

I-41 Traffic and Engineering Study
Year 2048 No Build
Synchro* Intersection Peak Hour Traffic Operations (HCM6)

Year 2048 No Build Intersection Operations																	
Intersection	Scenario	Traffic Control	Peak Hour	Lane Group	EBL	East EBT	EBR	WBL	West WBT	WBR	NBL	North NBT	NBR	SBL	South SBT	SBR	
IH 41 NB ramps & CTH S (Freedom Rd)	No Build (2048)	Stop Controlled	AM	Lane Configurations	1	1	0	0	1	1	0	<1	1	0	0	0	
				Volume (vph)	310	160	-	-	390	190	60	0	160	-	-	-	
				Total Delay	11.2	0	-	-	0	0	119.3	119.3	10.4	-	-	-	
				LOS	B	A	-	-	A	A	F	F	B	-	-	-	
				PM	Volume (vph)	160	230	-	-	330	240	70	0	200	-	-	-
					Total Delay	9.7	0	-	-	0	0	40.6	40.6	11.6	-	-	-
IH 41 SB ramps & CTH S (Freedom Rd)	No Build (2048)	Stop Controlled	AM	Lane Configurations	0	1	1	1	1	0	0	0	0	0	<1	1	
				Volume (vph)	-	390	100	240	210	-	-	-	-	80	0	-	
				Total Delay	-	0	0	10	0	-	-	-	-	94.9	94.9	-	
				LOS	-	A	A	A	A	-	-	-	-	F	F	-	
				PM	Volume (vph)	-	240	90	200	200	-	-	-	150	0	-	
					Total Delay	-	0	0	8.8	0	-	-	-	80.6	80.6	-	
IH 41 NB ramps & CTH U (County Line Rd)	No Build (2048)	Stop Controlled	AM	Lane Configurations	0	<1>	0	0	0	0	0	1	1	1	1	0	
				Volume (vph)	80	0	90	-	-	-	-	160	380	110	430	-	
				Total Delay	37.4	37.4	37.4	-	-	-	-	0	0	9.3	0	-	
				LOS	E	E	E	-	-	-	-	A	A	A	A	-	
				PM	Volume (vph)	140	0	90	-	-	-	-	300	200	110	400	-
					Total Delay	119.8	119.8	119.8	-	-	-	-	0	0	9.1	0	-
IH 41 SB ramps & CTH U (County Line Rd)	No Build (2048)	Stop Controlled	AM	Lane Configurations	0	0	0	0	<1>	0	1	1	0	0	1	1	
				Volume (vph)	-	-	-	150	0	120	90	150	-	-	390	-	
				Total Delay	-	-	-	42.8	42.8	42.8	9	0	-	-	0	-	
				LOS	-	-	-	E	E	E	A	A	-	-	A	-	
				PM	Volume (vph)	-	-	-	320	0	240	120	320	-	-	190	-
					Total Delay	-	-	-	358.4	358.4	358.4	8.2	0	-	-	0	-
IH 41 NB ramps & CTH J (Hyland Ave)	No Build (2048)	Roundabout*	AM	Lane Configurations	0	<1>	0	0	0	0	0	1>	0	0	<1	0	
				Volume (vph)	240	0	150	-	-	-	-	390	430	120	230	-	
				Total Delay	10.2	10.2	10.2	-	-	-	-	69.8	69.8	6	6	-	
				LOS	B	B	B	-	-	-	-	F	F	A	A	-	
				PM	Volume (vph)	280	0	390	-	-	-	-	290	270	120	620	-
					Total Delay	100.1	100.1	100.1	-	-	-	-	16.5	16.5	11.6	11.6	-
IH 41 SB ramps & CTH J (Hyland Ave)	No Build (2048)	Roundabout*	AM	Lane Configurations	0	0	0	0	<1>	0	0	<1	0	0	1>	0	
				Volume (vph)	-	-	-	140	0	110	220	410	-	-	210	350	
