

2040 MTP and CTP Alternatives – Travel Time

Purpose of Travel Time Measure

This measure calculates and compares the travel time between key activity centers in the Triangle for the afternoon peak period, which occurs from 3:30pm to 7:30pm. The six activity centers include:

- Downtown Durham
- Carrboro/Chapel Hill
- Downtown Hillsborough
- Research Triangle Park
- Downtown Raleigh, and
- Pittsboro

These centers attract a significant portion of the travel demand in the region and therefore the most important travel corridors are between these centers. The travel time impact that each Alternative has on these corridors indicates the effectiveness of that particular Alternative.

Presentation of Travel Time Measure

This section presents the travel time data by Alternative. A series of tables presents the travel time between the activity centers and then compares those values to the Existing plus Committed scenario (E+C). The E+C represents the no build alternative, and thus the comparison demonstrates how effective the particular Alternative reduces travel time from that worst case scenario. A map shows the travel time comparison, as well.

The first set of travel time tables and map show the 2010 and E+C scenario to help provide a baseline for comparison for the Alternatives.

Alternatives – Travel Time 2010 and E+C

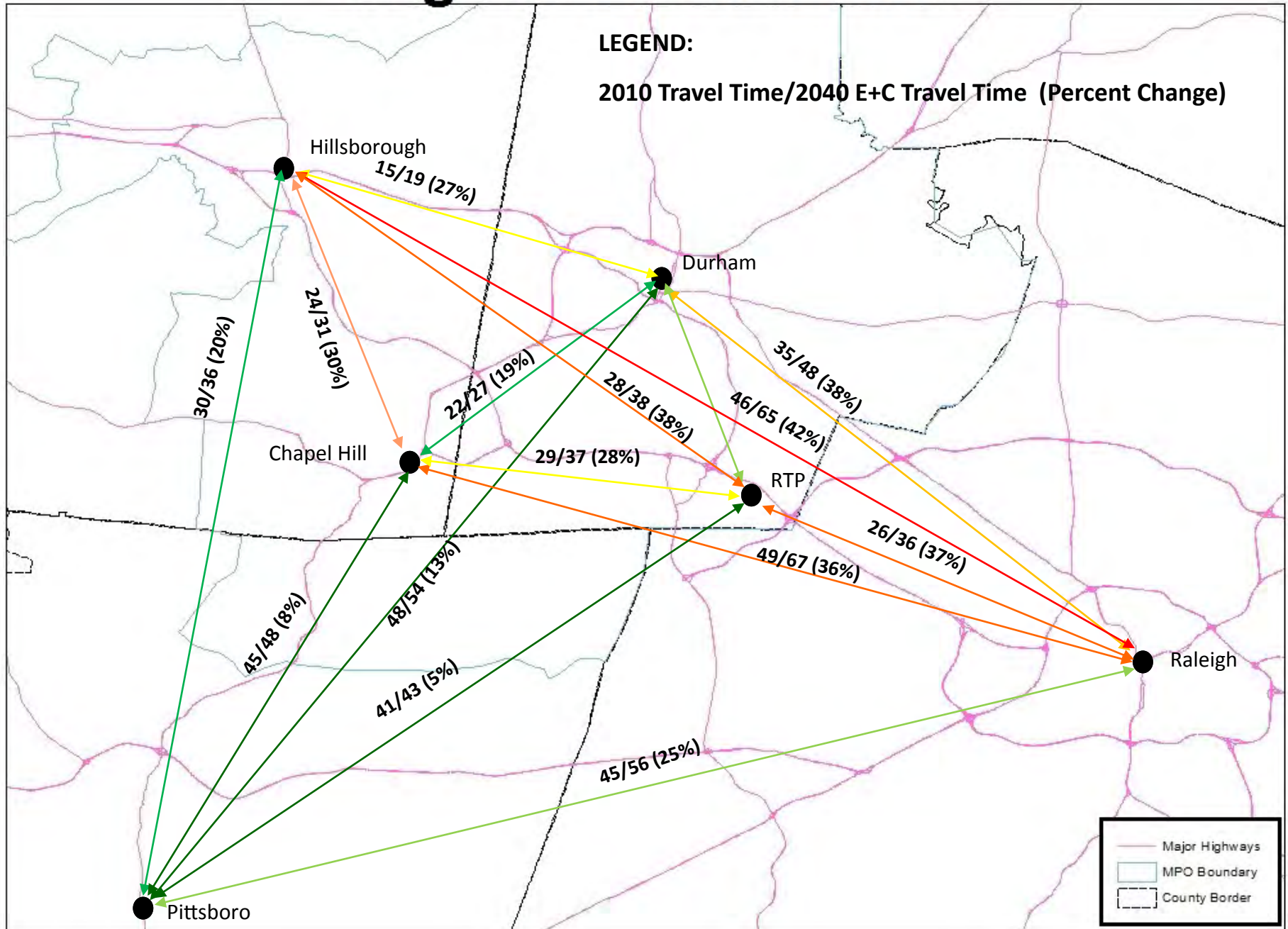
This series of tables compares the 2010 and E+C travel times. The E+C includes the 2040 population and employment with no improvements to the current transportation network. The comparison table (3rd) table shows the percent increase in travel time from 2010 to 2040, and shades the cells with an increasingly hot color as the percentage increases. Trips involving Raleigh and Hillsborough would experience the greatest percentage increase in trip time, while Pittsboro trips would experience the smallest percentage increase. These results reinforce the congestion maps that show the corridors between Raleigh and Hillsborough, such as I-40, US 70 and I-85, experiencing increasingly long delays.

