

2014 LEVEL OF SERVICE REPORT

CITY OF AIKEN, SC

Prepared for:

THE CITY OF AIKEN

Prepared by:



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Introduction & Methodology

This 2014 Level-of-Service (LOS) report was prepared by SRS Engineering to analyze the information and trends developed as part of the City of Aiken's biennial level of service (LOS) analysis. The City of Aiken adopted a Traffic Management Ordinance to provide better review and analysis of the potential impact of proposed developments. The Ordinance requires that there be prepared a map showing the LOS of the major streets in Aiken on a basis of at least once every two years. This process includes the acquisition of traffic counts using mechanical devices on the majority of the arterial streets and some of the collector streets in the City and the analysis of the data to establish the LOS for each of the street segments studied. The process has been used in 2004, 2006, 2008, 2010, and 2012 and for the current report for 2014. Based on direction given by City staff in the Spring, the same format/methodology has been used for this report that has been used for previous years. Recommendations are provided with regards to potential changes to this study in the last section of this report.

In the Spring of 2014, traffic counts were made at 99 count stations, some of which are also established count locations for the South Carolina Department of Transportation (SCDOT). **Figure 1** shows the locations of the traffic count stations. Typically, the count machines are placed at each station for 2 to 3 days. Generally, the highest weekday total between Tuesday and Thursday is selected for use and the tallies are sent to the SCDOT for processing. SCDOT uses the raw count data which is supplied by the City and returns an estimated average annual daily traffic (AADT) for each location. This AADT represents effects of daily and seasonal variation and is developed using factors that the SCDOT will not divulge. Since they are averages, the AADT's returned from SCDOT will be exceeded on some days and of course will exceed actual daily volumes on certain days. However, this data provides a good basis for an "apples to apples" comparison of traffic counts both in terms of location and time.

The AADT data is then used to calculate a volume-to-capacity ratio (v/c ratio). This ratio is calculated by dividing the AADT by the daily capacity of the roadway. Methodology developed by the Florida Department of Transportation (FDOT) is used to estimate the daily carrying capacity of each segment of roadway in the study network. The FDOT methods are based on the Highway Capacity Manual and include many years of research in the state of Florida to confirm the values. The daily capacity values take into consideration the number of lanes, the presence of medians, the presence and density of traffic signals, speed limits, the amount of turning traffic and many other factors. The value of the v/c ratio is then used to assign an LOS to each segment of the study network. The following **Table 1** shows the v/c ratios and LOS used by the City of Aiken as required by the Traffic Management Ordinance. These values are very close but differ slightly from criteria used by SCDOT. As seen in Table 1, streets are considered congested when the v/c ratio exceeds 0.70, which means the LOS is D or worse. In other words, when the daily capacity has been used to the extent of 70% of its availability, it is expected that there will be traffic congestion. During peak hours it is expect that traffic flow will be restricted with traffic operations in the range of LOS D and possibly worse. LOS at individual intersections is

measured in a different manner which takes into account the amount of stopped-time delay. It is possible to have LOS on a daily basis, as are used in the Aiken procedure, that differ from the LOS measured in the peak hours at intersections in the system. There may be times of the day when the LOS at intersections or within the segments is better or worse than the value calculated using the daily capacity and the AADT. However, this procedure does give a good indication of street segments that have capacity limitations and congestion issues. For example, in Table 1 it is seen that a segment of street with an LOS C would have acceptable traffic operations when looking at the overall segment and the overall day. There might be times such as the morning, midday and afternoon peak hours when the LOS in a segment might be better or worse than the overall LOS. Again, this procedure provides a snapshot of overall traffic operations. The Aiken Traffic Management Ordinance provides requirements for traffic studies depending upon the LOS derived in this process and the anticipated traffic generation and additions that will result from new development. The scope of the study depends upon the predicted trip generation and the current LOS of each segment of a street facility.

Table 1
LOS CRITERIA FOR CITY OF AIKEN NETWORK
2014 LOS REPORT

LOS	V/C Ratio	Comments
A	≤ 0.30	Excellent traffic flow
B	> 0.30 and ≤ 0.50	Good traffic flow
C	> 0.50 and ≤ 0.70	Average traffic flow
D	> 0.70 and ≤ 0.90	Acceptable traffic flow
E	> 0.90 and ≤ 1.0	Congested traffic flow
F	> 1.0	Severely congested traffic flow

Analysis of Traffic Count Data

The following **Table 2** shows the AADTs and LOS for the various segments of the study network. Street segments with LOS E or F are highlighted. The last column in the table notes a change in service level if it changed between 2012 and 2014.

