

GLORIETA SUR – HORIZONTE 2025 – LABORABLE MAÑANAS (8:00-9:00)

MOVEMENT SUMMARY



Site: 101 [G Sur 2025 lab AM]

G SUR 2025 lab AM
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows		Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
		Total	HV %				Vehicles	Distance			
		veh/h	%	v/c	sec		veh	m		per veh	km/h
East: M-108 Norte											
4a	L1	625	2,0	0,550	12,1	LOS B	3,9	27,7	0,53	0,65	48,1
6	R2	316	2,0	0,550	12,0	LOS B	3,8	27,0	0,51	0,63	47,8
Approach		941	2,0	0,550	12,1	LOS B	3,9	27,7	0,52	0,64	48,0
North: ITH											
7	L2	1	2,0	0,002	5,2	LOS A	0,0	0,0	0,41	0,26	52,1
9a	R1	1	2,0	0,001	5,0	LOS A	0,0	0,0	0,39	0,25	56,0
Approach		2	2,0	0,002	5,1	LOS A	0,0	0,0	0,40	0,26	53,9
SouthWest: M-10 Sur											
30a	L1	367	2,0	0,364	6,9	LOS A	1,4	10,2	0,02	0,00	51,3
32a	R1	447	2,0	0,364	6,9	LOS A	1,4	10,2	0,01	0,00	54,1
Approach		815	2,0	0,364	6,9	LOS A	1,4	10,2	0,02	0,00	52,8
All Vehicles		1758	2,0	0,550	9,6	LOS A	3,9	27,7	0,29	0,34	50,1

Site Level of Service (LOS) Method: Delay (SIDRA). 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 per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: US HCM.

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

Gap-Acceptance Capacity: Traditional M1.

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

INPUT VOLUMES

Vehicles and pedestrians per 60 minutes

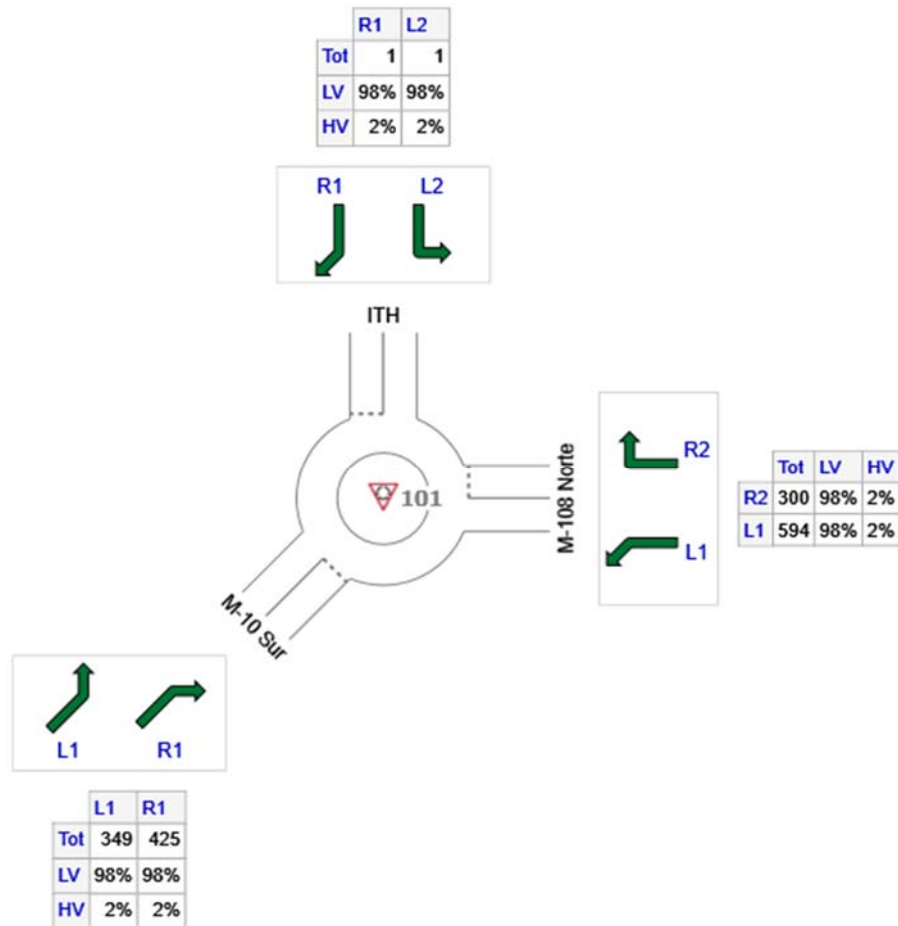


Site: 101 [G Sur 2025 lab AM]

G SUR 2025 lab AM

Roundabout

Volume Display Method: Total and %



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
E: M-108 Norte	894	876	18
N: ITH	2	2	0
SW: M-10 Sur	774	759	15
Total	1670	1637	33

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Organisation: OpcionA | Created: sábado, 8 de marzo de 2025 18:20:56

Project: C:\002-TRABAJO\2024\2024 ITH Torrejon\Glorieta S.sip7

LANE LEVEL OF SERVICE

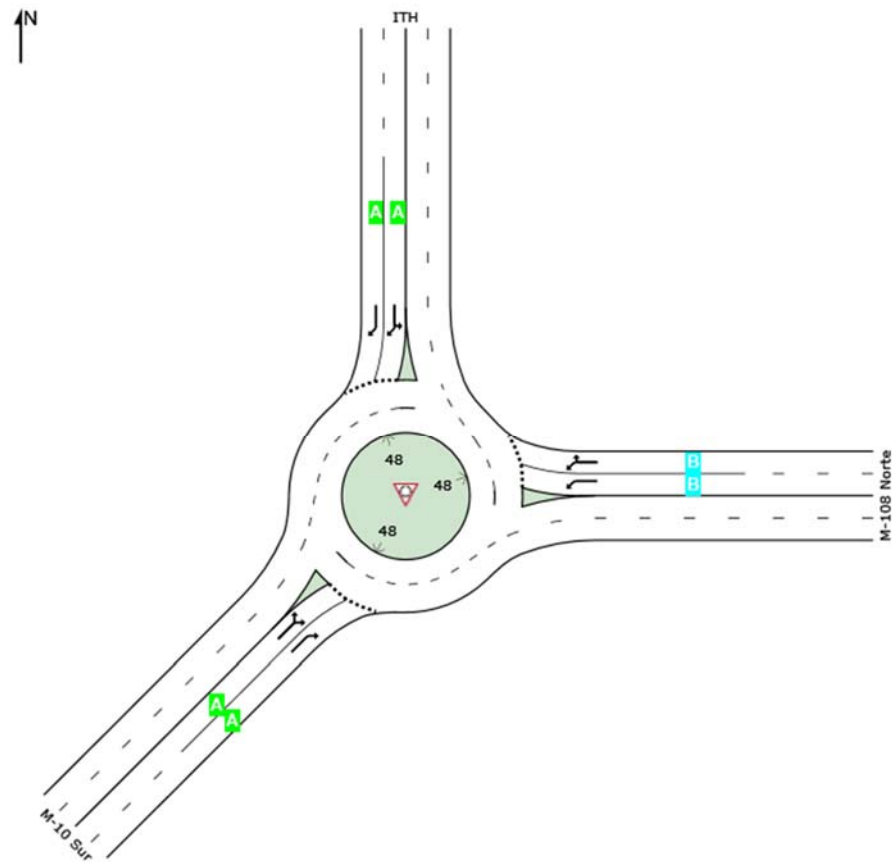
Lane Level of Service

 **Site: 101 [G Sur 2025 lab AM]**

G SUR 2025 lab AM
Roundabout

All Movement Classes

	East	North	Southwest	Intersection
LOS	B	A	A	A



Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

DELAY (CONTROL)

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



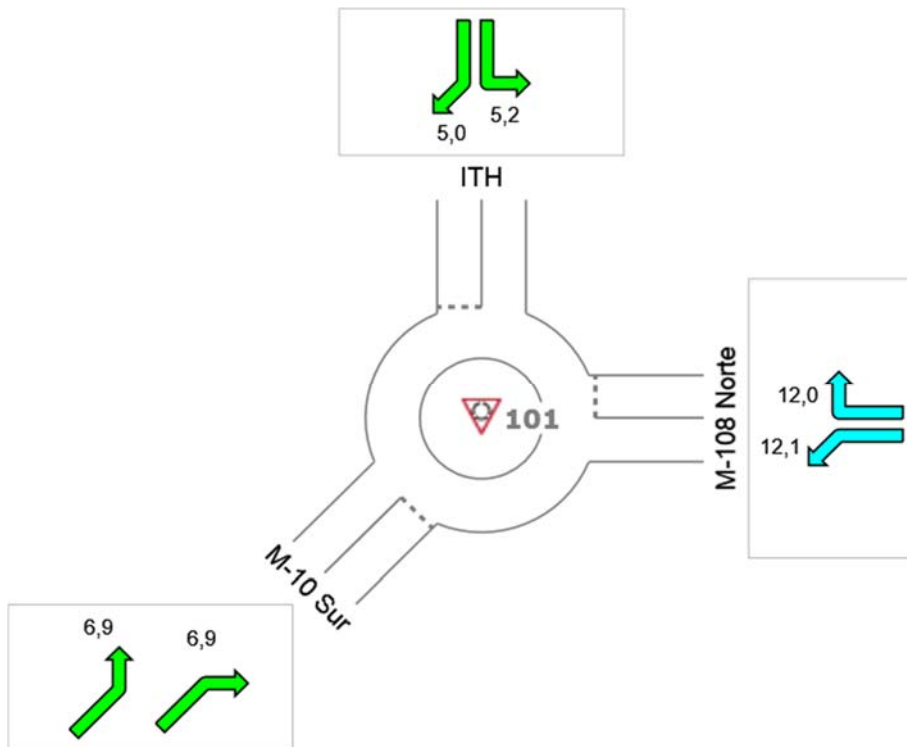
Site: 101 [G Sur 2025 lab AM]

G SUR 2025 lab AM

Roundabout

All Movement Classes

	East	North	Southwest	Intersection
Delay (Control)	12,1	5,1	6,9	9,6
LOS	B	A	A	A



Colour code based on Level of Service



Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout Level of Service Method: Same as Sign Control

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

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Organisation: OpcionA | Processed: sábado, 8 de marzo de 2025 13:45:02

Project: C:\002-TRABAJO\2024\2024 ITH Torrejon\Glorieta S.sip7

QUEUE DISTANCE (AVER)

