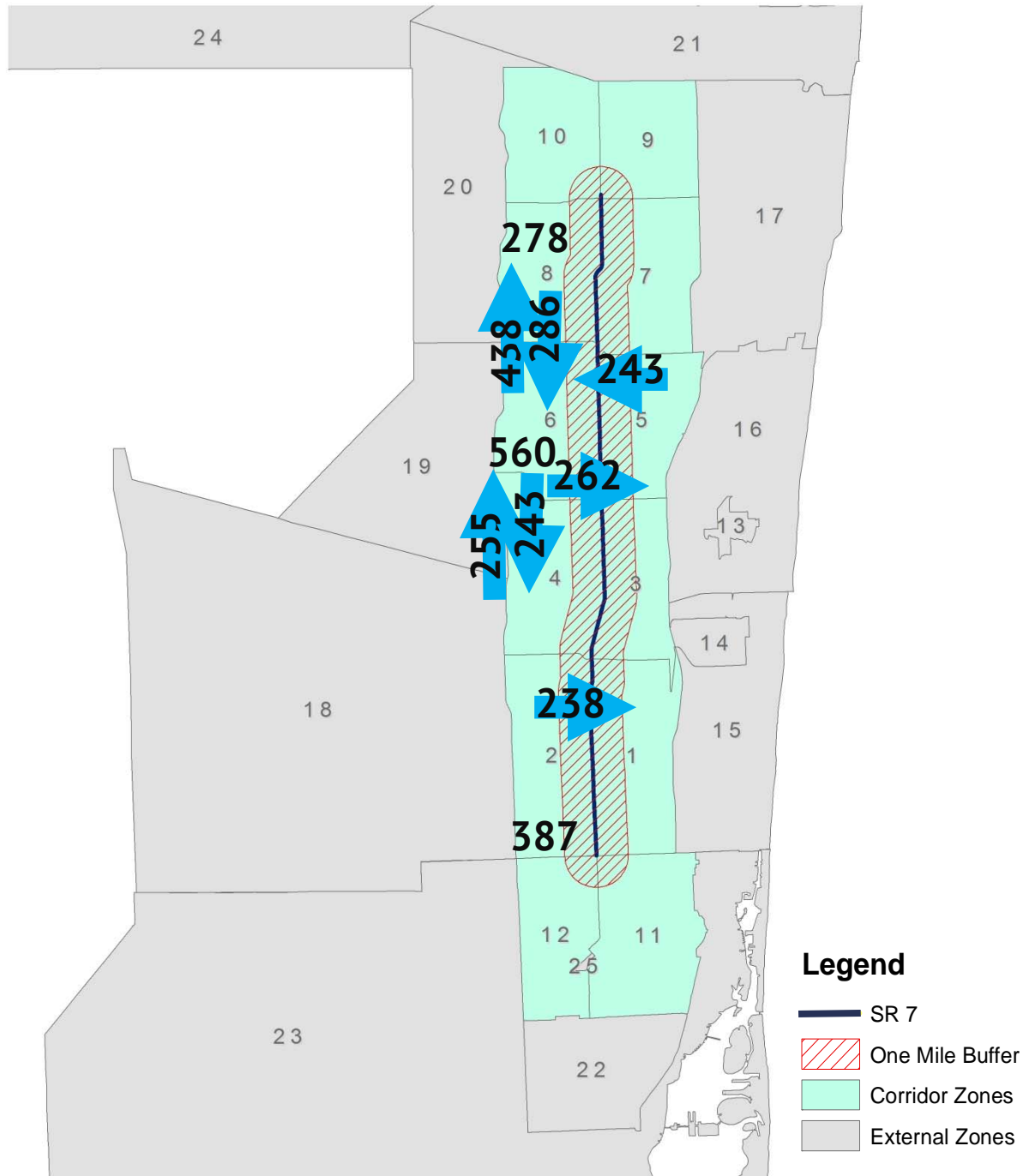
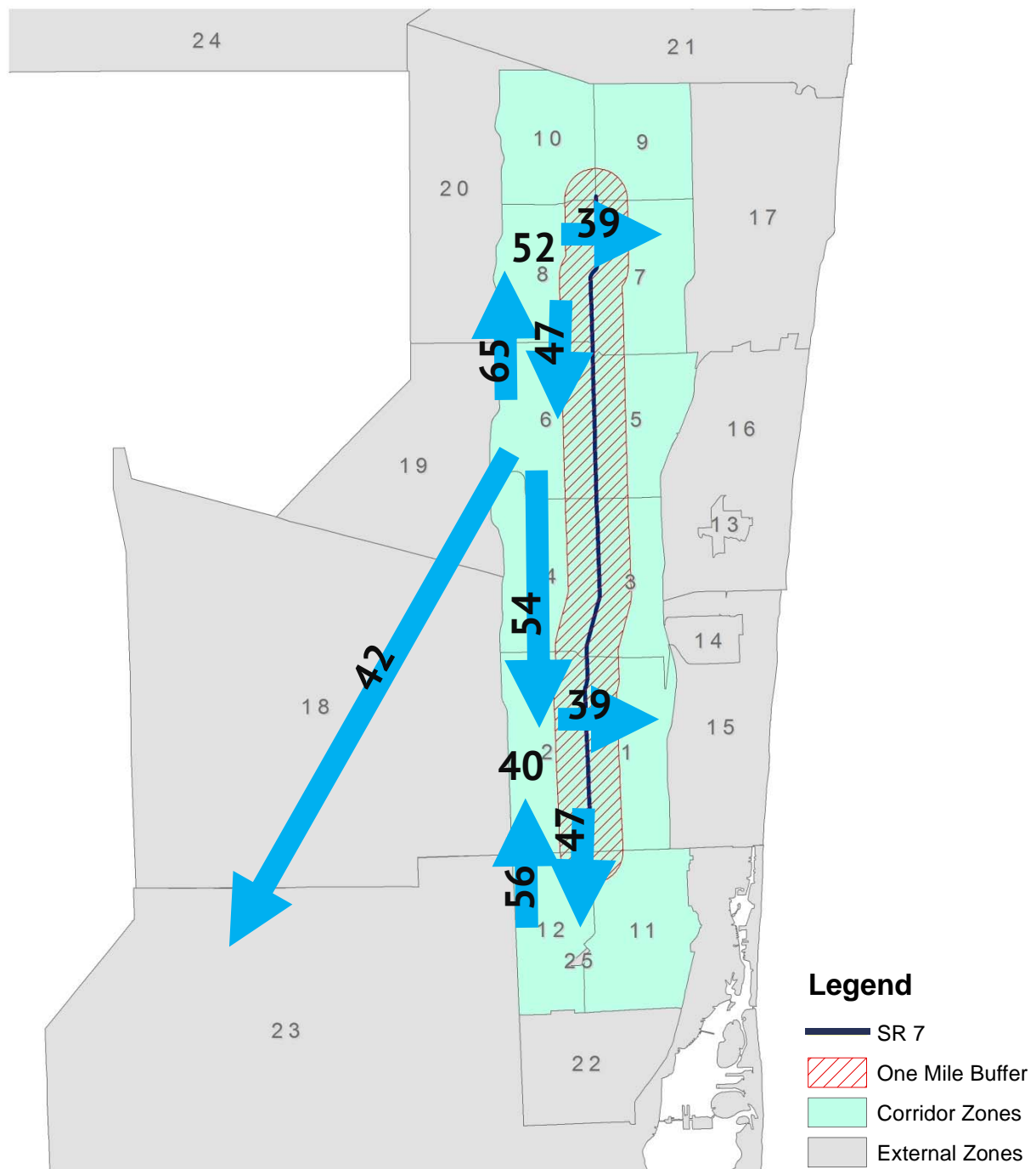