Table 2
2014 AADT'S AND LOS FOR CITY OF AIKEN NETWORK
2014 LOS REPORT

Segment	Street	From	To	2014 AADT	V/C Ratio	2014 LOS	Change in LOS 2012 to 2014
1	Centennial	Corporate	Churchill	5,700	0.35	B	-
2	Fabian	Pawnee	Silver Bluff Road	5,900	0.48	B	-
3	Pawnee	West Pine Log Road	Fabian	3,700	0.30	A	C to A
4	Pawnee	Fabian	Dougherty	750	0.06	A	-
5	Vauluse Road	Robert Bell Pkwy.	Gregg Ave.	1,500	0.11	A	-
6	Vauluse Road	Gregg Ave.	Trolley Line Road	1,450	0.11	A	-
7	Vauluse Road	Trolley Line Road	Richland Ave. West	3,500	0.26	A	-
8	University Pkwy.	Robert Bell Pkwy.	Trolley Line Road	4,400	0.34	B	A to B
9	University Pkwy.	Trolley Line Road	Medical Park	8,200	0.50	B	-
10	University Pkwy.	Medical Park	Physicians	12,100	0.74	D	-
11	University Pkwy.	Physicians	Richland Ave. West	12,800	0.99	E	F to E
12	Beaufort Street	Hampton/Camellia	Richland Ave. East	4,200	0.34	B	A to B
13	Gregg Ave.	Vauluse Road	Trolley Line Road	475	0.04	A	-
14	Gregg Ave.	Trolley Line Road	Richland Ave. West	3,400	0.27	A	-
15	Hampton Ave.	York Street	Horry Street	4,800	0.37	B	-
16	Hampton Ave.	York Street	Laurens Street	8,700	0.67	C	D to C
17	Hampton Ave.	Laurens Street	Vauluse Road	6,000	0.46	B	C to B
18	Wire Road	Horry Street	Rudy Mason Pkwy.	4,700	0.37	B	A to B
19	Hayne/Park Ave.	Richland Ave. West	Chesterfield	8,700	0.67	C	-
20	Park Ave.	Chesterfield	Orangeburg	2,200	0.13	A	-
21	Park Ave.	Orangeburg	Beaufort	2,200	0.14	A	-
22	Park Ave.	Beaufort	Richland Ave. East	1,900	0.14	A	-
23	Two Notch Road	South Boundary	Audubon	200	0.02	A	-
24	Two Notch Road	Audubon	East Pine Log Road	2200	0.15	A	-
25	Dougherty Road	Silver Bluff Road	Neilson Street	12,100	0.94	E	-
26	Dougherty Road	Neilson Street	Whiskey Road	12,400	0.96	E	-
27	Powderhouse Road	South Boundary	East Pine Log Road	3,350	0.26	A	-
28	Powderhouse Road	East Pine Log Road	Whiskey Road	5,000	0.39	B	A to B
29	Banks Mill Road	South Boundary	East Pine Log Road	4,000	0.30	A	-
30	Trolley Line Road	Robert Bell Pkwy.	University Pkwy.	4,750	0.37	B	-
31	Trolley Line Road	University Pkwy.	Gregg Ave.	5,000	0.38	B	-
32	Trolley Line Road	Gregg Ave.	Vauluse Road	5,700	0.43	B	-
33	Silver Bluff Road	Whiskey Road	West Pine Log Road	10,800	0.83	D	-
34	Hitchcock Pkwy.	Richland Ave. West	Augusta Road	13,900	0.85	D	-
35	Hitchcock Pkwy.	Augusta Road	Dibble Road	18,400	0.89	D	-
36	Hitchcock Pkwy.	Dibble Road	Casaba Road	19,000	0.92	E	-
37	Hitchcock Pkwy.	Casaba Road	Silver Bluff Road	17,300	0.84	D	-
38	Rudy Mason Pkwy.	Charleston Hwy.	Wagener Road	16,400	0.80	D	-
39	Rudy Mason Pkwy.	Wagener Road	Willow Run Road	12,300	0.76	D	-
40	Rudy Mason Pkwy.	Willow Run Road	Wrights Mill Road	12,500	0.35	B	-
41	Rudy Mason Pkwy.	Wrights Mill Road	Wire Road	13,900	0.39	B	-
42	Rudy Mason Pkwy.	Wire Road	York Street	14,700	0.41	B	-
43	Robert M. Bell Pkwy.	University Pkwy.	Trolley Line Road	10,000	0.61	C	B to C
44	Robert M. Bell Pkwy.	Trolley Line Road	Gregg Hwy.	9,800	0.60	C	-
45	Robert M. Bell Pkwy.	Gregg Hwy.	Richland Ave. West	10,400	0.64	C	B to C