2010 PM Peak Travel time (minutes)								
		To						
		Durham	RTP	Raleigh	RDU	Chapel Hill	Hillsborough	Pittsboro
From	Durham		14	35	24	22	28	48
	RTP	16		27	16	30	29	43
	Raleigh	35	25		26	50	46	46
	RDU	23	14	27		38	34	44
	Chapel Hill	22	28	49	38		24	45
	Hillsborough	29	27	46	34	25		31
	Pittsboro	48	39	44	42	44	29	

E+C PM Peak Travel time (minutes)								
		To						
		Durham	RTP	Raleigh	RDU	Chapel Hill	Hillsborough	Pittsboro
From	Durham		17	54	30	27	33	56
	RTP	20		43	20	39	37	48
	Raleigh	43	29		30	62	57	56
	RDU	28	15	40		47	43	47
	Chapel Hill	26	35	72	48		28	50
	Hillsborough	40	40	73	50	35		41
	Pittsboro	51	39	56	43	46	31	

Compare 2010 and E+C: PM Peak Travel time (percent increase)								
		To						
		Durham	RTP	Raleigh	RDU	Chapel Hill	Hillsborough	Pittsboro
From	Durham		23%	54%	28%	20%	16%	17%
	RTP	27%		58%	23%	29%	27%	11%
	Raleigh	23%	15%		14%	25%	24%	22%
	RDU	22%	8%	49%		26%	24%	6%
	Chapel Hill	18%	26%	47%	29%		18%	12%
	Hillsborough	39%	49%	60%	45%	41%		34%
	Pittsboro	8%	-1%	28%	1%	4%	6%	

Regional Travel Time In Minutes



(based on afternoon peak travel time)

