The 2030 Three Month Peak Period Average Daily Traffic assignments were compared to the 2030 AADT traffic assignments. The difference between the Three Month Peak and AADT assignments for the selected link volumes are summarized in the following table.

Route	Location	No-Build	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt.6	Alt. 7	Alt. 8
I-95	North of SC 34	1,900	2,100	3,400	1,900	1,700	1,600	3,200	1,800	2,600
I-95	South of SC 34	200	1,900	4,000	1,800	1,600	1,600	4,200	1,200	2,400
I-73	South of I-95	-	4,700	5,900	5,600	2,700	3,900	5,600	2,500	2,700
I-73	North of US 76	-	4,700	4,000	6,200	3,300	4,100	3,900	4,300	3,000
I-73	South of US 76	-	5,400	6,700	8,500	4,500	6,000	8,800	7,300	4,300
I-73	North of SC 22	-	10,000	8,700	8,300	8,200	8,200	8,700	7,600	9,700
SC 38	South of I-95	1,800	3,900	1,000	100	200	-100	1,200	1,900	600
SC 34	South of I-95	700	200	600	0	100	-100	1,000	600	0
SC 9	North of SC 41	800	700	100	0	300	200	200	500	500
SC 9	South of US 76	3,500	1,800	1,700	1,400	1,700	1,600	1,400	1,600	1,800
US 501	South of SC 38	1,400	500	1,400	800	700	300	1,700	2,400	1,000
US 501	North of SC 41	3,400	4,100	3,700	2,200	4,700	3,400	2,600	2,400	4,400
US 501	South of SC 41	4,000	4,200	3,700	2,600	4,900	3,600	2,900	2,600	4,700
US 501	North of SC 22	5,500	1,900	3,700	4,400	4,000	3,600	4,800	5,000	1,900
US 378	East of SC 41	2,000	1,700	2,000	1,500	1,900	1,800	1,900	1,700	2,200

The comparison of the 2030 Three Month Peak Period Average Daily traffic assignments indicate that the increased peak period traffic would be carried primarily by the I-73 alternatives and U.S. Route 501. Compared to the 2030 AADT assignments, slight increases in traffic would occur on I-95, S.C. Route 38, S.C. Route 34 S.C. Route 9, and U.S. Route 378.

Evaluation of Individual Three Month Peak Period I-73 Alternative Alignments

As was done previously with the 2030 AADT traffic assignments, the individual I-73 alternatives were evaluated and compared against each other with respect to their length, traffic assignments, vehicles miles traveled, and traffic density to identify which alternative carried the most traffic, provided the most vehicles miles of travel, or had the highest traffic density. The results of the analysis are summarized in the following table.

	ALT 1	ALT 2	ALT 3	ALT 4	ALT 5	ALT 6	ALT 7	ALT 8
Total Length	44.87	47.61	43.12	42.7	47.51	43.22	45.32	44.97
TOTAL VMT	1,317,413	1,355,206	1,361,413	1,367,413	1,268,621	1,385,976	1,372,651	1,360,048
Average AADT	32,692	31,692	29,619	34,952	29,872	34,998	33,585	29,507
Average VMT	164,677	193,601	272,370	170,927	181,232	230,996	119,093	151,116
Average Density	12.82	12.43	13.79	17.97	11.66	14.00	13.22	13.20

As shown in the tables, the Average AADTs are within a range between approximately 29,500 vehicles per day and 35,000 vehicles per day. Alternatives 3 and 6 continue to have the highest Average VMT of all the alternatives.

The eight I-73 Build Alternatives during the Three Month Peak Period were ranked based on these MOE following the same process used to rank the alternatives during the initial 2030 assignment. The rankings are summarized in the following table.

	ALT 1	ALT 2	ALT 3	ALT 4	ALT 5	ALT 6	ALT 7	ALT 8
Total Length	4	8	2	1	7	3	6	5
TOTAL VMT	7	6	4	3	8	1	2	5
Average AADT	4	5	7	2	6	1	3	8
Average VMT	6	3	1	5	4	2	8	7
Average Density	6	7	3	1	8	2	4	5
Average Ranking	5.4	5.8	3.4	2.4	6.6	1.8	4.6	6.0
Final Ranking	5	6	3	2	8	1	4	7

Based on this evaluation of the use of each Three Month Peak Period Alternative, Alternative 6 was the highest ranked alternative, with Alternatives 4, 3 and 7 following. Alternatives 1, 2 and 8 have similar average rankings. Alternative 5 was the lowest ranked alternative.

Travel Time Maps

Travel time maps were created for each of the Three Month Peak Period alternatives. As with the previous travel time maps, the fixed starting location was the junction of S.C. Route 22 with U.S. Route 17. The distance traffic could travel in ninety minutes from the junction of U.S. Route 17 and S.C. Route 22 was mapped for each alternative in five minute intervals and are shown in Figures 55 through 63.

The Travel time maps show that the construction of I-73 would continue to allow traffic to reach I-95 faster than the no-build condition. In the Three Month Peak Period no-build condition (Figure 55), traffic will be able to reach I-95 from the junction of U.S. Route 17 and S.C. Route 22 in approximately 85 minutes. Depending which I-73 alternative is constructed, the amount of time necessary for traffic to reach I-95 ranges from about 60 to 70 minutes. This would continue to provide a significant time savings to the public.

The following table summarizes the approximate minimum time required to travel between the junction of U.S. Route 17 and S.C. Route 22 to I-95, as illustrated in Figures 55 through 63.

	No-Build	ALT 1	ALT 2	ALT 3	ALT 4	ALT 5	ALT 6	ALT 7	ALT 8
Minimum Travel Time (minutes)	85	65	65	60	65	65	60	60	70

Local Network Congestion

As was done with the 2030 AADT Traffic Assignments, the effect of the Three Month Peak Period Traffic on local network congestion was examined. The projected 2030 Three Month

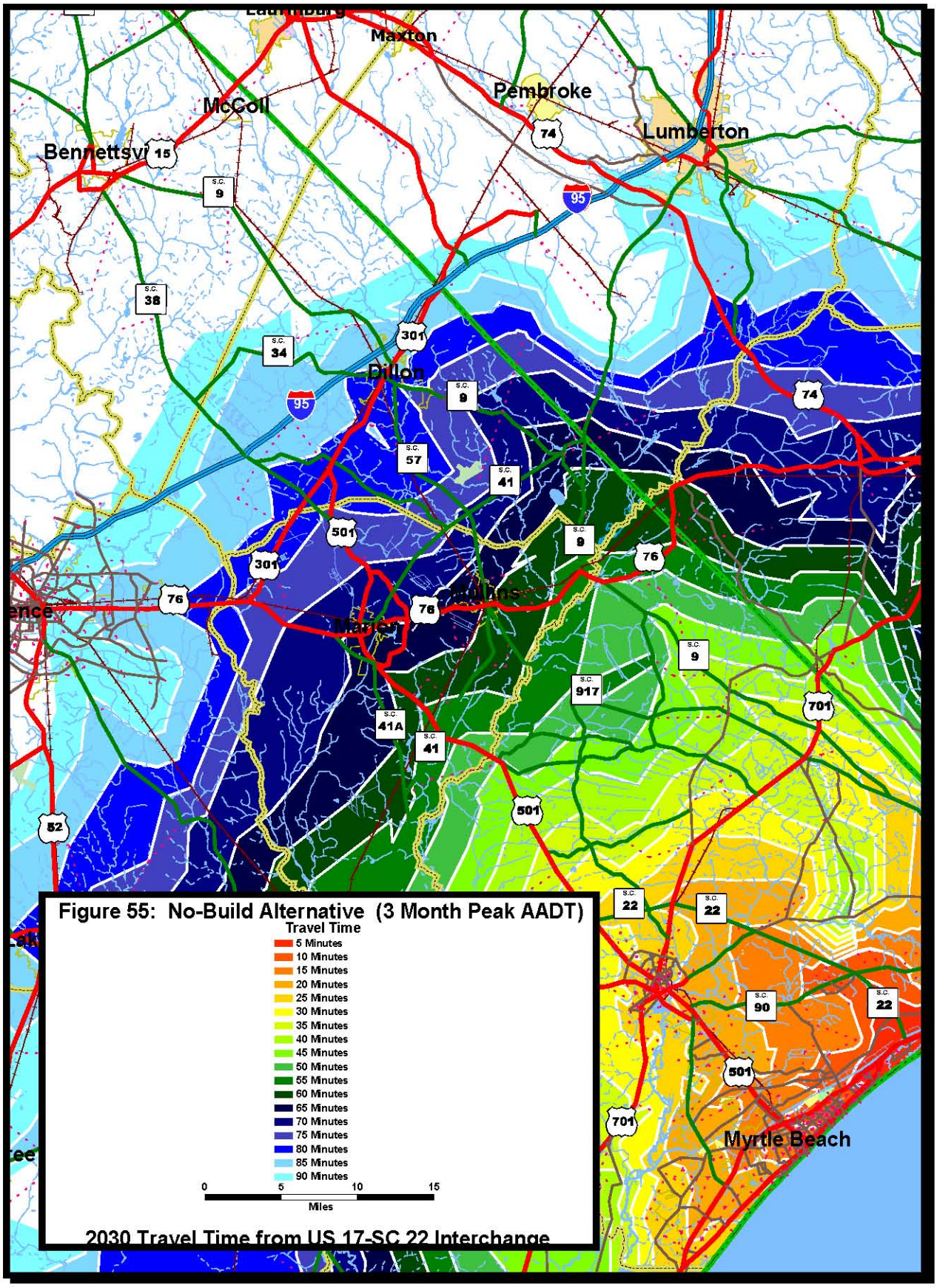


Figure 55: No-Build Alternative (3 Month Peak AADT)

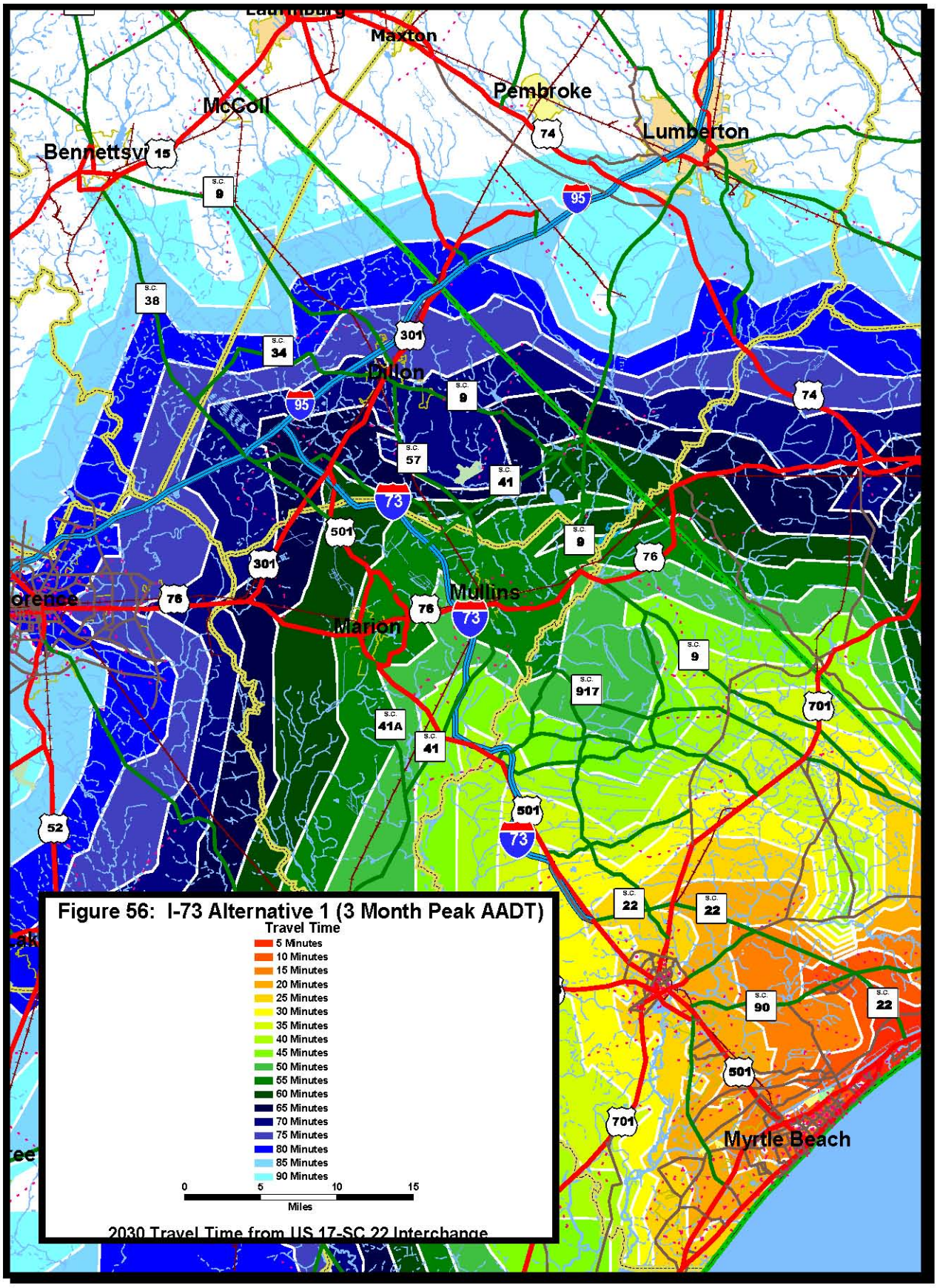


Figure 56: I-73 Alternative 1 (3 Month Peak AADT)

