



Roundabout Analysis Tool
Multi-Lane

5/2/2018
Version 4.1

	N	NE	E	SE	S	SW	W	NW
# of Entry Flow Lanes	1	0	2	0	1	0	2	0
# of Conflict Flow Lanes	2	2	1	2	2	2	1	2
Volume Characteristics								
	N	NE	E	SE	S	SW	W	NW
% Cars	93.8%	100.0%	96.3%	100.0%	100.0%	100.0%	96.3%	100.0%
% Heavy Vehicles	6.2%	0.0%	3.7%	0.0%	0.0%	0.0%	3.7%	0.0%
% Bicycles	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
# of Pedestrians (ped/hr)	0	0	0	0	0	0	0	0
PHF	0.85	0.95	0.95	0.95	0.50	0.95	0.81	0.95
F _{hv}	0.942	1.000	0.964	1.000	1.000	1.000	0.964	1.000
F _{ped}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Entry/Conflicting Flows	N	NE	E	SE	S	SW	W	NW
Flow to								
Leg #								
N (1) pcu/h	0	0	265	0	22	0	105	0
NE (2) pcu/h	0	0	0	0	0	0	0	0
E (3) pcu/h	141	0	0	0	2	0	494	0
SE (4) pcu/h	0	0	0	0	0	0	0	0
S (5) pcu/h	5	0	1	0	0	0	5	0
SW (6) pcu/h	0	0	0	0	0	0	0	0
W (7) pcu/h	0	0	811	0	0	0	0	0
NW (8) pcu/h	0	0	0	0	0	0	0	0
Entry flow pcu/h	146	0	267	0	24	0	604	0
Entry flow Lane 1 pcu/h	146	0	538	0	24	0	302	0
Entry flow Lane 2 pcu/h	0	0	539	0	0	0	302	0
Conflicting flow pcu/h	812	0	127	0	740	0	147	0

Results: Approach Measures of Effectiveness

HCM 6th Edition	N		E		S		W	
	Li-Th-Rt	No Lane	Left-Thru	Right-Thru	Li-Th-Rt	No Lane	Left-Thru	Right-Thru
Entry Capacity, veh/h	670	NA	1220	1220	757	NA	1198	1198
Entry Flow Rates, veh/h	138	NA	519	520	24	NA	291	291
V/C ratio	0.21		0.43	0.43	0.03		0.24	0.24
Control Delay, s/veh	7.8		7.2	7.3	5.1		5.2	5.2
LOS	A		A	A	A		A	A
95th % Queue (ft)	20		56	56	2		25	25
Approach Delay, LOS	7.8 sec, LOS A		7.3 sec, LOS A		5.1 sec, LOS A		5.2 sec, LOS A	
	NE		SE		SW		NW	
Lane Designations	No Lane	No Lane	No Lane	No Lane	No Lane	No Lane	No Lane	No Lane
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
V/C ratio								
Control Delay, sec/pcu								
LOS								
95th % Queue (ft)								
Approach Delay, LOS								

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Bypass Lane Merge Point Analysis (if applicable)						
Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)	N (1)					
Select Exit Leg for Bypass (TO)	W (7)					
Does the bypass have a dedicated receiving lane?	No					
# of Conflicting Exit Flow Lanes	2	2	2	2	2	2
Volumes						
Entry Leg: Insert Right Turn Volume	121					
Exit Leg: <i>(Select Input Method)</i>	HCM					
Lane Flow in Exit Leg***	811					
Sum of inner circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
Sum of outer circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
Critical Lane Flow (Manual) in Exit Leg***						
Volume Characteristics						
PHF (Entry Leg)	0.85					
F _{HV} (Entry Leg)	0.94					
F _{ped}	1.00					
PHF (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
F _{HV} (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
***Volume Characteristics are already taken into account for Default method ONLY. Insert Values above if Manual method.						
Entry/Conflicting Flows						
Entry Flow	151					
Conflicting Critical Flow	811					
Bypass Lane Results						
Entry Capacity of Bypass, veh/h	671					
Flow Rates of Exiting Traffic, veh/h	142					
V/C ratio	0.21					
Control Delay, sec/pcu	7.9					
LOS	A					
95th % Queue (ft)	21					





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General & Site Information v 4.1								
Analyst:	Matt Boyd							
Agency/Co:	Atkins							
Date:	4/17/2018							
Project or PI#:	SR 124 at SR 60							
Year, Peak Hour:	2021 PM Peak							
County/District:	Jackson County, GDOT District 1							
Intersection:	SR-124 at SR 60 and Sam Freeman Rd							

		Entry Legs (FROM)							
		N1 (1)	N2 (1)	NE1 (2)	NE2 (2)	E1 (3)	E2 (3)	SE1 (4)	SE2 (4)
Exit Legs (TO)	Lane Designation	Lf-Th-Rt	No Lane	No Lane	No Lane	Left-Thru	Right-Thru	No Lane	No Lane
	N (1), vph	0				0	149		
	NE (2), vph								
	E (3), vph	169				0	0		
	SE (4), vph								
	S (5), vph	15				1	0		
	SW (6), vph								
	W (7), vph	0				262	114		
	NW (8), vph								
	Entry Volume, vph	184	0	0	0	263	263	0	0
		S1 (5)	S2 (5)	SW1 (6)	SW2 (6)	W1 (7)	W2 (7)	NW1 (8)	NW2 (8)
Exit Legs (TO)	Lane Designation	Lf-Th-Rt	No Lane	No Lane	No Lane	Left-Thru	Right-Thru	No Lane	No Lane
	N (1), vph	14				92	0		
	NE (2), vph								
	E (3), vph	1				356	451		
	SE (4), vph								
	S (5), vph	0				0	5		
	SW (6), vph								
	W (7), vph	1				7	0		
	NW (8), vph								
Entry Volume, vph	16	0	0	0	455	456	0	0	





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	N	NE	E	SE	S	SW	W	NW
# of Entry Flow Lanes	1	0	2	0	1	0	2	0
# of Conflict Flow Lanes	2	2	1	2	2	2	1	2
Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	93.8%	100.0%	96.3%	100.0%	100.0%	100.0%	96.3%	100.0%
% Heavy Vehicles	6.2%	0.0%	3.7%	0.0%	0.0%	0.0%	3.7%	0.0%
% Bicycles	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
# of Pedestrians (ped/hr)	0	0	0	0	0	0	0	0
PHF	0.86	0.95	0.87	0.95	0.70	0.95	0.96	0.95
F _{car}	0.942	1.000	0.964	1.000	1.000	1.000	0.964	1.000
F _{ped}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Entry/Conflicting Flows	N	NE	E	SE	S	SW	W	NW
Flow to	N (1), pcu/h	0	0	178	0	20	0	99
Leg #	NE (2), pcu/h	0	0	0	0	0	0	0
	E (3), pcu/h	209	0	0	0	1	0	672
	SE (4), pcu/h	0	0	0	0	0	0	0
	S (5), pcu/h	19	0	1	0	0	0	5
	SW (6), pcu/h	0	0	0	0	0	0	0
	W (7), pcu/h	0	0	448	0	1	0	8
	NW (8), pcu/h	0	0	0	0	0	0	0
	Entry flow, pcu/h	227	0	627	0	23	0	984
	Entry flow Lane 1, pcu/h	227	0	313	0	23	0	491
	Entry flow Lane 2, pcu/h	0	0	313	0	0	0	493
	Conflicting flow, pcu/h	458	0	128	0	1187	0	228