				Total Delay	-	-	-	11.3	11.3	11.3	9.2	9.2	-	-	24.5	24.5	
				LOS	-	-	-	B	B	B	A	A	-	-	C	C	
				PM	Volume (vph)	-	-	-	380	0	190	110	460	-	-	360	350
					Total Delay	-	-	-	71.9	71.9	71.9	9.4	9.4	-	-	145.4	145.4
IH 41 NB ramps & WIS 55 (Delanglade St)	No Build (2048)	Roundabout*	AM	Lane Configurations	0	<1	1	0	0	0	0	2	1	1	1	0	
				Volume (vph)	70	0	300	-	-	-	-	610	160	60	340	-	
				Total Delay	5	5	8.2	-	-	-	-	7	4.4	3.2	5.9	-	
				LOS	A	A	A	-	-	-	-	A	A	A	A	-	
				PM	Volume (vph)	140	0	410	-	-	-	-	710	140	70	440	-
					Total Delay	6.6	6.6	12.3	-	-	-	-	11	4.3	3.2	7.1	-
IH 41 SB ramps & WIS 55 (Delanglade St)	No Build (2048)	Roundabout*	AM	Lane Configurations	0	0	0	0	<1	1	0	<2	0	0	1	1	
				Volume (vph)	-	-	-	90	0	120	280	400	-	-	310	220	
				Total Delay	-	-	-	6.2	6.2	5.3	4.9	5.9	-	-	8	6	
				LOS	-	-	-	A	A	A	A	A	-	-	A	A	
				PM	Volume (vph)	-	-	-	230	0	100	460	390	-	-	280	140
					Total Delay	-	-	-	10.7	10.7	5	6.6	5.9	-	-	11.2	6.1
IH 41 NB ramps & CTH N (Freedom Rd)	No Build (2048)	Signalized	AM	Lane Configurations	0	<1	1	0	0	0	0	2	1	1	2	0	
				Volume (vph)	150	-	180	-	-	-	-	520	220	180	260	-	
				Total Delay	21.2	-	0	-	-	-	-	12.2	0	14	3.6	-	
				LOS	C	-	A	-	-	-	-	B	A	B	A	-	
				PM	Volume (vph)	560	-	370	-	-	-	-	510	160	190	680	-
					Total Delay	172.1	-	0	-	-	-	-	14.7	0	17.5	6.1	-
IH 41 SB ramps & CTH N (Freedom Rd)	No Build (2048)	Signalized	AM	Lane Configurations	0	0	0	0	<1	1	1	2	0	0	2	1	
				Volume (vph)	-	-	-	140	-	130	320	350	-	-	300	370	
				Total Delay	-	-	-	20.6	-	0	13.8	3.7	-	-	11.3	0	
				LOS	-	-	-	C	-	A	B	A	-	-	B	A	
				PM	Volume (vph)	-	-	-	420	-	230	360	710	-	-	450	270
					Total Delay	-	-	-	32.9	-	0	26.2	9.2	-	-	20.6	0
IH 41 NB ramps & CTH E (Ballard Rd)	No Build (2048)	Signalized	AM	Lane Configurations	2	1	1	0	0	0	0	2	1	1	2	0	
				Volume (vph)	740	-	380	-	-	-	-	740	280	1040	350	-	
				Total Delay	104.7	-	0	-	-	-	-	19.3	0	247	0	-	
				LOS	F	-	A	-	-	-	-	B	A	F	A	-	
				PM	Volume (vph)	550	-	160	-	-	-	-	1280	200	730	1040	-
					Total Delay	46.4	-	0	-	-	-	-	129.1	0	78.5	21.2	-
IH 41 SB ramps & CTH E (Ballard Rd)	No Build (2048)	Signalized	AM	Lane Configurations	0	0	0	2	1	1	1	2	0	0	2	1	
				Volume (vph)	-	-	-	240	-	920	160	1320	-	-	1150	760	
				Total Delay	-	-	-	30.8	-	0	19.3	29.7	-	-	135.3	0	
				LOS	-	-	-	C	-	A	B	C	-	-	F	A	
				PM	Volume (vph)	-	-	-	250	-	710	490	1340	-	-	1520	910