Table 3: FDOT Transit Survey Summary—Top 10 Trips (Breeze 441)

Rank	Origin Zone #	Origin Zone Description	Destination Zone #	Destination Zone Description	Count	Percent Distribution
1	6	Lauderhill	8	Margate	65	13.5%
2	12	West Golden Glades	2	West Hollywood	56	11.6%
3	6	Lauderhill	2	West Hollywood	54	11.2%
4	8	Margate	8	Margate	52	10.8%
5	8	Margate	6	Lauderhill	47	9.8%
6	2	West Hollywood	12	West Golden Glades	47	9.8%
7	6	Lauderhill	23	Other Miami-Dade County	42	8.7%
8	2	West Hollywood	2	West Hollywood	40	8.3%
9	2	West Hollywood	1	Central Hollywood	39	8.1%
10	8	Margate	7	Coconut Creek/ Pompano Beach	39	8.1%
Total	--		--		481	100%

Figure 4: FDOT Transit Survey Summary–Top 10 Trips (Breeze 441)



CONCLUSIONS

When using AirSage in the future, it would be beneficial to further break down the external zones into smaller zones in order to more accurately conclude where people are going to and coming from. As provided, the AirSage data do indicate that SR 7 is used by drivers primarily as a regional travel route between Palm Beach, Broward, and Miami-Dade counties. Comparing the nature of these auto-based trips to transit trips within the SR 7 corridor did highlight the use of transit along SR 7 primarily for shorter, local trips, while auto-trips appear to be longer and more regional in nature.