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

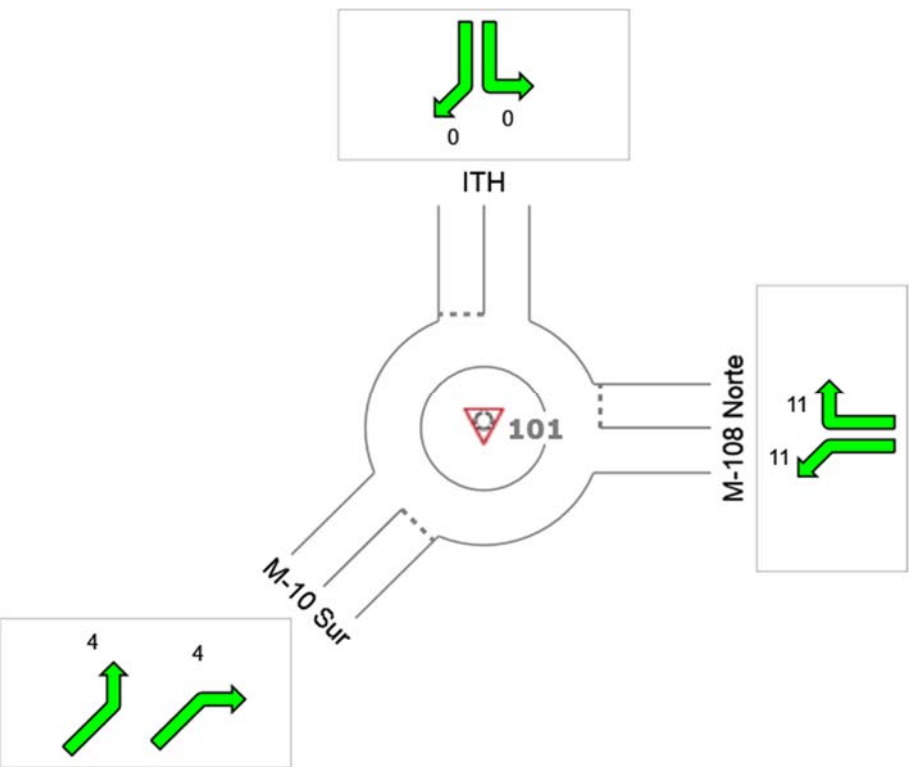
 Site: 101 [G Sur 2025 lab AM]

G SUR 2025 lab AM

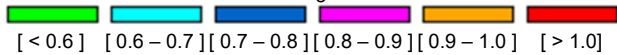
Roundabout

All Movement Classes

	East	North	Southwest	Intersection
Queue Distance (Aver)	11	0	4	11



Colour code based on Queue Storage Ratio



GLORIETA SUR – HORIZONTE 2025 – LABORABLE TARDES (18:00-19:00)

MOVEMENT SUMMARY



Site: 101 [G Sur 2025 lab PM]

G SUR 2025 lab AM
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	Prop. Queued Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: M-108 Norte											
4a	L1	672	2,0	0,302	6,1	LOS A	1,1	7,7	0,04	0,01	51,4
6	R2	2	2,0	0,302	6,1	LOS A	1,0	7,2	0,04	0,01	49,5
Approach		674	2,0	0,302	6,1	LOS A	1,1	7,7	0,04	0,01	51,4
North: ITH											
7	L2	1	2,0	0,318	9,4	LOS A	1,1	7,6	0,52	0,54	54,2
9a	R1	435	2,0	0,318	9,3	LOS A	1,1	7,6	0,51	0,53	52,6
Approach		436	2,0	0,318	9,3	LOS A	1,1	7,6	0,51	0,53	52,6
SouthWest: M-10 Sur											
30a	L1	6	2,0	0,138	4,4	LOS A	0,4	2,9	0,01	0,00	57,1
32a	R1	303	2,0	0,138	4,4	LOS A	0,4	2,9	0,01	0,00	56,4
Approach		309	2,0	0,138	4,4	LOS A	0,4	2,9	0,01	0,00	56,4
All Vehicles		1419	2,0	0,318	6,7	LOS A	1,1	7,7	0,18	0,17	52,8

Site Level of Service (LOS) Method: Delay (SIDRA). 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 per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: US HCM.

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

Gap-Acceptance Capacity: Traditional M1.

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

INPUT VOLUMES

Vehicles and pedestrians per 60 minutes

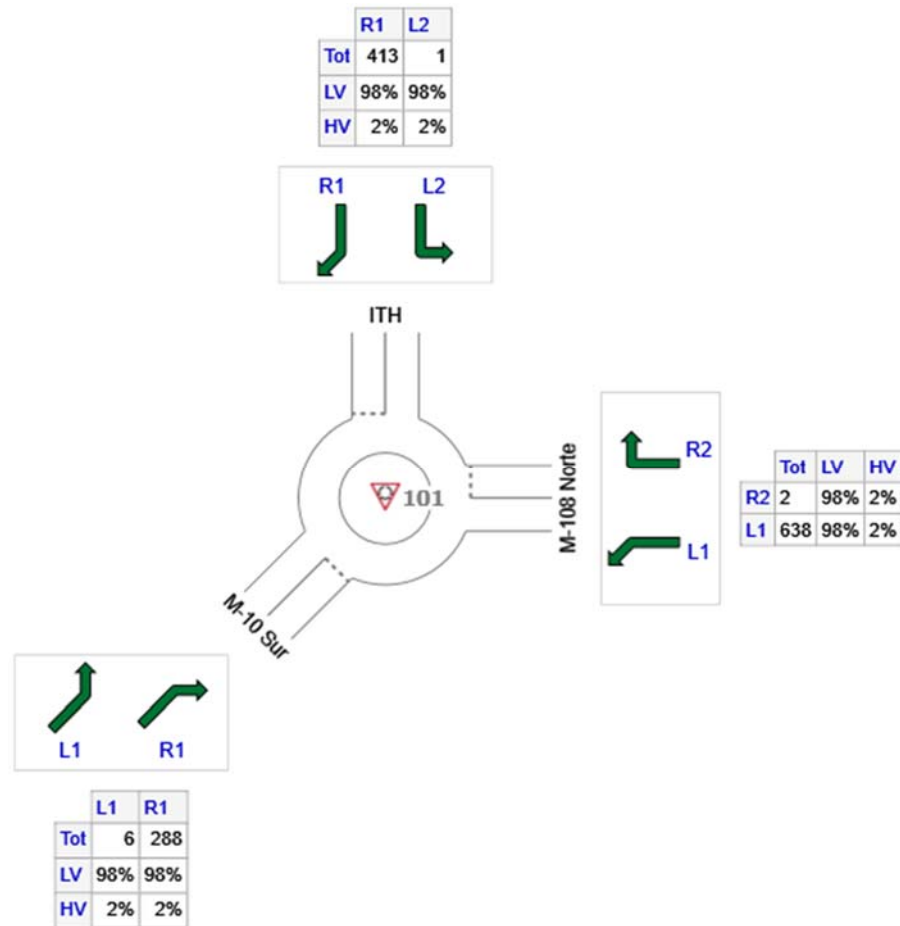


Site: 101 [G Sur 2025 lab PM]

G SUR 2025 lab AM

Roundabout

Volume Display Method: Total and %



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
E: M-108 Norte	640	627	13
N: ITH	414	406	8
SW: M-10 Sur	294	288	6
Total	1348	1321	27

LANE LEVEL OF SERVICE

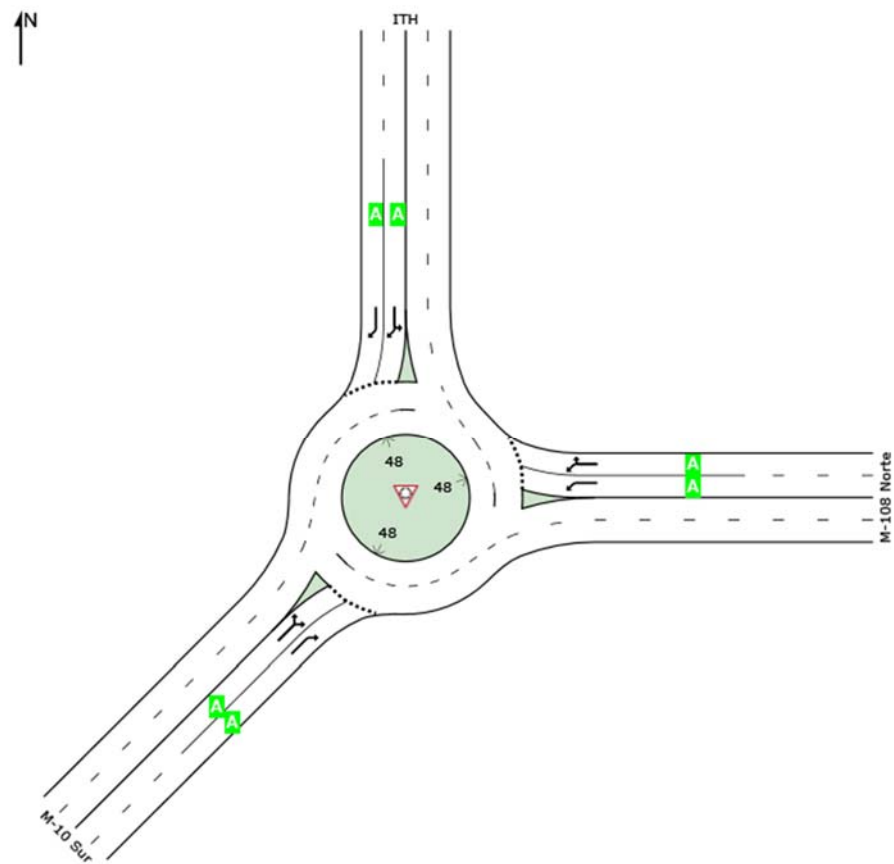
Lane Level of Service

 **Site: 101 [G Sur 2025 lab PM]**

G SUR 2025 lab AM
Roundabout

All Movement Classes

	East	North	Southwest	Intersection
LOS	A	A	A	A



Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

DELAY (CONTROL)

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



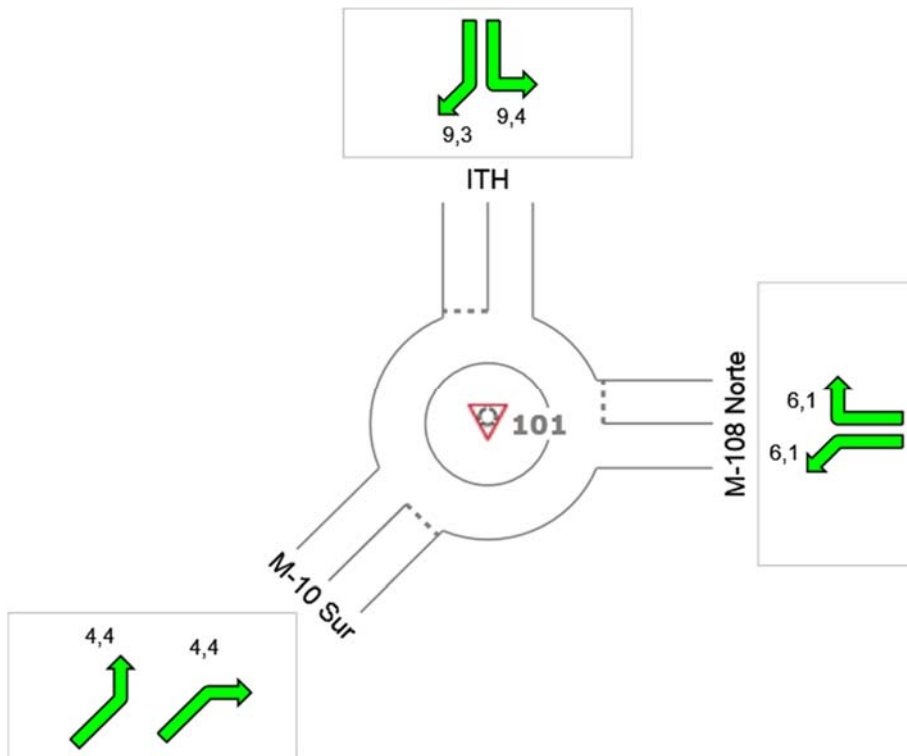
Site: 101 [G Sur 2025 lab PM]