TABLE 2 CONTINUED

Segment	Street	From	To	2014 AADT	V/C Ratio	LOS	Change in LOS 2012 to 2014
46	Rutland Drive	York Street	Edgefield Hwy.	12,300	0.76	D	B to D
47	University Pkwy.	Edgefield Hwy.	Vaucluse Road	7,100	0.44	B	-
48	University Pkwy.	Vaucluse Road	Hudson Road	7,700	0.47	B	-
49	University Pkwy.	Hudson Road	University Pkwy.	11,500	0.71	D	B to D
50	Chesterfield	Park Ave.	South Boundary	7,300	0.58	C	-
51	Edgefield Hwy.	Croft Mill	Rutland Drive	11,100	0.89	D	E to D
52	Laurens Street	Hampton Ave.	Richland Ave. West	7,200	0.28	A	-
53	Laurens Street NW	Rutland Drive	Hampton Ave.	6,250	0.25	A	-
54	Whiskey Road	South Boundary	Grace	19,600	1.31	F	-
55	Whiskey Road	Grace	Dupree	19,900	1.33	F	-
56	Whiskey Road	Dupree	Berrie	20,800	1.39	F	-
57	Whiskey Road	Berrie	Boardman	20,000	1.33	F	-
58	Whiskey Road	Boardman	Hitchcock	21,000	0.68	C	-
59	Whiskey Road	Hitchcock	Silver Bluff/ Price Ave.	20,800	0.63	C	-
60	Whiskey Road	Silver Bluff/ Price Ave.	Pine Log Road	15,700	0.48	B	-
61	Whiskey Road	Pine Log Road	Millbrook	23,600	0.72	D	-
62	Whiskey Road	Millbrook	Corporate	25,800	0.79	D	-
63	Whiskey Road	Corporate	Dougherty	28,500	0.87	D	-
64	Whiskey Road	Dougherty	East Gate	32,200	0.98	E	D to E
65	Whiskey Road	East Gate	Lower Mall/Lowes	21,400	0.65	C	D to C
66	Whiskey Road	Lower Mall/Lowes	Brookhaven	20,800	0.64	C	-
67	Whiskey Road	Brookhaven	Powderhouse Road	21,400	0.65	C	-
68	Whiskey Road	Powderhouse Road	Citadel	20,800	0.63	C	-
69	Whiskey Road	Citadel	Chukker Creek Road	19,400	0.60	C	-
70	Whiskey Road	Chukker Creek Road	Talatha Church Road	17,250	0.53	C	-
71	East Pine Log Road	Whiskey Road	Two Notch Road	21,500	0.66	C	-
72	East Pine Log Road	Two Notch Road	Powderhouse Road	23,500	0.72	D	C to D
73	East Pine Log Road	Powderhouse Road	Banks Mill Road	23,000	0.71	D	-
74	East Pine Log Road	Banks Mill Road	Old Airport Road	19,800	0.61	C	-
75	East Pine Log Road	Old Airport Road	Charleston Hwy.	17,200	0.53	C	-
76	Silver Bluff Road	Hitchcock Pkwy./West P	Dougherty	23,600	0.72	D	C to D
77	Silver Bluff Road	Dougherty	Pine Log Road	27,100	0.83	D	-
78	Silver Bluff Road	Pine Log Road	Town Creek Road	16,900	0.52	C	B to C
79	Silver Bluff Road	Town Creek Road	Hartwell	15,000	0.92	E	D to E
80	Silver Bluff Road	Hartwell	Woodside Plantation	12,700	0.77	D	-
81	Silver Bluff Road	Woodside Plantation	Pascallis	9,800	0.60	C	-
82	Silver Bluff Road	Pascallis	Richardsons Lake	8,900	0.54	C	-
83	West Pine Log Road	Silver Bluff Road	Pawnee	20,400	0.62	C	-
84	West Pine Log Road	Pawnee	Whiskey Road	20,000	0.61	C	-
85	York Street	Aldrich St.	Yates	11,200	0.34	B	-
86	York Street	Yates	Rudy Mason Pkwy.	15,400	0.47	B	-
87	York Street	Rudy Mason Pkwy.	Hampton Ave.	13,800	0.43	B	-
88	York Street	Hampton Ave.	Richland Ave. East	6,600	0.20	A	-
89	Jefferson Davis Hwy.	West of City	SC 118	20,800	0.60	C	-
90	Richland Ave. West	SC 118	SC 421	13,900	0.40	B	-
91	Richland Ave. West	SC421	Gregg Hwy.(S-895)	21,200	0.62	C	-
92	Richland Ave. West	Gregg Hwy.	University Pkwy.	22,800	0.66	C	-
93	Richland Ave. West	University Pkwy.	Gregg Ave.	20,700	0.63	C	-
94	Richland Ave. West	Gregg Ave.	Valley	19,100	0.58	C	-
95	Richland Ave. West	Valley	Hayne	12,000	0.36	B	C to B
96	Richland Ave. West	Hayne	Vaucluse/Waterloo	13,400	0.41	B	-
97	Richland Ave. West	Vaucluse/Waterloo	Newberry	10,500	0.32	B	-
98	Richland Ave. West/East	Newberry	Beaufort	8,300	0.26	A	-
99	Richland Ave. East	Beaufort	Rudy Mason Pkwy.	9,200	0.28	A	-

It should be noted that 20 of the 99 roadway segments had a change in service level from 2012 to 2014; 7 segments improved in service level and 13 segments declined in service level. Notable changes are discussed as follows:

- Segment 3 along Pawnee Street decreased significantly in volume from 2012 to 2014 resulting in an improvement in service level from C to A. Based on discussions with City staff indicates that a medical office closed in proximity to this location that could have attributed to this drop in volume.
- Segment 11 along University Parkway decreased slightly, resulting in a change from LOS F to E. Congestion is still a factor for this segment between Richland Avenue and Medical Park Drive. It should be noted that the most recent SCDOT count (2013) was 13,000 vpd; similar to our 2014 count of 12,800 vpd.
- Segment 46 along Rutland Drive saw a significant increase in volume to 12,300 vpd over 7,800 vpd reported in 2012 resulting in a LOS change from B to D. The 2014 volume is similar to that of the 2010 volume of 12,900 vpd. The 2013 reported SCDOT volume was 14,000 vpd.
- Segment 49 along University Parkway saw a significant increase in volume to 11,500 vpd over 7,800 vpd reported in 2012 resulting in a LOS change from B to D. The 2014 volume is similar to that of the 2010 volume of 10,800 vpd.
- Segment 51 along Edgefield Highway saw a slight decrease in volume from 2012 to 2014, resulting in an improvement from E to D based on V/C criteria however the traffic flow hasn't changed significantly.
- Segment 64 along Whiskey Road between Dougherty and East Gate saw a significant increase over 2012 volumes, resulting in a LOS change from D to E, however the 2014 volume is very similar to the 2010 reported volume of 33,000 vpd. SCDOT's reported 2013 volume for this segment was 33,600 vpd.
- Segment 79 along Silver Bluff Road degraded from LOS D to E from 2012 to 2014. The Village development may have added volume to this segment. The 2014 volume of 15,000 is still less than the 2008 reported volume of 15,250 vpd. SCDOT's reported 2013 volume for this segment was 13,300 vpd.

