2050 MTP – Alternatives Analysis – **Travel Time**

Background

These tables show the morning and afternoon peak hour travel time in minutes between key destinations of the DCHC MPO planning area based on the Triangle Regional Model (TRM). The comparison is between the year 2016 and the 2050 E+C (No Build), and the year 2016 and the 2050 All Together (Balanced & Equitable) scenario. The travel time difference among the three build scenarios, i.e., Trends & Plans, Shared Leadership and All Together, is not significant, and thus the All Together scenario was chosen to compare with the 2050 E+C scenario.

Reading the Tables

On each page, the first two tables show the year 2016 and 2050 travel times, and the third table presents the percent change from 2016 to 2050. Note that the destination name at the top of the column is the "to" destination, while the place name in each row is the "from," or origin, of the trips. The "to" and "from" travel time for a pair of places can vary quite a bit. For example, the 2050 E+C afternoon peak hour travel is 81 minutes from Durham to Raleigh, but only 74 minutes from Raleigh to Durham. This shows a directional difference in congestion during the peak hour, and in this case is likely caused by the heavier eastbound afternoon traffic on I-40.

The Results

The 2050 E+C results on pages 2 and 3 demonstrate that the forecasted travel time averages about 75% and in some cases doubles for the afternoon peak. The 2050 All Together results on pages 4 and 5 still show significant increases that average about 30% in the afternoon peak, but are much lower than that of the 2050 E+C because of the investment in roadway capacity and transit services. The travel time for the afternoon peak is significantly higher than the morning peak. The commutes with the largest travel time increase include trips to Raleigh and Pittsboro in the afternoon peak hour, and to Raleigh in the morning.

2050 MTP -- Existing + Committed
Morning Peak-Hour Travel Time

2016 MORNING Peak Hour Travel Time (minutes)						
To ==>	Durham DWTN	RTP	Raleigh DWTN	Chapel Hill	H'borough	Pittsboro
Durham DWTN		15	41	33	22	43
RTP	18		30	31	31	34
Raleigh DWTN	45	32		57	58	47
Chapel Hill	34	28	51		25	28
Hillsborough	24	30	55	27		46
Pittsboro	48	37	54	35	46	

2050 (E+C) MORNING Peak Hour Travel Time (minutes)						
To ==>	Durham DWTN	RTP	Raleigh DWTN	Chapel Hill	H'borough	Pittsboro
Durham DWTN		21	65	48	26	55
RTP	20		50	49	36	42
Raleigh DWTN	73	59		99	89	76
Chapel Hill	46	44	83		28	32
Hillsborough	35	44	89	39		47
Pittsboro	81	68	100	56	58	

Compare 2016 and 2050 MORNING Peak (percent increase)						
To ==>	Durham DWTN	RTP	Raleigh DWTN	Chapel Hill	H'borough	Pittsboro
Durham DWTN		38%	61%	46%	19%	29%
RTP	11%		65%	55%	16%	23%
Raleigh DWTN	62%	83%		75%	54%	60%
Chapel Hill	35%	53%	65%		15%	11%
Hillsborough	43%	50%	61%	45%		2%
Pittsboro	68%	85%	87%	63%	25%	

2050 MTP -- Existing + Committed
Afternoon Peak-Hour Travel Time

2016 AFTERNOON Peak Hour Travel Time (minutes)					
To ==>	Durham DWTN	RTP	Raleigh DWTN	Chapel Hill	H'borough	Pittsboro
Durham DWTN		17	47	36	23	47
RTP	16		33	31	30	36
Raleigh DWTN	40	29		54	55	52
Chapel Hill	35	32	58		28	33
Hillsborough	24	32	61	27		46
Pittsboro	45	36	50	32	46	