G SUR 2025 lab AM

Roundabout

All Movement Classes

	East	North	Southwest	Intersection
Delay (Control)	6,1	9,3	4,4	6,7
LOS	A	A	A	A



Colour code based on Level of Service

LOS A	LOS B	LOS C	LOS D	LOS E	LOS F
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Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout Level of Service Method: Same as Sign Control

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

QUEUE DISTANCE (AVER)

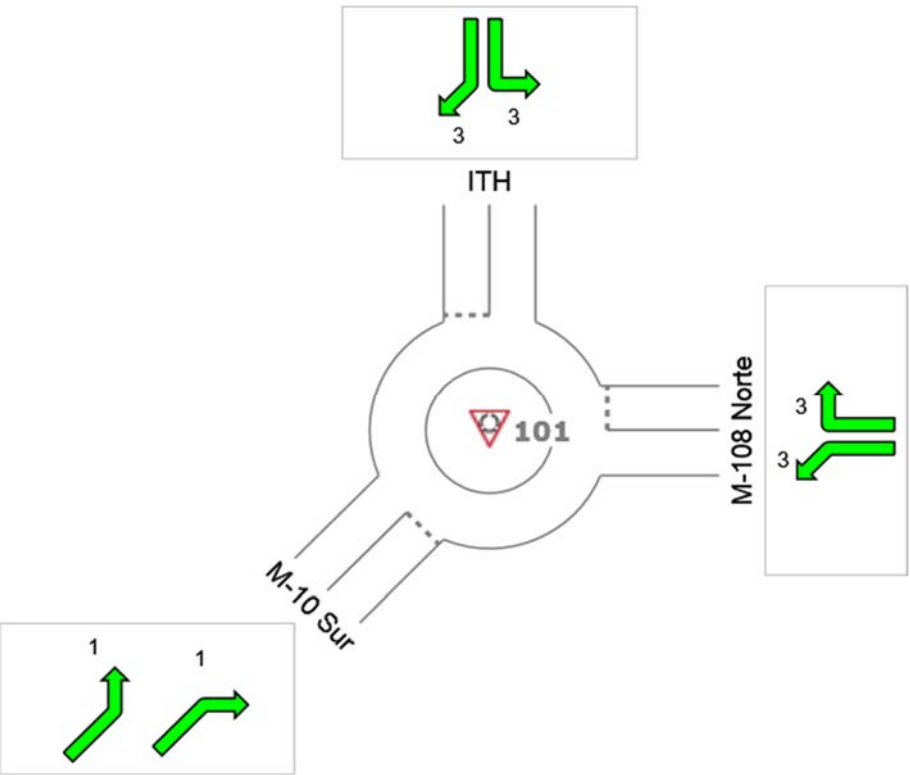
Average Back of Queue Distance for any lane used by vehicle movement (metres)

 Site: 101 [G Sur 2025 lab PM]

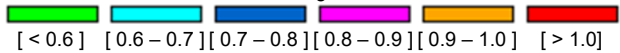
G SUR 2025 lab AM
Roundabout

All Movement Classes

	East	North	Southwest	Intersection
Queue Distance (Aver)	3	3	1	3



Colour code based on Queue Storage Ratio



GLORIETA SUR – HORIZONTE 2045 – LABORABLE MAÑANAS (8:00-9:00)

MOVEMENT SUMMARY



Site: 101 [G Sur 2045 lab AM]

G SUR 2025 lab AM
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	Prop. Queued Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: M-108 Norte											
4a	L1	832	2,0	0,671	16,0	LOS C	7,2	51,4	0,62	0,87	45,9
6	R2	316	2,0	0,671	15,8	LOS C	7,1	50,6	0,61	0,85	45,3
Approach		1147	2,0	0,671	15,9	LOS C	7,2	51,4	0,62	0,86	45,7
North: ITH											
7	L2	1	2,0	0,002	6,1	LOS A	0,0	0,0	0,47	0,33	51,5
9a	R1	1	2,0	0,002	5,8	LOS A	0,0	0,0	0,44	0,32	55,3
Approach		2	2,0	0,002	5,9	LOS A	0,0	0,0	0,46	0,33	53,3
SouthWest: M-10 Sur											
30a	L1	367	2,0	0,423	7,7	LOS A	1,8	13,0	0,02	0,00	51,2
32a	R1	579	2,0	0,423	7,7	LOS A	1,8	13,0	0,02	0,00	53,2
Approach		946	2,0	0,423	7,7	LOS A	1,8	13,0	0,02	0,00	52,4
All Vehicles		2096	2,0	0,671	12,2	LOS B	7,2	51,4	0,35	0,47	48,5

Site Level of Service (LOS) Method: Delay (SIDRA). 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 per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: US HCM.

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

Gap-Acceptance Capacity: Traditional M1.

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

INPUT VOLUMES

Vehicles and pedestrians per 60 minutes

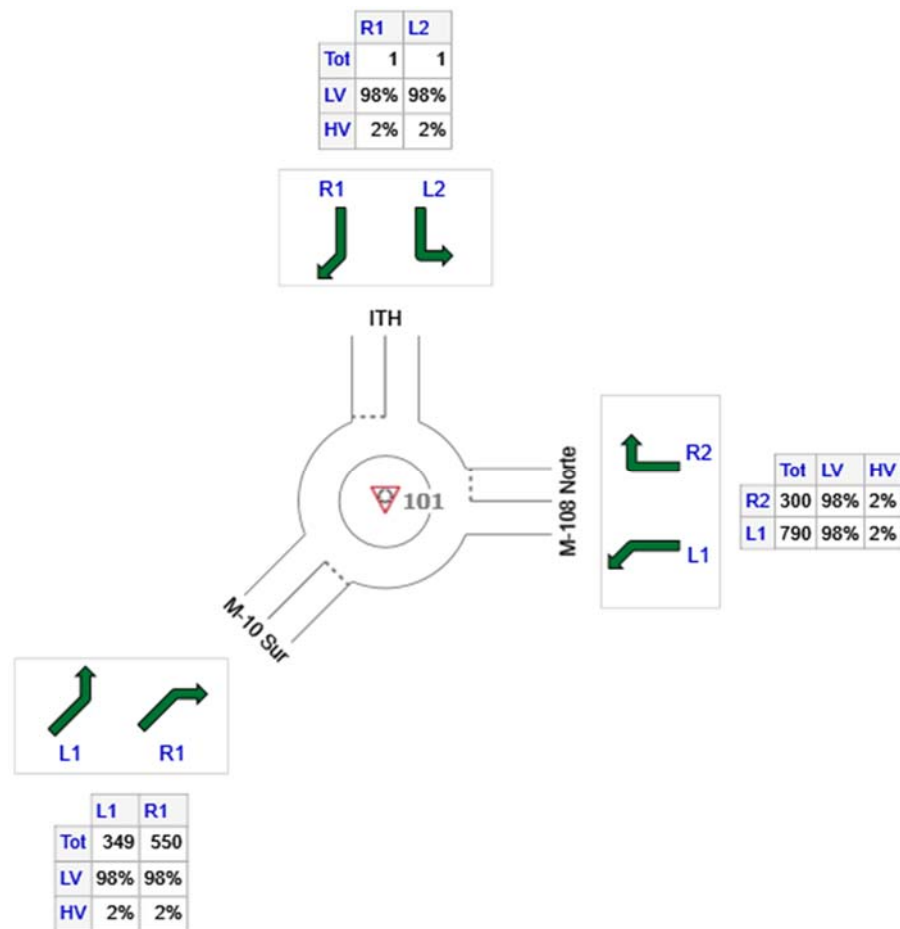


Site: 101 [G Sur 2045 lab AM]

G SUR 2025 lab AM

Roundabout

Volume Display Method: Total and %



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
E: M-108 Norte	1090	1068	22
N: ITH	2	2	0
SW: M-10 Sur	899	881	18
Total	1991	1951	40

LANE LEVEL OF SERVICE

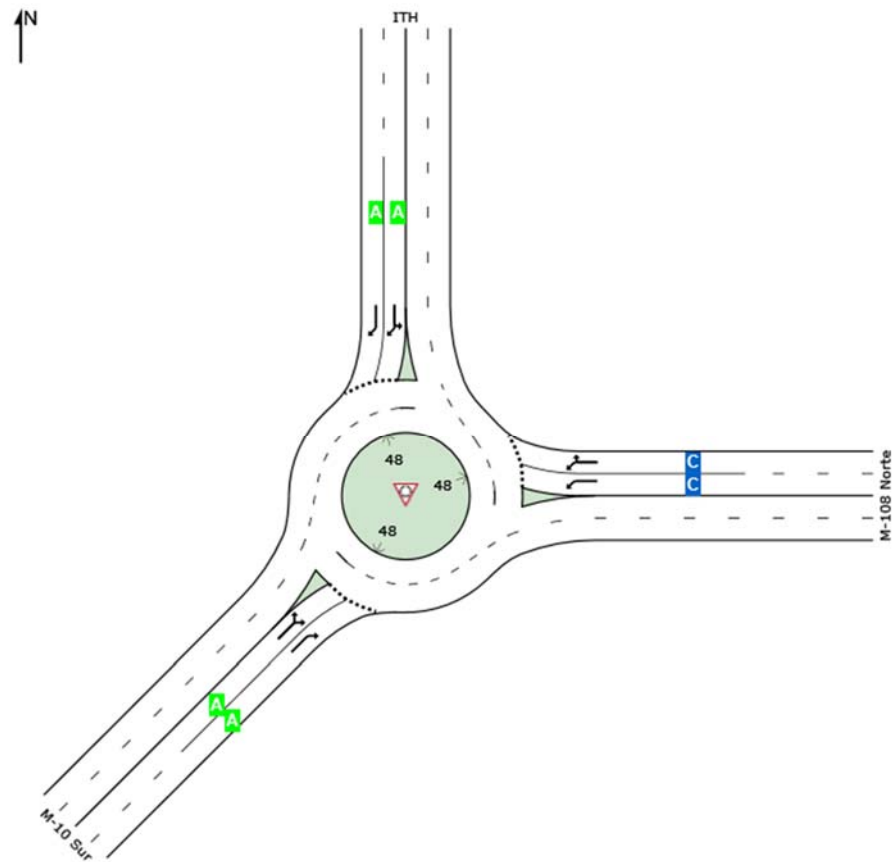
Lane Level of Service

 **Site: 101 [G Sur 2045 lab AM]**

G SUR 2025 lab AM
Roundabout

All Movement Classes

	East	North	Southwest	Intersection
LOS	C	A	A	B



Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

DELAY (CONTROL)