As previously discussed in Chapter 3-A: Baseline Conditions, transit-supportiveness levels are representative of the quality of service that could be supported by the existing urban intensity, defined as the total number of persons (residents and employees) per acre. The transit supportiveness levels are characterized by the following categories:

- *Low* (15–30 persons per acre) – supportive of basic bus service (15–30-minute headways)
- *Medium* (31–45 persons per acre) – supportive of enhanced-local bus service, such as high-frequency (10-minute) service and bus rapid transit (BRT) service
- *High* (greater than 45 persons per acre) – supportive of enhanced transit modes including BRT and light rail

The urban intensity analysis completed for the SR 7 corridor reflects the existing (2010) and projected (2040) population and employment density data from the Southeast Florida Regional Planning Model (SERPM). This analysis shows that the most transit-supportive areas today are in the mid-section of the corridor between Commercial Boulevard and Broward Boulevard to the east of SR 7. In these areas combined population and employment densities for most TAZs fall in the “Medium” range for 2010 and 2040. In general, the remaining areas of the corridor are supportive of basic bus service with 2010 and 2040 persons per acre falling in the “Low” range with the exception of a handful of TAZs.

The nature of shorter, localized trips, coupled with the urban intensity analysis documented in Chapter 3-A, indicates that the SR 7 corridor is supportive of enhanced local bus service, rather than enhanced transit modes, such as BRT and light rail. Therefore, transit improvements moving forward in this study will focus on enhancing operations of the existing transit service through treatments such as queue jumps and signal timing, rather than implementing new premium/enhanced services like BRT or light rail, although these modes may be studied in the future.

It was also determined completing this analysis at a system or county level would be beneficial so that the results could then be used in individual corridor studies as needed. This will give individual studies a wider access to travel flow data and can be compared to other similar corridors in the surrounding areas.



