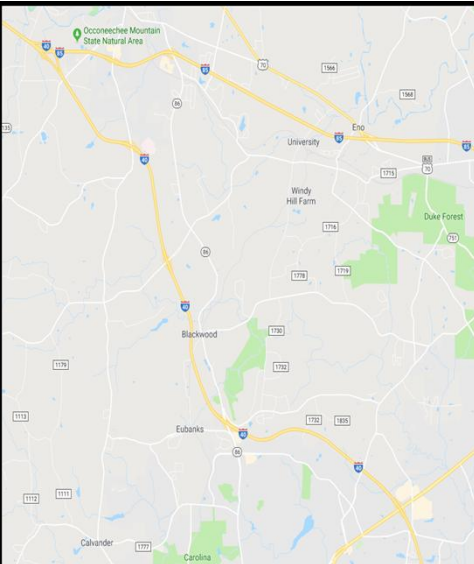


Appendix F. Traffic Data



I-3306A

2019 No Build (AM)

Without Widening

Vehicles Per Day in 100s 1- Less than 50 VPD

DHV $\frac{AM}{(d,t)}$ → D

DHV Design Hourly Volume (%) = K30
 AM AM Peak Period
 D Peak Hour Directional Split (%)
 → Indicates Direction of D
 (d,t) Dual, TT-STs (%)

— Existing Roadway
 — Road Widening
 - - - Proposed Roadway

EXTENTS

I-85 (Exit 163) to NC 54 (Exit 273)

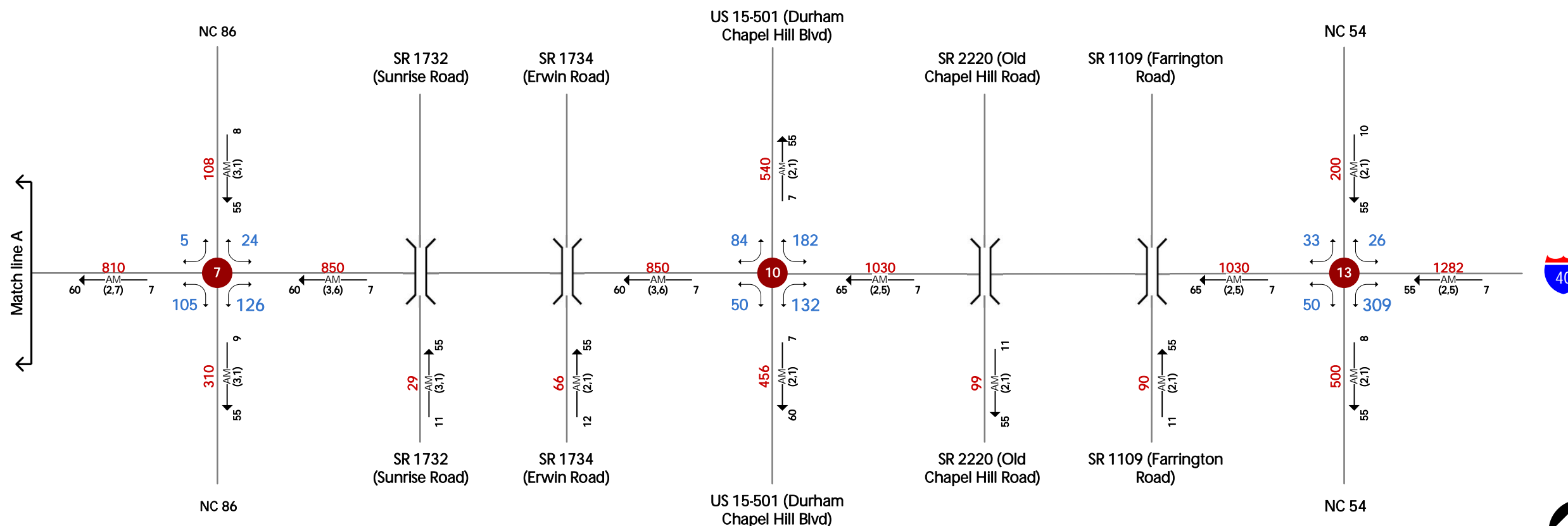
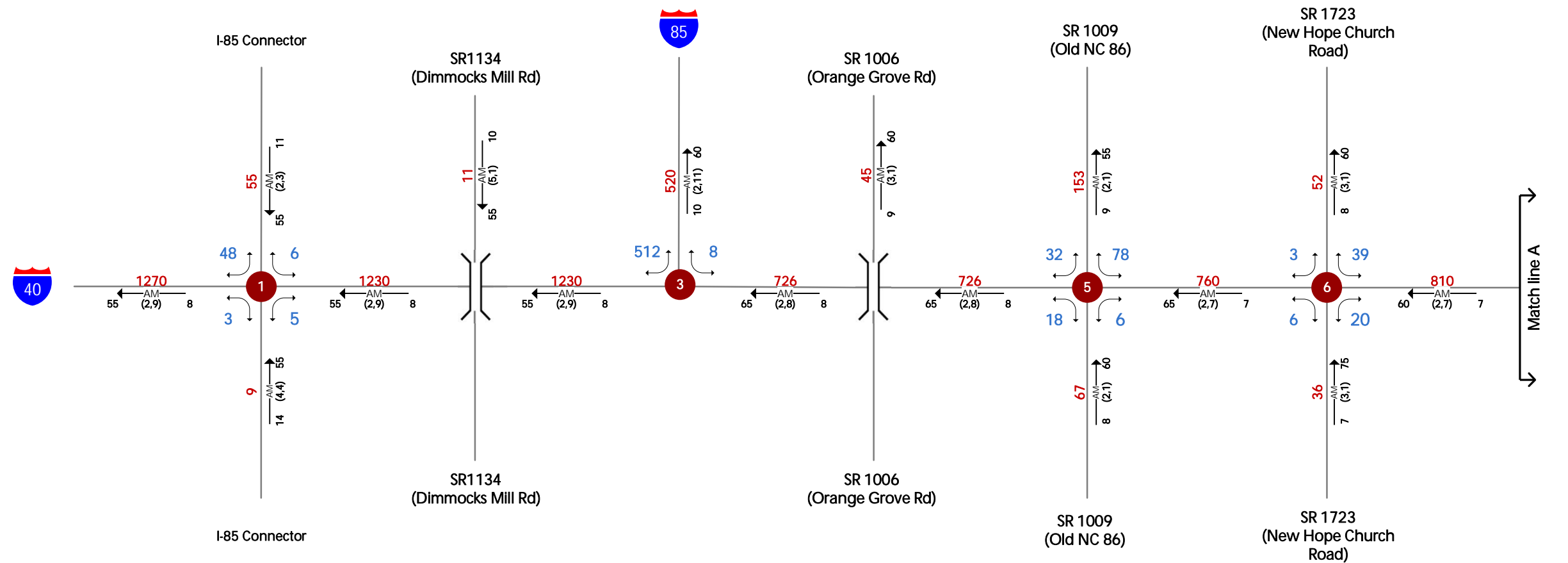
Orange County and Durham County Division 7