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

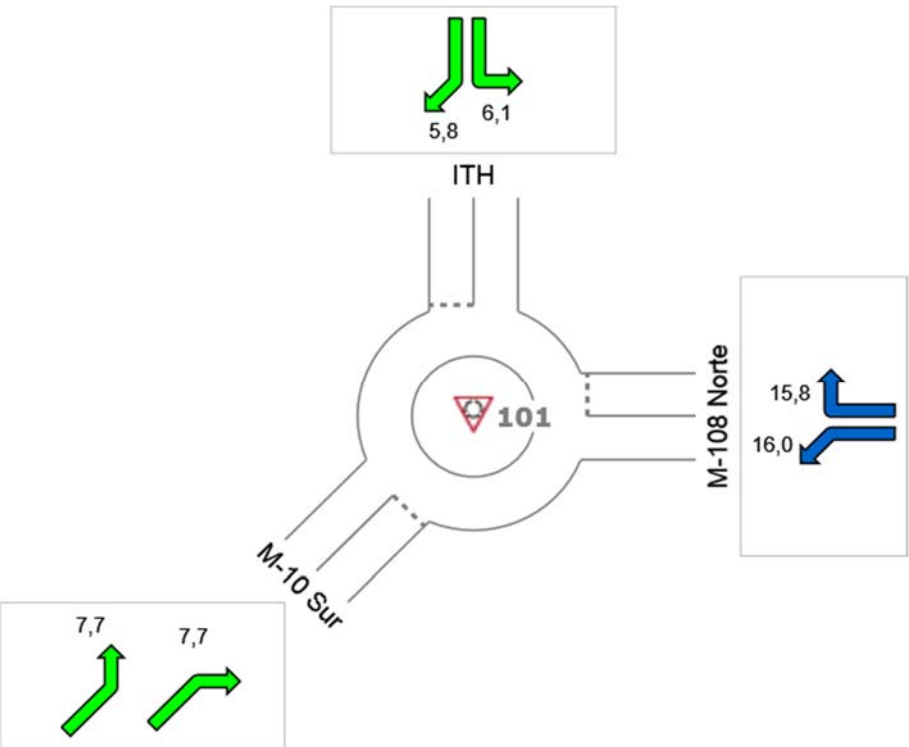
 **Site: 101 [G Sur 2045 lab AM]**

G SUR 2025 lab AM

Roundabout

All Movement Classes

	East	North	Southwest	Intersection
Delay (Control)	15,9	5,9	7,7	12,2
LOS	C	A	A	B



Colour code based on Level of Service



Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout Level of Service Method: Same as Sign Control

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

QUEUE DISTANCE (AVER)

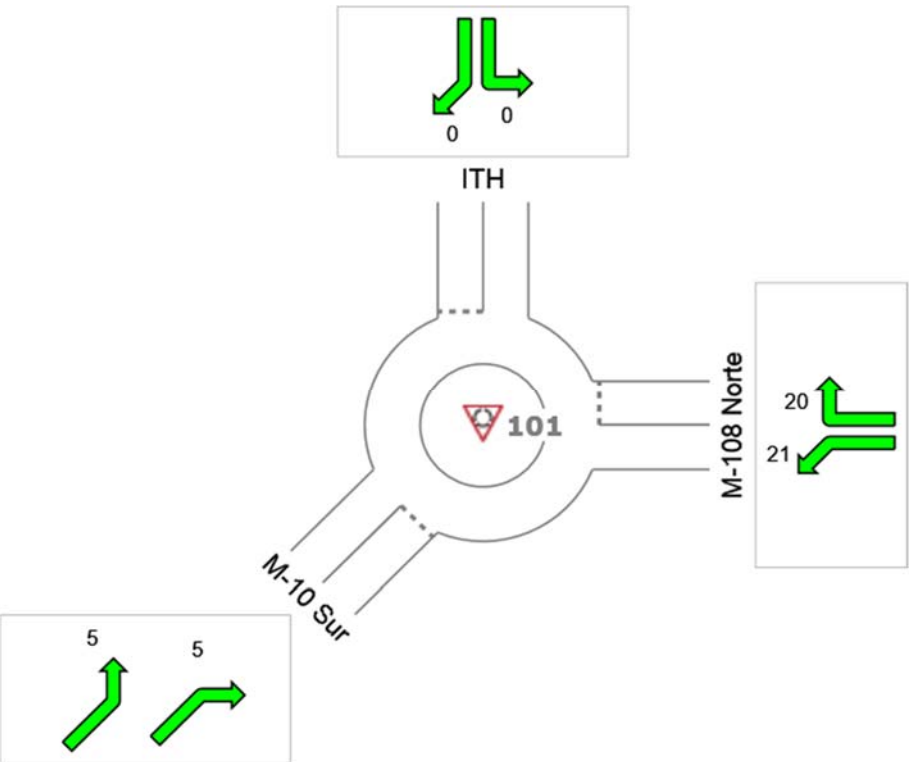
Average Back of Queue Distance for any lane used by vehicle movement (metres)

 Site: 101 [G Sur 2045 lab AM]

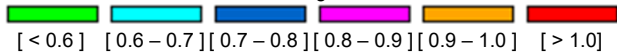
G SUR 2025 lab AM
Roundabout

All Movement Classes

	East	North	Southwest	Intersection
Queue Distance (Aver)	21	0	5	21



Colour code based on Queue Storage Ratio



GLORIETA SUR – HORIZONTE 2045 – LABORABLE TARDES (18:00-19:00)

MOVEMENT SUMMARY



Site: 101 [G Sur 2045 lab PM]

G SUR 2025 lab AM
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	Prop. Queued Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: M-108 Norte											
4a	L1	896	2,0	0,403	7,4	LOS A	1,7	11,9	0,05	0,01	50,5
6	R2	2	2,0	0,403	7,4	LOS A	1,6	11,1	0,05	0,01	48,8
Approach		898	2,0	0,403	7,4	LOS A	1,7	11,9	0,05	0,01	50,5
North: ITH											
7	L2	1	2,0	0,375	12,0	LOS B	1,4	9,9	0,61	0,67	52,3
9a	R1	435	2,0	0,375	11,8	LOS B	1,4	9,9	0,60	0,66	50,9
Approach		436	2,0	0,375	11,8	LOS B	1,4	9,9	0,60	0,66	50,9
SouthWest: M-10 Sur											
30a	L1	6	2,0	0,183	4,9	LOS A	0,6	4,0	0,01	0,00	56,8
32a	R1	403	2,0	0,183	4,9	LOS A	0,6	4,0	0,01	0,00	56,0
Approach		409	2,0	0,183	4,9	LOS A	0,6	4,0	0,01	0,00	56,1
All Vehicles		1743	2,0	0,403	7,9	LOS A	1,7	11,9	0,18	0,17	51,8

Site Level of Service (LOS) Method: Delay (SIDRA). 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 per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: US HCM.

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

Gap-Acceptance Capacity: Traditional M1.

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

INPUT VOLUMES

Vehicles and pedestrians per 60 minutes

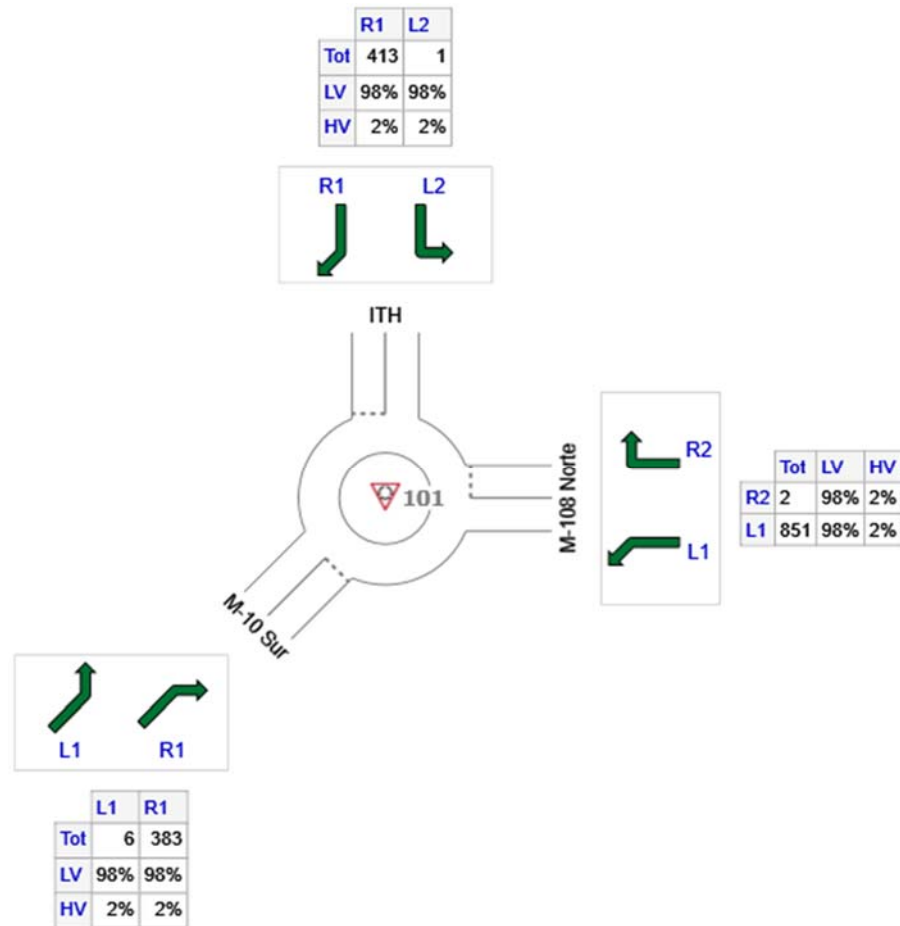


Site: 101 [G Sur 2045 lab PM]

G SUR 2025 lab AM

Roundabout

Volume Display Method: Total and %



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
E: M-108 Norte	853	836	17
N: ITH	414	406	8
SW: M-10 Sur	389	381	8
Total	1656	1623	33

LANE LEVEL OF SERVICE

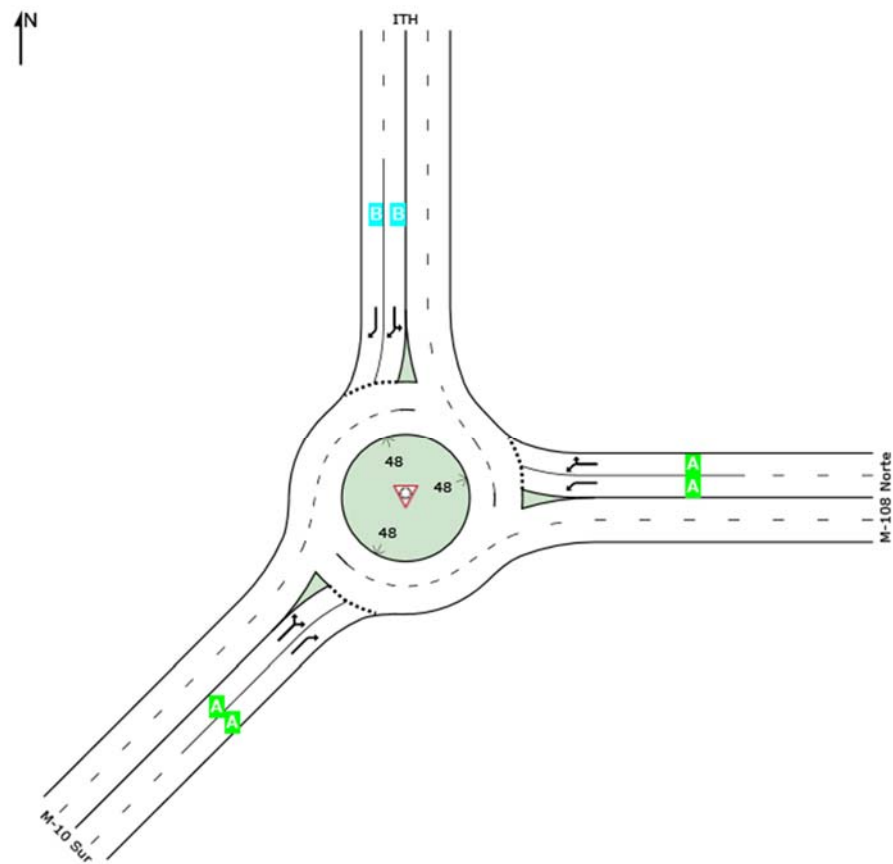
Lane Level of Service

 **Site: 101 [G Sur 2045 lab PM]**

G SUR 2025 lab AM
Roundabout

All Movement Classes

	East	North	Southwest	Intersection
LOS	A	B	A	A



Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

DELAY (CONTROL)