Results: Approach Measures of Effectiveness

HCM 6th Edition	N		E		S		W	
	Left-Thru	No Lane	Left-Thru	Right-Thru	Left-Thru	No Lane	Left-Thru	Right-Thru
Entry Capacity, veh/h	906	NA	1218	1218	518	NA	1112	1112
Entry Flow Rates, veh/h	214	NA	302	302	23	NA	474	475
V/C ratio	0.24		0.25	0.25	0.04		0.43	0.43
Control Delay, s/veh	6.4		5.2	5.2	7.5		7.7	7.8
LOS	A		A	A	A		A	A
95th % Queue (ft)	24		25	25	3		56	56
Approach Delay, LOS	5.9 sec, LOS A		5.2 sec, LOS A		7.5 sec, LOS A		7.8 sec, LOS A	
	NE		SE		SW		NW	
Lane Designations	No Lane	No Lane	No Lane	No Lane	No Lane	No Lane	No Lane	No Lane
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
V/C ratio								
Control Delay, sec/pcu								
LOS								
95th % Queue (ft)								
Approach Delay, LOS								

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Bypass Lane Merge Point Analysis (if applicable)						
Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)	N (1)					
Select Exit Leg for Bypass (TO)	W (7)					
Does the bypass have a dedicated receiving lane?	No					
# of Conflicting Exit Flow Lanes	2	2	2	2	2	2
<i>Volumes</i>						
Entry Leg: Insert Right Turn Volume	84					
Exit Leg: <i>(Select Input Method)</i>	HCM					
Lane Flow in Exit Leg***	457					
Sum of inner circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
Sum of outer circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
Critical Lane Flow (Manual) in Exit Leg***						
<i>Volume Characteristics</i>						
PHF (Entry Leg)	0.86					
F_{rtv} (Entry Leg)	0.94					
F_{ped}	1.00					
PHF (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
F_{rtv} (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
***Volume Characteristics are already taken into account for Default method ONLY. Insert Values above if Manual method.						
<i>Entry/Conflicting Flows</i>						
Entry Flow	104					
Conflicting Critical Flow	457					
Bypass Lane Results						
Entry Capacity of Bypass, veh/h	907					
Flow Rates of Exiting Traffic, veh/h	98					
V/C ratio	0.11					
Control Delay, sec/pcu	5.0					
LOS	A					
95th % Queue (ft)	10					





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General & Site Information		v 4.1							
Analyst:	Matt Boyd								
Agency/Co:	Atkins								
Date:	4/17/2018								
Project or PI#:	SR 124 at SR 60								
Year, Peak Hour:	2041 AM Peak								
County/District:	Jackson County, GDOT District 1								
Intersection:	SR-124 at SR 60 and Sam Freeman Rd								
Volumes		Entry Legs (FROM)							
		N1 (1)	N2 (1)	NE1 (2)	NE2 (2)	E1 (3)	E2 (3)	SE1 (4)	SE2 (4)
Lane Designation		Lf-Th-Rt	No Lane	No Lane	No Lane	Left-Thru	Right-Thru	No Lane	No Lane
Exit Legs (TO)	N (1), vph	0				0	438		
	NE (2), vph								
	E (3), vph	204				0	0		
	SE (4), vph								
	S (5), vph	6				2	0		
	SW (6), vph								
	W (7), vph	219				887	451		
	NW (8), vph								
Entry Volume, vph		429	0	0	0	889	889	0	0
		S1 (5)	S2 (5)	SW1 (6)	SW2 (6)	W1 (7)	W2 (7)	NW1 (8)	NW2 (8)
Lane Designation		Lf-Th-Rt	No Lane	No Lane	No Lane	Left-Thru	Right-Thru	No Lane	No Lane
	N (1), vph	19				147	0		
	NE (2), vph								
	E (3), vph	2				278	419		
	SE (4), vph								
	S (5), vph	0				0	6		
	SW (6), vph								
	W (7), vph	0				0	0		
	NW (8), vph								
	Entry Volume, vph	21	0	0	0	425	425	0	0





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	N	NE	E	SE	S	SW	W	NW
# of Entry Flow Lanes	1	0	2	0	1	0	2	0
# of Conflict Flow Lanes	2	2	1	2	2	2	1	2
Volume Characteristics								
	N	NE	E	SE	S	SW	W	NW
% Cars	93.8%	100.0%	96.3%	100.0%	100.0%	100.0%	96.3%	100.0%
% Heavy Vehicles	6.2%	0.0%	3.7%	0.0%	0.0%	0.0%	3.7%	0.0%
% Bicycles	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
# of Pedestrians (ped/hr)	0	0	0	0	0	0	0	0
PHF	0.85	0.95	0.95	0.95	0.50	0.95	0.81	0.95
F _{HV}	0.942	1.000	0.964	1.000	1.000	1.000	0.964	1.000
F _{ped}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Entry/Conflicting Flows	N	NE	E	SE	S	SW	W	NW
Flow to								
Leg #								
N (1), pcu/h	0	0	478	0	38	0	165	0
NE (2), pcu/h	0	0	0	0	0	0	0	0
E (3), pcu/h	255	0	0	0	4	0	892	0
SE (4), pcu/h	0	0	0	0	0	0	0	0
S (5), pcu/h	7	0	2	0	0	0	8	0
SW (6), pcu/h	0	0	0	0	0	0	0	0
W (7), pcu/h	274	0	1461	0	0	0	0	0
NW (8), pcu/h	0	0	0	0	0	0	0	0
Entry flow, pcu/h	536	0	1941	0	42	0	1088	0
Entry flow Lane 1, pcu/h	536	0	970	0	42	0	544	0
Entry flow Lane 2, pcu/h	0	0	970	0	0	0	544	0
Conflicting flow, pcu/h	1463	0	226	0	1335	0	265	0

Results: Approach Measures of Effectiveness

HCM 6th Edition	N		E		S		W	
	Left-Thru	No Lane	Left-Thru	Right-Thru	Left-Thru	No Lane	Left-Thru	Right-Thru
Entry Capacity, veh/h	386	NA	1115	1115	456	NA	1076	1076
Entry Flow Rates, veh/h	505	NA	936	936	42	NA	525	525
V/C ratio	1.31		0.84	0.84	0.09		0.49	0.49
Control Delay, s/veh	185.4		21.6	21.6	9.1		8.9	8.9
LOS	F		C	C	A		A	A
95th % Queue (ft)	613		276	276	8		71	71
Approach Delay, LOS	185.4 sec, LOS F		21.6 sec, LOS C		9.1 sec, LOS A		8.9 sec, LOS A	
	NE		SE		SW		NW	
Lane Designations	No Lane	No Lane	No Lane	No Lane	No Lane	No Lane	No Lane	No Lane
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
V/C ratio								
Control Delay, sec/pcu								
LOS								
95th % Queue (ft)								
Approach Delay, LOS								

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General & Site Information v 4.1								
Analyst:	Matt Boyd							
Agency/Co:	Atkins							
Date:	4/17/2018							
Project or PI#:	SR 124 at SR 60							
Year, Peak Hour:	2041 PM Peak							
County/District:	Jackson County, GDOT District 1							
Intersection:	SR-124 at SR 60 and Sam Freeman Rd							