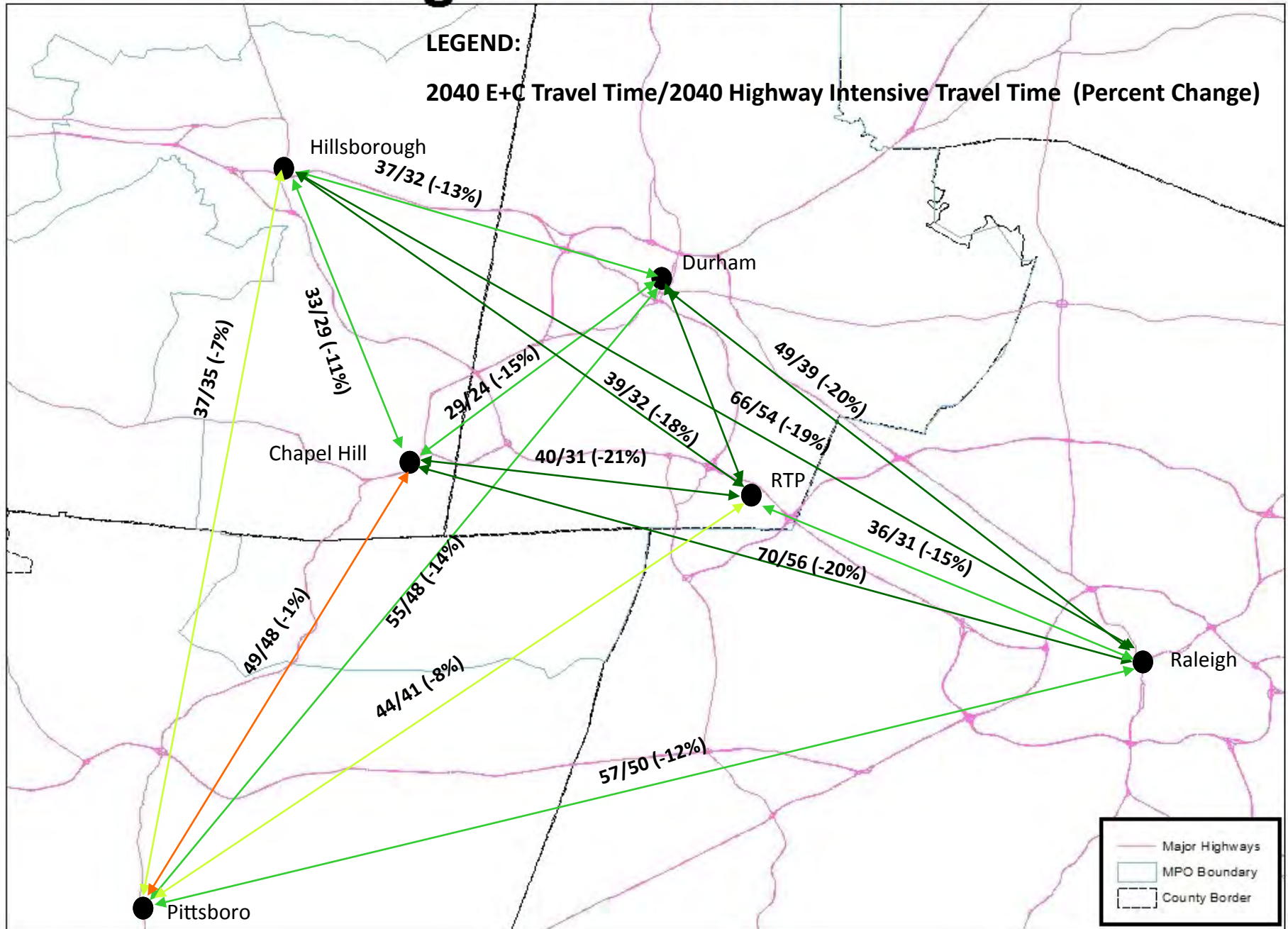
Alternatives – Travel Time

Highway Intensive/CommPlan

This series of tables uses the 2040 Highway Intensive transportation network with the Community Plan land use scenario to create an Alternative for comparison with the E+C travel times. The comparison table (3rd) table shows that trips to Raleigh and Chapel Hill, and trips from the RTP would experience the greatest percentage decrease in trip time (i.e., green shaded cells). The high level of existing and forecasted congestion and the concentration of highway improvements in the plan for these corridors produce these results.

E+C		PM Peak Travel time (w/ Terminal Time)						
		To						
		Durham	RTP	Raleigh	RDU	Chapel Hill	Hillsborough	Pittsboro
From	Durham DT		17	54	30	29	33	58
	RTP	21		43	20	42	38	49
	Raleigh DT	44	29		30	65	59	58
	RDU	29	15	40		51	44	48
	Chapel Hill	28	37	74	50		29	51
	Hillsborough	41	41	74	51	37		43
	Pittsboro	52	39	57	44	47	32	
Hwy Int.		PM Peak Travel time (w/ Terminal Time)						
		To						
		Durham	RTP	Raleigh	RDU	Chapel Hill	Hillsborough	Pittsboro
From	Durham DT		14	41	25	24	30	49
	RTP	16		34	18	32	31	43
	Raleigh DT	37	28		29	53	50	52
	RDU	23	14	32		39	36	44
	Chapel Hill	25	31	58	41		27	49
	Hillsborough	35	34	58	42	31		38
	Pittsboro	46	38	48	42	48	32	
		Compare E + C and Highway Intensive PM Peak Travel Time (percent increase)						
		To						
		Durham	RTP	Raleigh	RDU	Chapel Hill	Hillsborough	Pittsboro
From	Durham DT		-18%	-24%	-17%	-18%	-10%	-15%
	RTP	-24%		-22%	-10%	-24%	-18%	-12%
	Raleigh DT	-16%	-5%		-3%	-18%	-15%	-10%
	RDU	-20%	-2%	-20%		-22%	-17%	-9%
	Chapel Hill	-12%	-17%	-22%	-18%		-5%	-4%
	Hillsborough	-15%	-17%	-23%	-17%	-15%		-12%
	Pittsboro	-12%	-2%	-15%	-3%	2%	-1%	