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



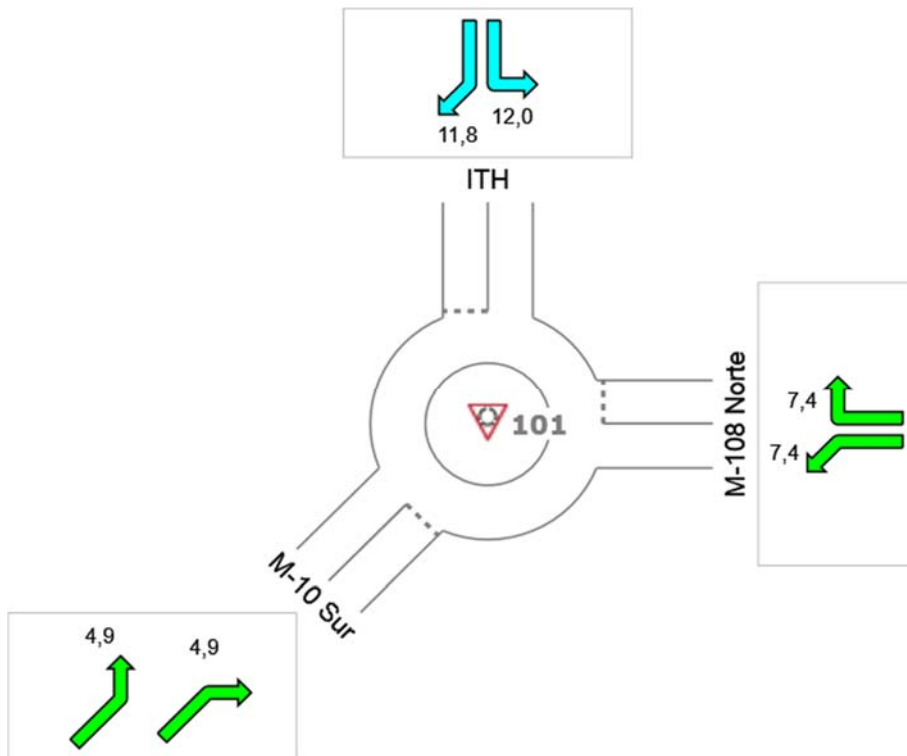
Site: 101 [G Sur 2045 lab PM]

G SUR 2025 lab AM

Roundabout

All Movement Classes

	East	North	Southwest	Intersection
Delay (Control)	7,4	11,8	4,9	7,9
LOS	A	B	A	A



Colour code based on Level of Service

LOS A	LOS B	LOS C	LOS D	LOS E	LOS F
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Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout Level of Service Method: Same as Sign Control

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

QUEUE DISTANCE (AVER)

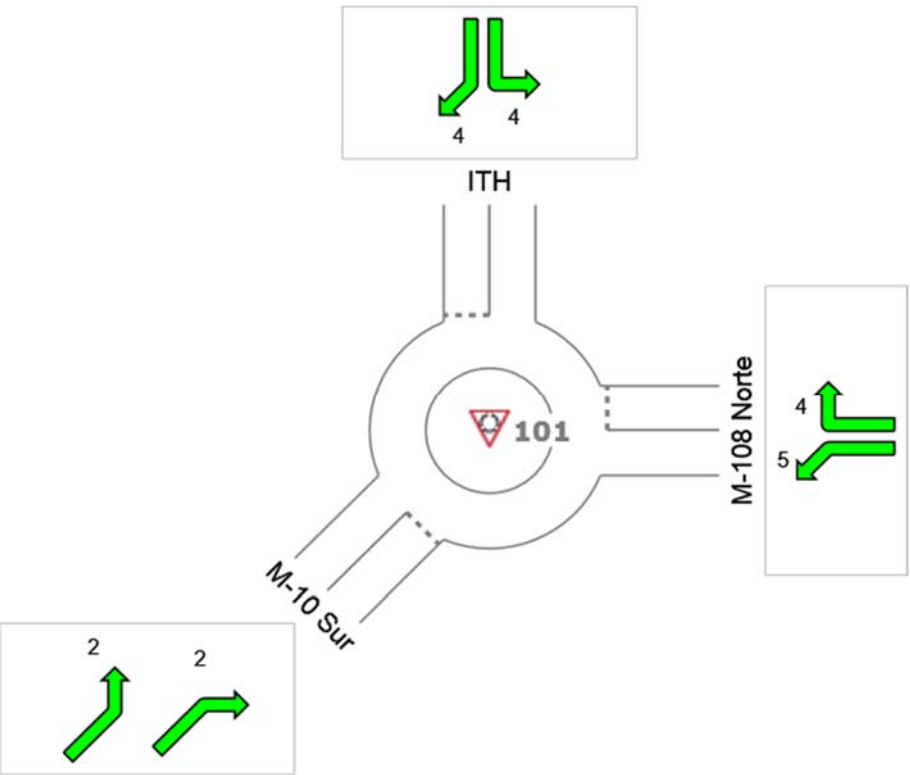
Average Back of Queue Distance for any lane used by vehicle movement (metres)

 Site: 101 [G Sur 2045 lab PM]

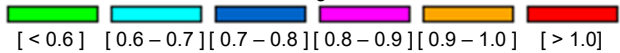
G SUR 2025 lab AM
Roundabout

All Movement Classes

	East	North	Southwest	Intersection
Queue Distance (Aver)	5	4	2	5



Colour code based on Queue Storage Ratio



GLORIETA NORTE – HORIZONTE 2025 – LAB. MAÑANAS (8:00-9:00)

MOVEMENT SUMMARY



Site: 101 [G NORTE 2025 lab AM]

GLORIETA NORTE
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Acceso Norte											
1	L2	1	2,0	0,001	4,3	LOS A	0,0	0,0	0,56	0,36	52,9
3	R2	1	2,0	0,001	4,3	LOS A	0,0	0,0	0,56	0,36	54,3
Approach		2	2,0	0,001	4,3	LOS A	0,0	0,0	0,56	0,36	53,6
East: M-115 Este											
4	L2	87	2,0	0,242	3,9	LOS A	1,2	8,4	0,01	0,00	57,8
5	T1	776	2,0	0,242	3,9	LOS A	1,2	8,4	0,01	0,00	57,3
Approach		863	2,0	0,242	3,9	LOS A	1,2	8,4	0,01	0,00	57,3
West: M-115-oeste											
11	T1	1075	2,0	0,584	8,1	LOS A	4,7	33,5	0,34	0,17	54,3
12	R2	1993	2,0	0,584	3,6	LOS A	4,7	33,5	0,15	0,07	55,1
Approach		3067	2,0	0,584	5,2	LOS A	4,7	33,5	0,22	0,11	54,8
All Vehicles		3933	2,0	0,584	4,9	LOS A	4,7	33,5	0,17	0,08	55,4

Site Level of Service (LOS) Method: Delay (SIDRA). 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 per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: US HCM.

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

Gap-Acceptance Capacity: Traditional M1.

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

INPUT VOLUMES

Vehicles and pedestrians per 60 minutes

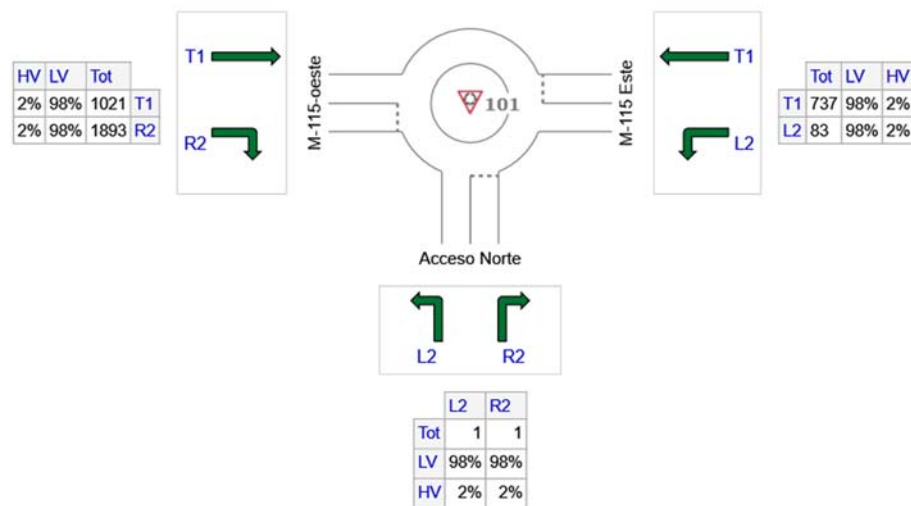


Site: 101 [G NORTE 2025 lab AM]

GLORIETA NORTE

Roundabout

Volume Display Method: Total and %



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Acceso Norte	2	2	0
E: M-115 Este	820	804	16
W: M-115-oeste	2914	2856	58
Total	3736	3661	75

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Organisation: OpcionA | Created: sábado, 8 de marzo de 2025 18:48:03

Project: C:\002-TRABAJO\2024\2024 ITH Torrejon\Glorieta N.sip7

LANE LEVEL OF SERVICE

Lane Level of Service



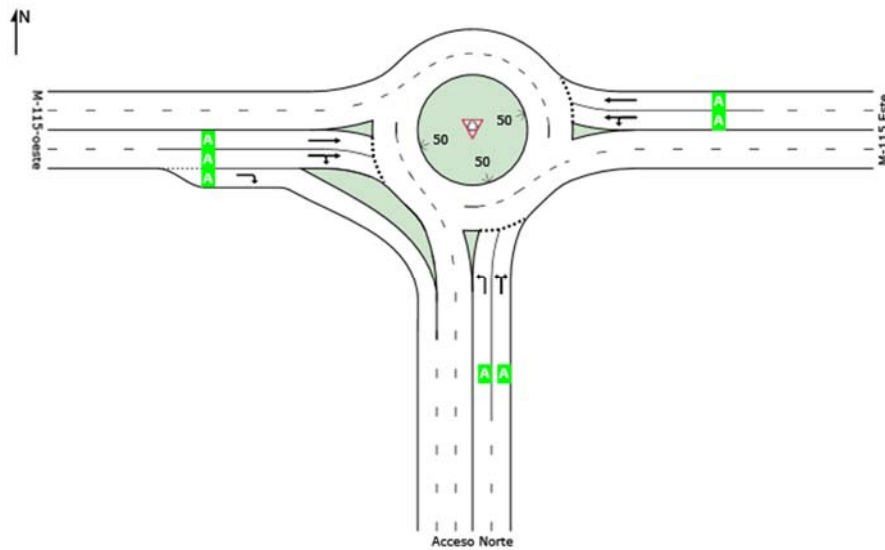
Site: 101 [G NORTE 2025 lab AM]

GLORIETA NORTE

Roundabout

All Movement Classes

	South	East	West	Intersection
LOS	A	A	A	A



Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

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

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Organisation: OpcionA | Processed: sábado, 8 de marzo de 2025 18:46:09

Project: C:\002-TRABAJO\2024\2024 ITH Torrejon\Glorieta N.sip7

DELAY (CONTROL)