Volumes	Entry Legs (FROM)								
	N1 (1)	N2 (1)	NE1 (2)	NE2 (2)	E1 (3)	E2 (3)	SE1 (4)	SE2 (4)	
Lane Designation	Lf-Th-Rt	No Lane	No Lane	No Lane	Left-Thru	Right-Thru	No Lane	No Lane	
Exit Legs (TO)	N (1), vph	0			0	269			
	NE (2), vph								
	E (3), vph	305			0	0			
	SE (4), vph								
	S (5), vph	27			2	0			
	SW (6), vph								
	W (7), vph	152			472	206			
	NW (8), vph								
	Entry Volume, vph	484	0	0	0	474	475	0	0
		S1 (5)	S2 (5)	SW1 (6)	SW2 (6)	W1 (7)	W2 (7)	NW1 (8)	NW2 (8)
Lane Designation	Lf-Th-Rt	No Lane	No Lane	No Lane	Left-Thru	Right-Thru	No Lane	No Lane	
	N (1), vph	25			166	0			
	NE (2), vph								
	E (3), vph	2			641	813			
	SE (4), vph								
	S (5), vph	0			0	8			
	SW (6), vph								
	W (7), vph	2			13	0			
	NW (8), vph								
	Entry Volume, vph	29	0	0	0	820	821	0	0





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	N	NE	E	SE	S	SW	W	NW
# of Entry Flow Lanes	1	0	2	0	1	0	2	0
# of Conflict Flow Lanes	2	2	1	2	2	2	1	2
Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	93.8%	100.0%	96.3%	100.0%	100.0%	100.0%	96.3%	100.0%
% Heavy Vehicles	6.2%	0.0%	3.7%	0.0%	0.0%	0.0%	3.7%	0.0%
% Bicycles	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
# of Pedestrians (ped/hr)	0	0	0	0	0	0	0	0
PHF	0.86	0.95	0.87	0.95	0.70	0.95	0.96	0.95
F _{car}	0.942	1.000	0.964	1.000	1.000	1.000	0.964	1.000
F _{ped}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Entry/Conflicting Flows		N	NE	E	SE	S	SW	W	NW
Flow to	N (1), pcu/h	0	0	821	0	56	0	179	0
Leg #	NE (2), pcu/h	0	0	0	0	0	0	0	0
	E (3), pcu/h	377	0	0	0	3	0	1571	0
	SE (4), pcu/h	0	0	0	0	0	0	0	0
	S (5), pcu/h	33	0	2	0	0	0	9	0
	SW (6), pcu/h	0	0	0	0	0	0	9	0
	W (7), pcu/h	188	0	808	0	3	0	14	0
	NW (8), pcu/h	0	0	0	0	0	0	0	0
	Entry flow, pcu/h	598	0	1131	0	41	0	1773	0
	Entry flow Lane 1, pcu/h	598	0	565	0	41	0	886	0
	Entry flow Lane 2, pcu/h	0	0	566	0	0	0	887	0
	Conflicting flow, pcu/h	827	0	332	0	2141	0	412	0

Results: Approach Measures of Effectiveness

HCM 6th Edition	N		E		S		W	
	Lf-Th-Rt	No Lane	Left-Thru	Right-Thru	Lf-Th-Rt	No Lane	Left-Thru	Right-Thru
Entry Capacity, veh/h	662	NA	1109	1109	230	NA	941	941
Entry Flow Rates, veh/h	563	NA	545	546	41	NA	854	855
V/C ratio	0.85		0.49	0.49	0.18		0.91	0.91
Control Delay, s/veh	32.7		8.8	8.8	19.9		32.3	32.4
LOS	D		A	A	C		D	D
95th % Queue (ft)	255		72	73	16		344	346
Approach Delay, LOS	32.7 sec, LOS D		8.8 sec, LOS A		19.9 sec, LOS C		32.4 sec, LOS D	
	NE		SE		SW		NW	
Lane Designations	No Lane	No Lane	No Lane	No Lane	No Lane	No Lane	No Lane	No Lane
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
V/C ratio								
Control Delay, sec/pcu								
LOS								
95th % Queue (ft)								
Approach Delay, LOS								

v 4.0



Appendix H: Roundabout Analysis (Build & Design Years) – SIDRA 7

Single Lane Roundabout - 2021

DEGREE OF SATURATION

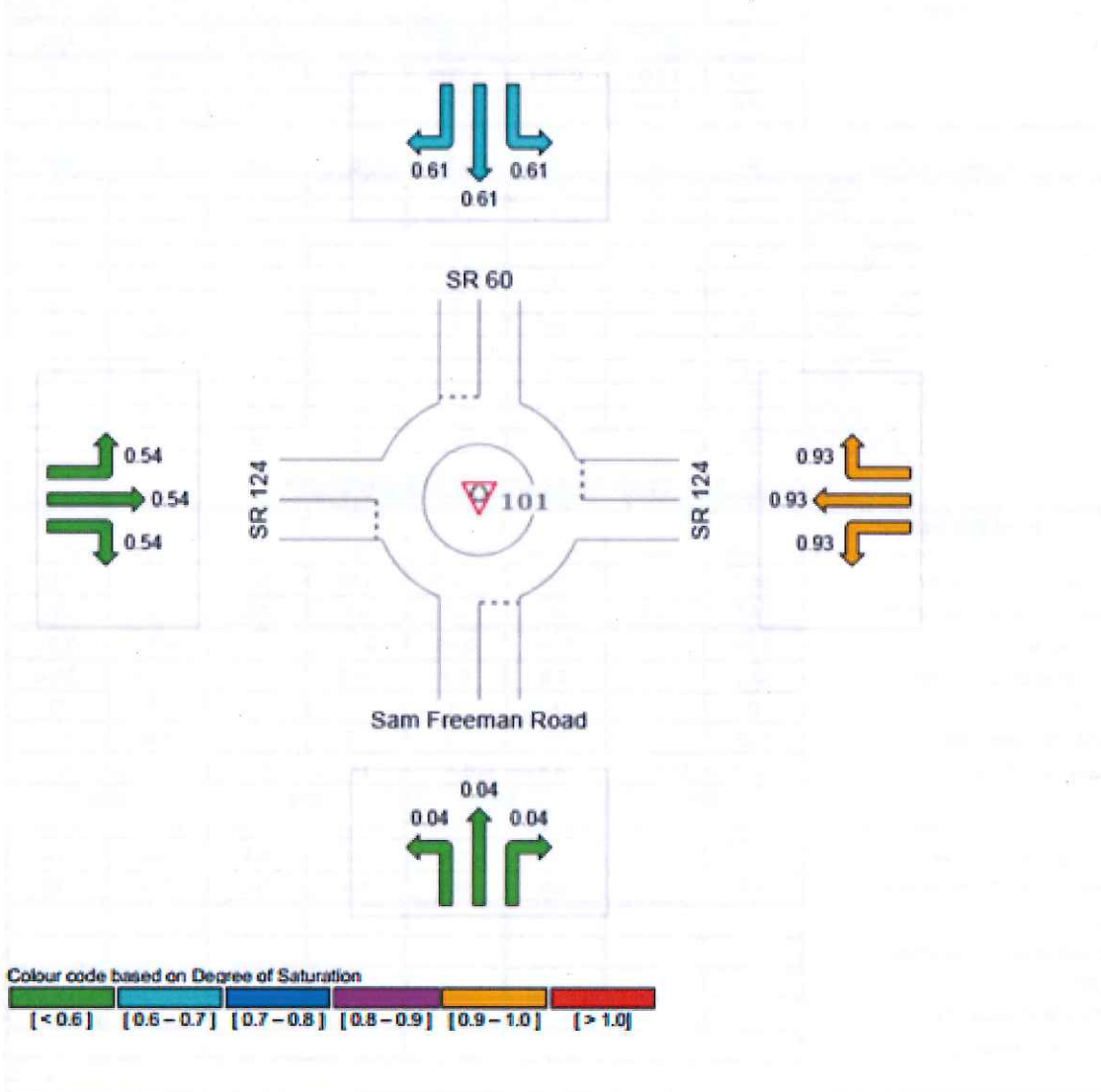
Ratio of Demand Volume to Capacity (v/c ratio)

