

Capacity Analysis for Planning of Junctions

Input Worksheet

Project Name:	Research Forest and Lake Woodlands	Critical Lane Volume Sum			
Project Number:	4609.001	Acceptable Configurations			
Location:	2030 PM Lake Woodlands Drive and Grogans Mill Road	< 1200	1200 - 1399	1400 - 1599	≥ 1600
Date:	April 17, 2019	10	7	6	9

Results for Intersections

#	TYPE OF INTERSECTION	Sheet	Zone 1 (North)		Zone 2 (South)		Zone 3 (East)		Zone 4 (West)		Zone 5 (Center)		Overall v/c Ratio	Ranking
			CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C		
1	Conventional	FULL	/	/	/	/	/	/	/	/	1479	<u>0.92</u>	0.92	7
2	Conventional Shared RT LN	CSRL	/	/	/	/	/	/	/	/	1951	<u>1.22</u>	1.22	14
3.1	Quadrant Roadway	S-W	/	/	932	<u>0.58</u>	/	/	1209	<u>0.76</u>	1270	<u>0.79</u>	0.79	3
3.2		N-E	908	<u>0.57</u>	/	/	1147	<u>0.72</u>	/	/	1704	<u>1.06</u>	1.06	12
3.3		S-E	/	/	990	<u>0.62</u>	990	<u>0.62</u>	/	/	1494	<u>0.93</u>	0.93	8
3.4		N-W	856	<u>0.54</u>	/	/	/	/	1374	<u>0.86</u>	1523	<u>0.95</u>	0.95	11
4.1	Partial Displaced Left Turn	N-S	655	<u>0.41</u>	879	<u>0.55</u>	/	/	/	/	1122	<u>0.70</u>	0.70	2
4.2		E-W	/	/	/	/	836	<u>0.52</u>	1010	<u>0.63</u>	1384	<u>0.86</u>	0.86	5
5	Displaced Left Turn	FULL	655	<u>0.41</u>	879	<u>0.55</u>	969	<u>0.61</u>	1010	<u>0.63</u>	1015	<u>0.63</u>	0.63	1
6.1	Restricted Crossing U-Turn	N-S	1523	<u>0.95</u>	1644	<u>1.03</u>	2444	<u>1.53</u>	2363	<u>1.48</u>	/	/	1.53	15
6.2		E-W	1433	<u>0.90</u>	1565	<u>0.98</u>	1730	<u>1.08</u>	1568	<u>0.98</u>	/	/	1.08	13
7.1	Median U-Turn	N-S	1172	<u>0.73</u>	1088	<u>0.68</u>	/	/	/	/	1377	<u>0.86</u>	0.86	4
7.2		E-W	/	/	/	/	1284	<u>0.80</u>	1247	<u>0.78</u>	1392	<u>0.87</u>	0.87	6
8.1	Partial Median U-Turn	N-S	1014	<u>0.63</u>	1231	<u>0.77</u>	/	/	/	/	1510	<u>0.94</u>	0.94	9
8.2		E-W	/	/	/	/	862	<u>0.54</u>	1244	<u>0.78</u>	1510	<u>0.94</u>	0.94	9

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Results for Roundabouts

#	TYPE OF ROUNDABOUT	Zone 1 (North)			Zone 3 (East)			Zone 2 (South)			Zone 4 (West)			Overall v/c Ratio	Ranking
		Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3		
9.1	50 ICD	-0.92			-6.56			-4.14			-3.31			-0.92	2
9.2	75 ICD	-1.07			-9.95			-5.75			-4.52			-1.07	1
9.3	1 X 1	9.35			5.89			6.74			6.38			9.35	7
9.4	1 X 2	4.81			1.91	3.98		4.39			3.40	2.97		4.81	4
9.5	2 X 1	5.20	4.15		4.02			3.97	2.77		4.10			5.20	5
9.6	2 X 2	2.99	2.13		2.36	1.91		2.78	1.80		1.39	2.72		2.99	3
9.7	3 X 3	1.16	3.81	2.85	0.04	1.75	2.92	1.31	2.58	2.22	0.52	2.68	2.22	3.81	3

Results for Interchanges

#	TYPE OF INTERCHANGE	Sheet	Zone 1 (Rt Mrg)		Zone 2 (Lt Mrg)		Zone 3 (Ctr. 1)		Zone 4 (Ctr. 2)		Zone 5 (Lt Mrg)		Zone 6 (Rt Mrg)		Overall v/c Ratio	Ranking
			CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C		
10.1	Diamond	N-S					1147	0.72	809	0.51					0.72	6
10.2		E-W					1100	0.69	1519	0.95					0.95	10
11.1	Partial Cloverleaf	N-S					1250	0.78	992	0.62					0.78	9
11.2		E-W					867	0.57	786	0.49					0.54	1
13.1	Displaced Left Turn	N-S	655	0.41			638	0.40	537	0.34			1227	0.77	0.77	7
13.2		E-W	1116	0.70			1117	0.70	1071	0.67			1099	0.69	0.70	4
14.1	Double Crossover Diamond	N-S	405	0.25	778	0.49	768	0.48	991	0.62	509	0.32	868	0.54	0.62	3
14.2		E-W	804	0.50	1242	0.78	858	0.54	874	0.55	1208	0.75	1146	0.72	0.78	8
15.1	Single Point	N-S	550	0.34			886	0.55					911	0.57	0.57	2
15.2		E-W	1131	0.71			1134	0.71					1146	0.72	0.72	5