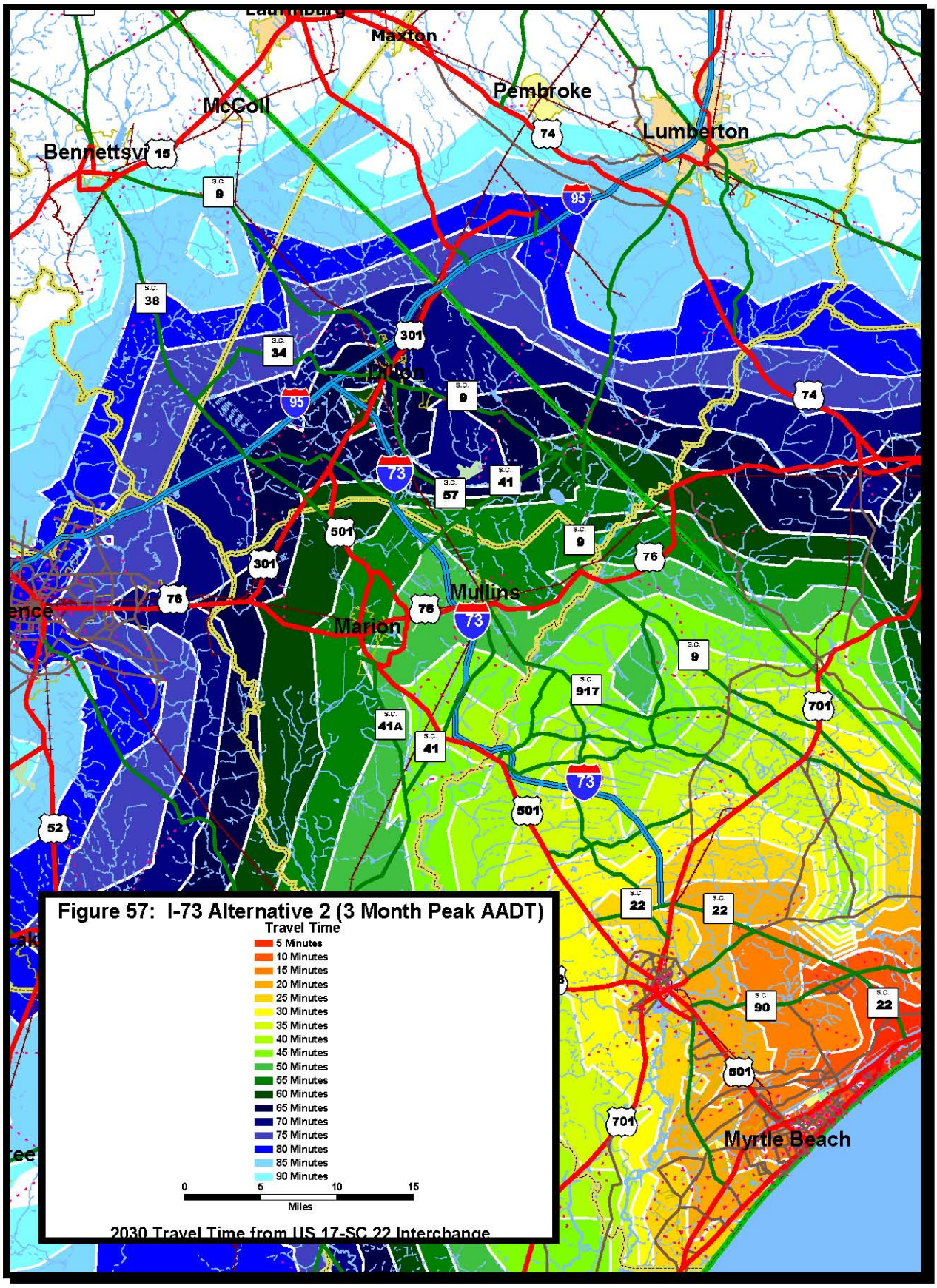


Figure 57: I-73 Alternative 2 (3 Month Peak AADT)

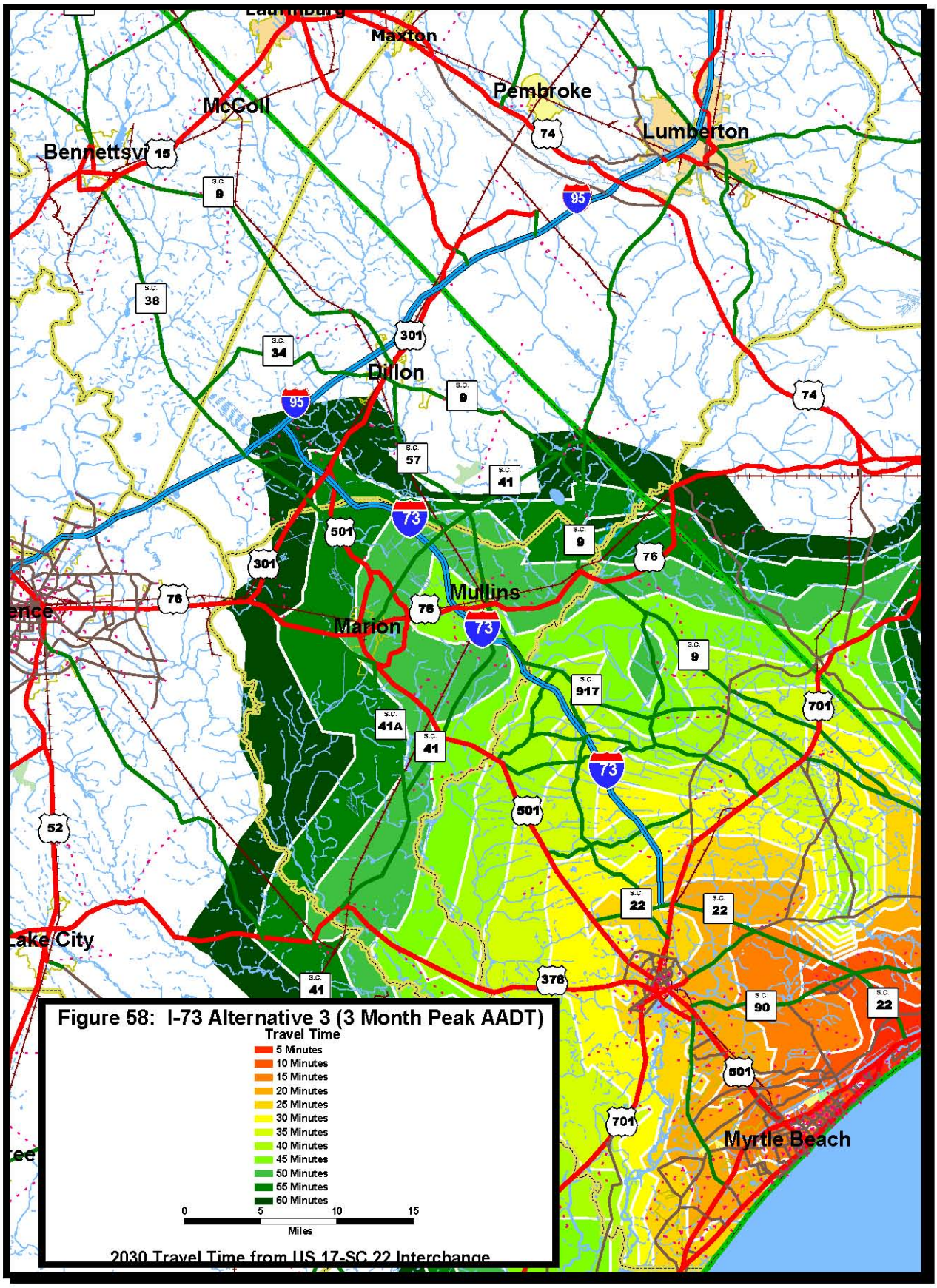


Figure 58: I-73 Alternative 3 (3 Month Peak AADT)

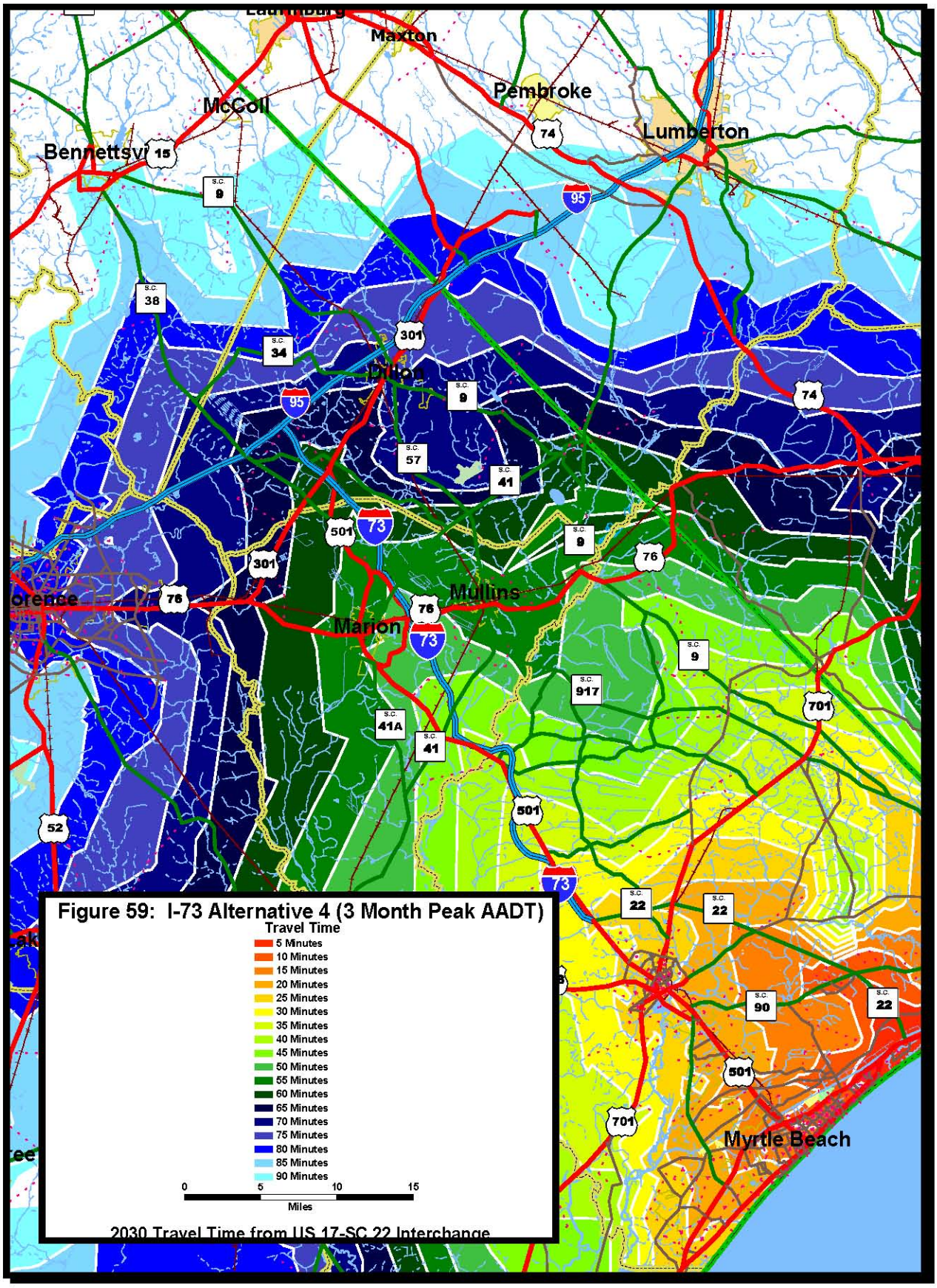


Figure 59: I-73 Alternative 4 (3 Month Peak AADT)