Site: 101 [SR124 @ SR60_2021 AM]

New Site
Roundabout

All Movement Classes

Degree of Saturation	South	East	North	West	Intersection
	0.04	0.93	0.61	0.54	0.93



SIDRA INTERSECTION 7.0 | Copyright © 2000-2016 Akcelik and Associates Pty Ltd | sidrasolutions.com
 Organisation: ATKINS NORTH AMERICA | Processed: Monday, June 04, 2018 2:08:09 PM
 Project: M:\TP_Projects\2018\GDOT Safety\SR124_SR60\Sidra\SR124@SR60_SpeedData.sip7

DELAY (CONTROL)

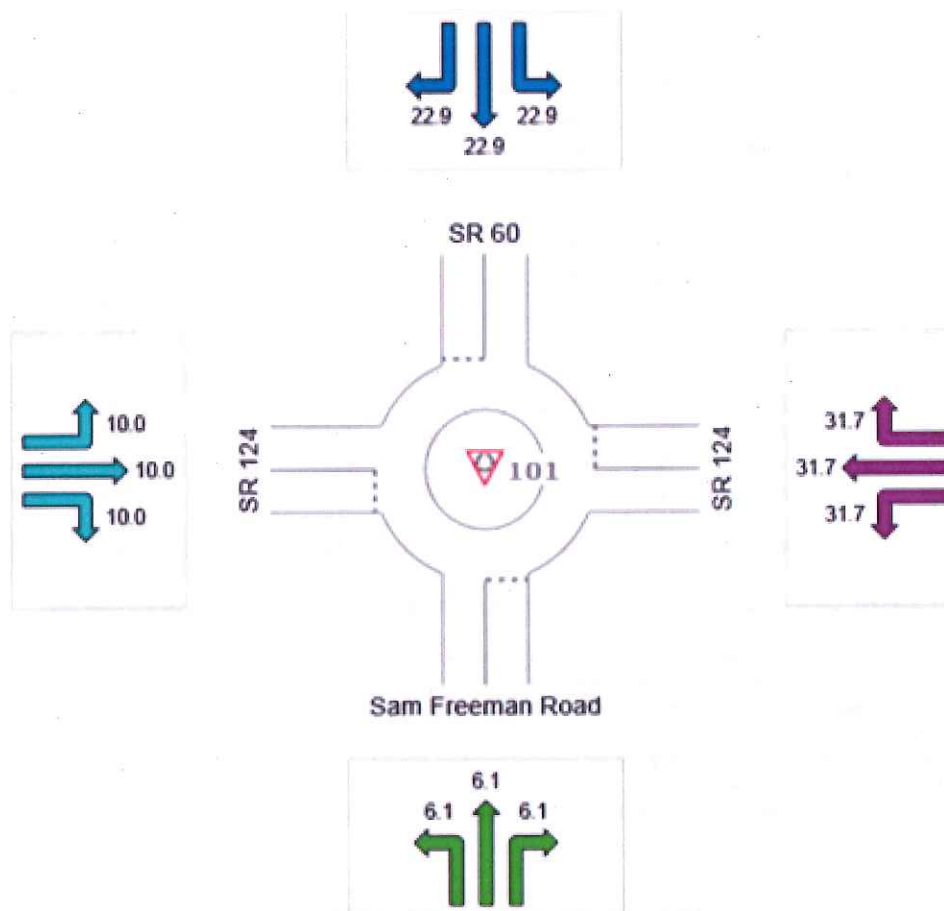
Average control delay per vehicle, or average pedestrian delay (seconds)

Site: 101 [SR124 @ SR60_2021 AM]

New Site
Roundabout

All Movement Classes

	South	East	North	West	Intersection
Delay (Control)	6.1	31.7	22.9	10.0	23.5
LOS	A	D	C	B	C



Colour code based on Level of Service



Site Level of Service (LOS) Method: Delay & w/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

LOS F will result if w/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Roundabout Level of Service Method: Same as Sign Control

MOVEMENT SUMMARY

Site: 101 [SR124 @ SR60_2021 AM]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn w/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Sam Freeman Road											
3	L2	2	0.0	0.038	6.1	LOS A	0.2	5.7	0.74	0.56	41.0
8	T1	20	0.0	0.038	6.1	LOS A	0.2	5.7	0.74	0.56	41.1
18	R2	2	0.0	0.038	6.1	LOS A	0.2	5.7	0.74	0.56	39.9
Approach		24	0.0	0.038	6.1	LOS A	0.2	5.7	0.74	0.56	41.0
East: SR 124											
1	L2	1	3.7	0.926	31.7	LOS D	26.0	668.2	1.00	0.71	27.8
6	T1	766	3.7	0.926	31.7	LOS D	26.0	668.2	1.00	0.71	27.9
16	R2	251	3.7	0.926	31.7	LOS D	26.0	668.2	1.00	0.71	27.4
Approach		1018	3.7	0.926	31.7	LOS D	26.0	668.2	1.00	0.71	27.8
North: SR 60											
7	L2	131	6.2	0.611	22.9	LOS C	5.8	153.0	1.00	1.09	29.9
4	T1	4	6.2	0.611	22.9	LOS C	5.8	153.0	1.00	1.09	30.1
14	R2	140	6.2	0.611	22.9	LOS C	5.8	153.0	1.00	1.09	29.4
Approach		274	6.2	0.611	22.9	LOS C	5.8	153.0	1.00	1.09	29.7
West: SR 124											
5	L2	99	3.7	0.540	10.0	LOS B	5.2	134.7	0.61	0.39	37.3
2	T1	468	3.7	0.540	10.0	LOS B	5.2	134.7	0.61	0.39	37.6
12	R2	4	3.7	0.540	10.0	LOS B	5.2	134.7	0.61	0.39	36.5
Approach		570	3.7	0.540	10.0	LOS B	5.2	134.7	0.61	0.39	37.5
All Vehicles		1886	4.0	0.926	23.5	LOS C	26.0	668.2	0.88	0.67	30.6

Site Level of Service (LOS) Method: Delay & w/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and w/c ratio (degree of saturation) per movement.

LOS F will result if w/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (w/c not used as specified in HCM 6).

Roundabout Capacity Model: SIDRA Standard.

HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Gap-Acceptance Capacity: SIDRA Standard (Akgelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Project: M1TP_Projects\2018\VDOT Safety\SR124_SR60\Sidra\SR124@SR60_SpeedData.sip7

QUEUE DISTANCE (AVER)

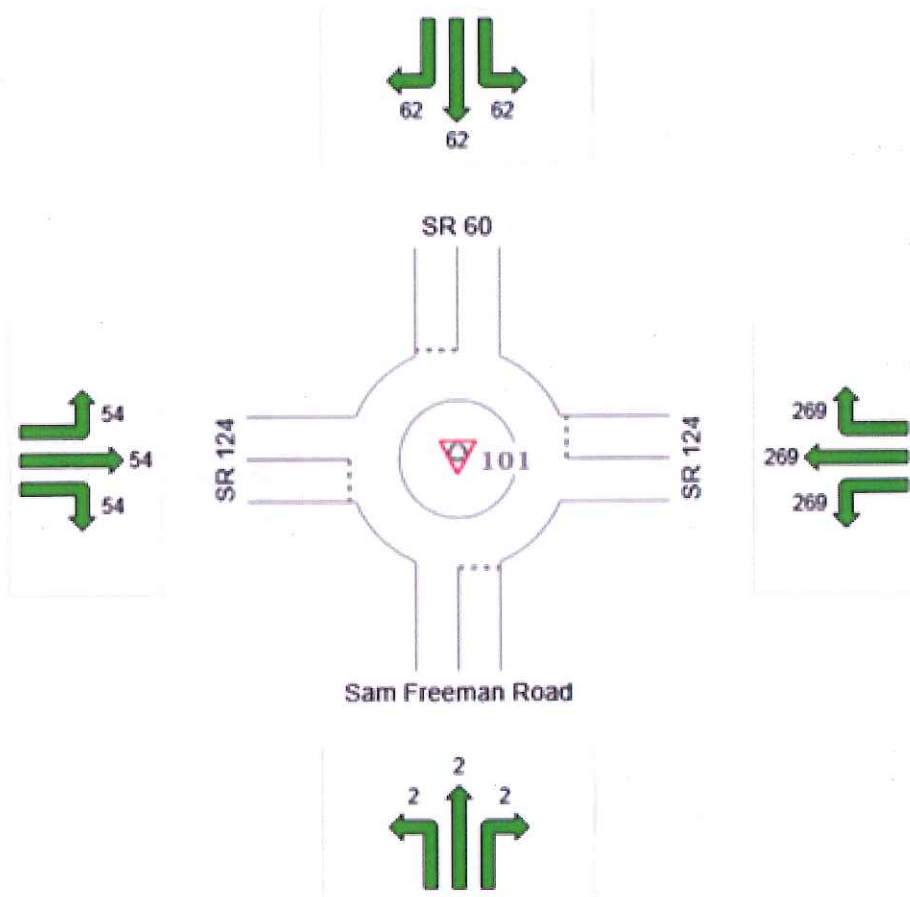
Average Back of Queue Distance for any lane used by movement (feet)

Site: 101 [SR124 @ SR60_2021 AM]

New Site
Roundabout

All Movement Classes

Queue Distance (Aver)	South	East	North	West	Intersection
	2	269	62	54	269



Colour code based on Queue Storage Ratio



DEGREE OF SATURATION

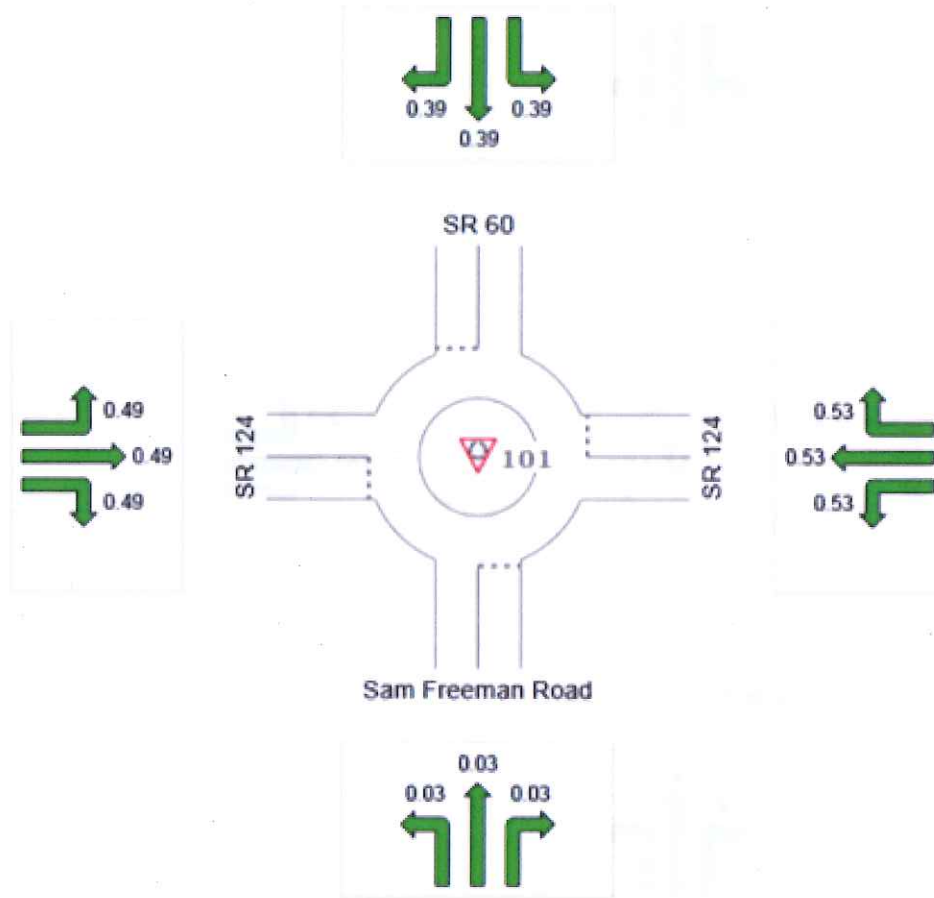
Ratio of Demand Volume to Capacity (v/c ratio)

Site: 101 [SR124 @ SR60_2021 PM]

New Site
Roundabout

All Movement Classes

Degree of Saturation	South	East	North	West	Intersection
	0.03	0.53	0.39	0.49	0.53



Colour code based on Degree of Saturation



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 Project: M:\TP_Projects\2018\IGDOT Safety\SR124_SR60\Sidra\SR124@SR60_SpeedData.sip7

DELAY (CONTROL)