Regional Travel Time In Minutes



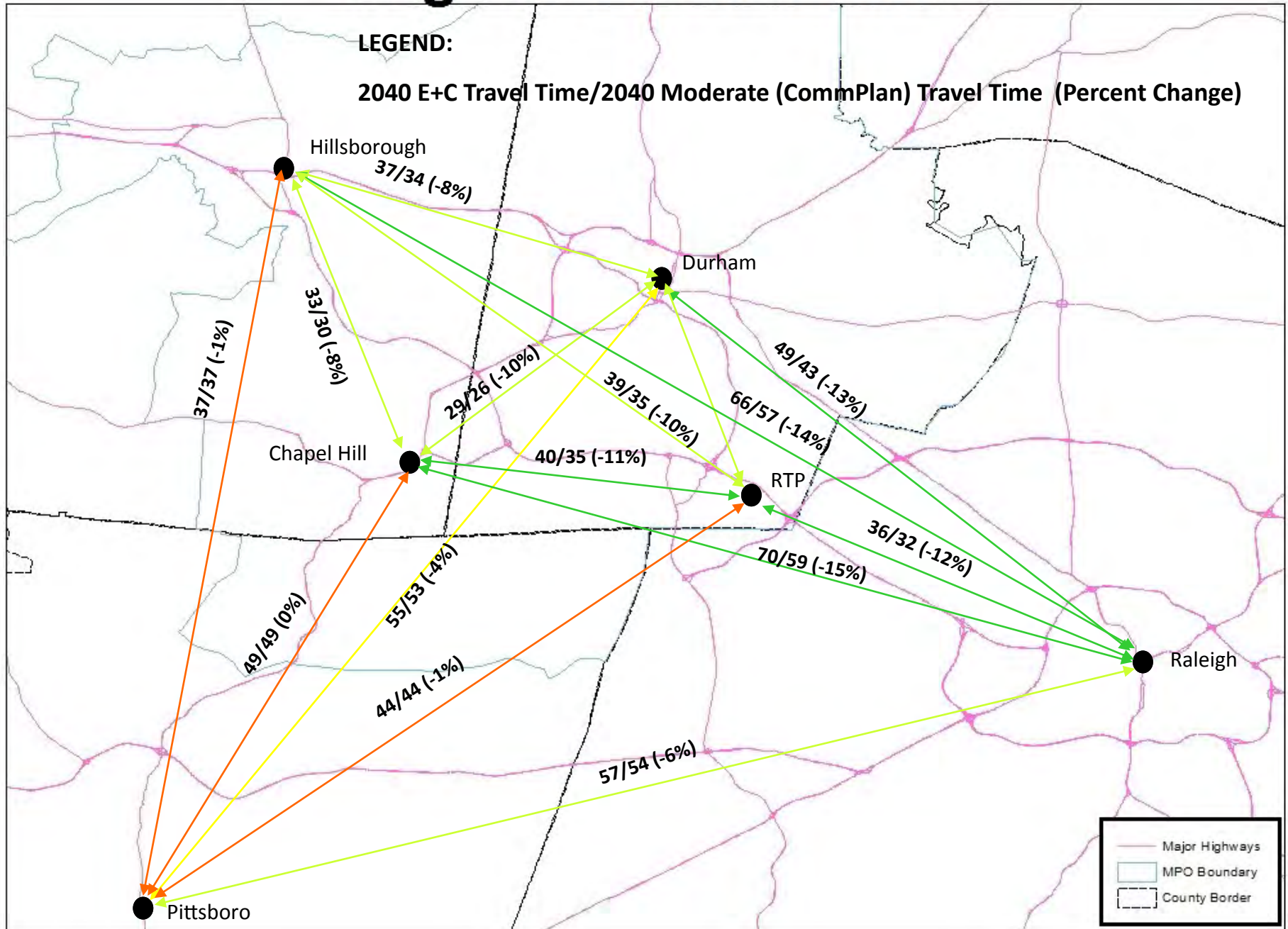
(based on afternoon peak travel time)

Alternatives – Travel Time Moderate/CommPlan

This series of tables has the 2040 Moderate transportation network that uses the Community Plan land use scenario Alternative in a comparison with the E+C travel times.

E+C		PM Peak Travel time (w/ Terminal Time)							
		To							
		Durham	RTP	Raleigh	RDU	Chapel Hill	Hillsborough	Pittsboro	
From	Durham DT		17	54	30	29	33	58	
	RTP	21		43	20	42	38	49	
	Raleigh DT	44	29		30	65	59	58	
	RDU	29	15	40		51	44	48	
	Chapel Hill	28	37	74	50		29	51	
	Hillsborough	41	41	74	51	37		43	
	Pittsboro	52	39	57	44	47	32		
ModCom		PM Peak Travel time (w/ Terminal Time)							
		To							
		Durham	RTP	Raleigh	RDU	Chapel Hill	Hillsborough	Pittsboro	
From	Durham DT		17	45	29	26	31	56	
	RTP	18		35	19	36	33	48	
	Raleigh DT	40	29		30	57	53	56	
	RDU	25	15	32		42	39	47	
	Chapel Hill	26	34	61	45		28	51	
	Hillsborough	37	37	61	45	32		42	
	Pittsboro	50	40	51	43	48	32		
		Compare E + C and Moderate (Comm) PM Peak Travel Time (percent increase)							
		To							
		Durham	RTP	Raleigh	RDU	Chapel Hill	Hillsborough	Pittsboro	
From	Durham DT		-3%	-17%	-6%	-13%	-6%	-3%	
	RTP	-14%		-20%	-6%	-15%	-11%	-2%	
	Raleigh DT	-8%	-2%		0%	-13%	-9%	-3%	
	RDU	-13%	-1%	-18%		-16%	-11%	-2%	
	Chapel Hill	-7%	-7%	-17%	-10%		-3%	-1%	
	Hillsborough	-9%	-9%	-17%	-10%	-12%		-3%	
	Pittsboro	-5%	1%	-9%	0%	2%	1%		