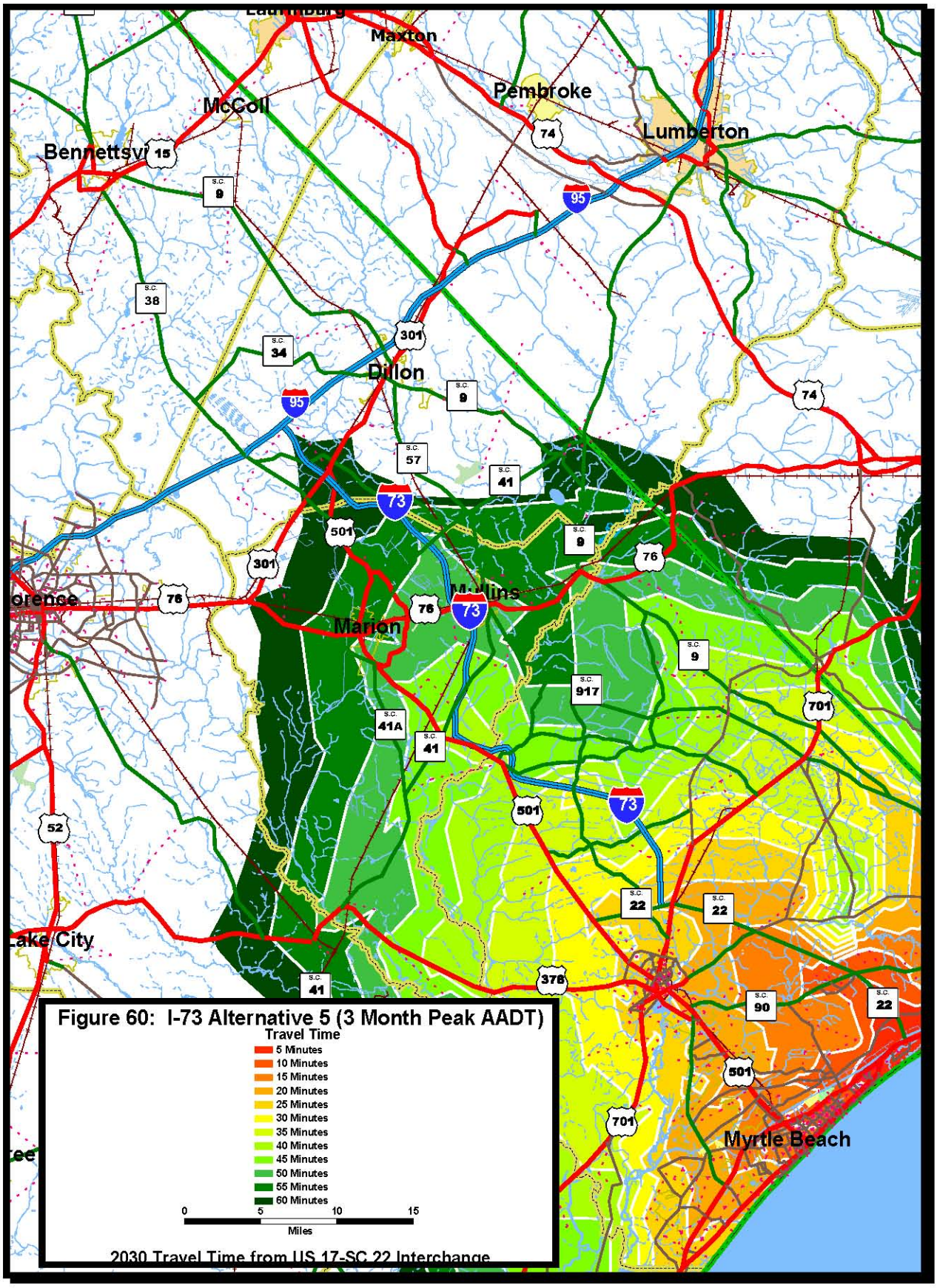


Figure 60: I-73 Alternative 5 (3 Month Peak AADT)

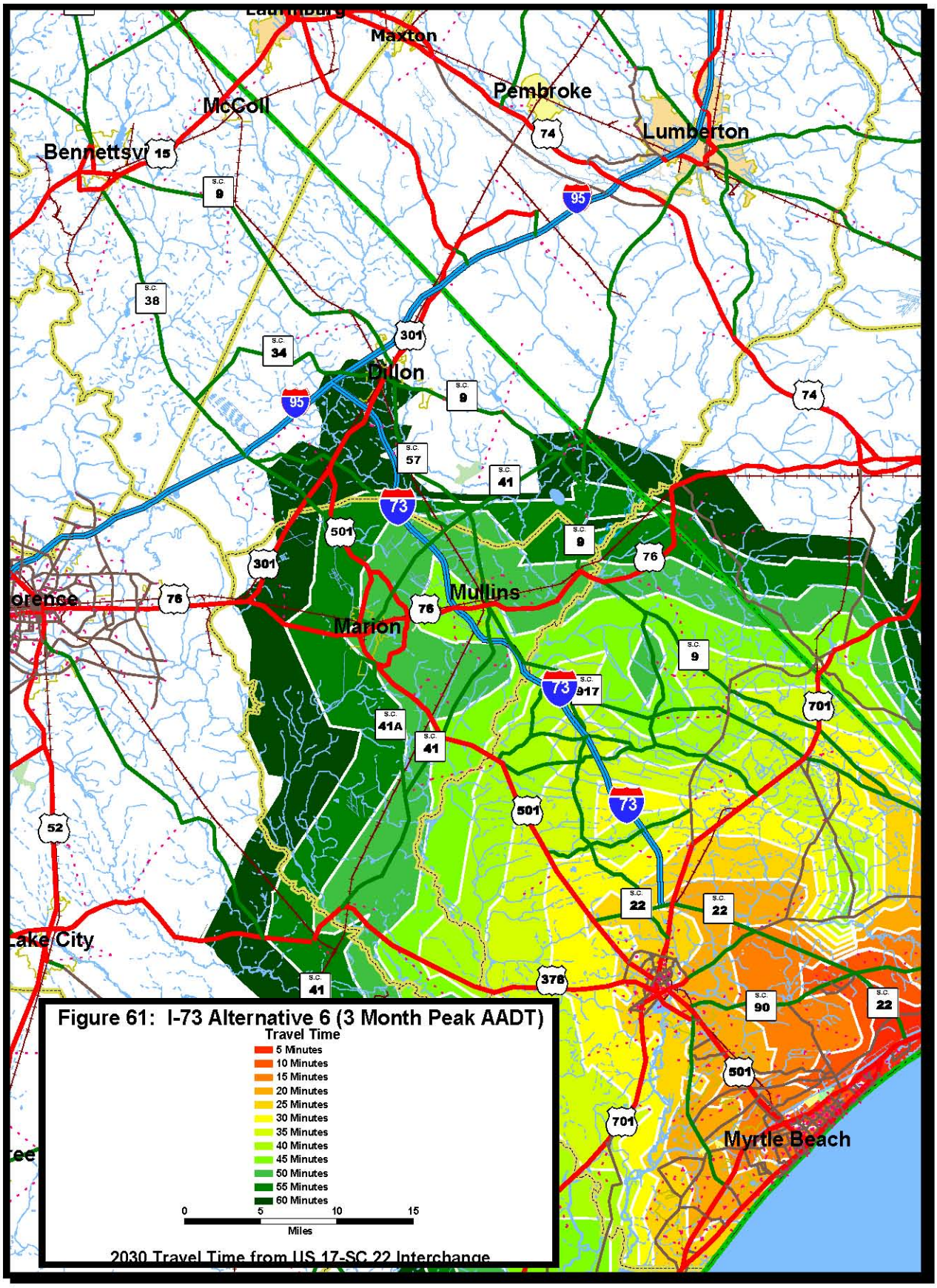
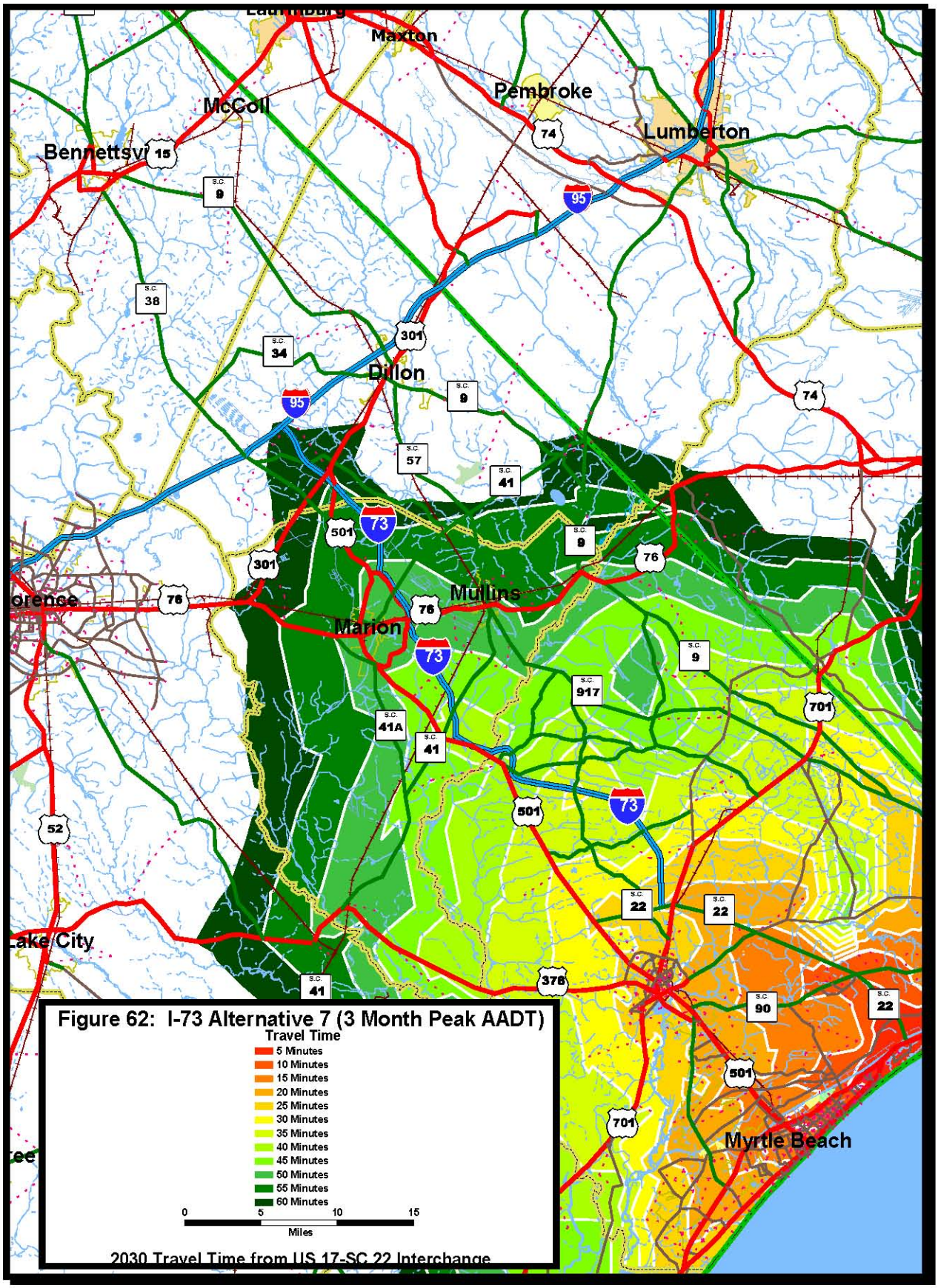


Figure 61: I-73 Alternative 6 (3 Month Peak AADT)


Maxton
McColl
Pembroke
Lumberton
Bennettsville
15
74
95
S.C. 9
S.C. 38
S.C. 34
301
Dillon
S.C. 57
S.C. 41
73
501
76
Mullins
Marion
S.C. 917
S.C. 41A
701
52
Lake City
S.C. 22
S.C. 90
376
Myrtle Beach
Figure 62: I-73 Alternative 7 (3 Month Peak AADT)
Travel Time
5 Minutes
10 Minutes
15 Minutes
20 Minutes
25 Minutes
30 Minutes
35 Minutes
40 Minutes
45 Minutes
50 Minutes
55 Minutes
60 Minutes
0
5
10
15
Miles
2030 Travel Time from US 17-SC 22 Interchange

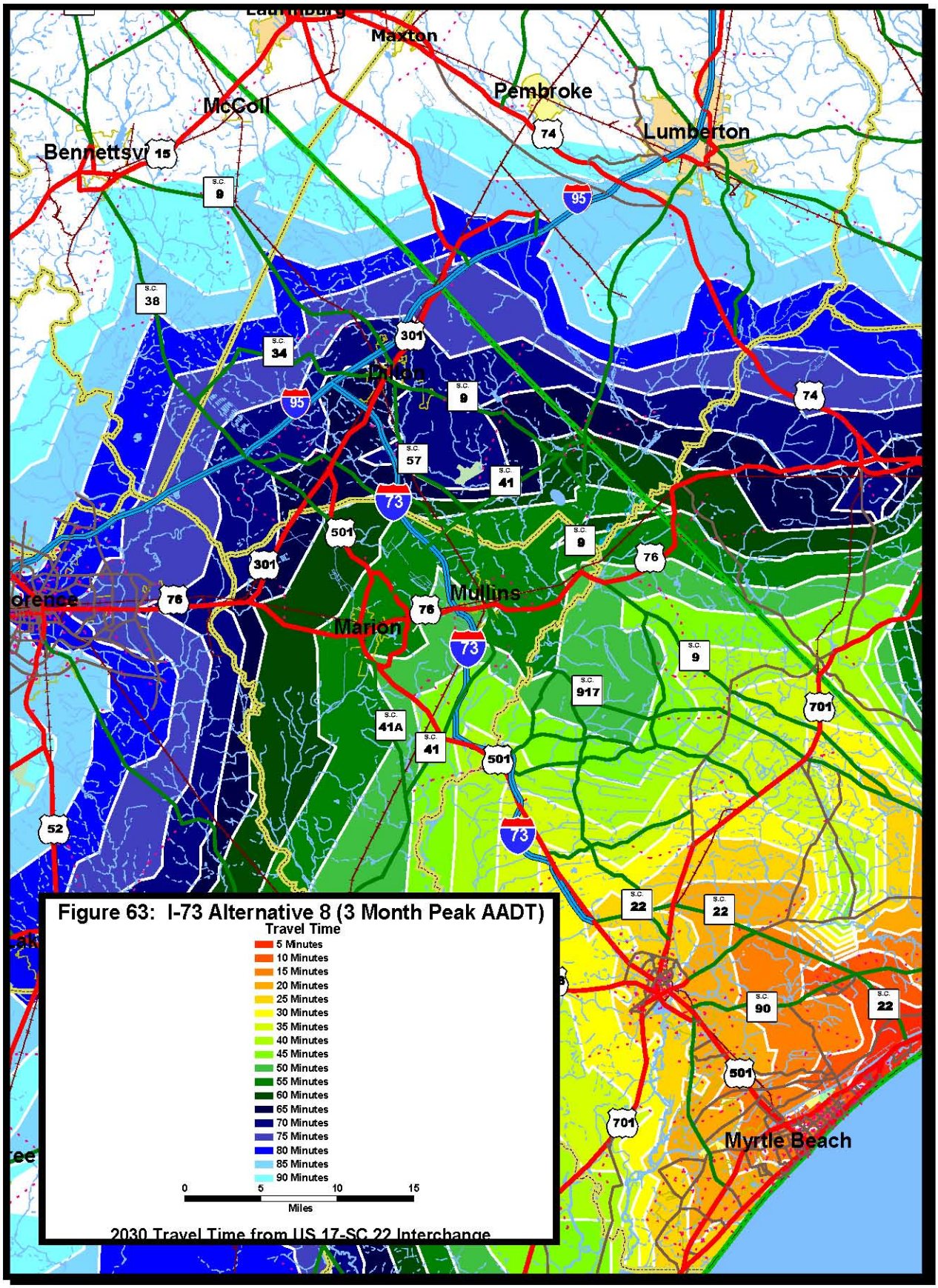


Figure 63: I-73 Alternative 8 (3 Month Peak AADT)

Peak Period average roadway levels of service for the No-build and eight I-73 Build Alternatives were determined using the same SCDOT level of service (LOS) criteria as used previously.