Upon meeting with Planning staff to present preliminary results, five locations were identified for recounts based on comparisons data from past studies and for general quality control. The results of these recounts are as follows:

Seg. 16: Hampton Avenue (Laurens to York): Spring – 8,400 Fall Recount – 8,700

Seg. 33: Silver Bluff Rd. (Whiskey to W. Pine Log): Spring – 10,800 Fall Recount – 10,300

Seg. 37: Hitchcock Pkwy. (Casaba to S. Bluff): Spring – 16,600 Fall Recount – 17,300

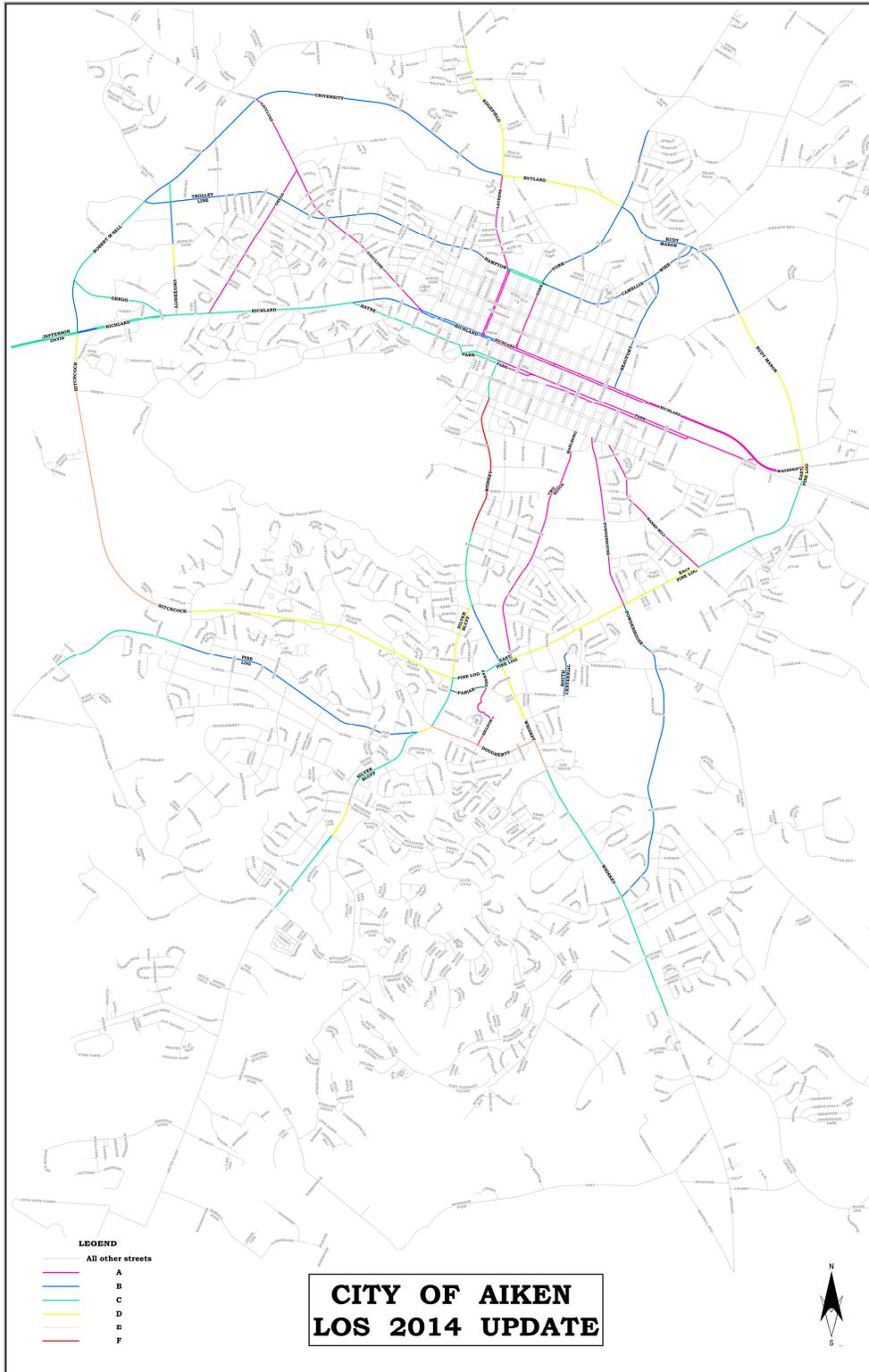
Seg. 61: Whiskey Rd. (Pine Log to Millbrook): Spring – 20,900 Fall Recount – 23,600

Seg. 67: Whiskey Rd. (Pine Log to Millbrook): Spring – 20,800 Fall Recount – 21,400

All re-counts were greater for each of the five re-counted segments with the exception of Segment 33 along Silver Bluff Road, which was greater in the Spring. For each location, the greater volume was utilized in the LOS designation to present a conservative analysis.