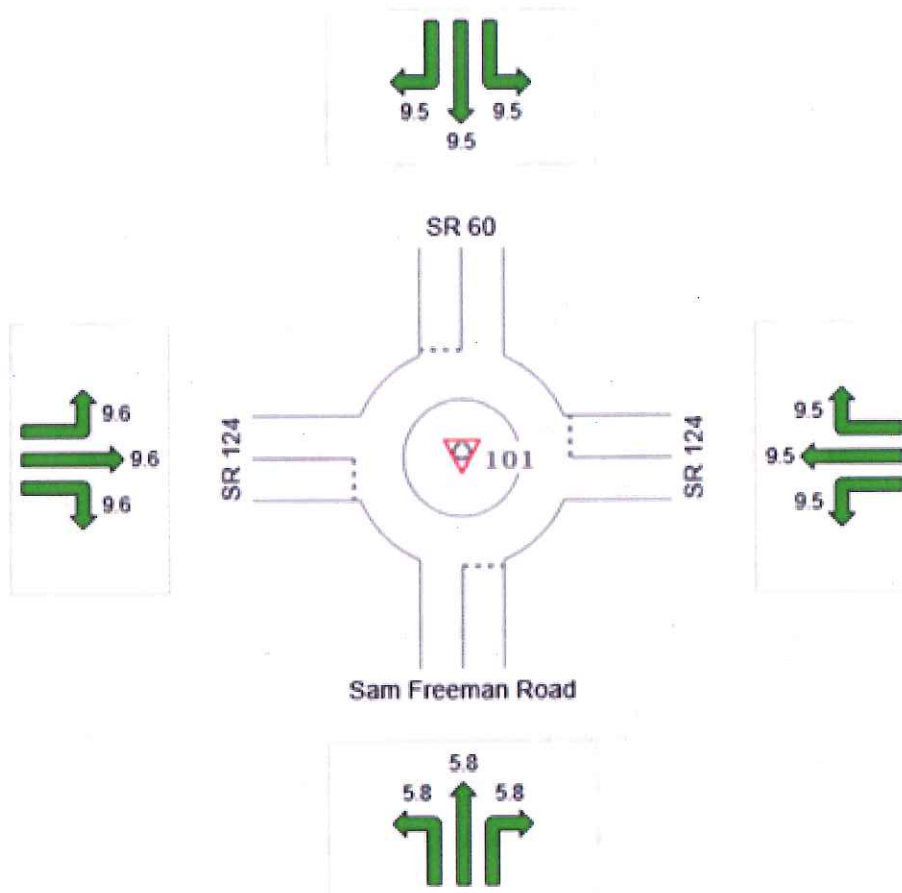
Average control delay per vehicle, or average pedestrian delay (seconds)

Site: 101 [SR124 @ SR60_2021 PM]

New Site
Roundabout

All Movement Classes

	South	East	North	West	Intersection
Delay (Control)	5.8	9.5	9.5	9.6	9.5
LOS	A	A	A	A	A



Colour code based on Level of Service



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Roundabout Level of Service Method: Same as Sign Control

MOVEMENT SUMMARY

 Site: 101 [SR124 @ SR60_2021 PM]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Sam Freeman Road											
3	L2	1	0.0	0.035	5.8	LOS A	0.2	5.1	0.72	0.53	41.2
8	T1	20	0.0	0.035	5.8	LOS A	0.2	5.1	0.72	0.53	41.4
18	R2	1	0.0	0.035	5.8	LOS A	0.2	5.1	0.72	0.53	40.2
Approach		23	0.0	0.035	5.8	LOS A	0.2	5.1	0.72	0.53	41.3
East: SR 124											
1	L2	1	3.7	0.531	9.5	LOS A	4.9	125.8	0.50	0.29	38.3
6	T1	424	3.7	0.531	9.5	LOS A	4.9	125.8	0.50	0.29	38.5
16	R2	169	3.7	0.531	9.5	LOS A	4.9	125.8	0.50	0.29	37.4
Approach		594	3.7	0.531	9.5	LOS A	4.9	125.8	0.50	0.29	38.2
North: SR 60											
7	L2	193	6.2	0.392	9.5	LOS A	2.7	69.6	0.73	0.63	35.8
4	T1	17	6.2	0.392	9.5	LOS A	2.7	69.6	0.73	0.63	36.1
14	R2	95	6.2	0.392	9.5	LOS A	2.7	69.6	0.73	0.63	35.1
Approach		306	6.2	0.392	9.5	LOS A	2.7	69.6	0.73	0.63	35.6
West: SR 124											
5	L2	83	3.7	0.491	9.6	LOS A	4.0	103.8	0.65	0.47	37.6
2	T1	395	3.7	0.491	9.6	LOS A	4.0	103.8	0.65	0.47	37.8
12	R2	3	3.7	0.491	9.6	LOS A	4.0	103.8	0.65	0.47	36.8
Approach		481	3.7	0.491	9.6	LOS A	4.0	103.8	0.65	0.47	37.8
All Vehicles		1404	4.2	0.531	9.5	LOS A	4.9	125.8	0.60	0.43	37.5

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: SIDRA Standard.

HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Gap-Acceptance Capacity: SIDRA Standard (Akpelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

QUEUE DISTANCE (AVER)

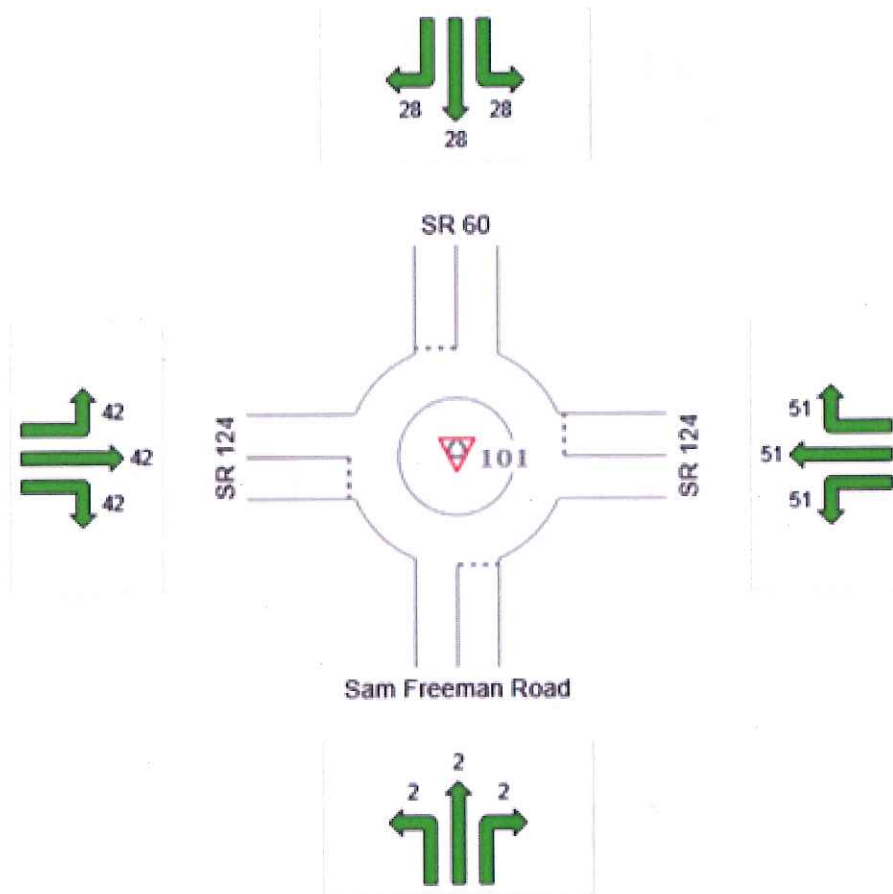
Average Back of Queue Distance for any lane used by movement (feet)

Site: 101 [SR124 @ SR60_2021 PM]