The 2030 Three Month Peak No-build Alternative Roadway Levels of Service are shown in Figure 64.

As shown in Figure 64, most of the U.S. Route 501 roadway segments between U.S. Route 76 west of Marion and S.C. Route 22 north of Conway are projected to operate at LOS E or F during the 2030 Three Month Peak Period No-Build condition. U.S. Route 378 between SC 41 and Conway is also projected to operate at LOS E.

Figures 65 through 72 illustrate the projected 2030 roadway LOS for I-73 Alternatives 1 through 8, respectively. As these figures show, the construction of any of the I-73 alternatives would improve congestion along U.S. Route 501 between U.S 76 and S.C. Route 22, and also improve the roadway LOS on U.S. Route 378 between SC 41 and Conway.

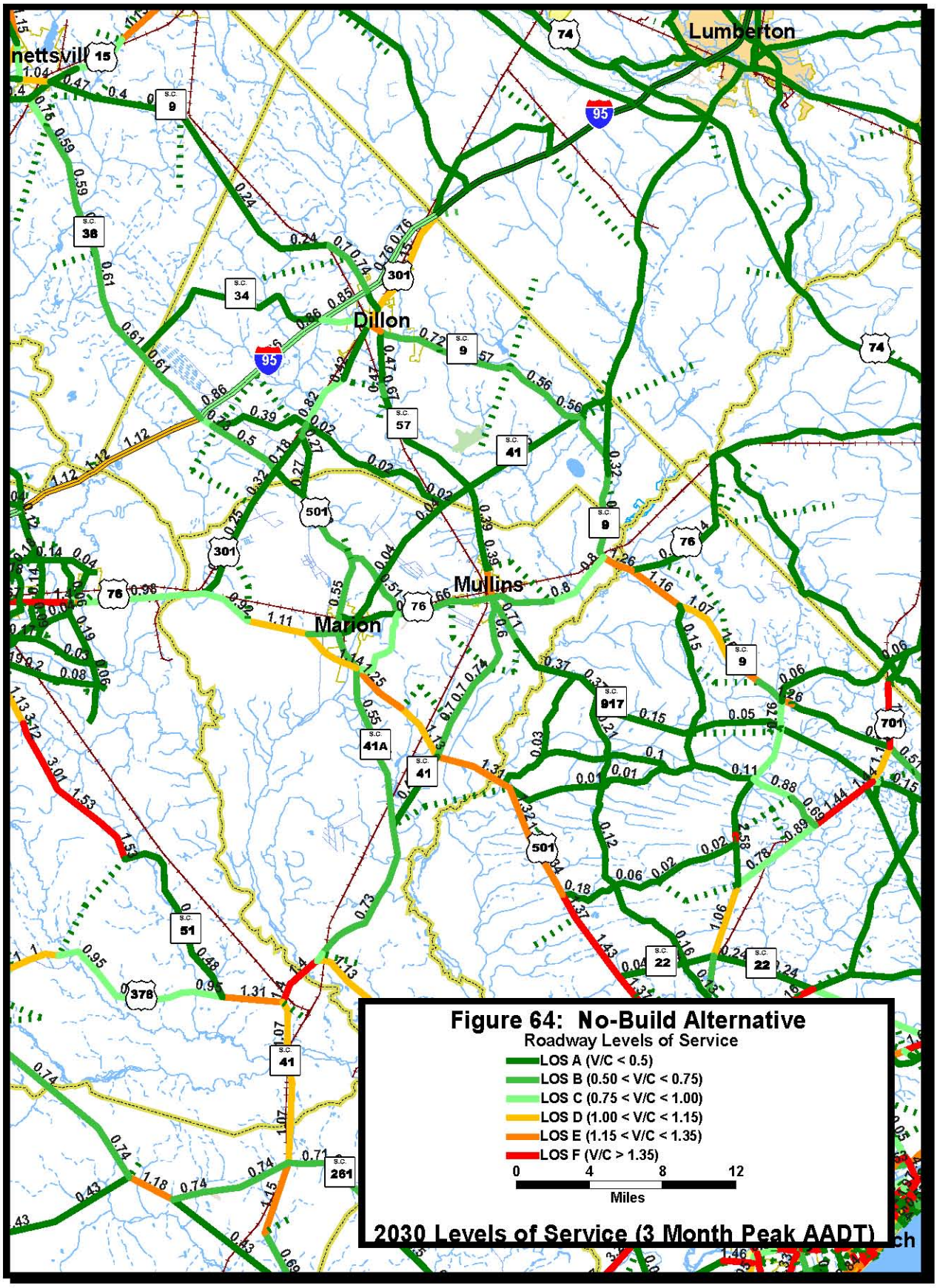
During the Three Month Peak Travel Period, the I-73 alternatives would continue to divert longer distance trips through the study area from the existing local roadway network, especially U.S. Route 501, freeing up existing capacity that can be used by local residents and businesses for shorter distance trips.

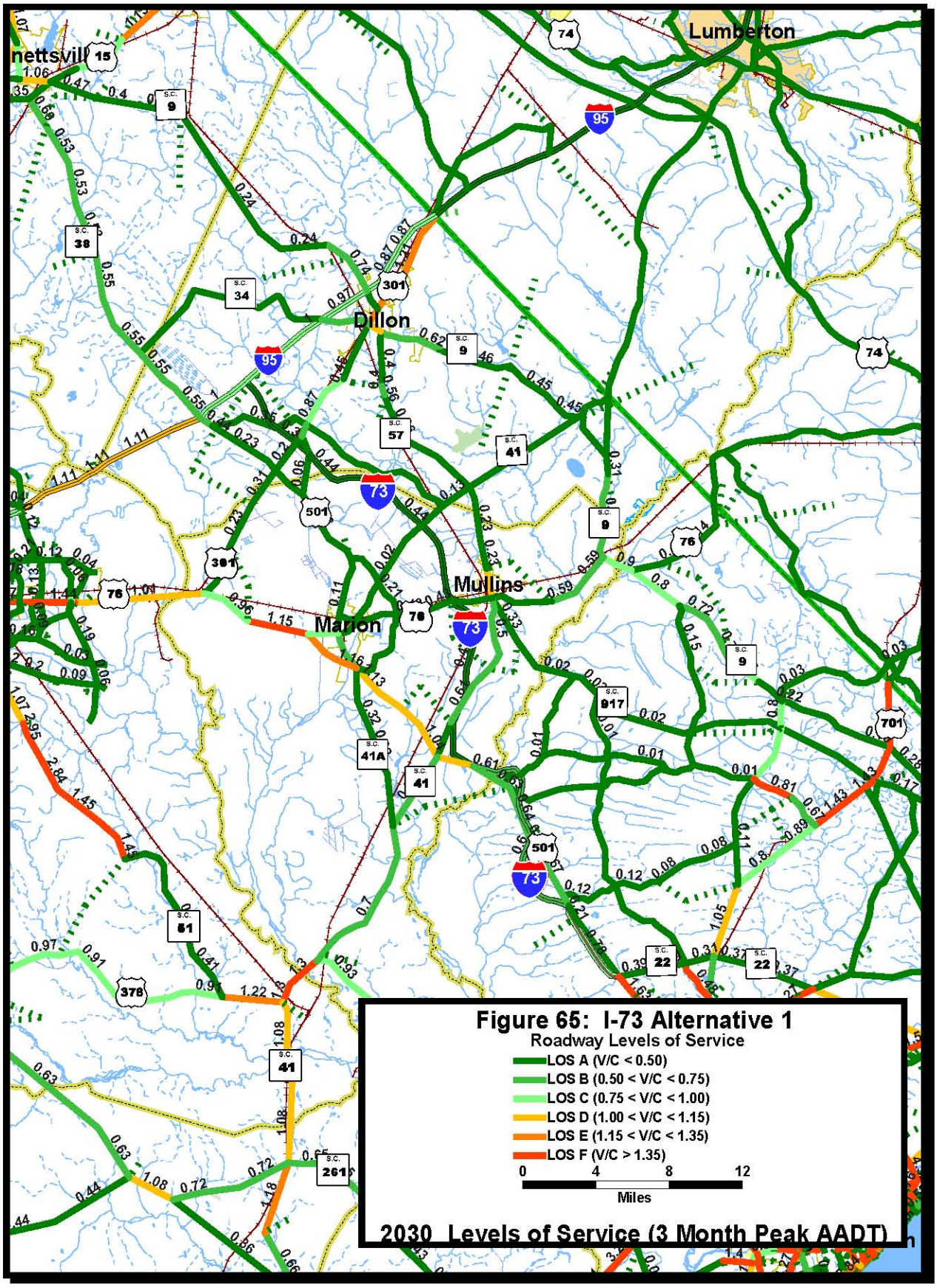
Other Measures of Effectiveness

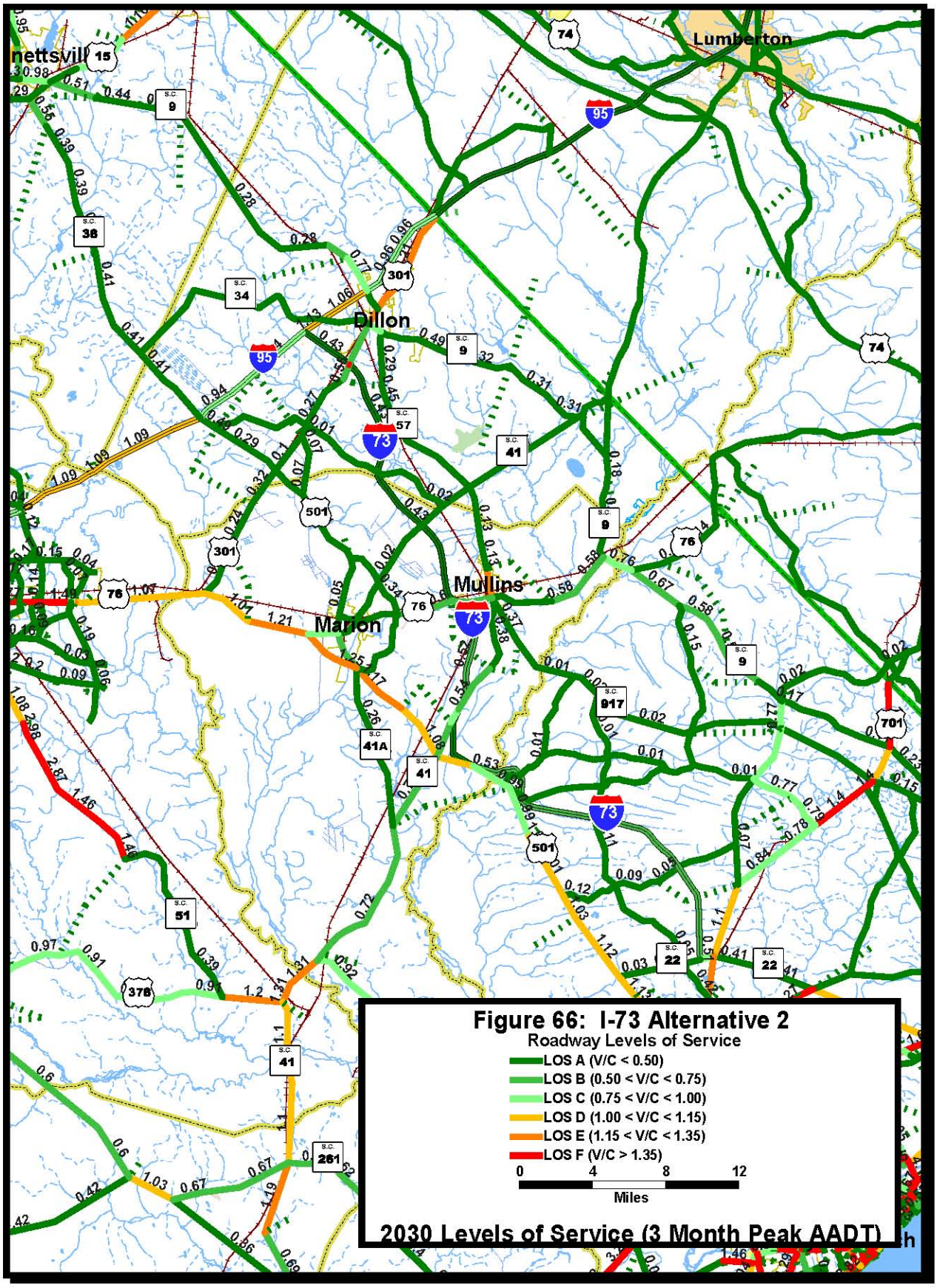
The Three Month Peak Period average daily Vehicle Miles Traveled (VMT) and Vehicle Hours Traveled (VHT) were again calculated as MOE used to evaluate the various alternatives against the no-build condition. The 2030 Three Month Peak Period No-Build condition VMT and VHT for the three county study area (with and without the GSATS network contribution) is summarized in the following table.