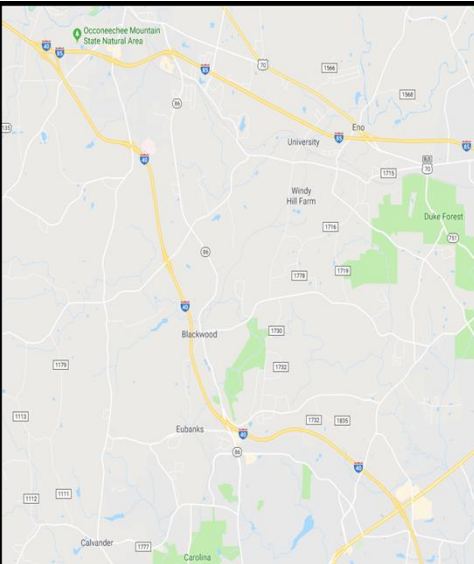
PROJECT

Widening of I-40 in Durham and Orange Counties from I-85 to NC 54

WBS# 47537.1.1

July 17, 2019





I-3306A

2019 No Build (PM)

Without Widening

Vehicles Per Day in 100s 1- Less than 50 VPD

DHV $\xrightarrow{\text{PM}}$ (d,t) \rightarrow D

DHV Design Hourly Volume (%) = K30
 PM PM Peak Period
 D Peak Hour Directional Split (%)
 \rightarrow Indicates Direction of D
 (d,t) Dual, TT-STs (%)

Existing Roadway
 Road Widening
 Proposed Roadway

EXTENTS

I-85 (Exit 163) to NC 54 (Exit 273)

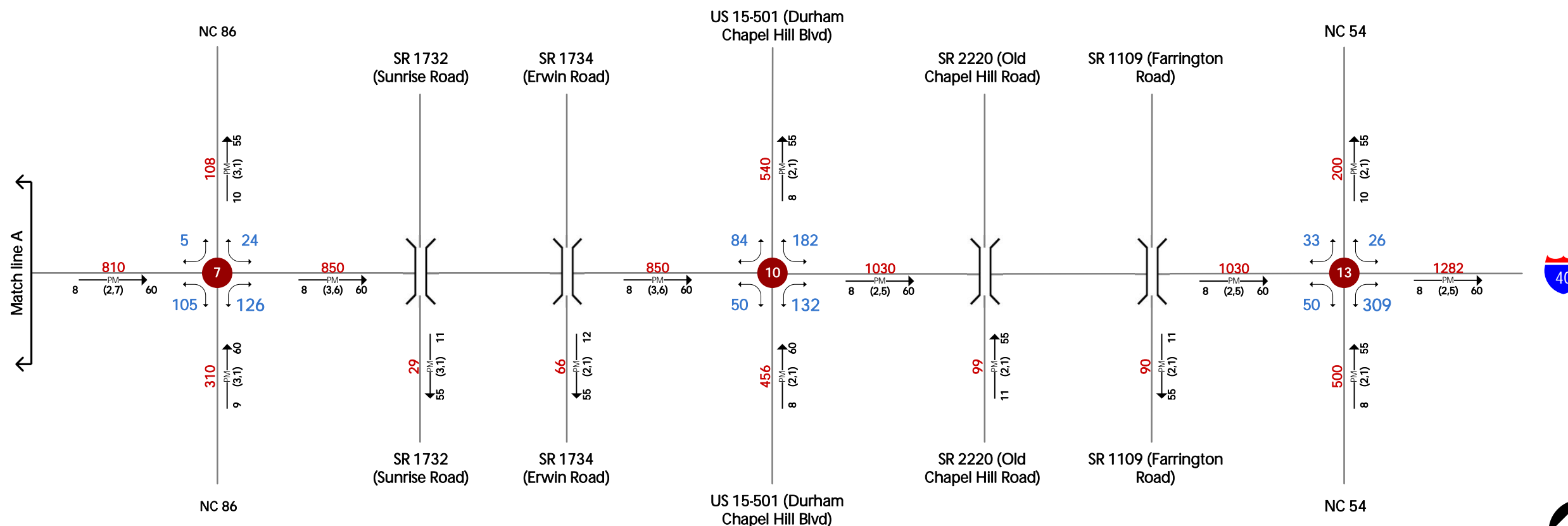
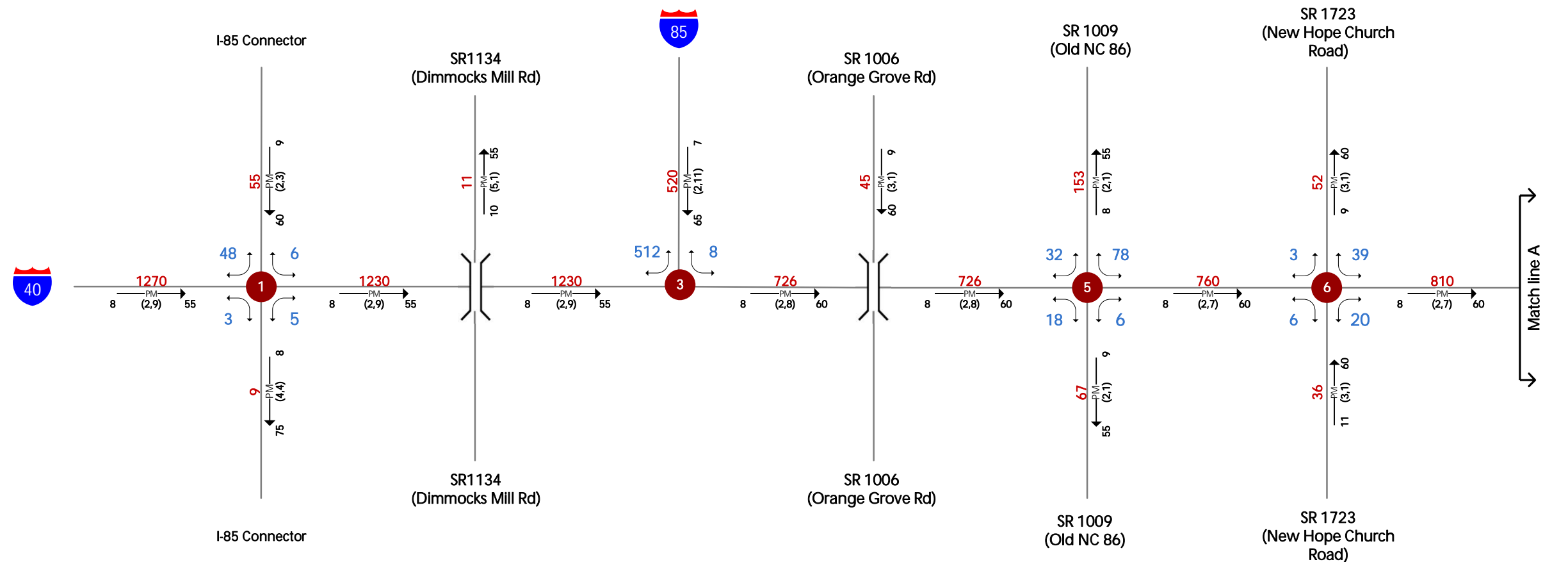
Orange County and Durham County Division 7