Figure 2 shows the LOS for the study network on a base map prepared by the City's Department of Public Works/Engineering. As seen in Table 2 and on Figure 2, there are some street segments with poor levels of service of E and F and quite a few with LOS D. There are more segments operating at LOS D in 2014 than in 2012.

Figure 2 Aiken 2014 LOS for Study Network



As noted in Table 2 and shown in Figure 2, the locations with LOS D, E or F are on segments of Hitchcock Parkway, Whiskey Road, Edgefield Highway, Dougherty Road and University Parkway.

The following **Table 3** provides a summary of the LOS for the City of Aiken study network.

Table 3
SUMMARY OF LOS FOR CITY OF AIKEN NETWORK
2014 LOS REPORT

LOS Classification	Street Mileage	% of Total Mileage	Proportion
A	16.3	25.67%	About 3/4
B	16.9	26.61%	
C	13.9	21.89%	
D	11.1	17.48%	About 1/4
E	4.0	6.30%	
F	1.3	2.05%	
Total	63.5	100%	

As shown in Table 3, approximately 25% of the street mileage in the Aiken study network has LOS D, E or F designation, with approximately 8.3% having E or F. Therefore, about one-fourth of the major street mileage in Aiken has traffic flow conditions considered below average. This is slightly worse than 2012 conditions when about one-fifth of the street mileage had LOS D, E or F, with the percentage change from about 20% up to about 25%. The 2014 data is more in line with data presented for 2010. The most notable change from 2012 to 2014 is in the percentage of roadways operating at LOS D; which went from 10.7% in 2012 to 17.5% in 2014. Sections designated for LOS E and F stayed approximately the same.

Trends Analysis

A review of traffic count data extending back to 2006 was made in order to see if there are any trends of note in the congestion and levels of service in the study network.

A calculation was made to determine the overall level of travel in the study network over the last eight years. This calculation was made by multiplying the length of each segment by the AADT and the number of days to develop the total vehicle-miles of travel for each segment and the network as a whole. **Table 4** shows the total travel in the Aiken study network for the years 2006, 2008, 2010 and 2012. As seen in Table 4, there was an increase in total vehicle-miles of travel between 2006 and 2008 of 13.8%. Between 2008 and 2010, there was a decrease in total travel of about 4.2%. Between 2010 and 2012, there was a decrease in total travel of about 6.7%. As shown, for 2014 total vehicle miles traveled increased in the network for the first time since 2008, which likely reflects recent increases in economic activity. The vehicle miles traveled estimated for this 2014 report were slightly less than 2008 (pre-recession) levels.

Table 4
TOTAL TRAVEL FOR CITY OF AIKEN NETWORK
2006 -2014 (SEMI-ANNUAL)
2014 LOS REPORT

Year	Total Vehicle-Miles of Travel (million vehicle-miles)	Change from Previous	Comments
2006	229.8	NA	Baseline year
2008	261.46	13.80%	Rudy Mason Pkwy. and new Wal-mart affect travel
2010	250.51	-4.20%	May reflect economic conditions
2012	233.74	-6.70%	Reflects economic conditions
2014	255.44	9.30%	May reflect economic recovery

The declines in total miles of travel on the Aiken street network between 2008 and 2012 generally compare to national trends for travel, reflecting the shrinkage in the national economy. The documented increase for this current 2014 study is also in line with national trends of increased economic activity. **Table 5** shows the trends for the individual street segments in the study network. In some cases, segments were added to the study network or revised and those are noted with NA in the table.