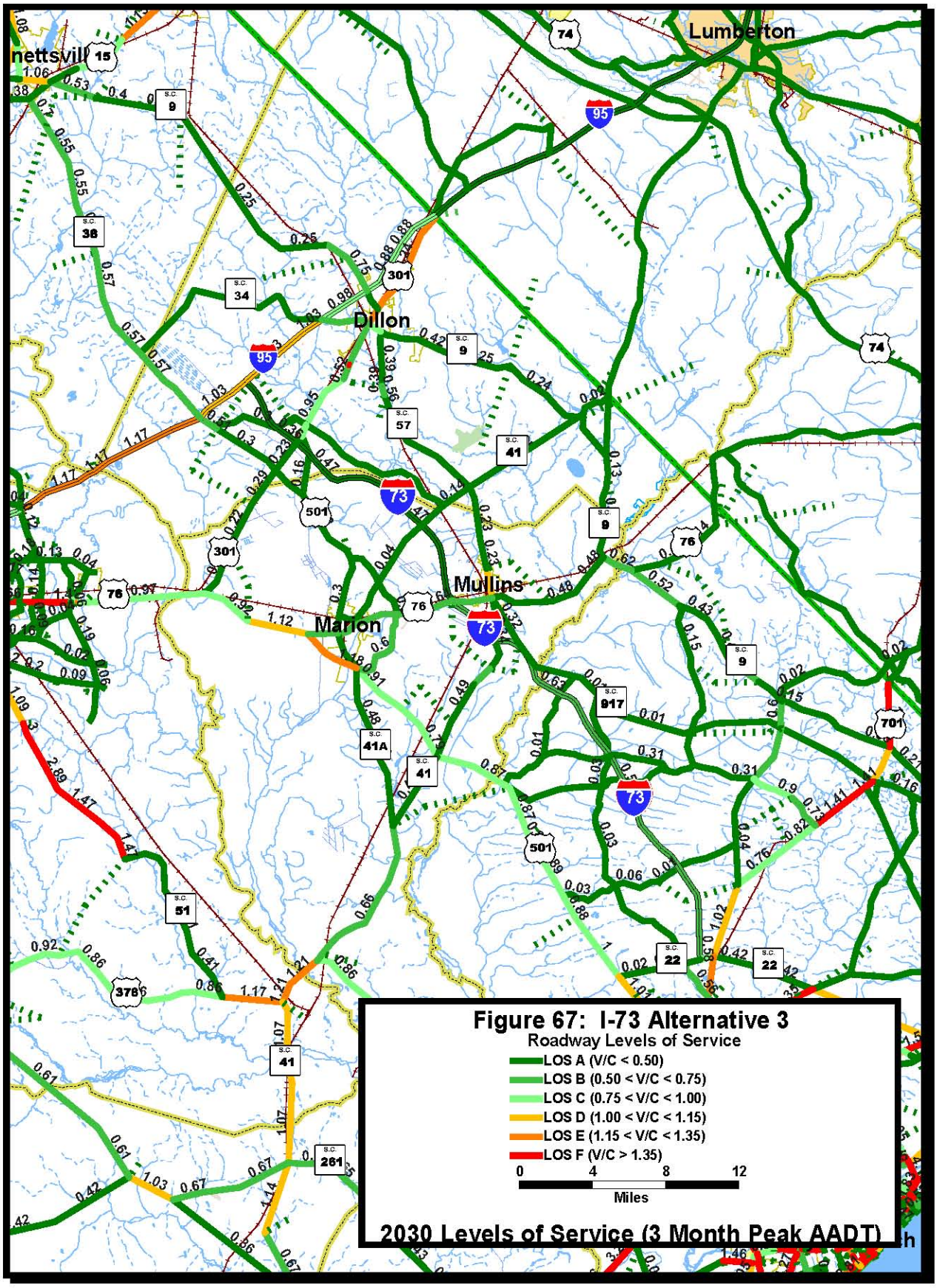
	NO BUILD STUDY AREA		***NO BUILD STUDY AREA W/O GSATS***	
FUNCTIONAL CLASSIFICATION	VMT	VHT	VMT	VHT
Centroid Connector	2,960,966	65,843	441,860	9,872
Rural Interstate	1,064,202	16,215	1,064,202	16,215
Rural Minor Arterial	3,443,074	74,109	2,114,662	49,955
Rural Minor Collector	62,552	1,847	62,552	1,847
Rural Principal Arterial	5,569,207	104,162	1,922,813	37,388
Urban Freeway or Expressway	2,881,211	48,081	0	0
Urban Principal Arterial	2,427,960	52,913	12,108	226
Other (Unclassified)	3,883,392	84,675	584	19
TOTAL:	**22,292,565**	**447,846**	**5,618,781**	**115,522**

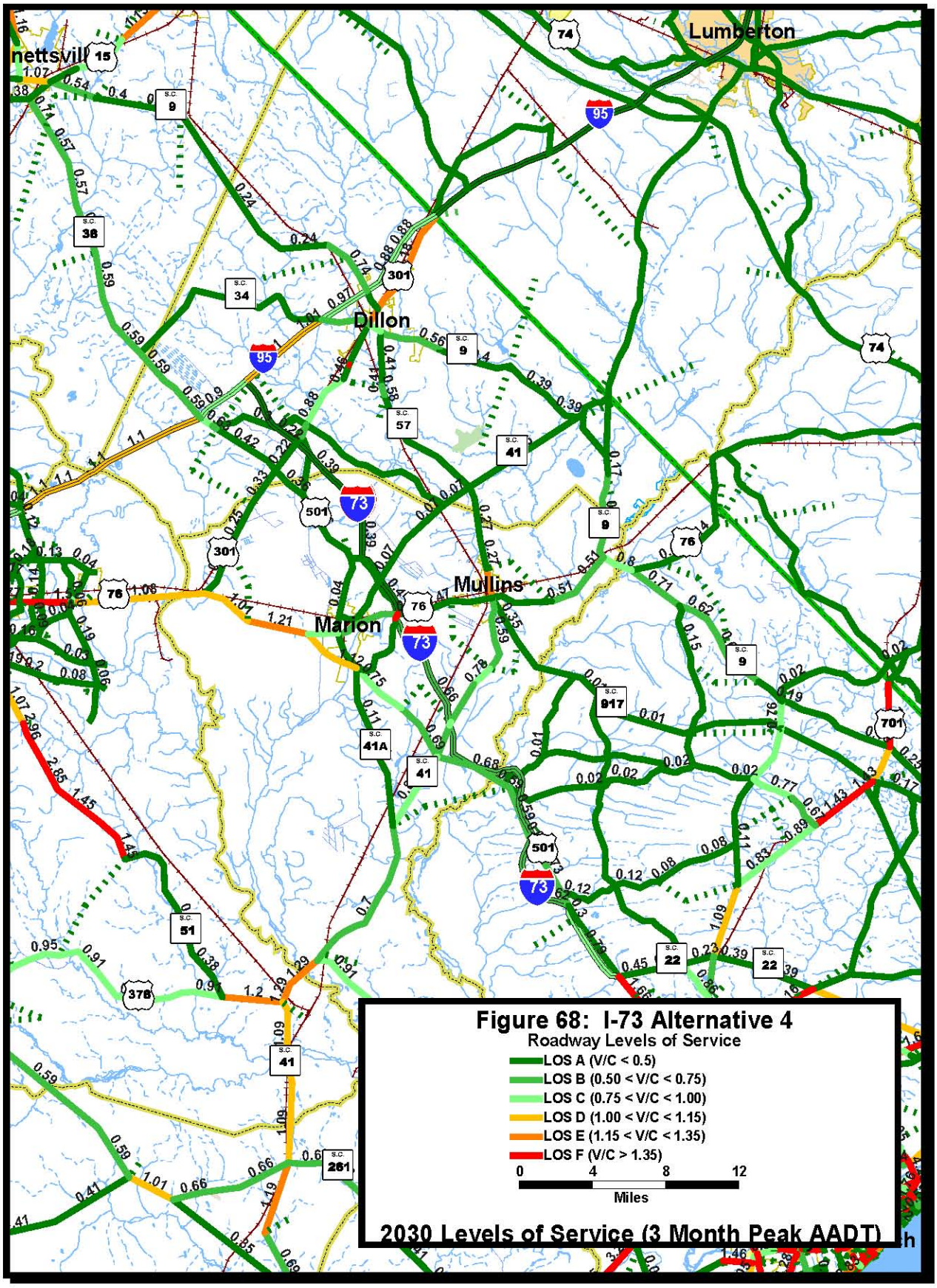
The GSATS area network contributes about 16.7 million VMT and 332,000 VHT within the study area on an average day during the Three Month Peak Period. This is approximately 75

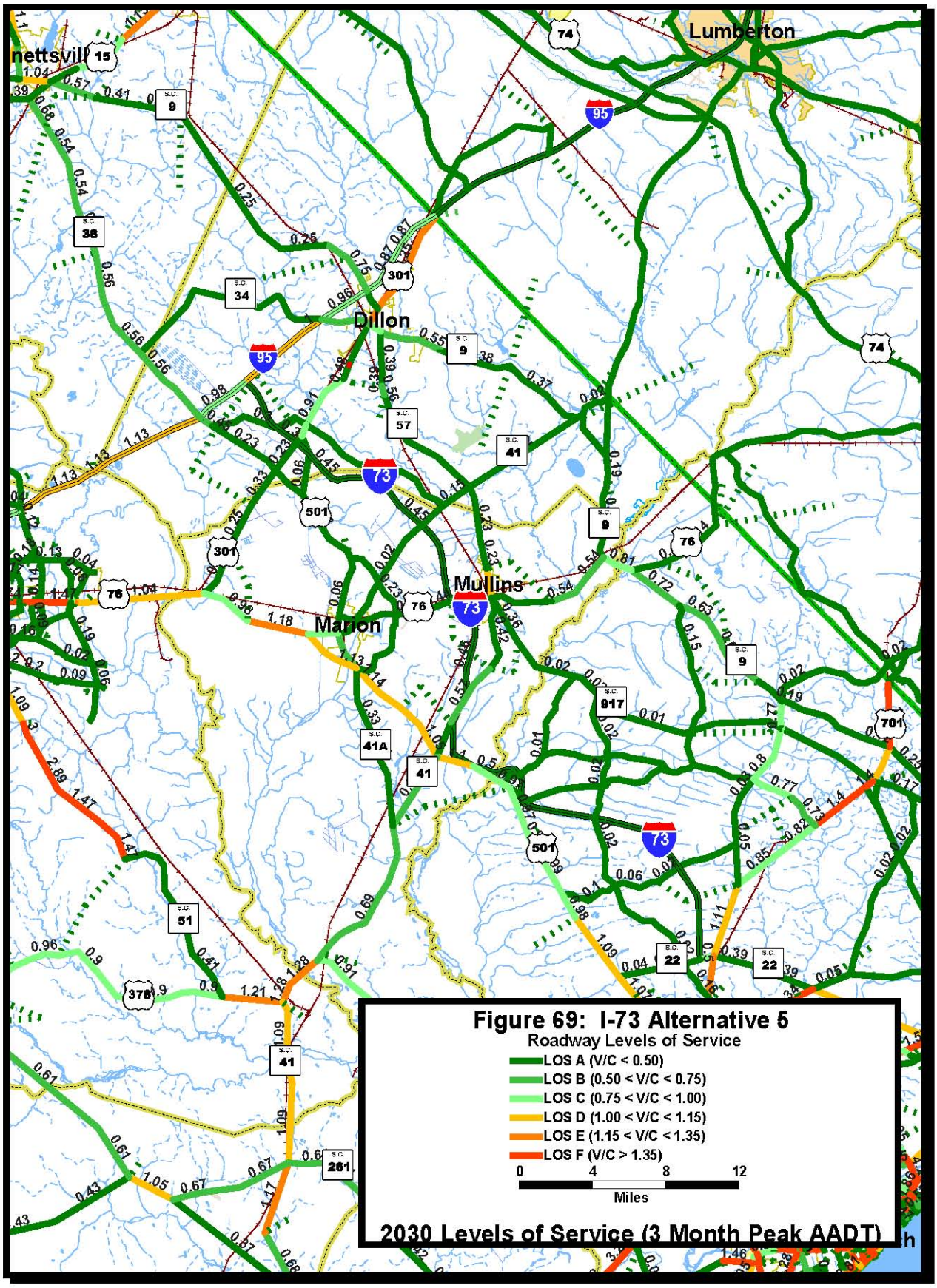

Lumberton
Dillon
Marion
Mullins
Figure 64: No-Build Alternative
Roadway Levels of Service
LOS A (V/C < 0.5)
LOS B (0.50 < V/C < 0.75)
LOS C (0.75 < V/C < 1.00)
LOS D (1.00 < V/C < 1.15)
LOS E (1.15 < V/C < 1.35)
LOS F (V/C > 1.35)
0 4 8 12
Miles
2030 Levels of Service (3 Month Peak AADT)