APPENDIX A: AIRSAGE TRAVEL FLOW DATA

Table A-1: AirSage Weekday Travel Flows

Zones	Destination																											
Origin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	Total
1	-	7,871.86	2,169.75	2,937.31	836.65	1,249.72	825.48	1,003.17	242.89	261.37	2,222.88	1,506.04	391.02	742.96	3,391.17	1,482.31	800.88	10,241.61	2,882.97	717.77	409.00	828.08	7,062.45	2,237.73	9.17	172.59	102.57	52,599.39
2	7,977.12	-	2,355.78	2,992.32	1,419.30	1,793.66	1,178.30	899.49	412.32	158.54	3,550.89	2,136.14	681.90	919.91	4,785.78	2,570.02	1,378.07	8,770.35	2,567.67	656.56	340.29	1,586.84	8,284.68	2,981.95	31.90	353.66	86.39	60,869.83
3	2,459.08	2,421.02	-	3,076.37	1,792.68	3,529.22	680.05	1,481.49	263.06	226.49	442.79	529.56	403.97	313.56	1,233.86	2,604.67	794.83	3,418.94	2,444.86	719.71	215.59	409.52	3,252.06	1,096.89	12.02	82.43	44.73	33,949.46
4	3,006.58	3,141.81	3,404.73	-	2,313.48	2,576.70	935.97	1,020.62	451.55	302.41	607.28	490.67	704.25	759.45	2,680.10	3,668.90	1,436.33	2,975.55	2,164.71	599.80	427.96	313.43	4,677.21	1,982.38	27.27	443.32	85.71	41,198.16
5	1,045.77	1,446.81	2,027.44	2,676.26	-	4,965.77	1,939.89	4,249.03	375.73	763.33	392.62	915.02	246.60	257.76	661.67	2,536.14	1,206.66	3,604.27	2,850.09	1,950.65	451.15	247.71	2,985.44	2,631.93	21.77	152.05	23.56	40,625.12
6	1,699.02	1,427.89	2,686.90	2,268.59	4,454.41	-	2,379.63	2,964.91	611.27	487.88	589.66	586.94	723.44	602.39	1,204.00	4,470.87	2,673.05	1,927.19	2,472.63	726.20	569.63	360.48	2,145.95	2,419.49	15.60	202.16	42.99	40,713.14
7	661.70	986.80	840.48	917.75	1,867.21	2,448.76	-	4,729.45	675.84	940.43	285.92	202.70	88.36	293.36	486.95	1,400.24	2,255.50	1,858.31	1,606.40	2,353.77	427.35	162.64	2,927.66	1,256.75	14.30	189.08	15.43	29,893.13
8	610.68	645.14	1,464.53	855.36	3,055.62	3,423.22	4,174.15	-	1,289.92	1,288.98	285.08	373.28	242.60	418.71	691.42	2,403.26	3,605.26	1,217.51	1,496.02	2,139.59	987.47	163.51	1,702.38	1,827.10	-	110.44	80.93	34,552.15
9	240.83	313.20	284.61	400.20	355.47	672.22	1,088.93	1,089.84	-	268.98	90.73	141.43	72.75	63.34	213.48	359.72	494.19	340.14	249.36	411.93	168.53	65.93	678.89	381.95	13.50	91.80	-	8,551.96
10	223.39	208.78	264.39	386.17	586.67	442.88	1,080.72	1,177.49	255.12	-	48.27	118.98	110.28	80.23	71.22	525.25	598.36	244.72	197.16	604.42	149.42	44.33	352.24	306.46	-	91.23	-	8,168.18
11	2,300.20	3,573.28	590.88	753.86	267.70	654.89	307.55	298.61	106.69	33.32	-	3,137.51	127.31	171.43	1,082.21	460.26	262.57	3,379.75	736.75	359.40	182.98	1,368.70	8,158.88	930.85	82.78	386.01	76.38	29,790.75
12	1,492.65	2,055.78	414.74	644.84	664.65	228.60	282.56	135.34	68.52	2,959.92	-	-	149.01	107.79	1,045.61	464.70	324.13	2,089.93	575.71	155.95	135.67	1,218.48	6,455.19	757.18	31.61	196.39	44.49	23,355.31
13	368.91	640.01	503.08	894.93	306.11	925.43	199.72	401.97	65.14	71.14	177.94	161.96	-	47.91	130.52	304.55	54.79	1,596.90	682.12	187.19	34.74	35.51	1,007.08	259.74	8.18	31.51	-	9,097.09
14	476.68	1,007.47	355.35	595.62	524.64	581.13	356.38	383.71	108.56	93.49	140.29	144.18	39.44	-	229.57	239.45	161.12	1,159.78	606.81	273.37	132.10	121.02	2,543.55	919.21	27.27	133.79	35.74	11,389.72
15	3,182.75	5,371.73	1,214.44	1,921.57	583.31	1,413.99	544.69	545.23	216.48	135.08	1,255.33	1,115.35	145.23	203.86	-	757.67	344.85	5,587.13	1,465.30	397.03	94.48	328.68	5,449.57	952.17	22.27	98.04	65.66	33,411.88
16	1,816.36	2,791.21	2,488.25	2,991.37	2,341.46	4,526.23	1,554.48	2,440.83	231.85	244.83	387.19	671.22	404.86	598.88	800.21	-	939.82	4,679.72	3,476.41	1,222.82	208.24	353.77	3,975.69	1,172.78	29.10	191.12	70.96	40,609.66
17	754.48	1,563.20	739.32	1,548.77	1,195.60	2,765.72	2,291.47	3,414.80	556.33	501.95	308.05	327.21	70.67	215.75	443.34	1,068.79	-	2,667.01	1,752.16	1,926.93	373.66	86.07	3,143.42	679.23	37.44	72.00	41.45	28,544.83
18	8,517.81	8,410.69	2,944.19	3,207.45	2,593.13	1,587.30	1,546.01	1,463.05	376.03	343.47	3,789.00	1,841.44	1,358.88	2,761.28	5,900.37	4,791.33	2,418.53	-	1,507.09	453.52	529.32	1,059.11	7,417.25	2,871.41	37.58	625.08	76.08	68,426.40
19	2,641.32	2,453.00	1,925.50	1,987.86	3,079.82	2,733.99	1,379.00	1,447.62	380.71	280.59	846.46	617.85	764.18	506.34	1,437.92	3,432.23	1,879.82	1,534.75	-	562.58	553.14	423.35	3,195.37	1,667.03	-	276.37	23.00	36,029.80
20	497.93	472.31	388.93	364.75	1,189.68	1,080.27	1,983.48	2,117.26	451.54	501.89	152.92	175.43	271.05	202.99	316.38	1,570.17	1,802.74	406.79	663.21	-	412.62	99.40	642.85	798.45	13.04	94.42	20.59	16,691.07
21	313.50	306.38	306.52	297.04	358.12	464.76	549.60	891.51	270.76	161.15	108.81	43.30	44.39	110.69	138.19	203.82	437.07	458.76	363.45	277.01	-	37.38	801.45	403.19	-	44.29	21.44	7,412.57
22	904.20	1,148.94	313.17	476.19	198.29	355.18	158.49	97.56	43.63	36.17	1,534.86	1,513.04	45.04	41.95	340.83	146.47	154.40	924.17	419.21	163.28	34.42	-	1,550.64	401.03	-	40.30	13.63	11,055.10
23	7,394.00	8,604.37	2,522.23	3,764.53	2,560.67	2,231.20	3,225.08	1,835.51	818.38	370.80	7,977.80	6,634.42	727.48	1,834.76	4,643.57	4,031.40	2,923.15	7,896.36	2,925.91	799.63	922.15	1,638.65	-	9,194.10	43.64	528.48	155.75	86,204.00
24	2,159.70	2,946.95	1,041.77	1,552.97	1,872.05	1,724.68	1,345.44	2,173.20	454.52	515.59	667.78	633.17	186.73	883.01	1,102.61	1,264.70	936.51	2,573.78	1,362.69	695.00	507.46	486.05	8,012.86	-	11.97	389.41	184.89	35,685.47
25	10.79	23.18	15.07	29.90	15.39	-	37.10	-	-	-	70.60	50.37	35.28	-	42.63	9.32	-	28.00	24.50	-	-	-	74.74	-	-	-	-	466.87
26	346.20	547.55	93.36	264.39	145.16	226.30	194.17	103.63	64.82	49.87	384.53	377.51	50.79	82.79	233.32	98.75	85.67	669.09	349.77	125.60	67.87	46.22	719.20	528.45	-	-	-	5,855.02
27	86.75	144.45	46.26	112.06	44.56	40.18	40.21	20.74	12.83	11.59	101.63	65.07	12.55	25.07	100.19	56.04	20.53	74.05	43.35	-	12.40	-	93.11	264.47	-	-	-	1,428.09
Total	51,188.41	60,523.81	31,401.67	37,918.41	34,621.83	43,069.30	30,224.59	36,533.27	8,871.29	8,117.83	29,379.23	24,509.80	8,098.04	12,246.15	33,407.12	40,921.02	27,988.82	70,324.58	35,886.31	18,479.68	8,347.65	11,484.85	87,309.82	38,921.93	490.41	4,995.99	1,312.34	796,574.14