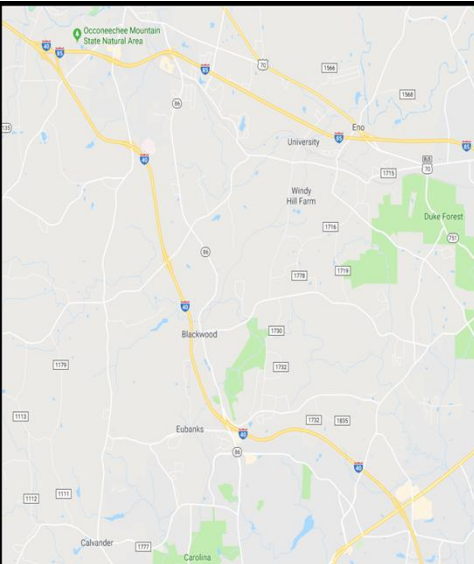
PROJECT

Widening of I-40 in Durham and Orange Counties from I-85 to NC 54

WBS# 47537.1.1

July 17, 2019





I-3306A

2045 Build 1 (AM)

Widening I-40 to 6 lanes

Vehicles Per Day in 100s 1- Less than 50 VPD

DHV $\frac{AM}{(d,t)}$ → D

DHV Design Hourly Volume (%) = K30
 AM AM Peak Period
 D Peak Hour Directional Split (%)
 → Indicates Direction of D
 (d,t) Dual, TT-STs (%)

— Existing Roadway
 — Road Widening
 - - - Proposed Roadway

EXTENTS

I-85 (Exit 163) to NC 54 (Exit 273)