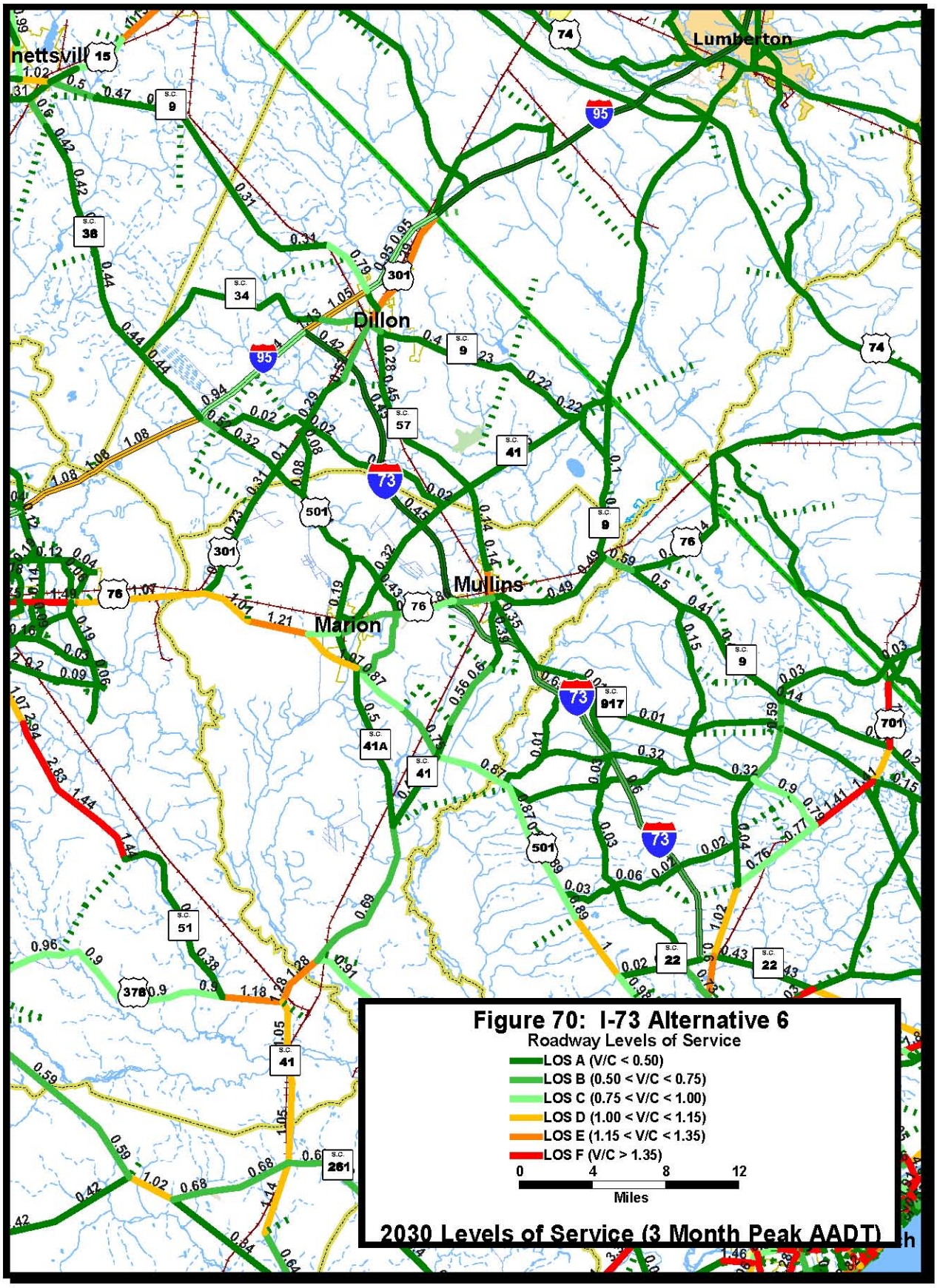

Lumberton
Dillon
Mullins
Marion
Figure 65: I-73 Alternative 1
Roadway Levels of Service
LOS A (V/C < 0.50)
LOS B (0.50 < V/C < 0.75)
LOS C (0.75 < V/C < 1.00)
LOS D (1.00 < V/C < 1.15)
LOS E (1.15 < V/C < 1.35)
LOS F (V/C > 1.35)
0 4 8 12
Miles
2030 Levels of Service (3 Month Peak AADT)

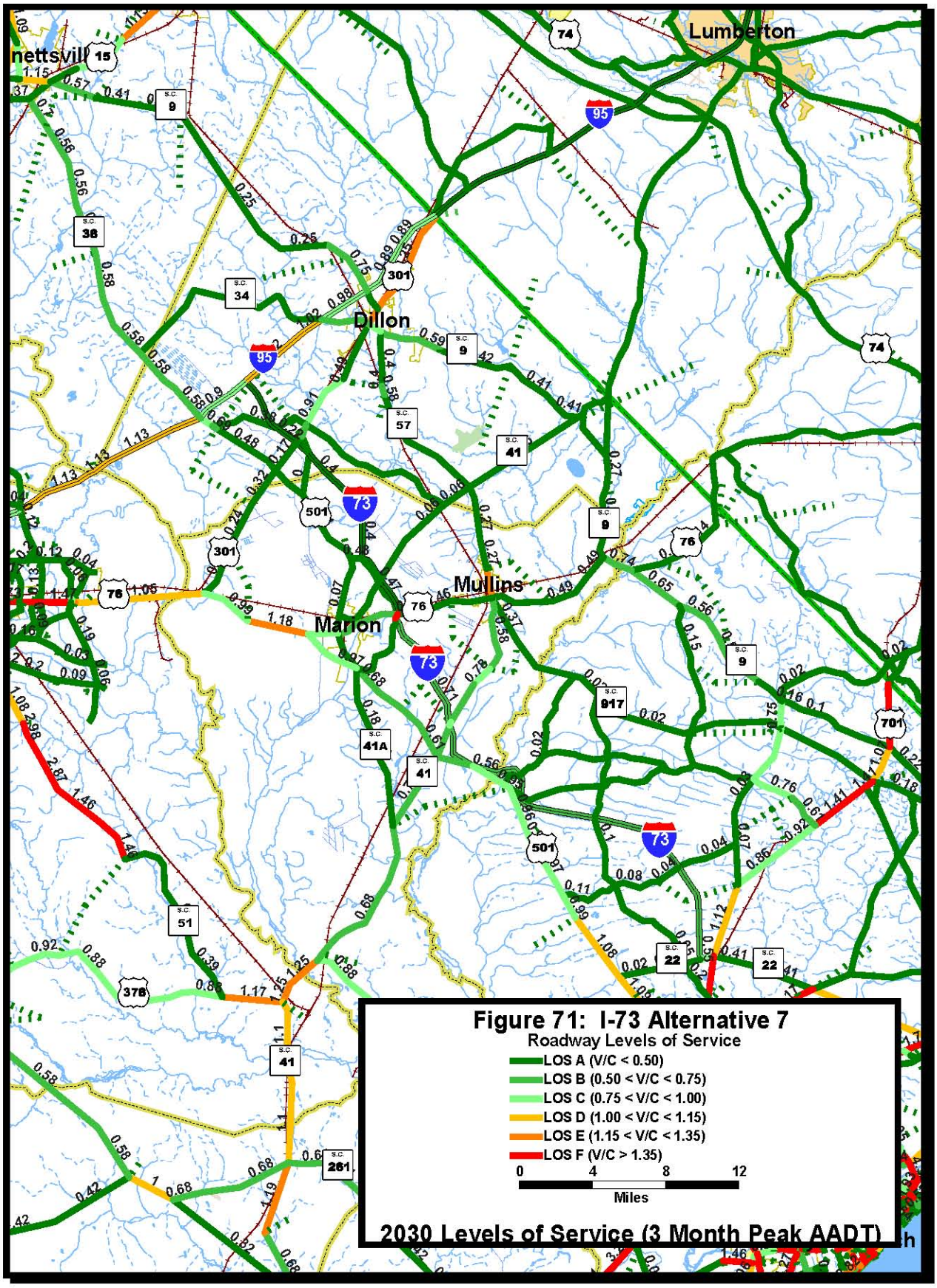

Lumberton
Dillon
Mullins
Marion
Figure 66: I-73 Alternative 2
Roadway Levels of Service
LOS A (V/C < 0.50)
LOS B (0.50 < V/C < 0.75)
LOS C (0.75 < V/C < 1.00)
LOS D (1.00 < V/C < 1.15)
LOS E (1.15 < V/C < 1.35)
LOS F (V/C > 1.35)
0 4 8 12
Miles
2030 Levels of Service (3 Month Peak AADT)

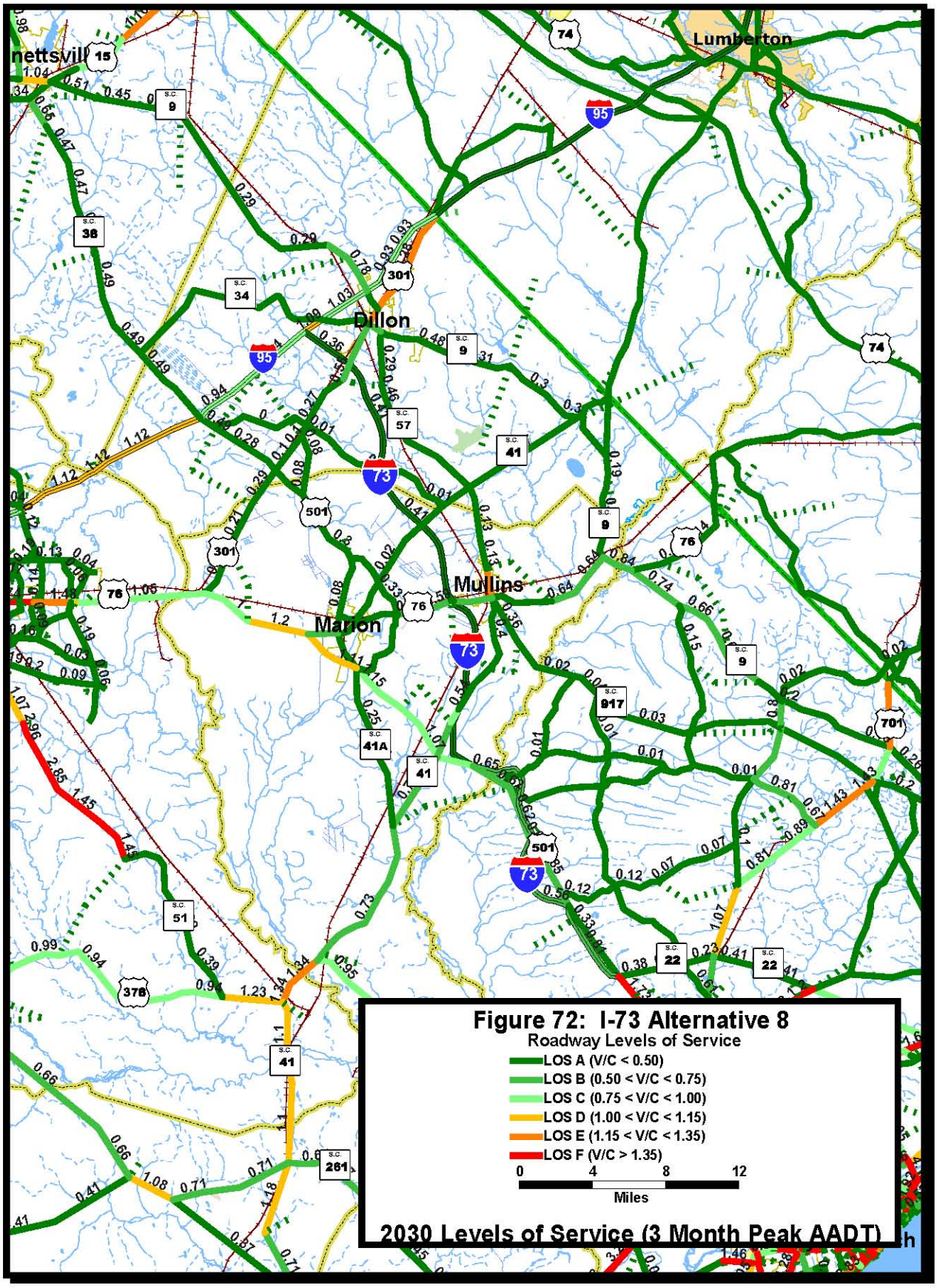

Lumberton
Dillon
Mullins
Marion
Figure 67: I-73 Alternative 3
Roadway Levels of Service
LOS A (V/C < 0.50)
LOS B (0.50 < V/C < 0.75)
LOS C (0.75 < V/C < 1.00)
LOS D (1.00 < V/C < 1.15)
LOS E (1.15 < V/C < 1.35)
LOS F (V/C > 1.35)
0 4 8 12
Miles
2030 Levels of Service (3 Month Peak AADT)


Lumberton
Dillon
Mullins
Marion
Figure 68: I-73 Alternative 4
Roadway Levels of Service
LOS A (V/C < 0.5)
LOS B (0.50 < V/C < 0.75)
LOS C (0.75 < V/C < 1.00)
LOS D (1.00 < V/C < 1.15)
LOS E (1.15 < V/C < 1.35)
LOS F (V/C > 1.35)
0 4 8 12
Miles
2030 Levels of Service (3 Month Peak AADT)


Lumberton
Dillon
Marion
Mullins
Figure 69: I-73 Alternative 5
Roadway Levels of Service
LOS A (V/C < 0.50)
LOS B (0.50 < V/C < 0.75)
LOS C (0.75 < V/C < 1.00)
LOS D (1.00 < V/C < 1.15)
LOS E (1.15 < V/C < 1.35)
LOS F (V/C > 1.35)
0 4 8 12
Miles
2030 Levels of Service (3 Month Peak AADT)


Lumberton
Dillon
Mullins
Marion
Figure 70: I-73 Alternative 6
Roadway Levels of Service
LOS A (V/C < 0.50)
LOS B (0.50 < V/C < 0.75)
LOS C (0.75 < V/C < 1.00)
LOS D (1.00 < V/C < 1.15)
LOS E (1.15 < V/C < 1.35)
LOS F (V/C > 1.35)
0 4 8 12
Miles
2030 Levels of Service (3 Month Peak AADT)


Lumberton
Dillon
Mullins
Marion
Figure 71: I-73 Alternative 7
Roadway Levels of Service
LOS A (V/C < 0.50)
LOS B (0.50 < V/C < 0.75)
LOS C (0.75 < V/C < 1.00)
LOS D (1.00 < V/C < 1.15)
LOS E (1.15 < V/C < 1.35)
LOS F (V/C > 1.35)
0
4
8
12
Miles
2030 Levels of Service (3 Month Peak AADT)


Lumberton
Dillon
Mullins
Marion
nettsville
74
95
301
34
9
38
15
57
41
501
76
73
917
41A
51
378
261
701
22
Figure 72: I-73 Alternative 8
Roadway Levels of Service
LOS A (V/C < 0.50)
LOS B (0.50 < V/C < 0.75)
LOS C (0.75 < V/C < 1.00)
LOS D (1.00 < V/C < 1.15)
LOS E (1.15 < V/C < 1.35)
LOS F (V/C > 1.35)
0
4
8
12
Miles
2030 Levels of Service (3 Month Peak AADT)

percent of the total study area network VMT and VHT. This is a slight increase over the approximately 16.4 million VMT and 327,000 VHT the GSATS area was estimated to contribute in the 2030 AADT assignments.