Table 5
TRAFFIC VOLUME CHANGES 2006 - 2014
2014 LOS REPORT

Segment	Street	From	To	AADT 2006	AADT 2008	AADT 2010	AADT 2012	AADT 2014	Change from 2012 to 2014
1	Centennial Ave.	Corporate Pkwy.	Churchill	8,600	6,900	5,200	7,600	5,700	-25%
2	Fabian	Pawnee	Silver Bluff Road	NA	NA	6,700	5,200	5,900	13%
3	Pawnee	West Pine Log Road	Fabian	NA	NA	NA	6,900	3,700	-46%
4	Pawnee/Neilson	Fabian	Dougherty Road	NA	NA	NA	1,100	750	-32%
5	Vaocluse Road	Robert Bell Pkwy.	Gregg Ave.	2,900	1,400	1,600	1,600	1,500	-6%
6	Vaocluse Road	Gregg Ave.	Trolley Line Road	2,900	3,200	1,600	1,600	1,450	-9%
7	Vaocluse Road	Trolley Line Road	Richland Ave. West	2,900	3,200	1,600	1,600	3,500	119%
8	University Pkwy.	Robert Bell Pkwy.	Trolley Line Road	4,300	6,300	6,900	3,500	4,400	26%
9	University Pkwy.	Trolley Line Road	Medical Park	4,300	6,300	6,900	7,500	8,200	9%
10	University Pkwy.	Medical Park	Physicians	7,100	9,000	13,700	14,200	12,100	-15%
11	University Pkwy.	Physicians	Richland Ave. West	7,100	9,000	14,000	14,000	12,800	-9%
12	Beaufort Street	Hampton/Camellia	Richland Ave. East	NA	NA	3,900	3,000	4,200	40%
13	Gregg Ave.	Vaocluse Road	Trolley Line Road	2,900	3,300	3,100	2,200	475	-78%
14	Gregg Ave.	Trolley Line Road	Richland Ave. West	3,000	3,250	3,300	2,300	3,400	48%
15	Hampton Ave.	York Street	Horry Street	2,900	6,500	5,500	4,500	4,800	7%
16	Hampton Ave.	York Street	Laurens Street	2,900	6,500	5,500	9,700	8,700	-10%
17	Hampton Ave.	Laurens Street	Vaocluse Road	2,900	6,500	5,500	7,600	6,000	-21%
18	Wire Road	Horry Street	Rudy Mason Pkwy.	2,900	3,100	5,400	2,800	4,700	68%
19	Hayne/Park Ave.	Richland Ave. West	Chesterfield	NA	NA	NA	8,100	8,700	7%
20	Park Ave.	Chesterfield	Orangeburg	2,500	3,000	5,400	3,000	2,200	-27%
21	Park Ave.	Orangeburg	Beaufort	2,500	3,000	5,400	2,400	2,200	-8%
22	Park Ave.	Beaufort	Richland Ave. East	2,500	3,000	3,500	2,500	1,900	-24%
23	Two Notch Road	South Boundary	Audubon	3,000	2,500	2,500	725	200	-72%
24	Two Notch Road	Audubon	East Pine Log Road	3,000	600	500	450	2,200	389%
25	Dougherty Road	Silver Bluff Road	Neilson Street	12,500	12,050	12,200	11,900	12,100	2%
26	Dougherty Road	Neilson Street	Whiskey Road	12,500	12,050	12,200	12,200	12,400	2%
27	Powderhouse Road	South Boundary	East Pine Log Road	3,200	3,200	3,500	3,600	3,350	-7%
28	Powderhouse Road	East Pine Log Road	Whiskey Road	4,500	5,450	5,400	3,200	5,000	56%
29	Banks Mill Road	South Boundary	East Pine Log Road	4,500	4,300	4,000	3,700	4,000	8%
30	Trolley Line Road	Robert Bell Pkwy.	University Pkwy.	2,900	2,900	1,600	5,200	4,750	-9%
31	Trolley Line Road	University Pkwy.	Gregg Ave.	2,900	2,900	3,700	5,500	5,000	-9%
32	Trolley Line Road	Gregg Ave.	Vaocluse Road	2,900	2,900	3,700	4,200	5,700	36%
33	Silver Bluff Road	Whiskey Road	West Pine Log Road	11,400	12,350	11,400	10,900	10,800	-1%
34	Hitchcock Pkwy.	Richland Ave. West	Augusta Road	11,900	12,000	17,200	12,700	13,900	9%
35	Hitchcock Pkwy.	Augusta Road	Dibble Road	18,200	16,800	17,800	17,700	18,400	4%
36	Hitchcock Pkwy.	Dibble Road	Huntsman Drive	18,200	18,650	19,200	19,000	19,000	0%
37	Hitchcock Pkwy.	Huntsman Drive	Silver Bluff Road	15,900	18,350	19,400	17,300	17,300	0%
38	Rudy Mason Pkwy.	Charleston Hwy.	Wagener Road	13,800	15,100	19,400	17,300	16,400	-5%
39	Rudy Mason Pkwy.	Wagener Road	Willow Run Road	9,700	11,300	12,200	13,800	12,300	-11%
40	Rudy Mason Pkwy.	Willow Run Road	Wrights Mill Road	10,700	11,900	12,500	12,400	12,500	1%
41	Rudy Mason Pkwy.	Wrights Mill Road	Wire Road	10,700	12,800	12,500	12,400	13,900	12%
42	Rudy Mason Pkwy.	Wire Road	York Street	10,700	11,500	11,700	12,600	14,700	17%
43	Robert M. Bell Pkwy.	University Pkwy.	Trolley Line Road	5,400	8,750	9,000	7,000	10,000	43%
44	Robert M. Bell Pkwy.	Trolley Line Road	Gregg Hwy.	5,400	8,750	9,000	8,200	9,800	20%
45	Robert M. Bell Pkwy.	Gregg Hwy.	Richland Ave. West	5,400	9,050	9,900	7,500	10,400	39%