Regional Travel Time In Minutes



(based on afternoon peak travel time)

Alternatives – Travel Time

Moderate/All-in-Transit

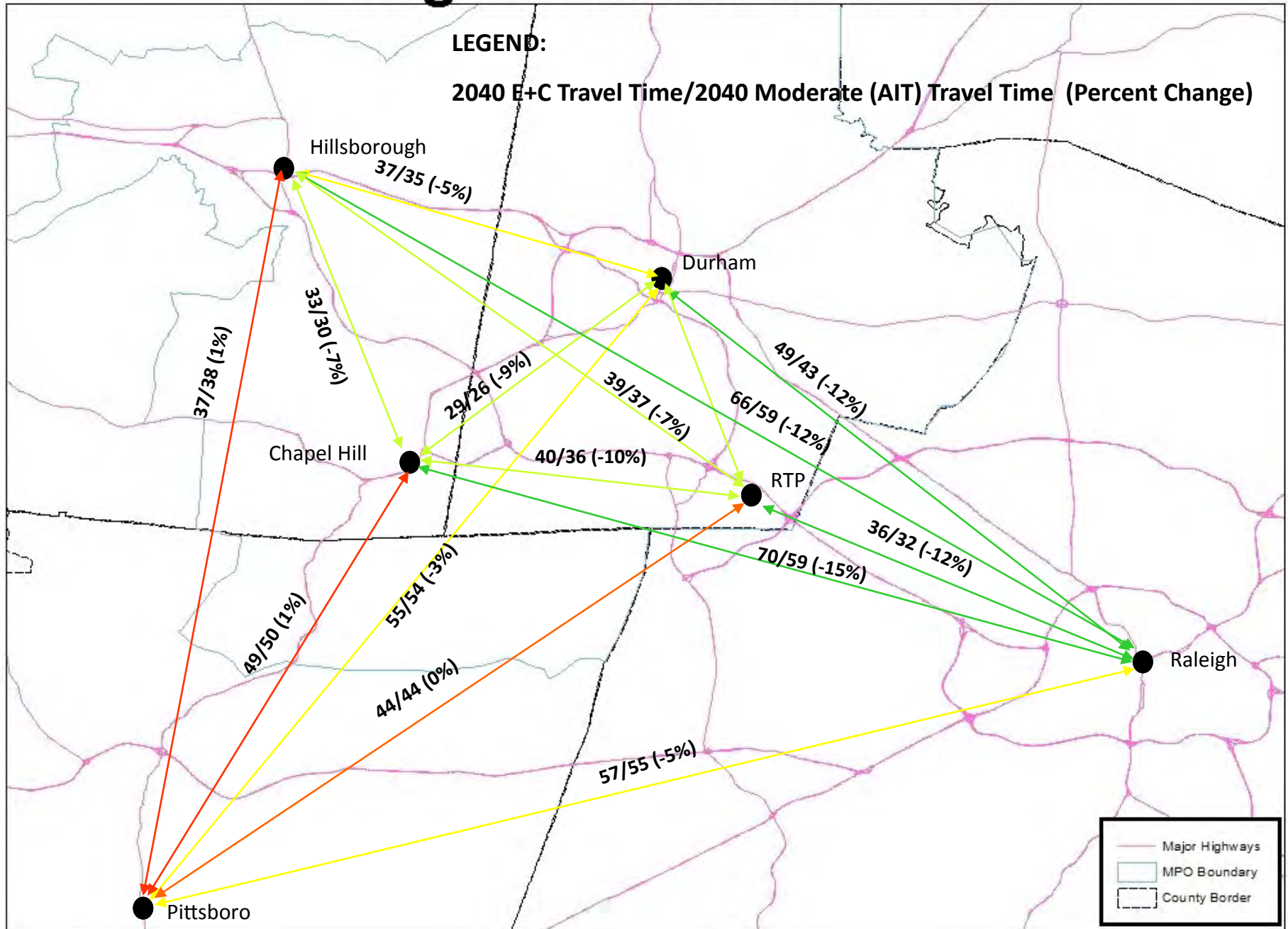
This series of tables has the 2040 Moderate transportation network that uses the All-in-Transit land use scenario Alternative in a comparison with the E+C travel times.