					Total Delay	-	-	-	34.4	-	0	43.9	16.3	-	-	135.1	0
IH 41 NB ramps & WIS 47 (Richmond St)	No Build (2048)	Signalized	AM	Lane Configurations	2	1	1	0	0	0	0	2	1	1	2	0	
				Volume (vph)	410	-	160	-	-	-	-	700	440	410	710	-	
				Total Delay	40.5	-	0	-	-	-	-	30.4	0	21	16.7	-	
				LOS	D	-	A	-	-	-	-	C	A	C	B	-	
				PM	Volume (vph)	710	-	290	-	-	-	-	1130	530	420	1240	-
					Total Delay	44.4	-	0	-	-	-	-	175.4	0	19.3	9.1	-
IH 41 SB ramps & WIS 47 (Richmond St)	No Build (2048)	Signalized	AM	Lane Configurations	0	0	0	2	1	1	1	2	0	0	2	1	
				Volume (vph)	-	-	-	280	-	340	460	650	-	-	840	680	
				Total Delay	-	-	-	42.3	-	0	9.2	0.1	-	-	23.4	0	
				LOS	-	-	-	D	-	A	A	A	-	-	C	A	
				PM	Volume (vph)	-	-	-	540	-	420	260	1580	-	-	1120	470
					Total Delay	-	-	-	41	-	0	17.8	8.7	-	-	47.5	0

*Note: Roundabout intersections were analyzed using HCS7 software, not Synchro.

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Intersection	Scenario	Traffic Control	Peak Hour	Lane Group	EBL	East EBT	EBR	WBL	West WBT	WBR	NBL	North NBT	NBR	SBL	South SBT	SBR	
IH 41 NB ramps & WIS 15 (Northland Ave)	No Build (2048)	Signalized	AM	Lane Configurations	1	2	0	0	2	1	0	<1	1	0	0	0	
				Volume (vph)	810	980	-	-	1000	170	270	-	490	-	-	-	
				Total Delay	516.3	7.5	-	-	36.5	0	56.1	-	0	-	-	-	
				LOS	F	A	-	-	D	A	E	-	A	-	-	-	
				PM	Volume (vph)	1220	1110	-	-	1620	340	420	-	900	-	-	-
				Total Delay	586.9	0.1	-	-	321.7	0	53.7	-	0	-	-	-	
LOS	F	A	-	-	F	A	D	-	A	-	-	-					
IH 41 SB ramps & WIS 15 (Northland Ave)	No Build (2048)	Signalized	AM	Lane Configurations	1	2	0	0	2	1	0	0	0	1	0	1	
				Volume (vph)	280	1560	-	-	810	460	-	-	-	230	-	1090	
				Total Delay	20	16.9	-	-	16.7	0	-	-	-	25	-	0	
				LOS	C	B	-	-	B	A	-	-	-	C	-	A	
				PM	Volume (vph)	320	2150	-	-	1470	570	-	-	-	180	-	1200
				Total Delay	155.6	6	-	-	31.3	0	-	-	-	42.7	-	0	
LOS	F	A	-	-	C	A	-	-	-	D	-	A					
IH 41 NB ramps & WIS 96 (Wisconsin Ave)	No Build (2048)	Signalized	AM	Lane Configurations	1	2	0	0	3	1	1	<1	1	0	0	0	
				Volume (vph)	190	690	-	-	780	80	350	-	390	-	-	-	
				Total Delay	10	9.8	-	-	26.9	23	41.9	-	0	-	-	-	
				LOS	A	A	-	-	C	C	D	-	A	-	-	-	
				PM	Volume (vph)	830	1150	-	-	1930	320	500	-	500	-	-	-
				Total Delay	124.9	20.8	-	-	110.5	33.3	42.6	-	0	-	-	-	
LOS	F	C	-	-	F	C	D	-	A	-	-	-					
IH 41 SB ramps & WIS 96 (Wisconsin Ave)	No Build (2048)	Signalized	AM	Lane Configurations	0	3	1	1	2	0	0	0	0	0	<1	1	