TABLE 5 CONTINUED

Segment	Street	From	To	AADT 2006	AADT 2008	AADT 2010	AADT 2012	AADT 2014	Change from 2012 to 2014
46	Rutland Drive	York Street	Edgefield Hwy.	8,300	14,900	12,900	7,800	12,300	58%
47	University Pkwy.	Edgefield Hwy.	Vaocluse Road	7,600	7,750	7,200	7,800	7,100	-9%
48	University Pkwy.	Vaocluse Road	Hudson Road	6,600	9,950	9,500	6,500	7,700	18%
49	University Pkwy.	Hudson Road	University Pkwy.	9,900	10,800	10,800	7,800	11,500	47%
50	Chesterfield	Park Ave.	South Boundary	7,000	8,100	7,400	7,500	7,300	-3%
51	Edgefield Hwy.	Croft Mill	Rutland Drive	12,600	12,800	7,400	11,200	11,100	-1%
52	Laurens Street NW	Hampton Ave.	Richland Ave. West	7,500	10,200	8,400	5,100	7,200	41%
53	Laurens Street NW	Rutland Drive	Hampton Ave.	4,700	9,750	8,400	5,100	6,250	23%
54	Whiskey Road	South Boundary	Grace	21,400	22,050	20,300	20,800	19,600	-6%
55	Whiskey Road	Grace	Dupree	21,400	22,050	20,300	20,800	19,900	-4%
56	Whiskey Road	Dupree	Berrie	22,100	24,400	19,800	19,200	20,800	8%
57	Whiskey Road	Berrie	Boardman	22,000	24,400	19,800	19,200	20,000	4%
58	Whiskey Road	Boardman	Hitchcock	22,000	24,400	20,300	18,900	21,000	11%
59	Whiskey Road	Hitchcock	Silver Bluff/ Price Ave.	22,900	24,700	20,300	22,300	20,800	-7%
60	Whiskey Road	Silver Bluff/Price Ave.	Pine Log Road	17,300	19,000	15,100	16,000	15,700	-2%
61	Whiskey Road	Pine Log Road	Millbrook	29,300	24,700	25,800	23,900	23,600	-1%
62	Whiskey Road	Millbrook	Corporate	NA	NA	25,700	27,500	25,800	-6%
63	Whiskey Road	Corporate	Dougherty	30,900	26,800	29,300	23,300	28,500	22%
64	Whiskey Road	Dougherty	East Gate	36,300	33,550	33,000	29,200	32,200	10%
65	Whiskey Road	East Gate	Lower Mall/Lowes	30,800	21,050	21,300	24,700	21,400	-13%
66	Whiskey Road	Lower Mall/Lowes	Brookhaven	24,800	21,900	21,200	22,500	20,800	-8%
67	Whiskey Road	Brookhaven	Powderhouse Road	22,600	21,600	24,200	22,600	21,400	-5%
68	Whiskey Road	Powderhouse Road	Citadel	20,800	21,400	24,200	20,700	20,800	0%
69	Whiskey Road	Citadel	Chukker Creek Road	20,050	19,050	22,100	20,200	19,400	-4%
70	Whiskey Road	Chukker Creek Road	Talatha Church Road	NA	16,450	19,600	17,600	17,250	-2%
71	East Pine Log Road	Whiskey Road	Two Notch Road	29,000	31,150	24,400	20,200	21,500	6%
72	East Pine Log Road	Two Notch Road	Powderhouse Road	29,000	31,150	24,400	20,200	23,500	16%
73	East Pine Log Road	Powderhouse Road	Banks Mill Road	22,000	22,500	22,100	23,800	23,000	-3%
74	East Pine Log Road	Banks Mill Road	Old Airport Road	17,700	19,500	20,600	19,300	19,800	3%
75	East Pine Log Road	Old Airport Road	Charleston Hwy.	17,700	20,900	17,200	17,000	17,200	1%
76	Silver Bluff Road	Hitchcock Pkwy./West Pine Log	Dougherty	22,000	24,200	23,900	21,900	23,600	8%
77	Silver Bluff Road	Dougherty	Pine Log Road	28,800	30,750	29,000	24,800	27,100	9%
78	Silver Bluff Road	Pine Log Road	Town Creek Road	10,200	19,200	16,000	15,600	16,900	8%
79	Silver Bluff Road	Town Creek Road	Hartwell	10,200	15,250	10,300	14,000	15,000	7%
80	Silver Bluff Road	Hartwell	Woodside Plantation	10,200	15,250	10,300	11,800	12,700	8%
81	Silver Bluff Road	Woodside Plantation	Pascallis	10,200	10,500	10,300	10,500	9,800	-7%
82	Silver Bluff Road	Pascallis	Richardsons Lake	NA	NA	10,300	9,000	8,900	-1%
83	West Pine Log Road	Silver Bluff Road	Pawnee	25,900	29,100	20,100	21,600	20,400	-6%
84	West Pine Log Road	Pawnee	Whiskey Road	25,900	29,100	20,100	19,400	20,000	3%
85	York Street	Aldrich St.	Yates	NA	15,000	10,800	10,400	11,200	8%
86	York Street	Yates	Rudy Mason Pkwy.	14,100	21,700	10,800	15,300	15,400	1%
87	York Street	Rudy Mason Pkwy.	Hampton Ave.	10,300	20,350	10,800	14,200	13,800	-3%
88	York Street	Hampton Ave.	Richland Ave. East	10,300	10,600	10,800	8,200	6,600	-20%
89	Jefferson Davis Hwy.	West of City	SC 118	NA	20,350	20,200	17,300	20,800	20%
90	Richland Ave. West	SC 118	SC 421	NA	11,850	11,400	13,600	13,900	2%
91	Richland Ave. West	SC421	Gregg Hwy.	18,100	23,050	20,400	21,600	21,200	-2%
92	Richland Ave. West	Gregg Hwy.	University Pkwy.	18,100	23,050	20,400	20,800	22,800	10%
93	Richland Ave. West	University Pkwy.	Gregg Ave.	18,100	23,050	23,300	18,300	20,700	13%
94	Richland Ave. West	Gregg Ave.	Valley	18,100	23,050	18,400	16,500	19,100	16%
95	Richland Ave. West	Valley	Hayne	18,000	18,950	13,500	16,500	12,000	-27%
96	Richland Ave. West	Hayne	Vaocluse/Waterloo	13,400	13,550	13,500	13,700	13,400	-2%
97	Richland Ave. West	Vaocluse/Waterloo	Newberry	12,100	15,150	14,300	11,000	10,500	-5%
98	Richland Ave. W/East	Newberry	Beaufort	18,100	15,150	12,000	7,800	8,300	6%
99	Richland Ave. East	Beaufort	Rudy Mason Pkwy.	9,000	8,650	12,000	8,800	9,200	5%