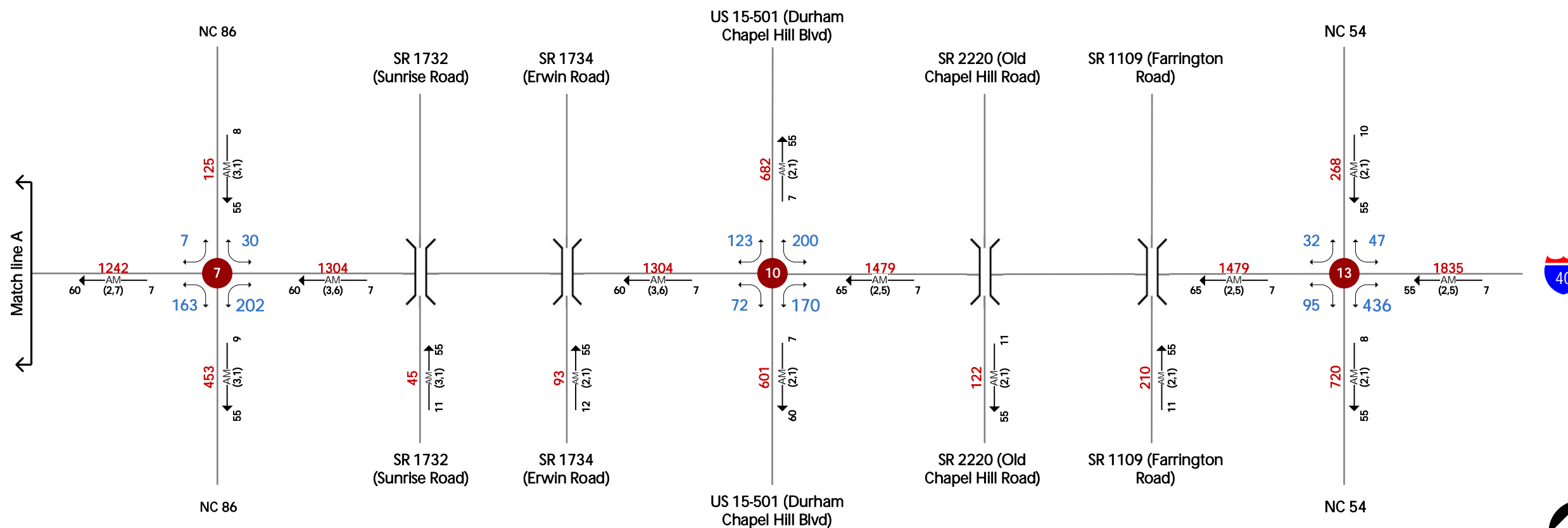
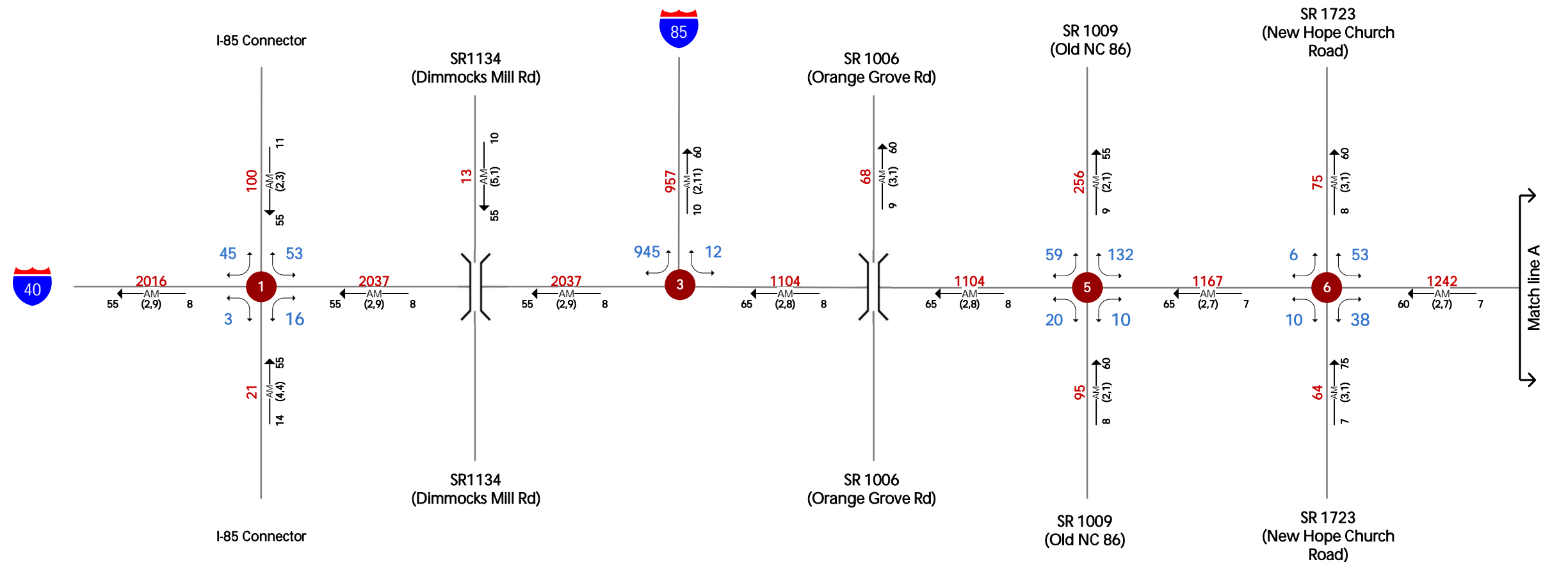
Orange County and Durham County Division 7

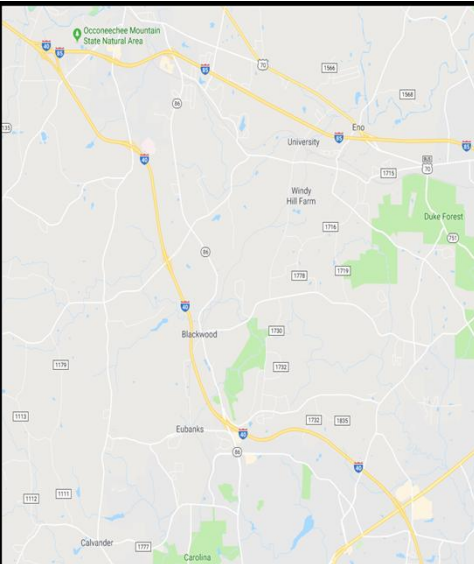
PROJECT

Widening of I-40 in Durham and Orange Counties from I-85 to NC 54

WBS# 47537.1.1

July 17, 2019





I-3306A

2045 Build 1 (PM)

Widening I-40 to 6 lanes

Vehicles Per Day in 100s 1- Less than 50 VPD

DHV $\xrightarrow{\text{PM}}$ (d,t) \rightarrow D

DHV Design Hourly Volume (%) = K30
 PM PM Peak Period
 D Peak Hour Directional Split (%)
 \rightarrow Indicates Direction of D
 (d,t) Dual, TT-STs (%)

Existing Roadway
 Road Widening
 Proposed Roadway

EXTENTS

I-85 (Exit 163) to NC 54 (Exit 273)