The MOE for Alternative 1 are summarized in the following table.

	ALTERNATIVE 1 STUDY AREA		***ALTERNATIVE 1 STUDY AREA W/O GSATS***	
FUNCTIONAL CLASSIFICATION	VMT	VHT	VMT	VHT
Centroid Connector	2,961,867	65,862	441,314	9,861
Rural Interstate	2,484,554	37,414	2,484,554	37,414
Rural Minor Arterial	2,786,994	56,829	1,482,159	33,105
Rural Minor Collector	53,180	1,563	53,180	1,563
Rural Principal Arterial	5,449,613	100,159	1,647,201	30,603
Urban Freeway or Expressway	2,862,343	47,766	0	0
Urban Principal Arterial	2,547,279	54,359	7,982	146
Other (Unclassified)	3,388,474	80,447	365	12
TOTAL:	**22,834,303**	**444,398**	**6,116,754**	**96,496**
DIFFERENCE FROM NO-BUILD	**541,738**	**-3,448**	**497,973**	**-2,818**

The Alternative 1 VMT is higher and the VHT is lower than the No-build Alternative within the entire study area and in the study area with the GSATS area network removed.

The MOE for Alternative 2 are summarized in the following table.

	ALTERNATIVE 2 STUDY AREA		***ALTERNATIVE 2 STUDY AREA W/O GSATS***	
FUNCTIONAL CLASSIFICATION	VMT	VHT	VMT	VHT
Centroid Connector	2,958,107	65,780	440,797	9,851
Rural Interstate	2,530,470	38,084	2,530,470	38,084
Rural Minor Arterial	2,969,437	60,348	1,657,803	36,499
Rural Minor Collector	53,244	1,569	53,244	1,569
Rural Principal Arterial	5,358,429	98,590	1,518,742	28,321
Urban Freeway or Expressway	2,859,876	47,725	0	0
Urban Principal Arterial	2,530,405	54,005	7,788	142
Other (Unclassified)	3,677,275	80,345	276	9
TOTAL:	**22,937,244**	**446,446**	**6,209,121**	**114,476**
DIFFERENCE FROM NO-BUILD	**644,679**	**-1,400**	**590,340**	**-1,047**

The Alternative 2 VMT is higher and the VHT is lower than the No-build Alternative within the entire study area and in the study area with the GSATS area network removed.

The MOE for Alternative 3 are summarized in the following table.

	ALTERNATIVE 3 STUDY AREA		***ALTERNATIVE 3 STUDY AREA W/O GSATS***	
FUNCTIONAL CLASSIFICATION	VMT	VHT	VMT	VHT
Centroid Connector	2,956,173	65,733	437,699	9,778
Rural Interstate	2,566,167	38,736	2,566,167	38,736
Rural Minor Arterial	2,876,578	57,108	1,566,030	33,278
Rural Minor Collector	71,866	2,124	71,866	2,125
Rural Principal Arterial	5,388,820	98,518	1,532,636	27,980
Urban Freeway or Expressway	2,839,406	47,383	0	0
Urban Principal Arterial	2,541,764	54,279	6,141	112
Other (Unclassified)	3,684,852	80,493	390	13
TOTAL:	**22,925,629**	**444,378**	**6,180,929**	**112,022**
DIFFERENCE FROM NO-BUILD	**633,064**	**-3,468**	**562,148**	**-3,494**

The Alternative 3 VMT is higher and the VHT is lower than the No-build Alternative within the entire study area and in the study area with the GSATS area network removed.

The MOE for Alternative 4 are summarized in the following table.

	ALTERNATIVE 4 STUDY AREA		***ALTERNATIVE 4 STUDY AREA W/O GSATS***	
FUNCTIONAL CLASSIFICATION	VMT	VHT	VMT	VHT
Centroid Connector	2,958,350	65,780	441,164	9,854
Rural Interstate	2,518,861	37,994	2,518,861	37,994
Rural Minor Arterial	2,763,245	55,777	1,431,569	31,566
Rural Minor Collector	60,786	1,773	60,786	1,773
Rural Principal Arterial	5,461,251	100,460	1,650,657	30,749
Urban Freeway or Expressway	2,850,923	47,575	0	0
Urban Principal Arterial	2,537,044	54,113	6,499	118
Other (Unclassified)	3,706,028	80,786	306	10
TOTAL:	**22,856,488**	**444,259**	**6,109,842**	**112,065**
DIFFERENCE FROM NO-BUILD	**563,923**	**-3,587**	**491,060**	**-3,458**

The Alternative 4 VMT is higher and the VHT is lower than the No-build Alternative within the entire study area and in the study area with the GSATS area network removed.

The MOE for Alternative 5 are summarized in the following table.

	ALTERNATIVE 5 STUDY AREA		***ALTERNATIVE 5 STUDY AREA W/O GSATS***	
FUNCTIONAL CLASSIFICATION	VMT	VHT	VMT	VHT
Centroid Connector	2,958,970	65,795	440,515	9,840
Rural Interstate	2,439,248	36,513	2,439,248	36,513
Rural Minor Arterial	2,942,605	59,561	1,645,896	35,983
Rural Minor Collector	42,644	1,259	42,644	1,259
Rural Principal Arterial	5,407,238	99,389	1,578,844	29,364
Urban Freeway or Expressway	2,840,963	47,410	0	0
Urban Principal Arterial	2,546,499	54,369	6,986	127
Other (Unclassified)	3,698,931	80,688	2,050	68
TOTAL:	**22,877,097**	**444,983**	**6,156,182**	**113,154**
DIFFERENCE FROM NO-BUILD	**584,532**	**-2,863**	**537,400**	**-2,369**

The Alternative 5 VMT is higher and the VHT is lower than the No-build Alternative within the entire study area and in the study area with the GSATS area network removed.

The MOE for Alternative 6 are summarized in the following table.

	ALTERNATIVE 6 STUDY AREA		***ALTERNATIVE 6 STUDY AREA W/O GSATS***	
FUNCTIONAL CLASSIFICATION	VMT	VHT	VMT	VHT
Centroid Connector	2,955,705	65,727	437,904	9,786
Rural Interstate	2,553,550	38,537	2,553,550	38,537
Rural Minor Arterial	2,905,529	57,500	1,546,832	32,794
Rural Minor Collector	77,462	2,295	77,462	2,295
Rural Principal Arterial	5,360,096	98,483	1,520,030	28,179
Urban Freeway or Expressway	2,838,710	47,372	0	0
Urban Principal Arterial	2,541,230	54,222	6,381	116
Other (Unclassified)	3,667,297	80,331	344	11
TOTAL:	**22,899,581**	**444,465**	**6,142,503**	**111,719**
DIFFERENCE FROM NO-BUILD	**607,016**	**-3,381**	**523,722**	**-3,804**

The Alternative 6 VMT is higher and the VHT is lower than the No-build Alternative within the entire study area and in the study area with the GSATS area network removed.

The MOE for Alternative 7 are summarized in the following table.

	ALTERNATIVE 7 STUDY AREA		***ALTERNATIVE 7 STUDY AREA W/O GSATS***	
FUNCTIONAL CLASSIFICATION	VMT	VHT	VMT	VHT
Centroid Connector	2,964,675	65,924	442,146	9,879
Rural Interstate	2,540,232	38,195	2,540,232	38,195
Rural Minor Arterial	2,950,459	58,895	1,611,577	34,550
Rural Minor Collector	44,848	1,313	44,848	1,313
Rural Principal Arterial	5,399,171	99,332	1,575,032	29,339
Urban Freeway or Expressway	2,823,521	47,119	0	0
Urban Principal Arterial	2,519,977	53,826	6,124	111
Other (Unclassified)	3,728,318	81,262	289	10
TOTAL:	**22,971,201**	**445,865**	**6,220,248**	**113,397**
DIFFERENCE FROM NO-BUILD	**678,636**	**-1,981**	**601,467**	**-2,125**

The Alternative 7 VMT is higher and the VHT is lower than the No-build Alternative within the entire study area and in the study area with the GSATS area network removed.

The MOE for Alternative 8 are summarized in the following table.

	ALTERNATIVE 8 STUDY AREA		***ALTERNATIVE 8 STUDY AREA W/O GSATS***	
FUNCTIONAL CLASSIFICATION	VMT	VHT	VMT	VHT
Centroid Connector	2,960,797	65,833	441,312	9,856
Rural Interstate	2,532,416	38,177	2,532,416	38,177
Rural Minor Arterial	2,816,595	58,194	1,485,065	33,986
Rural Minor Collector	54,715	1,605	54,715	1,605
Rural Principal Arterial	5,399,472	99,366	1,584,015	29,543
Urban Freeway or Expressway	2,836,904	47,342	0	0
Urban Principal Arterial	2,548,250	54,332	8,900	163
Other (Unclassified)	3,690,129	80,519	337	11
TOTAL:	**22,839,278**	**453,369**	**6,106,759**	**113,341**
DIFFERENCE FROM NO-BUILD	**546,713**	**-2,477**	**487,978**	**-2,181**

The Alternative 8 VMT is higher and the VHT is lower than the No-build Alternative within the entire study area and in the study area with the GSATS area network removed.

The total difference in VMT and VHT from the 2030 No-build Alternative compared to each of the 2030 I-73 Alternatives during the Three Month Peak Period is summarized in the following table.

	DIFFERENCE FROM NO-BUILD (STUDY AREA)				***DIFFERENCE FROM NO-BUILD (STUDY AREA W/O GSATS)***			
ALTERNATIVE	VMT	Rating	VHT	Rating	VMT	Rating	VHT	Rating
Alternative 1	541,738	8.00	-3,448	0.51	497,973	7.30	-2,818	2.86
Alternative 2	644,679	1.98	-1,400	8.00	590,340	0.78	-1,047	8.00
Alternative 3	633,064	2.66	-3,468	0.44	562,148	2.77	-3,494	0.90
Alternative 4	563,923	6.70	-3,587	0.00	491,060	7.78	-3,458	1.00
Alternative 5	584,532	5.50	-2,863	2.65	537,400	4.52	-2,369	4.16
Alternative 6	607,016	4.19	-3,381	0.75	523,722	5.48	-3,804	0.00
Alternative 7	678,636	0.00	-1,981	5.87	601,467	0.00	-2,125	4.87
Alternative 8	546,713	7.71	-2,477	4.06	487,978	8.00	-2,181	4.71

A statistical analysis was performed using the VMT and VHT shown in the previous table. For the entire study area, the VMT for all the alternatives except Alternatives 1, 7 and 8 are within one standard deviation of the mean VMT, while the VHT for Alternatives 1, 3, 5, 6 and 8 are within one standard deviation of the mean VHT. For the study area with the GSATS area network removed, the VMT for Alternatives 1, 3, 5, and 6 are within one standard deviation of the mean VMT, while the VHT for all the alternatives except Alternatives 2 and 6 are within one standard deviation of the mean VHT.

As was done with the 2030 AADT MOE, the alternatives were rated according to the relative differences between their VMT and VHT using the same proportional rating system.

In comparing the analysis results for the entire study area (including the GSATS area network), Alternative 1 would continue to provide the smallest increase in VMT (541,738 vehicle miles), while Alternative 4 would provide the largest reduction in VHT (3,587 vehicle hours). Alternative 7 would provide the largest increase in VMT (678,636 vehicle miles) and Alternative 2 would produce the smallest decreases in VHT (1,400 vehicle-hours).

After adjusting for the influence of the GSATS area network in the VMT and VHT calculations, Alternative 8 would provide the smallest increase in VMT (487,978 vehicle-miles) and Alternative 7 would provide the largest increase in VMT (601,467 vehicle-miles). Alternative 6 would provide the greatest reduction in VHT (3,804 vehicle-hours), while Alternative 2 would provide smallest reduction in VHT (1,047 vehicle-hours).