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



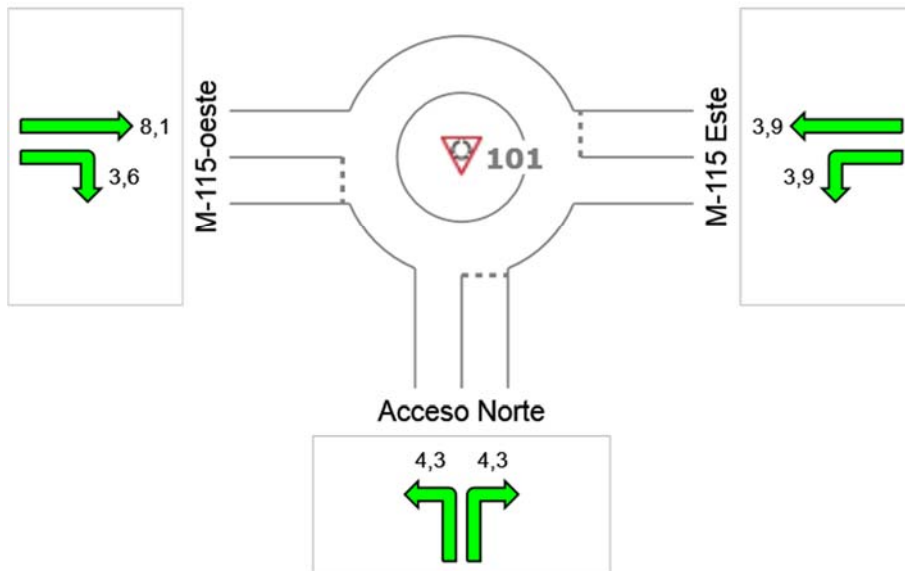
Site: 101 [G NORTE 2025 lab AM]

GLORIETA NORTE

Roundabout

All Movement Classes

	South	East	West	Intersection
Delay (Control)	4,3	3,9	5,2	4,9
LOS	A	A	A	A



Colour code based on Level of Service



Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout Level of Service Method: Same as Sign Control
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

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Organisation: OpcionA | Processed: sábado, 8 de marzo de 2025 18:46:09

Project: C:\002-TRABAJO\2024\2024 ITH Torrejon\Glorieta N.sip7

QUEUE DISTANCE (AVER)

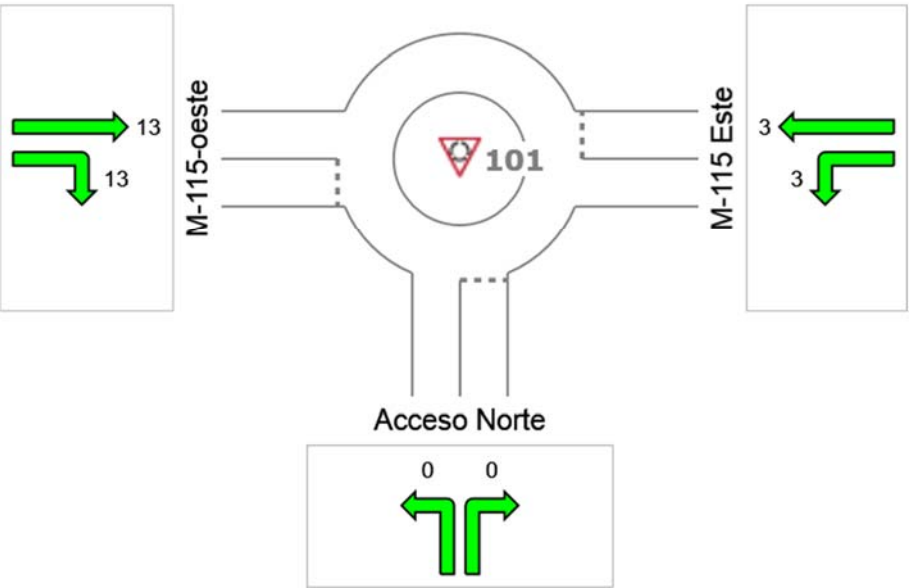
Average Back of Queue Distance for any lane used by vehicle movement (metres)

 Site: 101 [G NORTE 2025 lab AM]

GLORIETA NORTE
Roundabout

All Movement Classes

	South	East	West	Intersection
Queue Distance (Aver)	0	3	13	13



Colour code based on Queue Storage Ratio
[< 0.6] [0.6 – 0.7] [0.7 – 0.8] [0.8 – 0.9] [0.9 – 1.0] [> 1.0]

GLORIETA NORTE – HORIZONTE 2025 – LAB. TARDES (18:00-19:00)

MOVEMENT SUMMARY



Site: 101 [G NORTE 2025 lab PM]

GLORIETA NORTE
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	Prop. Queued Distance m	Effective Stop Rate per veh	Average Speed km/h	
South: Acceso Norte											
1	L2	1120	2,0	0,669	15,5	LOS C	5,6	39,7	0,81	1,06	46,2
3	R2	49	2,0	0,669	15,5	LOS C	5,6	39,7	0,81	1,06	44,1
Approach		1169	2,0	0,669	15,5	LOS C	5,6	39,7	0,81	1,06	46,1
East: M-115 Este											
4	L2	2	2,0	0,350	8,6	LOS A	1,5	11,0	0,68	0,72	55,1
5	T1	566	2,0	0,350	8,6	LOS A	1,5	11,0	0,68	0,72	54,0
Approach		568	2,0	0,350	8,6	LOS A	1,5	11,0	0,68	0,72	54,0
West: M-115-oeste											
11	T1	1015	2,0	0,285	4,3	LOS A	1,5	10,4	0,02	0,00	57,5
12	R2	36	2,0	0,019	0,0	LOS A	0,0	0,0	0,00	0,00	58,3
Approach		1051	2,0	0,285	4,1	LOS A	1,5	10,4	0,02	0,00	57,5
All Vehicles		2788	2,0	0,669	9,8	LOS A	5,6	39,7	0,49	0,59	51,4

Site Level of Service (LOS) Method: Delay (SIDRA). 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 per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: US HCM.

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

Gap-Acceptance Capacity: Traditional M1.

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

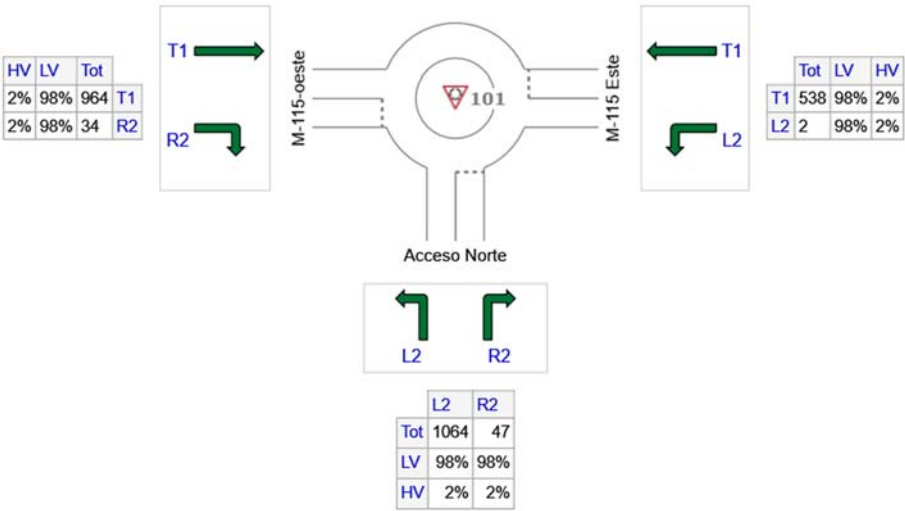
INPUT VOLUMES

Vehicles and pedestrians per 60 minutes

 **Site: 101 [G NORTE 2025 lab PM]**

GLORIETA NORTE
Roundabout

Volume Display Method: Total and %



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Acceso Norte	1111	1089	22
E: M-115 Este	540	529	11
W: M-115-oeste	998	978	20
Total	2649	2596	53

LANE LEVEL OF SERVICE

Lane Level of Service



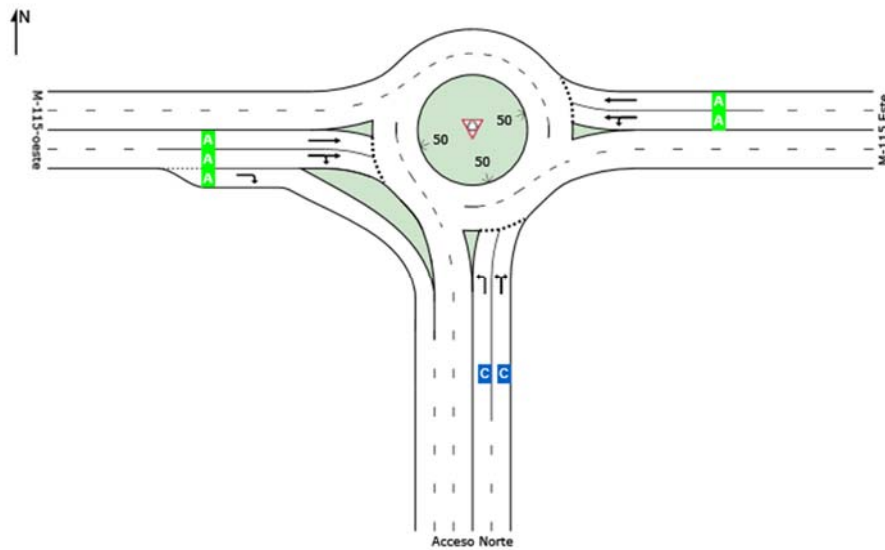
Site: 101 [G NORTE 2025 lab PM]

GLORIETA NORTE

Roundabout

All Movement Classes

	South	East	West	Intersection
LOS	C	A	A	A



Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

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

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Organisation: OpcionA | Processed: sábado, 8 de marzo de 2025 18:46:10

Project: C:\002-TRABAJO\2024\2024 ITH Torrejon\Glorieta N.sip7

DELAY (CONTROL)

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



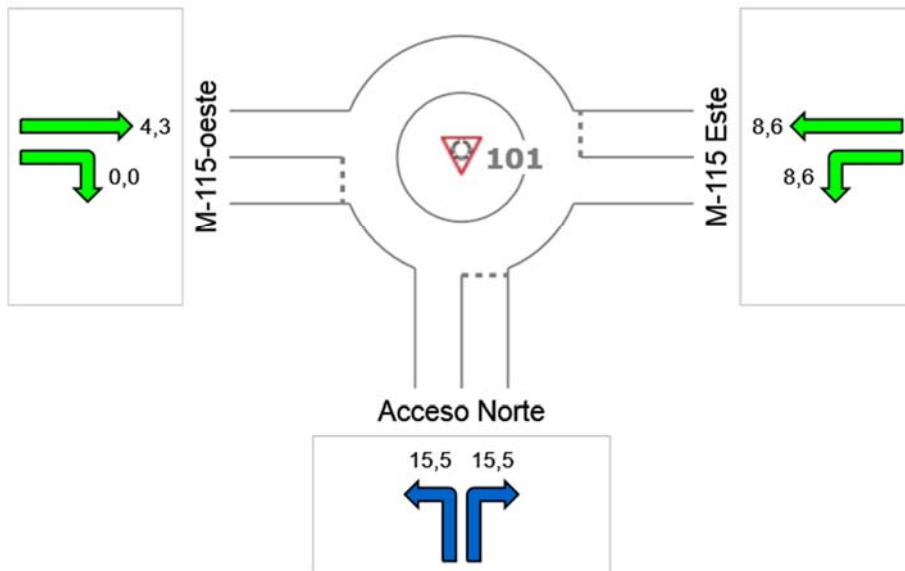
Site: 101 [G NORTE 2025 lab PM]