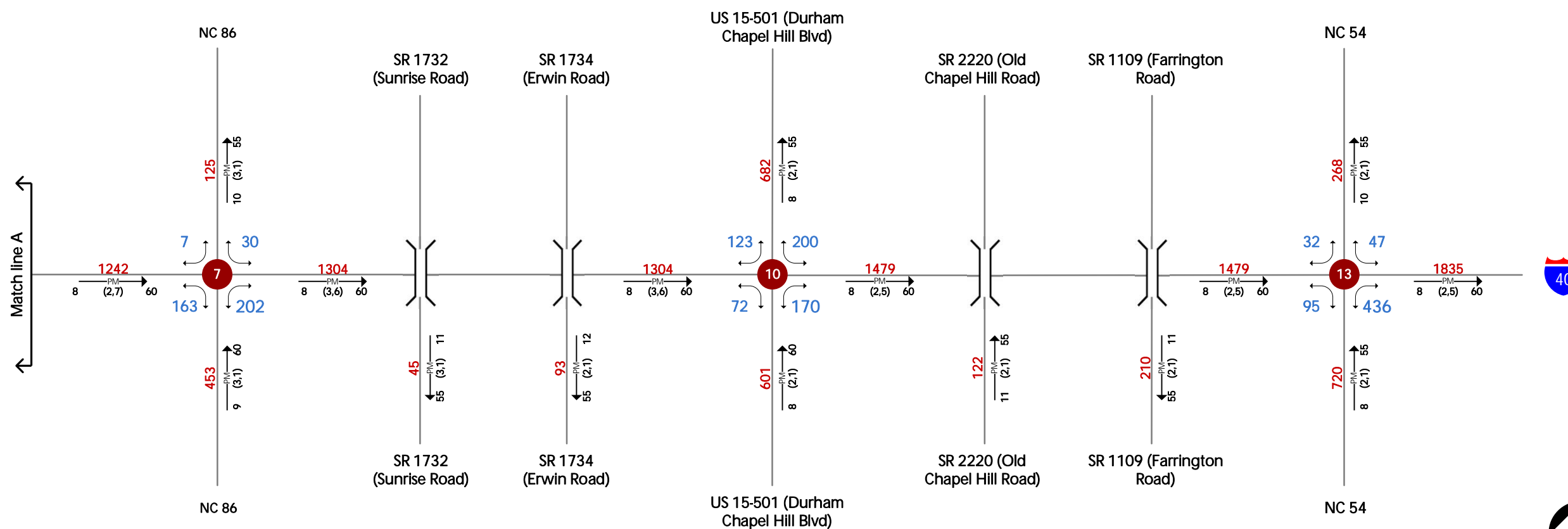
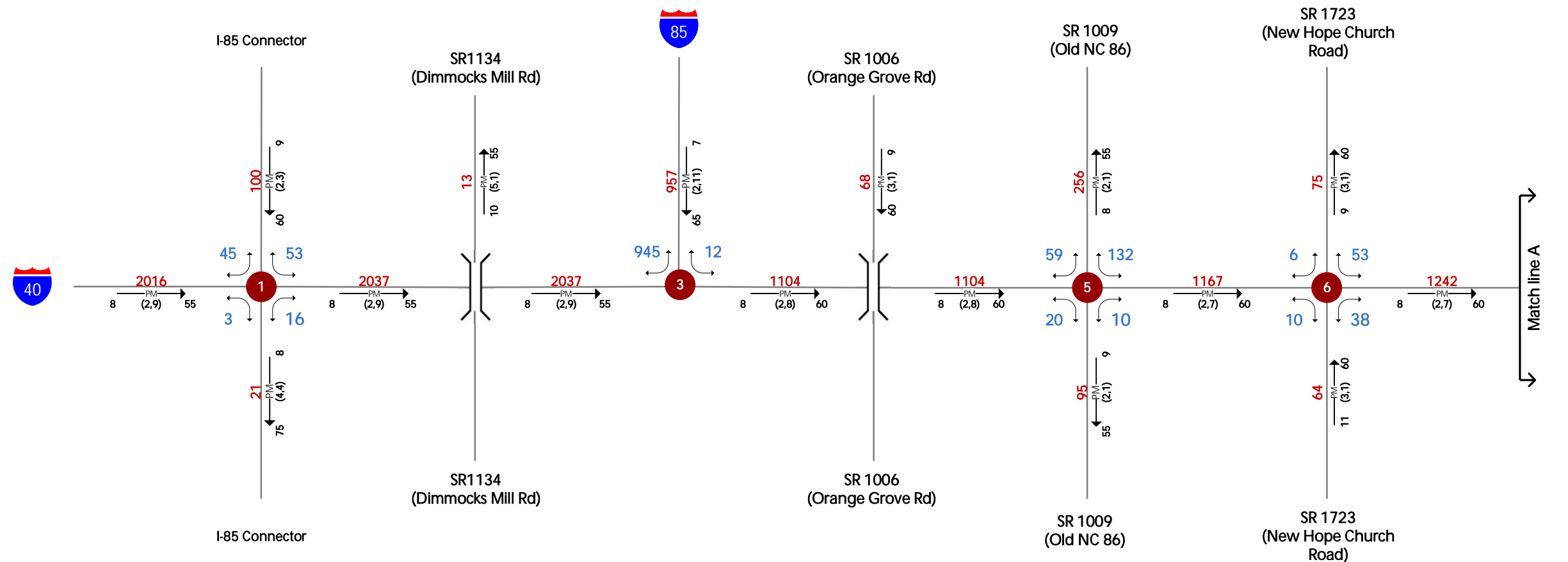
Orange County and Durham County Division 7