				Volume (vph)	-	720	280	410	720	-	-	-	-	160	-	360	
				Total Delay	-	31.7	0	6.6	0.2	-	-	-	-	35.6	-	203.9	
				LOS	-	C	A	A	A	-	-	-	-	D	-	F	
				PM	Volume (vph)	-	1760	560	640	1790	-	-	-	-	220	-	610
				Total Delay	-	119.9	0	27.2	9.4	-	-	-	-	36.7	-	396.8	
LOS	-	F	A	C	A	-	-	-	-	D	-	F					
IH 41 NB ramps & WIS 125 (College Ave)	No Build (2048)	Signalized	AM	Lane Configurations	1	2	0	0	3	1	1	<1	2	0	0	0	
				Volume (vph)	230	630	-	-	710	130	300	-	440	-	-	-	
				Total Delay	9.6	6.7	-	-	25.5	0	33.5	-	0	-	-	-	
				LOS	A	A	-	-	C	A	C	-	A	-	-	-	
				PM	Volume (vph)	720	1070	-	-	1480	320	510	-	500	-	-	-
				Total Delay	111.1	10	-	-	89.4	0	31.4	-	0	-	-	-	
LOS	F	A	-	-	F	A	C	-	A	-	-	-					
IH 41 SB ramps & WIS 125 (College Ave)	No Build (2048)	Signalized	AM	Lane Configurations	0	3	1	1	2	0	0	0	0	1	<1	2	
				Volume (vph)	-	620	170	300	710	-	-	-	-	240	-	440	
				Total Delay	-	28.6	0	41.6	5	-	-	-	-	37.4	-	0	
				LOS	-	C	A	D	A	-	-	-	-	D	-	A	
				PM	Volume (vph)	-	1570	630	440	1550	-	-	-	-	220	-	270
				Total Delay	-	35.4	0	14.2	0	-	-	-	-	36.5	-	0	
LOS	-	D	A	B	A	-	-	-	-	D	-	A					
IH 41 NB off ramp & CTH BB (Prospect Ave)	No Build (2048)	Signalized	AM	Lane Configurations	0	1	0	0	1	0	1	0	1	0	0	0	
				Volume (vph)	-	290	-	-	570	-	220	-	460	-	-	-	
				Total Delay	-	5.9	-	-	8.3	-	13.6	-	0	-	-	-	
				LOS	-	A	-	-	A	-	B	-	A	-	-	-	
				PM	Volume (vph)	-	420	-	-	740	-	210	-	410	-	-	-
				Total Delay	-	5.7	-	-	9.1	-	18	-	0	-	-	-	
LOS	-	A	-	-	A	-	B	-	A	-	-	-					
IH 41 NB on ramp & CTH BB (Prospect Ave)	No Build (2048)	Signalized	AM	Lane Configurations	1	1	0	0	1	1	0	0	0	0	0	0	
				Volume (vph)	520	290	-	-	700	90	-	-	-	-	-	-	
				Total Delay	15.6	0.3	-	-	32.8	8	-	-	-	-	-	-	
				LOS	B	A	-	-	C	A	-	-	-	-	-	-	
				PM	Volume (vph)	780	420	-	-	770	180	-	-	-	-	-	-
				Total Delay	20.5	0.3	-	-	55.4	12.2	-	-	-	-	-	-	
LOS	C	A	-	-	F	B	-	-	-	-	-	-					
IH 41 SB off ramps & CTH BB (Prospect Ave)	No Build (2048)	Signalized	AM	Lane Configurations	0	1	1	1	1	0	0	0	0	0	<1	1	
				Volume (vph)	-	670	230	160	540	-	-	-	-	140	-	550	
				Total Delay	-	217.7	28.5	50.9	24.2	-	-	-	-	18.8	-	101	
				LOS	-	F	C	D	C	-	-	-	-	B	-	F	
				PM	Volume (vph)	-	1020	440	340	430	-	-	-	-	180	-	370
				Total Delay	-	353.9	38.1	181.9	11.6	-	-	-	-	22.3	-	32	
LOS	-	F	D	F	B	-	-	-	-	C	-	C					