E+C		PM Peak Travel time (w/ Terminal Time)						
		To						
		Durham	RTP	Raleigh	RDU	Chapel Hill	Hillsborough	Pittsboro
From	Durham DT		17	54	30	29	33	58
	RTP	21		43	20	42	38	49
	Raleigh DT	44	29		30	65	59	58
	RDU	29	15	40		51	44	48
	Chapel Hill	28	37	74	50		29	51
	Hillsborough	41	41	74	51	37		43
	Pittsboro	52	39	57	44	47	32	

ModAIT		PM Peak Travel time (w/ Terminal Time)						
		To						
		Durham	RTP	Raleigh	RDU	Chapel Hill	Hillsborough	Pittsboro
From	Durham DT		17	46	29	26	32	57
	RTP	17		35	19	36	34	48
	Raleigh DT	40	29		30	57	54	57
	RDU	25	15	33		43	40	48
	Chapel Hill	26	35	62	46		28	51
	Hillsborough	38	39	63	47	33		43
	Pittsboro	50	40	52	44	48	32	

		Compare E + C and Moderate (Comm) PM Peak Travel Time (percent increase)						
		To						
		Durham	RTP	Raleigh	RDU	Chapel Hill	Hillsborough	Pittsboro
From	Durham DT		1%	-15%	-3%	-11%	-2%	-1%
	RTP	-15%		-19%	-4%	-15%	-9%	-1%
	Raleigh DT	-9%	-2%		-1%	-13%	-8%	-2%
	RDU	-13%	0%	-17%		-16%	-9%	-1%
	Chapel Hill	-7%	-5%	-16%	-9%		-3%	0%
	Hillsborough	-7%	-5%	-15%	-7%	-10%		0%
	Pittsboro	-5%	2%	-8%	1%	2%	2%	

Regional Travel Time In Minutes



(based on afternoon peak travel time)