2050 (E+C) AFTERNOON Peak Hour Travel Time (minutes)					
To ==>	Durham DWTN	RTP	Raleigh DWTN	Chapel Hill	H'borough	Pittsboro
Durham DWTN		21	81	54	39	87
RTP	22		65	53	52	73
Raleigh DWTN	74	56		101	103	112
Chapel Hill	57	53	108		44	59
Hillsborough	32	40	101	34		60
Pittsboro	64	48	91	36	48	

Compare 2016 and 2050 AFTERNOON Peak (percent increase)					
To ==>	Durham DWTN	RTP	Raleigh DWTN	Chapel Hill	H'borough	Pittsboro
Durham DWTN		18%	74%	49%	70%	87%
RTP	41%		93%	70%	73%	106%
Raleigh DWTN	82%	90%		87%	89%	114%
Chapel Hill	62%	63%	86%		58%	78%
Hillsborough	31%	26%	64%	27%		30%
Pittsboro	41%	35%	82%	13%	5%	

2050 MTP -- All Together scenario
Morning Peak-Hour Travel Time

2016 MORNING Peak Hour Travel Time (minutes)						
To ==>	Durham DWTN	RTP	Raleigh DWTN	Chapel Hill	H'borough	Pittsboro
Durham DWTN		15	41	33	22	43
RTP	18		30	31	31	34
Raleigh DWTN	45	32		57	58	47
Chapel Hill	34	28	51		25	28
Hillsborough	24	30	55	27		46
Pittsboro	48	37	54	35	46	

2050 (All Together) MORNING Peak Hour Travel Time (minutes)						
To ==>	Durham DWTN	RTP	Raleigh DWTN	Chapel Hill	H'borough	Pittsboro
Durham DWTN		17	55	39	25	47
RTP	21		44	36	32	37
Raleigh DWTN	52	38		65	61	57
Chapel Hill	40	31	64		28	33
Hillsborough	29	34	68	33		48
Pittsboro	64	50	80	49	54	

Compare 2016 and 2050 MORNING Peak (percent increase)						
To ==>	Durham DWTN	RTP	Raleigh DWTN	Chapel Hill	H'borough	Pittsboro
Durham DWTN		13%	34%	19%	17%	10%
RTP	19%		45%	14%	5%	8%
Raleigh DWTN	15%	18%		14%	6%	20%
Chapel Hill	17%	8%	27%		13%	16%
Hillsborough	21%	16%	23%	25%		5%
Pittsboro	33%	37%	48%	42%	16%	

2050 MTP -- All Together scenario
Afternoon Peak-Hour Travel Time

2016 AFTERNOON Peak Hour Travel Time (minutes)						
To ==>	Durham DWTN	RTP	Raleigh DWTN	Chapel Hill	H'borough	Pittsboro
Durham DWTN		17	47	36	23	47
RTP	16		33	31	30	36
Raleigh DWTN	40	29		54	55	52
Chapel Hill	35	32	58		28	33
Hillsborough	24	32	61	27		46
Pittsboro	45	36	50	32	46	

2050 (All Together) AFTERNOON Peak Hour Travel Time (minutes)						
To ==>	Durham DWTN	RTP	Raleigh DWTN	Chapel Hill	H'borough	Pittsboro
Durham DWTN		21	57	43	30	68
RTP	19		43	35	37	54
Raleigh DWTN	56	43		70	72	84
Chapel Hill	45	38	72		37	51
Hillsborough	30	35	68	30		56
Pittsboro	52	40	65	37	49	

Compare 2016 and 2050 AFTERNOON Peak (percent increase)						
To ==>	Durham DWTN	RTP	Raleigh DWTN	Chapel Hill	H'borough	Pittsboro
Durham DWTN		20%	22%	18%	30%	46%
RTP	19%		28%	11%	22%	51%
Raleigh DWTN	39%	48%		29%	31%	61%
Chapel Hill	27%	18%	23%		35%	54%
Hillsborough	22%	9%	11%	14%		20%
Pittsboro	16%	13%	29%	18%	7%	