GLORIETA NORTE

Roundabout

All Movement Classes

	South	East	West	Intersection
Delay (Control)	15,5	8,6	4,1	9,8
LOS	C	A	A	A



Colour code based on Level of Service



Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout Level of Service Method: Same as Sign Control
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

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Organisation: OpcionA | Processed: sábado, 8 de marzo de 2025 18:46:10

Project: C:\002-TRABAJO\2024\2024 ITH Torrejon\Glorieta N.sip7

QUEUE DISTANCE (AVER)

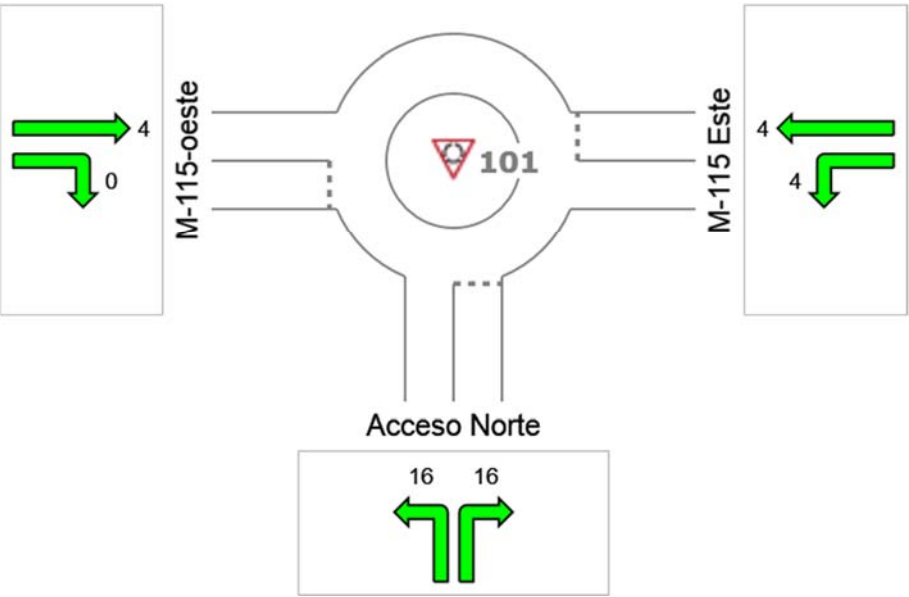
Average Back of Queue Distance for any lane used by vehicle movement (metres)

Site: 101 [G NORTE 2025 lab PM]

GLORIETA NORTE
Roundabout

All Movement Classes

	South	East	West	Intersection
Queue Distance (Aver)	16	4	4	16



Colour code based on Queue Storage Ratio
[< 0.6] [0.6 – 0.7] [0.7 – 0.8] [0.8 – 0.9] [0.9 – 1.0] [> 1.0]

GLORIETA NORTE – HORIZONTE 2045 – LAB. MAÑANAS (8:00-9:00)

MOVEMENT SUMMARY



Site: 101 [G NORTE 2045 lab AM]

GLORIETA NORTE
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows		Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
		Total	HV				Vehicles	Distance			
		veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Acceso Norte											
1	L2	1	2,0	0,002	5,5	LOS A	0,0	0,0	0,63	0,46	52,1
3	R2	1	2,0	0,002	5,5	LOS A	0,0	0,0	0,63	0,46	53,4
Approach		2	2,0	0,002	5,5	LOS A	0,0	0,0	0,63	0,46	52,7
East: M-115 Este											
4	L2	87	2,0	0,314	4,5	LOS A	1,7	12,0	0,02	0,00	57,5
5	T1	1032	2,0	0,314	4,5	LOS A	1,7	12,0	0,02	0,00	56,8
Approach		1119	2,0	0,314	4,5	LOS A	1,7	12,0	0,02	0,00	56,9
West: M-115-oeste											
11	T1	1429	2,0	0,652	9,4	LOS A	6,1	43,3	0,40	0,19	53,3
12	R2	1993	2,0	0,652	3,6	LOS A	6,1	43,3	0,15	0,07	55,1
Approach		3422	2,0	0,652	6,0	LOS A	6,1	43,3	0,25	0,12	54,3
All Vehicles		4543	2,0	0,652	5,6	LOS A	6,1	43,3	0,20	0,09	54,9

Site Level of Service (LOS) Method: Delay (SIDRA). 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 per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: US HCM.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

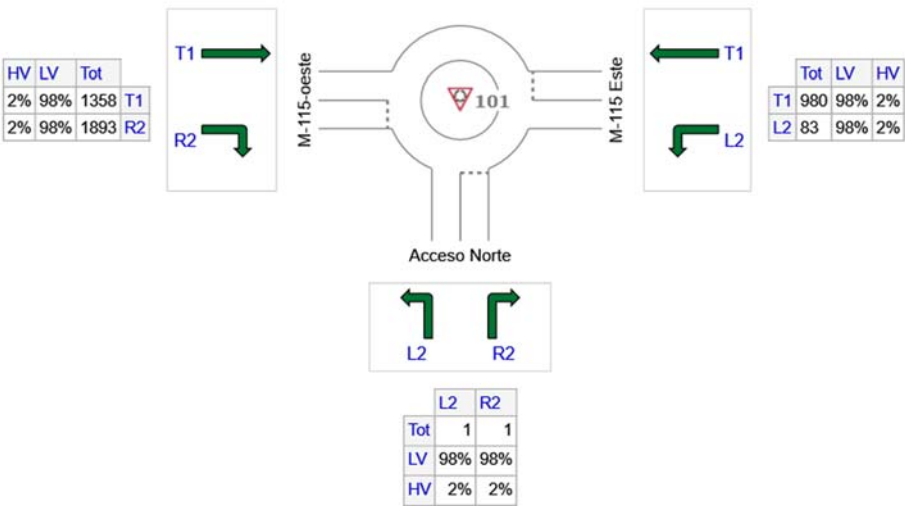
INPUT VOLUMES

Vehicles and pedestrians per 60 minutes

 **Site: 101 [G NORTE 2045 lab AM]**

GLORIETA NORTE
Roundabout

Volume Display Method: Total and %



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Acceso Norte	2	2	0
E: M-115 Este	1063	1042	21
W: M-115-oeste	3251	3186	65
Total	4316	4230	86

LANE LEVEL OF SERVICE

Lane Level of Service



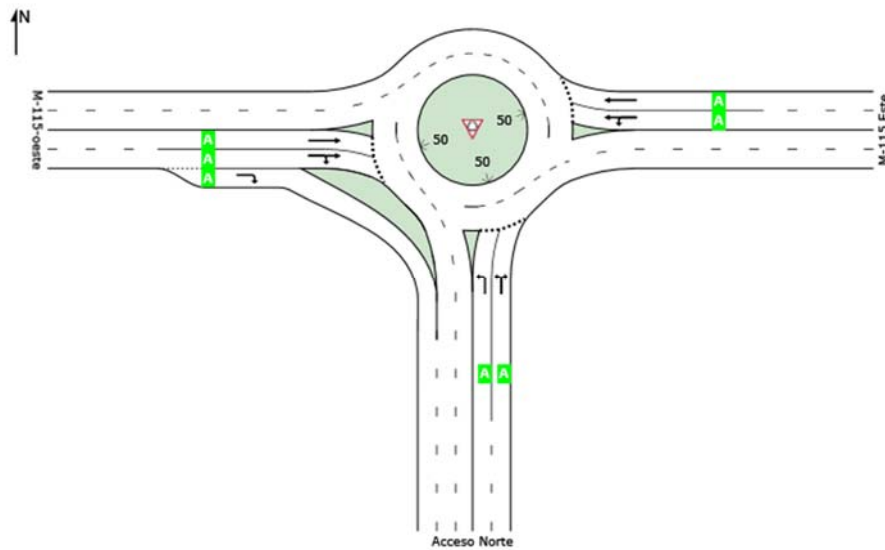
Site: 101 [G NORTE 2045 lab AM]

GLORIETA NORTE

Roundabout

All Movement Classes

	South	East	West	Intersection
LOS	A	A	A	A



Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

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

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Project: C:\002-TRABAJO\2024\2024 ITH Torrejon\Glorieta N.sip7

DELAY (CONTROL)

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



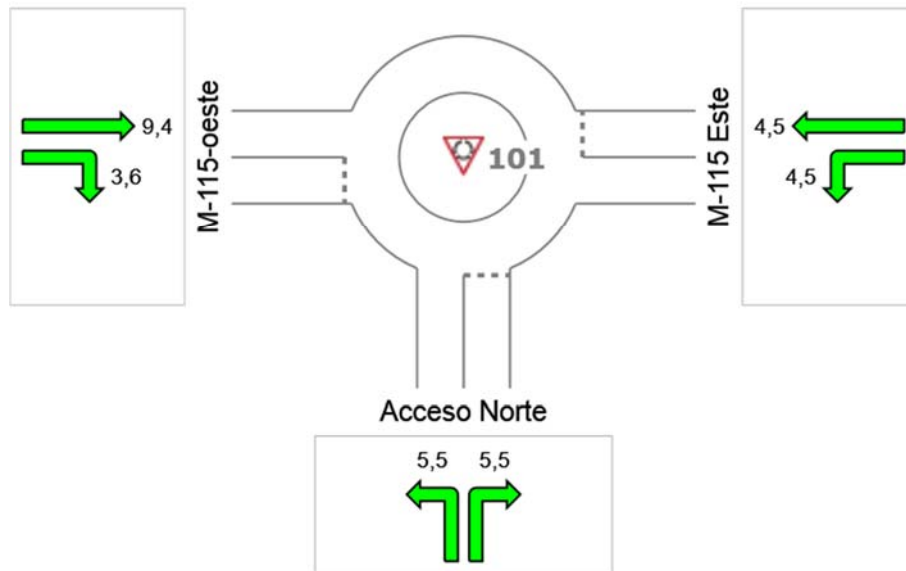
Site: 101 [G NORTE 2045 lab AM]

GLORIETA NORTE

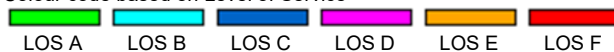
Roundabout

All Movement Classes

	South	East	West	Intersection
Delay (Control)	5,5	4,5	6,0	5,6
LOS	A	A	A	A



Colour code based on Level of Service



Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Roundabout Level of Service Method: Same as Sign Control HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

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Project: C:\002-TRABAJO\2024\2024 ITH Torrejon\Glorieta N.sip7

QUEUE DISTANCE (AVER)