Alternatives – Travel Time

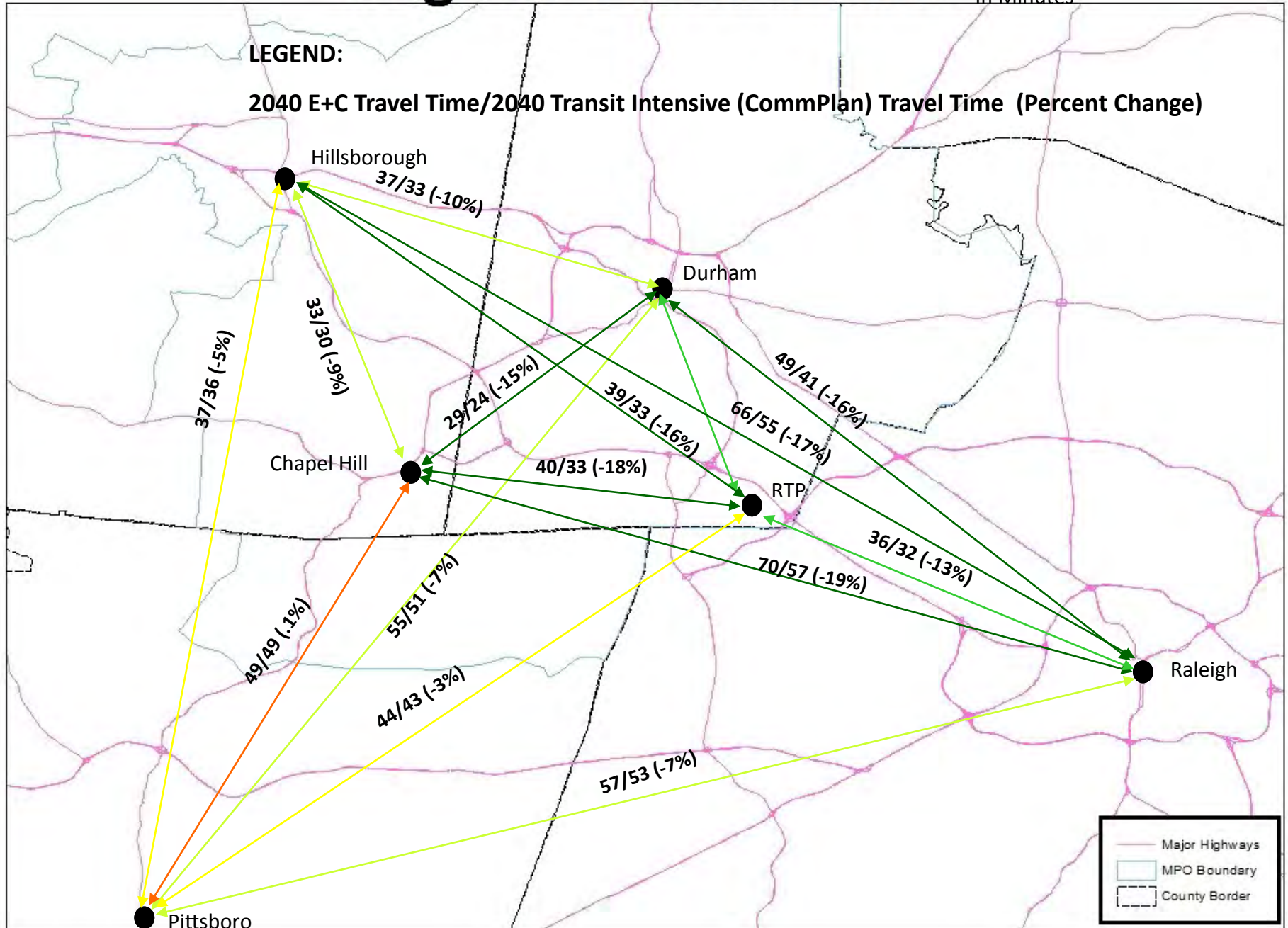
Transit Intensive/CommPlan

This series of tables has the 2040 Transit Intensive transportation network that uses the Community Plan land use scenario Alternative in a comparison with the E+C travel times.

E+C		PM Peak Travel time (w/ Terminal Time)							
		To							
		Durham	RTP	Raleigh	RDU	Chapel Hill	Hillsborough	Pittsboro	
From	Durham DT		17	54	30	29	33	58	
	RTP	21		43	20	42	38	49	
	Raleigh DT	44	29		30	65	59	58	
	RDU	29	15	40		51	44	48	
	Chapel Hill	28	37	74	50		29	51	
	Hillsborough	41	41	74	51	37		43	
	Pittsboro	52	39	57	44	47	32		
TransComm		PM Peak Travel time (w/ Terminal Time)							
		To							
		Durham	RTP	Raleigh	RDU	Chapel Hill	Hillsborough	Pittsboro	
From	Durham DT		15	43	27	24	30	54	
	RTP	17		35	18	33	32	47	
	Raleigh DT	39	29		30	55	52	56	
	RDU	24	14	33		40	37	46	
	Chapel Hill	25	32	58	42		28	50	
	Hillsborough	36	34	59	42	32		40	
	Pittsboro	48	39	51	43	47	32		
		Compare E + C and Moderate (Comm) PM Peak Travel Time (percent increase)							
		To							
		Durham	RTP	Raleigh	RDU	Chapel Hill	Hillsborough	Pittsboro	
From	Durham DT		-11%	-20%	-12%	-18%	-8%	-7%	
	RTP	-19%		-20%	-8%	-21%	-16%	-5%	
	Raleigh DT	-10%	-2%		0%	-16%	-12%	-4%	
	RDU	-16%	-2%	-18%		-21%	-15%	-3%	
	Chapel Hill	-12%	-14%	-21%	-16%		-3%	-3%	
	Hillsborough	-12%	-15%	-21%	-16%	-13%		-8%	
	Pittsboro	-8%	-1%	-10%	-2%	1%	0%		

Regional Travel Time

In Minutes



(based on afternoon peak travel time)