Note: Highlighted cells represent top 10 trip pairs summarized in Table 1.

Table A-2: Route 18 Weekday Travel Flows

Daily (Route 18)	Destination																								Total
Origin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1	144	215	24	70	24	91	4	18	2	9	37	122	16	0	37	49	14	67	27	0	0	0	117	3	1090
2	238	387	114	83	47	92	45	76	34	8	84	183	18	8	50	25	4	23	33	9	20	24	163	21	1789
3	115	147	33	86	61	152	23	83	15	25	18	19	0	0	47	28	4	9	19	6	4	7	29	0	930
4	34	84	90	72	118	255	11	79	0	7	4	64	6	0	8	50	0	27	11	46	8	5	48	5	1032
5	31	54	33	112	118	243	83	212	10	17	0	24	16	0	11	28	17	10	81	15	20	8	23	23	1189
6	110	176	200	243	262	560	192	438	21	69	13	33	10	10	51	166	65	53	90	47	40	13	21	8	2891
7	2	25	21	30	34	114	47	111	11	50	33	0	31	4	4	65	8	7	32	29	13	0	15	3	689
8	40	69	61	68	151	286	226	278	86	26	4	23	10	18	6	92	82	8	69	31	73	0	24	29	1760
9	0	0	0	7	8	27	3	17	0	0	9	0	0	0	0	21	3	9	0	0	29	0	0	0	133
10	0	5	0	7	21	67	40	43	6	4	0	15	0	0	0	4	6	0	10	0	36	0	0	3	267
11	88	97	0	5	6	39	10	9	0	0	19	13	5	0	11	17	8	44	4	0	5	0	26	0	406
12	166	222	52	53	18	69	9	27	14	12	18	56	14	8	9	22	4	69	54	0	0	12	18	0	926
13	5	24	0	17	6	0	0	6	7	0	5	5	0	0	0	0	0	0	0	0	0	0	4	0	79
14	0	4	5	5	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17
15	26	68	20	16	14	57	4	14	0	0	0	11	0	0	7	5	0	0	16	0	0	17	12	0	287
16	5	81	29	50	51	116	28	67	14	18	5	10	13	0	0	14	9	28	48	12	0	0	8	7	613
17	0	0	8	18	31	56	7	39	9	10	0	0	0	0	0	14	0	27	8	0	0	0	0	24	251
18	35	78	22	0	8	22	3	10	0	0	5	49	0	0	11	15	8	4	0	0	0	8	39	0	317
19	5	41	36	7	23	10	14	13	0	3	0	0	0	0	11	16	0	4	25	0	4	0	0	3	215
20	7	21	6	3	12	25	32	72	32	0	0	11	4	0	0	3	9	0	0	0	17	0	0	0	254
21	0	5	7	7	8	32	10	35	13	18	0	3	0	0	0	4	16	0	3	10	18	0	0	0	189
22	72	54	0	10	4	4	0	0	0	0	4	8	13	0	4	4	0	40	5	0	0	0	0	0	222
23	85	112	30	5	9	16	0	23	5	39	12	32	8	0	11	4	0	65	13	0	4	5	31	0	509
24	5	2	0	0	3	8	53	21	10	6	0	0	0	0	7	7	57	0	21	0	0	3	0	0	203
Total	1213	1971	791	974	1037	2344	844	1691	289	321	270	681	164	48	285	653	314	494	569	205	291	102	578	129	16,258