PROJECT

Widening of I-40 in Durham and Orange Counties from I-85 to NC 54

WBS# 47537.1.1

July 17, 2019



Seg.	Links			2019 No Build													2045 Build Forecast					2045 Build Alt										
	From	To	Dir.	K	D	%Auto	%MT	%HT	Lanes	Design Speed (mph)	Forecast		LOS C	Volumes: Peak Hour or LOS C?	Auto (vph per lane)	MT (vph per lane)	HT (vph per lane)	K	D	%Auto	%MT	%HT	Lanes	SL (mph)	Design Speed (mph)	Forecast		LOS C	Volumes: Peak Hour or LOS C?	Auto (vph per lane)	MT (vph per lane)	HT (vph per lane)
											AADT (vpd)	PHV (vph)	PHV (vph)													AADT (vpd)	PHV (vph)	PHV (vph)				
I-40	Western Project Extents	I-85	EB	0.50	0.89	0.02	0.09	4	70	123,000	4,920	5,760	Pk Hr	1,095	25	111	0.50	0.08	0.89	0.02	0.09	4	65	70	203,700	8,148	5,760	LOS C	1,282	29	130	
			WB	0.50	0.89	0.02	0.09	5			4,920	7,200	Pk Hr	876	20	89	0.50					5				8,148	7,200	LOS C	1,282	29	130	
	I-85	Old NC 86	EB	0.50	0.90	0.02	0.08	2	70	72,600	2,904	2,880	LOS C	1,296	29	115	0.50	0.08	0.90	0.02	0.08	3	65	70	110,400	4,416	4,320	LOS C	1,296	29	115	
			WB	0.50	0.90	0.02	0.08	2			2,904	2,880	LOS C	1,296	29	115	0.50					3				4,416	4,320	LOS C	1,296	29	115	
	Old NC 86	SR 1723 (New Hope Church Road)	EB	0.50	0.91	0.02	0.07	2	70	76,000	3,040	2,920	LOS C	1,329	29	102	0.50	0.08	0.91	0.02	0.07	3	65	70	116,700	4,668	4,380	LOS C	1,329	29	102	
			WB	0.50	0.91	0.02	0.07	2			3,040	2,920	LOS C	1,329	29	102	0.50					3				4,668	4,380	LOS C	1,329	29	102	
	SR 1723 (New Hope Church Road)	NC 86	EB	0.50	0.91	0.02	0.07	2	70	81,000	3,240	2,920	LOS C	1,329	29	102	0.50	0.08	0.91	0.02	0.07	3	65	70	124,200	4,968	4,380	LOS C	1,329	29	102	
			WB	0.50	0.91	0.02	0.07	2			3,240	2,920	LOS C	1,329	29	102	0.50					3				4,968	4,380	LOS C	1,329	29	102	
	NC 86	US 15/501	EB	0.50	0.91	0.03	0.06	2	70	85,000	3,400	2,920	LOS C	1,329	44	88	0.50	0.08	0.91	0.03	0.06	3	65	70	130,400	5,216	4,380	LOS C	1,329	44	88	
			WB	0.50	0.91	0.03	0.06	2			3,400	2,920	LOS C	1,329	44	88	0.50					3				5,216	4,380	LOS C	1,329	44	88	
	US 15/501	Eastern Project Extents	EB	0.50	0.93	0.02	0.05	3	70	103,000	4,120	4,470	Pk Hr	1,277	27	69	0.50	0.08	0.93	0.02	0.05	3	65	70	147,900	5,916	4,470	LOS C	1,386	30	75	
			WB	0.50	0.93	0.02	0.05	3			4,120	4,470	Pk Hr	1,277	27	69	0.50					3				5,916	4,470	LOS C	1,386	30	75	
	I-40 Under/Overpasses	I-85 Underpass		EB	0.50	0.89	0.02	0.09	2	70	71,800	2,872	2,880	Pk Hr	1,278	29	129	0.50	0.08	0.89	0.02	0.09	3	65	70	109,200	4,368	4,320	LOS C	1,282	29	130
				WB	0.50	0.89	0.02	0.09	2			2,872	2,880	Pk Hr	1,278	29	129	0.50					3				4,368	4,320	LOS C	1,282	29	130
Old NC 86 Overpass			EB	0.50	0.90	0.02	0.08	2	70	67,600	2,704	2,880	Pk Hr	1,217	27	108	0.50	0.08	0.90	0.02	0.08	3	65	70	102,500	4,100	4,320	Pk Hr	1,230	27	109	
			WB	0.50	0.90	0.02	0.08	2			2,704	2,880	Pk Hr	1,217	27	108	0.50					3				4,100	4,320	Pk Hr	1,230	27	109	
SR 1723 (New Hope Church Road) Underpass			EB	0.50	0.91	0.02	0.07	2	70	75,100	3,004	2,920	LOS C	1,329	29	102	0.50	0.08	0.91	0.02	0.07	3	65	70	115,100	4,604	4,380	LOS C	1,329	29	102	
			WB	0.50	0.91	0.02	0.07	2			3,004	2,920	LOS C	1,329	29	102	0.50					3				4,604	4,380	LOS C	1,329	29	102	
NC 86 Underpass			EB	0.50	0.91	0.02	0.07	2	70	70,000	2,800	2,920	Pk Hr	1,274	28	98	0.50	0.08	0.91	0.02	0.07	3	65	70	107,200	4,288	4,380	Pk Hr	1,301	29	100	
			WB	0.50	0.91	0.02	0.07	2			2,800	2,920	Pk Hr	1,274	28	98	0.50					3				4,288	4,380	Pk Hr	1,301	29	100	
US 15/501 Underpass			EB	0.50	0.91	0.03	0.06	3	70	71,600	2,864	4,380	Pk Hr	869	29	57	0.50	0.08	0.91	0.03	0.06	3	65	70	110,900	4,436	4,380	LOS C	1,329	44	88	
			WB	0.50	0.91	0.03	0.06	3			2,864	4,380	Pk Hr	869	29	57	0.50					3				4,436	4,380	LOS C	1,329	44	88	
I-85	Northern I-40 Connection	Eastern I-40 Connection	EB	0.50	0.87	0.02	0.11	3	70	51,200	2,560	4,230	Pk Hr	742	17	94	0.50	0.10	0.87	0.02	0.11	3	65	70	94,500	4,725	4,230	LOS C	1,227	28	155	
			WB	0.50	0.87	0.02	0.11	3			2,560	4,230	Pk Hr	742	17	94	0.50					3				4,725	4,230	LOS C	1,227	28	155	
	Eastern I-40 Connection	East of I-40	EB	0.50	0.87	0.02	0.11	3	70	52,000	2,600	4,230	Pk Hr	754	17	95	0.50	0.10	0.87	0.02	0.11	3	65	70	95,700	4,785	4,230	LOS C	1,227	28	155	
			WB	0.50	0.87	0.02	0.11	3			2,600	4,230	Pk Hr	754	17	95	0.50					3				4,785	4,230	LOS C	1,227	28	155	