The following **Table 6** shows the ten street segments with the highest overall total increases in traffic from 2012 to 2014.

Table 6
TEN STREET SEGMENTS WITH LARGEST
VOLUME INCREASES 2012 - 2014
2014 LOS REPORT

Segment	Street	From	To	Additional AADT from 2012 to 2014
63	Whiskey Road	Corporate	Dougherty	5,200
46	Rutland Drive	York Street	Edgefield Hwy.	4,500
49	University Pkwy.	Hudson Road	University Pkwy.	3,700
89	Jefferson Davis Hwy.	West of City	SC 118	3,500
72	East Pine Log Road	Two Notch Road	Powderhouse Road	3,300
43	Robert M. Bell Pkwy.	University Pkwy.	Trolley Line Road	3,000
64	Whiskey Road	Dougherty	East Gate	3,000
45	Robert M. Bell Pkwy.	Gregg Hwy.	Richland Ave. West	2,900
94	Richland Ave. West	Gregg Ave.	Valley	2,600
93	Richland Ave. West	University Pkwy.	Gregg Ave.	2,400

As can be seen in Table 6, the street segments gaining the largest additional daily traffic volume from 2012 to 2014 are on Whiskey Road, Richland Ave. West, Robert M. Bell Parkway, East Pine Log Road, University Parkway, Rutland Drive and Jefferson Davis Highway. Most of these are roadway segments that service commercial development. The increases along Jefferson Davis Highway, Robert M. Bell Parkway, and Richland Avenue West could be attributed to additional retail development including the Sam's Club at the intersection of Jefferson Davis Highway at Robert M. Bell Parkway.

Conclusions

There are 10 street segments in Aiken totaling 5.3 miles in length with LOS E or F. There are another 17 segments totaling 11.1 miles with LOS D. The total mileage of the segments with LOS D, E or F is about 16.4 miles, approximately 25% of the total network. The total mileage with LOS D is about 17.5% of the total network. Therefore, in the Aiken major street network, approximately 8% of the mileage is congested or severely congested and another 17.5% is described as having acceptable congestion. Therefore, approximately 25% (or about one-fourth) of the mileage on the City's major streets operates below LOS C. This is up from approximately 20% in 2012.

While the economic downturn was documented to affect travel in Aiken between 2008 and 2012, recent data indicates increased travel for the first time since 2008. This is likely representative of economic recovery that has occurred over the past two years. Network travel for 2014 is in line with what was presented from 2006, but not yet as high at the peak in 2008. Annual Growth for the life of this program 2006 to 2014 is estimated at an annual rate of 1.3%, which is considered a low to moderate growth rate over this period.

The street segments showing the largest increases in daily traffic volume are on Richland Ave. West, Hitchcock Pkwy., University Pkwy., and Whiskey Road. These increases are indicative of the continued growth in commercial development in the vicinity of the new Wal-mart on Richland Ave. including the Sam's Club, as well as the continued growth in the Whiskey Road corridor.

Recommendations for Future Studies

It is possible and likely probable that the economy will continue to rebound over the next two years and that traffic flow in Aiken will continue to increase. Development continues to be moderate in the southern portion of Whiskey Road and Aiken County is proceeding with the new county government complex on University Parkway west of Edgefield Highway. This new facility will result in shifting of traffic to University Parkway and streets that connect to it. It is possible there might be a renovation or re-use of the existing county government facility that will affect traffic volumes on Richland Avenue.

It is recommended that additional study be conducted again in 2016 with modifications. Due to the fact that SCDOT already collects volumes for numerous segments of roadway within the City of Aiken, it is recommended that the number of daily volume counts be scaled back, potentially in half, and supplemented with other data such as peak hour intersection counts/analyses for 10 or 15 critical intersections within the City. These locations would be identified based on direction from City staff. This would provide good data for specific problematic turning movements that could be utilized to develop plans to address specific movements. Another

option would be to conduct travel time runs during peak periods to track congestion along heavily travelled routes (i.e. Whiskey Road, Richland Avenue, etc.). With the scaling back of daily volume counts, these additional services would likely not increase the cost of the semi-annual effort, yet would provide a better cross-section of data to evaluate traffic flow in the City of Aiken.