The change in the No-build network VMT and VHT for each alternative was examined by removing the VMT and VHT for each I-73 Alternative from the data, and examining the changes in MOE in the existing surrounding roadway network.

The MOE for each I-73 alternative during the Three Month Peak Period is summarized in the following table.

I-73 ALTERNATIVE	***VMT***	***Rating***	***VHT***	***Rating***
ALTERNATIVE 1	1,317,413	4.67	19,186	3.86
ALTERNATIVE 2	1,355,206	2.10	19,544	5.36
ALTERNATIVE 3	1,361,848	1.64	19,790	6.39
ALTERNATIVE 4	1,367,413	1.27	20,083	7.61
ALTERNATIVE 5	1,268,621	8.00	18,266	0.00
ALTERNATIVE 6	1,385,976	0.00	20,175	8.00
ALTERNATIVE 7	1,372,651	0.91	20,001	7.27
ALTERNATIVE 8	1,360,048	1.77	19,854	6.65

As shown in the previous table, Alternative 5 would continue to have the lowest VMT of the eight I-73 alternatives (1,268,621 vehicle-miles), while Alternative 6 would have the highest VMT (1,385,976 vehicle-miles). Alternative 5 also would continue to have the lowest VHT (18,266 vehicle-hours), while Alternative 4 would have the highest VHT (20,083 vehicle-hours).

The MOE for the eight I-73 Alternatives were analyzed again to identify the impact on each alternative has on the remainder of the roadway network.

The MOE for Alternative 1 are summarized in the following table.

	ALTERNATIVE 1 STUDY AREA W/O I-73		***ALTERNATIVE 1 STUDY AREA W/O GSATS W/O I-73***	
FUNCTIONAL CLASSIFICATION	VMT	VHT	VMT	VHT
Centroid Connector	2,961,867	65,862	441,314	9,861
Rural Interstate	1,167,141	18,228	1,167,141	18,228
Rural Minor Arterial	2,786,994	56,829	1,482,159	33,105
Rural Minor Collector	53,180	1,563	53,180	1,563
Rural Principal Arterial	5,449,613	100,159	1,647,201	30,603
Urban Freeway or Expressway	2,862,343	47,766	0	0
Urban Principal Arterial	2,547,279	54,359	7,982	146
Other (Unclassified)	3,688,474	80,447	365	12
TOTAL:	**21,516,890**	**425,212**	**4,799,341**	**93,518**
DIFFERENCE FROM NO-BUILD	**-775,675**	**-22,634**	**-819,440**	**-22,004**

The MOE for Alternative 2 are summarized in the following table.

	ALTERNATIVE 2 STUDY AREA W/O I-73		***ALTERNATIVE 2 STUDY AREA W/O GSATS W/O I-73***	
FUNCTIONAL CLASSIFICATION	VMT	VHT	VMT	VHT
Centroid Connector	2,958,107	65,780	440,797	9,851
Rural Interstate	1,175,264	18,541	1,175,264	18,541
Rural Minor Arterial	2,969,437	60,348	1,657,803	36,499
Rural Minor Collector	53,244	1,569	53,244	1,569
Rural Principal Arterial	5,358,429	98,590	1,518,742	28,321
Urban Freeway or Expressway	2,859,876	47,725	0	0
Urban Principal Arterial	2,530,405	54,005	7,788	142
Other (Unclassified)	3,677,275	80,345	276	9
TOTAL:	**21,582,038**	**426,903**	**4,853,915**	**94,932**
DIFFERENCE FROM NO-BUILD	**-710,527**	**-20,944**	**-764,867**	**-20,590**

The MOE for Alternative 3 are summarized in the following table.

	ALTERNATIVE 3 STUDY AREA W/O I-73		***ALTERNATIVE 3 STUDY AREA W/O GSATS W/O I-73***	
FUNCTIONAL CLASSIFICATION	VMT	VHT	VMT	VHT
Centroid Connector	2,956,174	65,734	437,699	9,778
Rural Interstate	1,204,319	18,946	1,204,319	18,946
Rural Minor Arterial	2,876,579	57,108	1,566,030	33,278
Rural Minor Collector	71,866	2,125	71,866	2,125
Rural Principal Arterial	5,388,820	98,518	1,532,636	27,980
Urban Freeway or Expressway	2,839,406	47,384	0	0
Urban Principal Arterial	2,541,764	54,280	6,141	112
Other (Unclassified)	3,684,853	80,494	390	13
TOTAL:	**21,563,781**	**424,588**	**4,819,081**	**92,232**
DIFFERENCE FROM NO-BUILD	**-728,784**	**-23,258**	**-799,701**	**-23,290**

The MOE for Alternative 4 are summarized in the following table.

	ALTERNATIVE 4 STUDY AREA W/O I-73		***ALTERNATIVE 4 STUDY AREA W/O GSATS W/O I-73***	
FUNCTIONAL CLASSIFICATION	VMT	VHT	VMT	VHT
Centroid Connector	2,958,350	65,780	441,164	9,854
Rural Interstate	1,151,447	17,911	1,151,447	17,911
Rural Minor Arterial	2,763,245	55,777	1,431,569	31,566
Rural Minor Collector	60,786	1,773	60,786	1,773
Rural Principal Arterial	5,461,251	100,460	1,650,657	30,749
Urban Freeway or Expressway	2,850,923	47,575	0	0
Urban Principal Arterial	2,537,044	54,113	6,499	118
Other (Unclassified)	3,706,028	80,786	306	10
TOTAL:	**21,489,075**	**424,176**	**4,742,429**	**91,982**
DIFFERENCE FROM NO-BUILD	**-803,490**	**-23,670**	**-876,353**	**-23,540**

The MOE for Alternative 5 are summarized in the following table.

	ALTERNATIVE 5 STUDY AREA W/O I-73		***ALTERNATIVE 5 STUDY AREA W/O GSATS W/O I-73***	
FUNCTIONAL CLASSIFICATION	VMT	VHT	VMT	VHT
Centroid Connector	2,958,970	65,795	440,515	9,840
Rural Interstate	1,170,627	18,246	1,170,627	18,246
Rural Minor Arterial	2,942,605	59,561	1,645,896	35,983
Rural Minor Collector	42,644	1,259	42,644	1,259
Rural Principal Arterial	5,407,238	99,389	1,578,844	29,364
Urban Freeway or Expressway	2,840,963	47,410	0	0
Urban Principal Arterial	2,546,499	54,369	6,986	127
Other (Unclassified)	3,698,931	80,688	2,050	68
TOTAL:	**21,608,477**	**426,717**	**4,887,561**	**94,887**
DIFFERENCE FROM NO-BUILD	**-684,088**	**-21,129**	**-731,220**	**-20,635**

The MOE for Alternative 6 are summarized in the following table.

	ALTERNATIVE 6 STUDY AREA W/O I-73		***ALTERNATIVE 6 STUDY AREA W/O GSATS W/O I-73***	
FUNCTIONAL CLASSIFICATION	VMT	VHT	VMT	VHT
Centroid Connector	2,955,705	65,727	437,904	9,786
Rural Interstate	1,167,575	18,362	1,167,575	18,362
Rural Minor Arterial	2,905,529	57,500	1,546,832	32,794
Rural Minor Collector	77,462	2,295	77,462	2,295
Rural Principal Arterial	5,360,096	98,483	1,520,030	28,179
Urban Freeway or Expressway	2,838,710	47,372	0	0
Urban Principal Arterial	2,541,230	54,222	6,381	116
Other (Unclassified)	3,667,297	80,331	344	11
TOTAL:	**21,513,605**	**424,291**	**4,756,528**	**91,544**
DIFFERENCE FROM NO-BUILD	**-778,960**	**-23,555**	**-862,254**	**-23,978**

The MOE for Alternative 7 are summarized in the following table.

	ALTERNATIVE 7 STUDY AREA W/O I-73		***ALTERNATIVE 7 STUDY AREA W/O GSATS W/O I-73***	
FUNCTIONAL CLASSIFICATION	VMT	VHT	VMT	VHT
Centroid Connector	2,964,675	65,924	442,146	9,879
Rural Interstate	1,167,582	18,193	1,167,582	18,193
Rural Minor Arterial	2,950,459	58,895	1,611,577	34,550
Rural Minor Collector	44,848	1,313	44,848	1,313
Rural Principal Arterial	5,399,171	99,332	1,575,032	29,339
Urban Freeway or Expressway	2,823,521	47,119	0	0
Urban Principal Arterial	2,519,977	53,826	6,124	111
Other (Unclassified)	3,728,318	81,262	289	10
TOTAL:	**21,598,550**	**425,864**	**4,847,597**	**93,396**
DIFFERENCE FROM NO-BUILD	**-694,015**	**-21,982**	**-771,184**	**-22,126**

The MOE for Alternative 8 are summarized in the following table.

	ALTERNATIVE 8 STUDY AREA W/O I-73		***ALTERNATIVE 8 STUDY AREA W/O GSATS W/O I-73***	
FUNCTIONAL CLASSIFICATION	VMT	VHT	VMT	VHT
Centroid Connector	2,960,797	65,833	441,312	9,856
Rural Interstate	1,172,368	18,323	1,172,368	18,323
Rural Minor Arterial	2,816,595	58,194	1,485,065	33,986
Rural Minor Collector	54,715	1,605	54,715	1,605
Rural Principal Arterial	5,399,472	99,366	1,584,015	29,543
Urban Freeway or Expressway	2,836,904	47,342	0	0
Urban Principal Arterial	2,548,250	54,332	8,900	163
Other (Unclassified)	3,690,129	80,519	337	11
TOTAL:	**21,479,230**	**425,514**	**4,746,712**	**93,487**
DIFFERENCE FROM NO-BUILD	**-813,335**	**-22,332**	**-872,070**	**-22,035**

The VMT and VHT within the remainder of the study area network continue to be substantially reduced by all of the I-73 Build Alternatives during the Three Month Peak Season, providing a congestion reducing effect on the remaining existing roadway network when compared to the No-Build Alternative.

To identify which 2030 Three Month Peak Period I-73 alternative provides the largest reductions in MOE on the remainder of the roadway network, the difference from the No-build Alternative can be compared. This comparison is shown in the following table.

	DIFFERENCE FROM NO-BUILD (STUDY AREA)				***DIFFERENCE FROM NO-BUILD (STUDY AREA W/O GSATS)***			
ALTERNATIVE	VMT	Rating	VHT	Rating	VMT	Rating	VHT	Rating
Alternative 1	-775,675	2.33	-22,634	3.04	-819,440	3.14	-22,004	4.66
Alternative 2	-710,527	6.36	-20,944	8.00	-764,867	6.15	-20,590	8.00
Alternative 3	-728,784	5.23	-23,258	1.21	-799,701	4.23	-23,290	1.62
Alternative 4	-803,490	0.61	-23,670	0.00	-876,353	0.00	-23,540	1.03
Alternative 5	-684,088	8.00	-21,129	7.46	-731,220	8.00	-20,635	7.89
Alternative 6	-778,960	2.13	-23,555	0.34	-862,254	0.78	-23,978	0.00
Alternative 7	-694,015	7.39	-21,982	4.95	-771,184	5.80	-22,126	4.37
Alternative 8	-813,335	0.00	-22,332	3.93	-872,070	0.24	-22,035	4.59

The analysis and comparison of alternatives indicates that Alternatives 4 and 8 would provide the largest reduction in network VMT (803,490 and 813,335 vehicle-miles respectively), while Alternative 4 would provide the largest reduction in VHT (23,670 vehicle-hours) throughout the

existing roadway network in the three county study area. Alternative 5 would provide the least reduction in VMT (694,015 vehicle-miles), while Alternative 2 would provide the least reduction in VHT (20,944 vehicle-hours).

When considering the study area network without the GSATS area network, Alternatives 4 and 8 would provide the largest reduction in network VMT (876,353 and 872,070 vehicle-miles respectively), while Alternative 6 would provide the largest reduction in VHT (23,978 vehicle-hours). Alternative 5 would provide the least reduction in VMT (731,220 vehicle-miles), while Alternatives 2 and 5 would provide the least reduction in VHT (20,590 and 20,635 vehicle-hours respectively).

Evaluation of 2030 Three Month Peak Period Alternatives

The analyses indicate that all of the proposed I-73 Build Alternatives would carry a large number of vehicle-miles of travel throughout the study area. The analyses also indicate that all of the proposed Build Alternatives would reduce vehicle-miles and vehicle-hours of travel of the rest of the existing 'No-build' network. A summary of the ratings for each of the alternatives is contained in the following table.

ALTERNATIVE	Sum of Ratings	Average Ratings	Rank
Alternative 1	64.08	4.27	5
Alternative 2	80.78	5.39	7
Alternative 3	42.59	2.84	3
Alternative 4	32.64	2.18	2
Alternative 5	92.24	6.15	8
Alternative 6	29.70	1.98	1
Alternative 7	62.69	4.18	4
Alternative 8	67.49	4.50	6

Based on this evaluation, Alternatives 4 and 6 would be better overall in addressing travel demands arising from 2030 Three Month Peak Period Average Daily traffic conditions. Alternative 3 would be the next 'best' alternative for these conditions, followed by Alternatives 1, 7, and 8, which provide about the same overall benefit. Alternative 5 would be the least beneficial alternative under the 2030 Three Month Peak Period Average Daily traffic conditions.

Peak Day Traffic Assignment

The Peak Day Traffic Assignments were developed by increasing the surveyed work, non-work and truck portions of the 2030 AADT trip table by 2.3. The resulting Peak Day trip table was assigned to the No-build network and the eight I-73 alternative alignment networks.