Seg.	Links			2019 No Build													2045 Build Forecast					2045 Build Alt										
	From	To	Dir.	K	D	%Auto	%MT	%HT	Lanes	Design Speed (mph)	Forecast		LOS C PHV (vph)	Volumes: Peak Hour or LOS C?	Auto (vph per lane)	MT (vph per lane)	HT (vph per lane)	K	D	%Auto	%MT	%HT	Lanes	SL (mph)	Design Speed (mph)	Forecast		LOS C PHV (vph)	Volumes: Peak Hour or LOS C?	Auto (vph per lane)	MT (vph per lane)	HT (vph per lane)
											AADT (vpd)	PHV (vph)														AADT (vpd)	PHV (vph)					
	East of I-40	Eastern Project Extents	EB	0.10	0.50	0.87	0.02	0.11	2	70	52,000	2,600	2,820	Pk Hr	1,131	26	143	0.10	0.50	0.87	0.02	0.11	2	65	70	95,700	4,785	2,820	LOS C	1,227	28	155
			WB	0.50	0.50	0.87	0.02	0.11	2			2,600	2,820	Pk Hr	1,131	26	143										0.50	4,785	2,820	LOS C	1,227	28
I-40 Ramps	EB On Ramp from I-85		EB	0.08	1.00	0.90	0.02	0.08	1	40	400	32	840	Pk Hr	29	1	3	0.08	1.00	0.90	0.02	0.08	1	35	40	600	48	840	Pk Hr	43	1	4
	WB Off Ramp to I-85		WB	0.10	1.00	0.87	0.02	0.11	1	50	400	40	840	Pk Hr	35	1	4	0.10	1.00	0.87	0.02	0.11	1	45	50	600	60	840	Pk Hr	52	1	7
	EB Off Ramp to Old NC 86		EB	0.09	1.00	0.97	0.02	0.01	1	50	2,500	225	670	Pk Hr	218	5	2	0.09	1.00	0.97	0.02	0.01	1	45	50	3,950	356	670	Pk Hr	345	7	4
	EB On Ramp from Old NC 86		EB	0.08	1.00	0.91	0.02	0.07	1	50	4,200	336	670	Pk Hr	306	7	24	0.08	1.00	0.91	0.02	0.07	1	45	50	7,100	568	670	Pk Hr	517	11	40
	WB Off Ramp to Old NC 86		WB	0.09	1.00	0.97	0.02	0.01	1	50	4,200	378	670	Pk Hr	367	8	4	0.09	1.00	0.97	0.02	0.01	1	45	50	7,100	639	670	Pk Hr	620	13	6
	WB On Ramp from Old NC 86		WB	0.08	1.00	0.90	0.02	0.08	1	50	2,500	200	670	Pk Hr	180	4	16	0.08	1.00	0.90	0.02	0.08	1	45	50	3,950	316	670	Pk Hr	284	6	25
	EB Off Ramp to SR 1723 (New Hope Church Road)		EB	0.11	1.00	0.96	0.03	0.01	1	50	450	50	660	Pk Hr	48	1	0	0.11	1.00	0.96	0.03	0.01	1	45	50	800	88	660	Pk Hr	84	3	1
	EB On Ramp from SR 1723 (New Hope Church Road)		EB	0.08	1.00	0.91	0.02	0.07	1	50	2,950	236	660	Pk Hr	215	5	17	0.08	1.00	0.91	0.02	0.07	1	45	50	4,550	364	660	Pk Hr	331	7	25
	WB Off Ramp to SR 1723 (New Hope Church Road)		WB	0.11	1.00	0.96	0.03	0.01	1	50	2,950	325	660	Pk Hr	312	10	3	0.11	1.00	0.96	0.03	0.01	1	45	50	4,550	501	660	Pk Hr	480	15	5
	WB On Ramp from SR 1723 (New Hope Church Road)		WB	0.08	1.00	0.91	0.02	0.07	1	50	450	36	660	Pk Hr	33	1	3	0.08	1.00	0.91	0.02	0.07	1	45	50	800	64	660	Pk Hr	58	1	4
	EB Off Ramp to NC 86		EB	0.10	1.00	0.96	0.03	0.01	1	50	5,500	550	660	Pk Hr	528	17	6	0.10	1.00	0.96	0.03	0.01	1	45	50	8,500	850	660	LOS C	634	20	7
	EB On Ramp from NC 86		EB	0.08	1.00	0.91	0.03	0.06	1	50	7,500	600	660	Pk Hr	546	18	36	0.08	1.00	0.91	0.03	0.06	1	45	50	11,600	928	660	LOS C	601	20	40
	WB Off Ramp to NC 86		WB	0.10	1.00	0.96	0.03	0.01	1	50	7,500	750	660	LOS C	634	20	7	0.10	1.00	0.96	0.03	0.01	1	45	50	11,600	1,160	660	LOS C	634	20	7
	WB On Ramp from NC 86		WB	0.08	1.00	0.91	0.02	0.07	1	50	5,500	440	660	Pk Hr	400	9	31	0.08	1.00	0.91	0.02	0.07	1	45	50	8,500	680	660	LOS C	601	13	46
	EB Off Ramp to US 15/501		EB	0.08	1.00	0.97	0.02	0.01	1	50	6,700	536	670	Pk Hr	520	11	5	0.08	1.00	0.97	0.02	0.01	1	45	50	9,750	780	670	LOS C	650	13	7
	EB On Ramp from US 15/501		EB	0.08	1.00	0.93	0.02	0.05	1	50	15,700	1,256	670	LOS C	623	13	34	0.08	1.00	0.93	0.02	0.05	1	45	50	18,500	1,480	670	LOS C	623	13	34
	WB Off Ramp to US 15/501		WB	0.08	1.00	0.97	0.02	0.01	1	50	15,700	1,256	670	LOS C	650	13	7	0.08	1.00	0.97	0.02	0.01	1	45	50	18,500	1,480	670	LOS C	650	13	7
WB On Ramp from US 15/501		WB	0.08	1.00	0.91	0.03	0.06	1	50	6,700	536	670	Pk Hr	488	16	32	0.08	1.00	0.91	0.03	0.06	1	45	50	9,750	780	670	LOS C	610	20	40	
Old NC 86	North of I-40		NB	0.09	0.50	0.97	0.02	0.01	2	50	15,300	689	1,860	Pk Hr	334	7	3	0.09	0.50	0.97	0.02	0.01	1	45	50	25,600	1,152	930	LOS C	902	19	9
			SB	0.50	0.50	0.97	0.02	0.01	2			689	1,860	Pk Hr	334	7	3										0.50	1,152	930	LOS C	902	19
	Overpass at I-40		NB	0.09	0.50	0.97	0.02	0.01	1	50	11,000	495	930	Pk Hr	480	10	5	0.09	0.50	0.97	0.02	0.01	1	45	50	17,550	790	930	Pk Hr	766	16	8
			SB	0.50	0.50	0.97	0.02	0.01	1			495	930	Pk Hr	480	10	5										0.50	790	930	Pk Hr	766	16
Old NC 86	South of I-40		NB	0.09	0.50	0.97	0.02	0.01	1	50	6,700	302	930	Pk Hr	292	6	3	0.09	0.50	0.97	0.02	0.01	1	45	50	9,500	428	930	Pk Hr	415	9	4
			SB	0.50	0.50	0.97	0.02	0.01	1			302	930	Pk Hr	292	6	3										0.50	428	930	Pk Hr	415	9