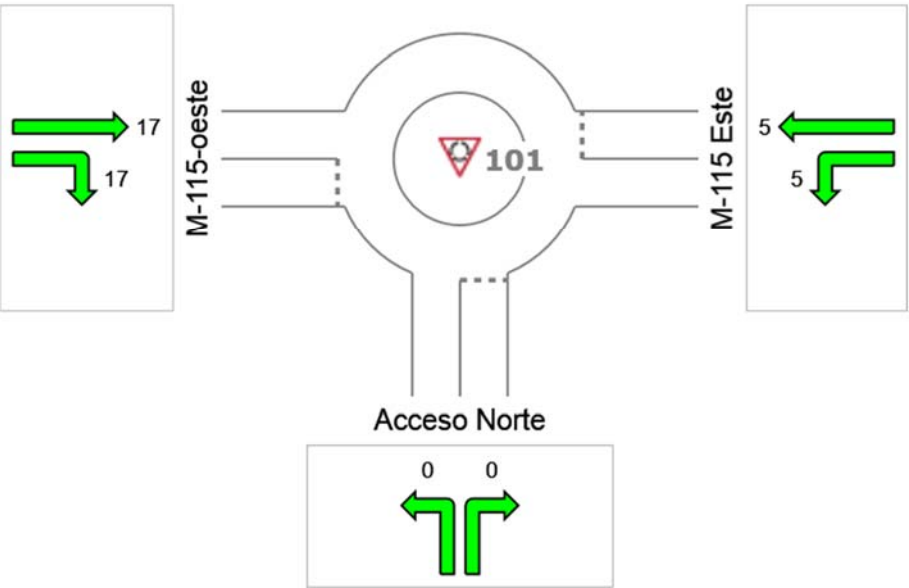
Average Back of Queue Distance for any lane used by vehicle movement (metres)

 Site: 101 [G NORTE 2045 lab AM]

GLORIETA NORTE
Roundabout

All Movement Classes

	South	East	West	Intersection
Queue Distance (Aver)	0	5	17	17



Colour code based on Queue Storage Ratio
[< 0.6] [0.6 – 0.7] [0.7 – 0.8] [0.8 – 0.9] [0.9 – 1.0] [> 1.0]

GLORIETA NORTE – HORIZONTE 2045 – LAB. TARDES (18:00-19:00)

MOVEMENT SUMMARY



Site: 101 [G NORTE 2045 lab PM]

GLORIETA NORTE
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	Prop. Queued Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Acceso Norte											
1	L2	1120	2,0	0,845	33,7	LOS D	9,3	66,2	0,91	1,44	38,2
3	R2	49	2,0	0,845	33,7	LOS D	9,3	66,2	0,91	1,44	36,7
Approach		1169	2,0	0,845	33,7	LOS D	9,3	66,2	0,91	1,44	38,1
East: M-115 Este											
4	L2	2	2,0	0,465	10,6	LOS B	2,5	17,8	0,72	0,83	53,5
5	T1	754	2,0	0,465	10,6	LOS B	2,5	17,8	0,72	0,83	52,5
Approach		756	2,0	0,465	10,6	LOS B	2,5	17,8	0,72	0,83	52,5
West: M-115-oeste											
11	T1	1349	2,0	0,379	5,2	LOS A	2,2	15,9	0,03	0,00	56,7
12	R2	36	2,0	0,019	0,0	LOS A	0,0	0,0	0,00	0,00	58,3
Approach		1385	2,0	0,379	5,0	LOS A	2,2	15,9	0,03	0,00	56,8
All Vehicles		3311	2,0	0,845	16,4	LOS C	9,3	66,2	0,50	0,70	47,5

Site Level of Service (LOS) Method: Delay (SIDRA). 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 per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: US HCM.

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

Gap-Acceptance Capacity: Traditional M1.

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

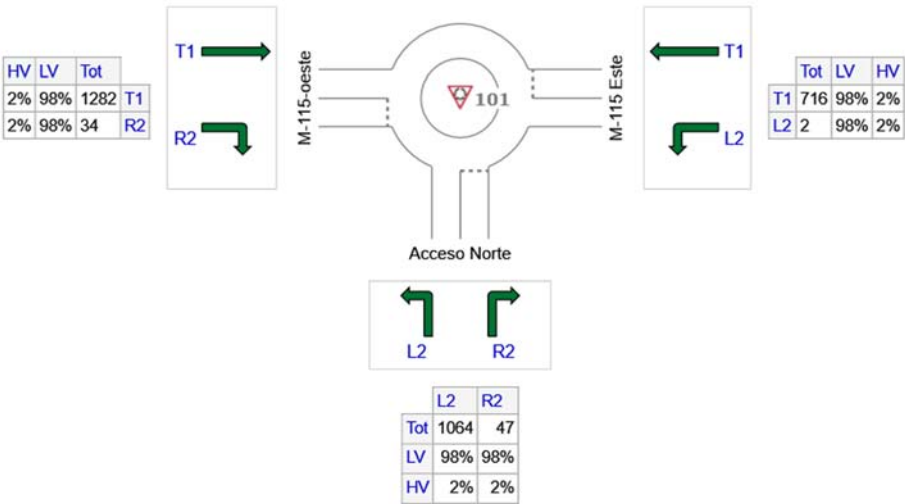
INPUT VOLUMES

Vehicles and pedestrians per 60 minutes

 **Site: 101 [G NORTE 2045 lab PM]**

GLORIETA NORTE
Roundabout

Volume Display Method: Total and %



	All MCs	Light Vehicles (LV)	Heavy Vehicles (HV)
S: Acceso Norte	1111	1089	22
E: M-115 Este	718	704	14
W: M-115-oeste	1316	1290	26
Total	3145	3082	63

LANE LEVEL OF SERVICE

Lane Level of Service



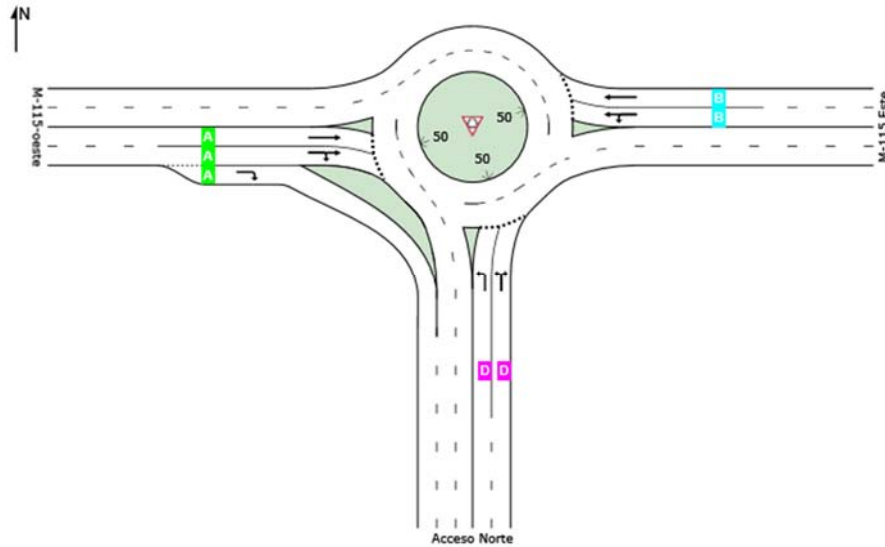
Site: 101 [G NORTE 2045 lab PM]

GLORIETA NORTE

Roundabout

All Movement Classes

	South	East	West	Intersection
LOS	D	B	A	C



Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

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

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Organisation: OpcionA | Processed: sábado, 8 de marzo de 2025 18:46:11

Project: C:\002-TRABAJO\2024\2024 ITH Torrejon\Glorieta N.sip7

DELAY (CONTROL)

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



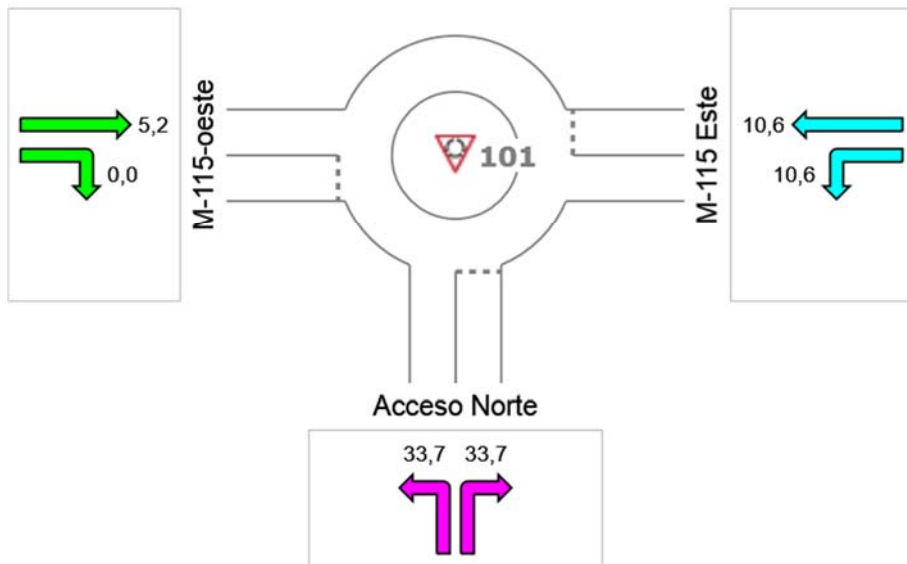
Site: 101 [G NORTE 2045 lab PM]

GLORIETA NORTE

Roundabout

All Movement Classes

	South	East	West	Intersection
Delay (Control)	33,7	10,6	5,0	16,4
LOS	D	B	A	C



Colour code based on Level of Service



Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout Level of Service Method: Same as Sign Control

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

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Project: C:\002-TRABAJO\2024\2024 ITH Torrejon\Glorieta N.sip7

QUEUE DISTANCE (AVER)

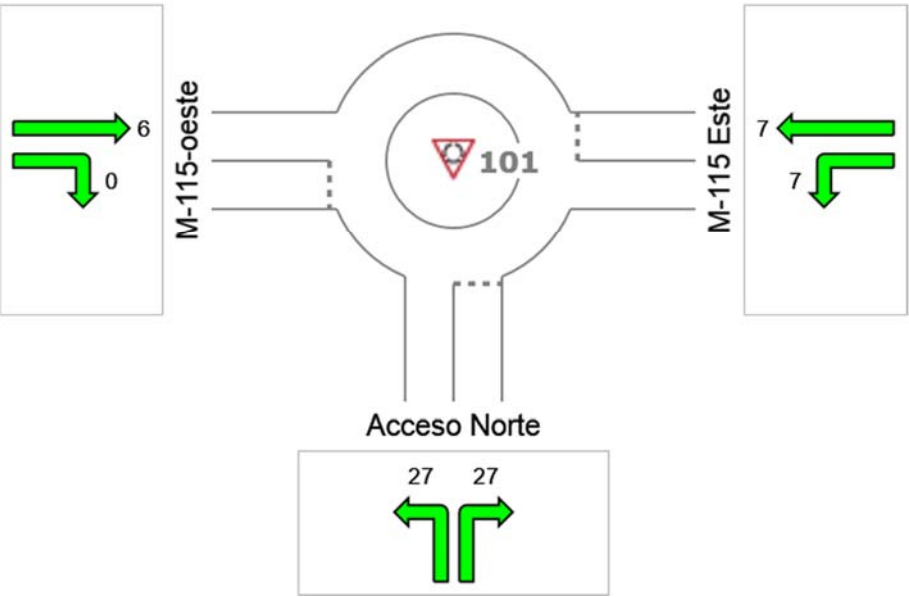
Average Back of Queue Distance for any lane used by vehicle movement (metres)

 Site: 101 [G NORTE 2045 lab PM]

GLORIETA NORTE
Roundabout

All Movement Classes

	South	East	West	Intersection
Queue Distance (Aver)	27	7	6	27



Colour code based on Queue Storage Ratio