New Site
Roundabout

All Movement Classes

Queue Distance (Aver)	South	East	North	West	Intersection
	2	51	28	42	51



Colour code based on Queue Storage Ratio



Single Lane Roundabout – 2041

DEGREE OF SATURATION

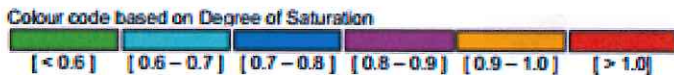
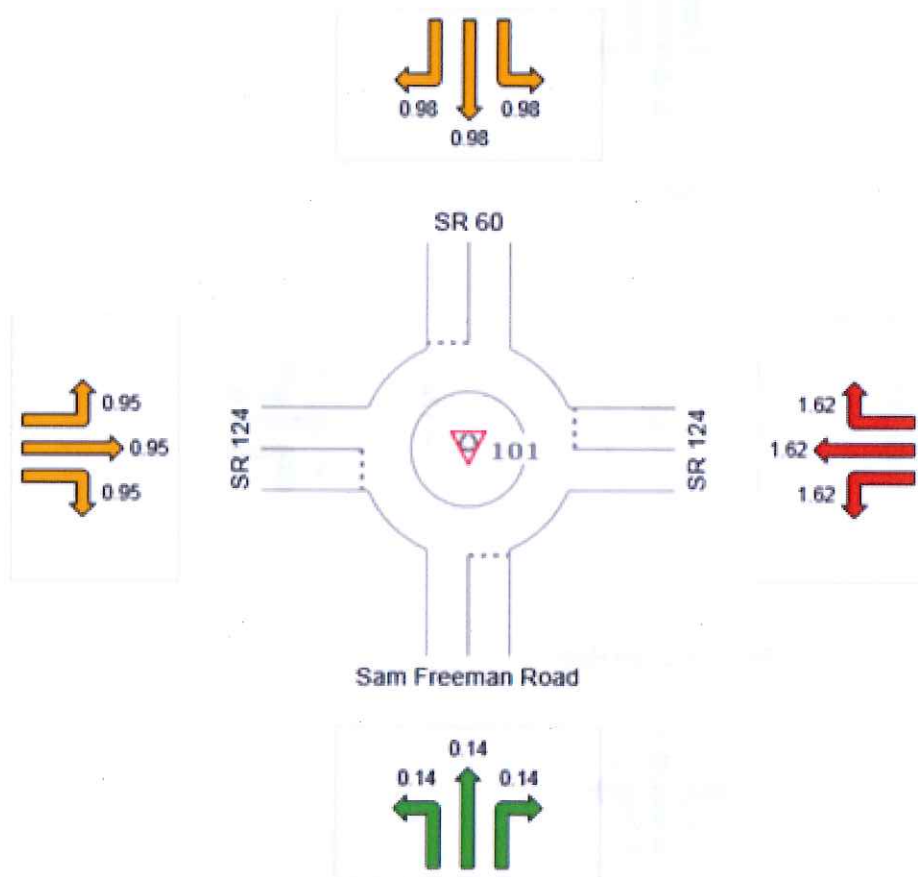
Ratio of Demand Volume to Capacity (v/c ratio)

Site: 101 [SR124 @ SR60_2041 AM]

New Site
Roundabout

All Movement Classes

Degree of Saturation	South	East	North	West	Intersection
	0.14	1.62	0.98	0.95	1.62



DELAY (CONTROL)

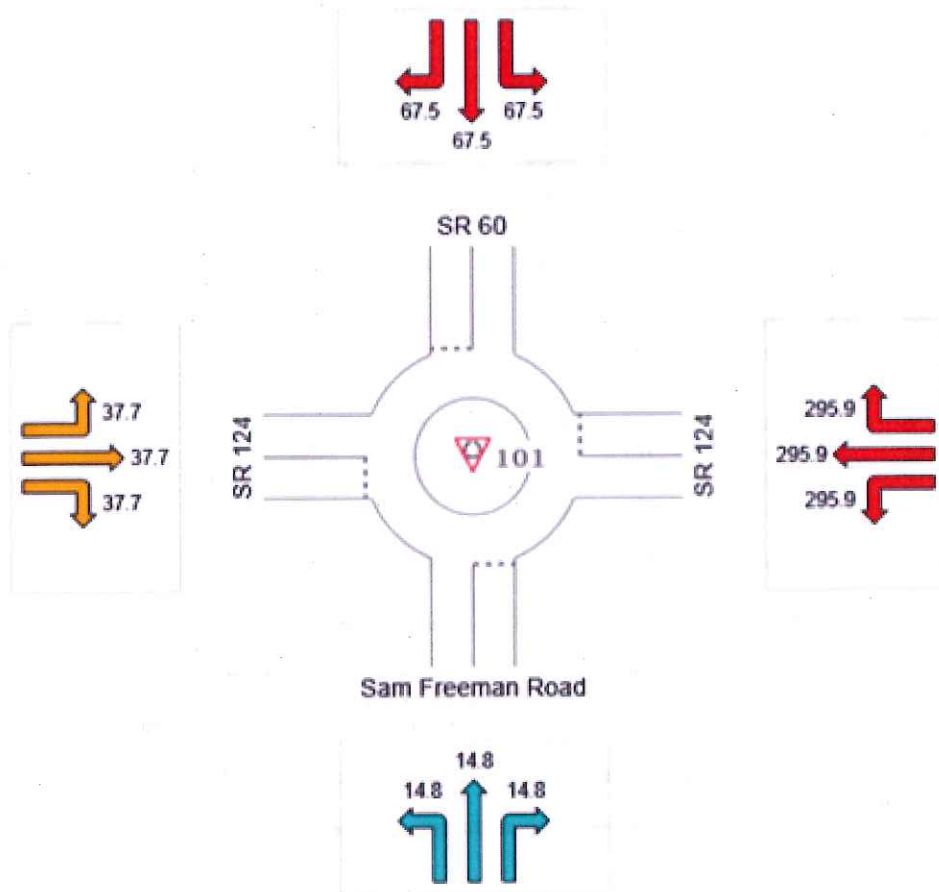
Average control delay per vehicle, or average pedestrian delay (seconds)

Site: 101 [SR124 @ SR60_2041 AM]

New Site
Roundabout

All Movement Classes

	South	East	North	West	Intersection
Delay (Control)	14.8	295.9	67.5	37.7	181.0
LOS	B	F	F	E	F



Colour code based on Level of Service



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Roundabout Level of Service Method: Same as Sign Control