Alternatives – Travel Time

Transit Intensive/All-in-Transit

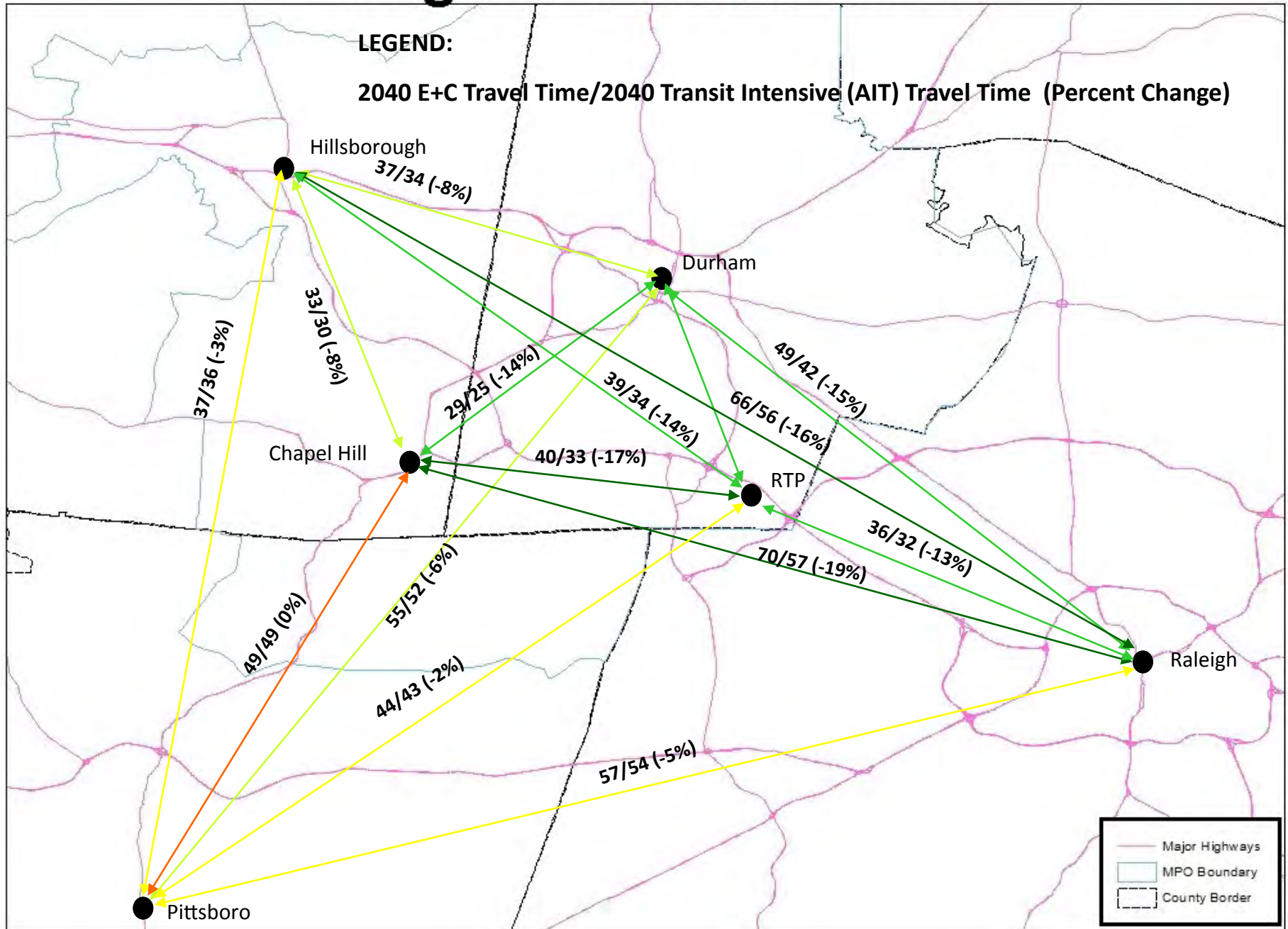
This series of tables has the 2040 Transit Intensive transportation network that uses the All-in-Transit land use scenario Alternative in a comparison with the E+C travel times.

E+C		PM Peak Travel time (w/ Terminal Time)						
		To						
		Durham	RTP	Raleigh	RDU	Chapel Hill	Hillsborough	Pittsboro
From	Durham DT		17	54	30	29	33	58
	RTP	21		43	20	42	38	49
	Raleigh DT	44	29		30	65	59	58
	RDU	29	15	40		51	44	48
	Chapel Hill	28	37	74	50		29	51
	Hillsborough	41	41	74	51	37		43
	Pittsboro	52	39	57	44	47	32	

Transit/AIT		PM Peak Travel time (w/ Terminal Time)						
		To						
		Durham	RTP	Raleigh	RDU	Chapel Hill	Hillsborough	Pittsboro
From	Durham DT		16	44	28	25	32	55
	RTP	17		35	18	33	32	47
	Raleigh DT	39	29		30	55	52	57
	RDU	24	15	33		40	38	47
	Chapel Hill	25	32	59	42		28	50
	Hillsborough	37	35	60	44	32		41
	Pittsboro	48	39	52	43	47	32	

		Compare E + C and Moderate (Comm) PM Peak Travel Time (percent increase)						
		To						
		Durham	RTP	Raleigh	RDU	Chapel Hill	Hillsborough	Pittsboro
From	Durham DT		-7%	-18%	-10%	-16%	-5%	-5%
	RTP	-19%		-20%	-6%	-21%	-14%	-3%
	Raleigh DT	-11%	-2%		0%	-16%	-11%	-2%
	RDU	-16%	0%	-17%		-21%	-13%	-1%
	Chapel Hill	-12%	-12%	-21%	-16%		-3%	-2%
	Hillsborough	-10%	-13%	-19%	-14%	-12%		-6%
	Pittsboro	-8%	0%	-9%	-1%	2%	0%	

Regional Travel Time In Minutes



(based on afternoon peak travel time)