Note: Highlighted cells represent top 10 trip pairs summarized in Table 2Table 1.

Table A-3: Route 441 Weekday Travel

Daily (Route 441)	Destination																								Total
Origin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Total
1	7	19	15	13	17	14	7	5	0	4	0	34	3	0	0	5	0	0	7	3	0	4	15	0	172
2	39	40	21	20	14	38	14	17	5	0	21	47	0	0	4	28	6	9	0	7	0	4	22	0	356
3	3	25	3	0	0	21	8	14	0	3	0	8	0	0	2	7	0	3	7	3	0	0	0	0	107
4	12	28	11	5	4	18	6	26	7	11	3	5	3	0	7	11	3	0	10	0	0	0	8	0	178
5	14	20	0	26	0	22	10	8	0	3	7	9	0	0	3	6	6	10	0	0	0	0	7	0	151
6	38	54	25	38	14	23	20	65	9	20	0	6	0	0	16	11	6	20	15	8	0	3	42	0	433
7	13	17	4	4	0	16	18	11	3	0	5	0	3	0	3	3	0	2	5	0	0	0	0	0	107
8	31	35	21	9	3	47	39	52	3	11	5	13	3	6	2	22	7	13	13	3	0	4	9	0	351
9	0	0	0	0	0	3	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22
10	3	6	0	6	0	3	13	0	0	0	0	2	0	0	0	3	0	2	0	0	0	0	4	0	42
11	8	33	6	6	4	4	0	2	0	0	4	0	0	0	0	0	3	8	3	0	0	0	3	0	84
12	28	56	4	17	5	35	0	15	0	2	0	20	8	0	7	11	0	14	5	2	0	0	4	0	233
13	0	0	0	0	0	0	0	5	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3	0	11
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	8	4	3	7	9	2	10	0	0	2	0	0	0	4	0	0	0	3	0	0	0	8	0	60
16	2	6	0	0	3	4	7	16	0	0	0	0	0	0	0	0	0	5	0	3	0	3	5	0	54
17	3	7	0	0	3	15	3	3	3	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	39
18	3	0	0	3	4	0	2	9	0	0	4	25	0	0	0	0	3	0	0	0	4	0	0	0	57
19	7	4	0	0	0	3	0	3	0	0	0	0	3	0	0	0	3	0	0	0	0	0	8	0	31
20	0	7	0	4	7	0	3	20	0	0	0	0	0	0	2	4	4	0	0	0	0	0	0	0	51
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	12	15	3	0	0	0	0	4	0	0	0	0	0	0	4	0	0	0	4	4	0	0	0	0	46
23	14	15	5	8	8	16	5	9	0	4	0	0	3	0	7	5	4	4	9	0	0	0	6	2	124
24	0	0	0	0	0	0	0	10	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	14
Total	237	395	122	162	93	291	157	323	30	61	51	169	30	6	63	116	45	90	81	33	4	18	144	2	2723

Note: Highlighted cells represent top 10 trip pairs summarized in Table 1.