MOVEMENT SUMMARY

Site: 101 [SR124 @ SR60_2041 AM]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Sam Freeman Road											
3	L2	2	0.0	0.136	14.8	LOS B	1.0	25.6	1.00	0.91	35.5
8	T1	34	0.0	0.136	14.8	LOS B	1.0	25.6	1.00	0.91	35.6
18	R2	4	0.0	0.136	14.8	LOS B	1.0	25.6	1.00	0.91	34.7
Approach		40	0.0	0.136	14.8	LOS B	1.0	25.6	1.00	0.91	35.5
East: SR 124											
1	L2	2	3.7	1.620	295.9	LOS F	239.2	6156.6	1.00	3.50	6.5
6	T1	1280	3.7	1.620	295.9	LOS F	239.2	6156.6	1.00	3.50	6.5
16	R2	419	3.7	1.620	295.9	LOS F	239.2	6156.6	1.00	3.50	6.5
Approach		1701	3.7	1.620	295.9	LOS F	239.2	6156.6	1.00	3.50	6.5
North: SR 60											
7	L2	218	6.2	0.984	67.5	LOS F	21.6	566.8	1.00	1.51	18.9
4	T1	7	6.2	0.984	67.5	LOS F	21.6	566.8	1.00	1.51	18.9
14	R2	234	6.2	0.984	67.5	LOS F	21.6	566.8	1.00	1.51	18.7
Approach		459	6.2	0.984	67.5	LOS F	21.6	566.8	1.00	1.51	18.8
West: SR 124											
5	L2	165	3.7	0.949	37.7	LOS E	29.0	745.5	1.00	1.03	25.7
2	T1	781	3.7	0.949	37.7	LOS E	29.0	745.5	1.00	1.03	25.8
12	R2	7	3.7	0.949	37.7	LOS E	29.0	745.5	1.00	1.03	25.3
Approach		954	3.7	0.949	37.7	LOS E	29.0	745.5	1.00	1.03	25.8
All Vehicles		3154	4.0	1.620	181.0	LOS F	239.2	6156.6	1.00	2.43	9.8

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Roundabout LOS Method: Same as Sign Control.
 Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
 LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
 Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
 Roundabout Capacity Model: SIDRA Standard.
 HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
 Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

QUEUE DISTANCE (AVER)

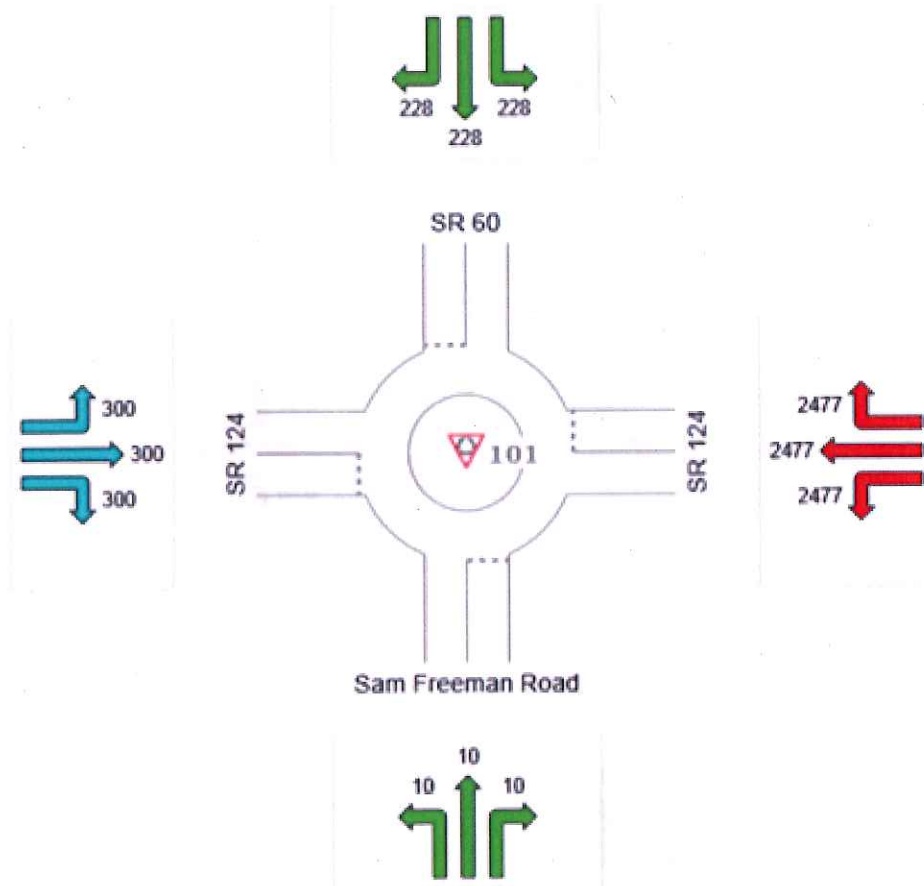
Average Back of Queue Distance for any lane used by movement (feet)

Site: 101 [SR124 @ SR60_2041 AM]

New Site
Roundabout

All Movement Classes

	South	East	North	West	Intersection
Queue Distance (Aver)	10	2477	228	300	2477



Colour code based on Queue Storage Ratio



DEGREE OF SATURATION

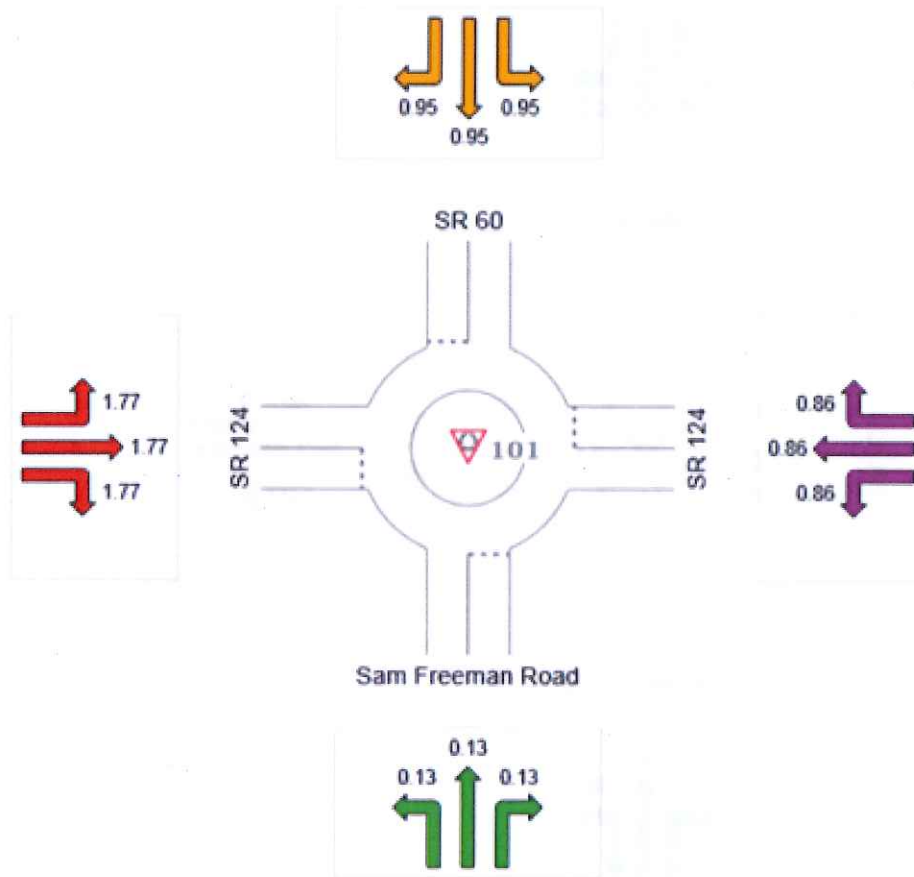
Ratio of Demand Volume to Capacity (v/c ratio)

Site: 101 [SR124 @ SR60_2041 PM]

New Site
Roundabout

All Movement Classes

	South	East	North	West	Intersection
Degree of Saturation	0.13	0.86	0.95	1.77	1.77



Colour code based on Degree of Saturation



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 Project: M:\NTP_Projects\2018\IGDOT Safety\SR124_SR60\Sidra\SR124@SR60_SpeedData.sip7