Seg.	Links				2019 No Build											2045 Build Forecast					2045 Build Alt											
	From	To	Dir.	K	D	%Auto	%MT	%HT	Lanes	Design Speed (mph)	Forecast		LOS C PHV (vph)	Volumes: Peak Hour or LOS C?	Auto (vph per lane)	MT (vph per lane)	HT (vph per lane)	K	D	%Auto	%MT	%HT	Lanes	SL (mph)	Design Speed (mph)	Forecast		LOS C PHV (vph)	Volumes: Peak Hour or LOS C?	Auto (vph per lane)	MT (vph per lane)	HT (vph per lane)
											AADT (vpd)	PHV (vph)														AADT (vpd)	PHV (vph)					
SR 1723 (New Hope Church Road)	East of I-40		EB	0.50					1	50	5,200	234	780	Pk Hr	225	7	2	0.09	0.96	0.03	0.01	1	45	50	7,500	338	780	Pk Hr	324	10	3	
			WB	0.09	0.96	0.03	0.01	1	234			780	Pk Hr	225	7	2	0.50									338	780	Pk Hr	324	10	3	
	Underpass at I-40		EB	0.50					1	50	4,400	242	780	Pk Hr	232	7	2	0.11	0.96	0.03	0.01	1	45	50	6,950	382	780	Pk Hr	367	11	4	
			WB	0.11	0.96	0.03	0.01	1	242			780	Pk Hr	232	7	2	0.50									382	780	Pk Hr	367	11	4	
	West of I-40		EB	0.50					1	50	3,600	198	780	Pk Hr	190	6	2	0.11	0.96	0.03	0.01	1	45	50	6,400	352	780	Pk Hr	338	11	4	
			WB	0.11	0.96	0.03	0.01	1	198			780	Pk Hr	190	6	2	0.50									352	780	Pk Hr	338	11	4	
NC 86	North of I-40		NB	0.50				1	50	10,800	540	910	Pk Hr	518	16	5	0.10	0.96	0.03	0.01	1	45	50	12,500	625	910	Pk Hr	600	19	6		
			SB	0.10	0.96	0.03	0.01	2			540	1,820	Pk Hr	259	8	3									0.50	625	1,820	Pk Hr	300	9	3	
	Overpass at I-40		NB	0.50				1	50	20,900	1,045	910	LOS C	874	27	9	0.10	0.96	0.03	0.01	1	45	50	28,900	1,445	910	LOS C	874	27	9		
			SB	0.10	0.96	0.03	0.01	2			1,045	1,820	Pk Hr	502	16	5									0.50	1,445	1,820	Pk Hr	694	22	7	
	South of I-40		NB	0.50				2	50	31,000	1,395	1,820	Pk Hr	670	21	7	0.09	0.96	0.03	0.01	2	45	50	45,300	2,039	1,820	LOS C	874	27	9		
			SB	0.09	0.96	0.03	0.01	2			1,395	1,820	Pk Hr	670	21	7									0.50	2,039	1,820	LOS C	874	27	9	
US 15/501	East of I-40		EB	0.50				3	50	54,000	2,160	2,790	Pk Hr	698	14	7	0.08	0.97	0.02	0.01	3	45	50	68,200	2,728	2,790	Pk Hr	882	18	9		
			WB	0.08	0.97	0.02	0.01	3			2,160	2,790	Pk Hr	698	14	7									0.50	2,728	2,790	Pk Hr	882	18	9	
	Overpass at I-40		EB	0.50				3	50	49,800	1,992	2,790	Pk Hr	644	13	7	0.08	0.97	0.02	0.01	3	45	50	64,150	2,566	2,790	Pk Hr	830	17	9		
			WB	0.08	0.97	0.02	0.01	3			1,992	2,790	Pk Hr	644	13	7									0.50	2,566	2,790	Pk Hr	830	17	9	
	West of I-40		EB	0.50				2	50	45,600	1,824	1,860	Pk Hr	885	18	9	0.08	0.97	0.02	0.01	2	45	50	60,100	2,404	1,860	LOS C	902	19	9		
			WB	0.08	0.97	0.02	0.01	2			1,824	1,860	Pk Hr	885	18	9									0.50	2,404	1,860	LOS C	902	19	9	
SR 1006 (Orange Grove Road)	Overpass at I-40		NB	0.50				1	50	4,500	203	910	Pk Hr	194	6	2	0.09	0.96	0.03	0.01	1	45	50	6,800	306	910	Pk Hr	294	9	3		
			SB	0.09	0.96	0.03	0.01	1			203	910	Pk Hr	194	6	2									0.50	306	910	Pk Hr	294	9	3	