

### 1: Performance by approach

Approach	NW	NE	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	2.1	2.7	2.4
Stop Del/Veh (s)	0.0	0.0	0.0
Stop/Veh	0.00	0.00	0.00
Avg Speed (kph)	25	30	28
HC Emissions (g)	0	0	1
CO Emissions (g)	19	15	34
NOx Emissions (g)	3	2	5

### 2: Performance by approach

Approach	EB	WB	SW	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	0.3	0.9	1.4	0.7
Stop Del/Veh (s)	0.0	0.0	0.0	0.0
Stop/Veh	0.00	0.00	0.00	0.00
Avg Speed (kph)	37	44	28	38
HC Emissions (g)	1	2	0	3
CO Emissions (g)	76	27	6	110
NOx Emissions (g)	4	5	1	10

Intersection: 1:

Movement
Directions Served
Maximum Queue (m)
Average Queue (m)
95th Queue (m)
Link Distance (m)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (m)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 2:

Movement
Directions Served
Maximum Queue (m)
Average Queue (m)
95th Queue (m)
Link Distance (m)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (m)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection					
Intersection Delay, s/veh	6.4				
Intersection LOS	A				
Approach	EB	WB	SB	NW	NE
Entry Lanes	0	0	1	1	1
Conflicting Circle Lanes	1	1	1	1	1
Adj Approach Flow, veh/h	0	0	0	357	359
Demand Flow Rate, veh/h	0	0	0	364	366
Vehicles Circulating, veh/h	0	364	364	0	0
Vehicles Exiting, veh/h	364	0	0	366	0
Follow-Up Headway, s	3.186	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	0.0	0.0	6.4	6.4
Approach LOS	-	-	-	A	A
Lane	Left	Left	Left		
Designated Moves	L	L	R		
Assumed Moves	L	L	R		
RT Channelized					
Lane Util	1.000	1.000	1.000		
Critical Headway, s	5.193	5.193	5.193		
Entry Flow, veh/h	0	364	366		
Cap Entry Lane, veh/h	785	1130	1130		
Entry HV Adj Factor	1.000	0.981	0.981		
Flow Entry, veh/h	0	357	359		
Cap Entry, veh/h	785	1108	1108		
V/C Ratio	0.000	0.322	0.324		
Control Delay, s/veh	4.6	6.4	6.4		
LOS	A	A	A		
95th %tile Queue, veh	0	1	1		

1: Performance by approach

Approach	NW	NE	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	2.2	2.4	2.3
Stop/Veh	0.00	0.00	0.00
Avg Speed (kph)	25	29	27
HC Emissions (g)	1	1	1
CO Emissions (g)	23	25	48
NOx Emissions (g)	4	4	7

2: Performance by approach

Approach	EB	WB	SW	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	0.4	0.6	4.0	1.2
Stop/Veh	0.00	0.00	0.42	0.09
Avg Speed (kph)	36	47	21	35
HC Emissions (g)	2	4	0	6
CO Emissions (g)	148	67	7	222
NOx Emissions (g)	8	10	1	19

## Queuing and Blocking Report Baseline

Centura metropolitana Cluj - Napoca  
Anexa 2 - Nod 1 - an 2045

### Intersection: 1:

#### Movement

Directions Served

Maximum Queue (m)

Average Queue (m)

95th Queue (m)

Link Distance (m)

Upstream Blk Time (%)

Queuing Penalty (veh)

Storage Bay Dist (m)

Storage Blk Time (%)

Queuing Penalty (veh)

### Intersection: 2:

#### Movement

SW

Directions Served

R

Maximum Queue (m)

30.2

Average Queue (m)

17.3

95th Queue (m)

30.6

Link Distance (m)

53.1

Upstream Blk Time (%)

Queuing Penalty (veh)

Storage Bay Dist (m)

Storage Blk Time (%)

Queuing Penalty (veh)

Intersection					
Intersection Delay, s/veh	7.3				
Intersection LOS	A				
Approach	EB	WB	NW	NE	SW
Entry Lanes	0	0	1	1	1
Conflicting Circle Lanes	1	1	1	1	1
Adj Approach Flow, veh/h	0	0	434	435	0
Demand Flow Rate, veh/h	0	0	443	444	0
Vehicles Circulating, veh/h	0	443	0	0	443
Vehicles Exiting, veh/h	443	0	444	0	0
Follow-Up Headway, s	3.186	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	0.0	7.3	7.3	0.0
Approach LOS	-	-	A	A	-
Lane	Left	Left	Left		
Designated Moves	L	R	L		
Assumed Moves	L	R	L		
RT Channelized					
Lane Util	1.000	1.000	1.000		
Critical Headway, s	5.193	5.193	5.193		
Entry Flow, veh/h	443	444	0		
Cap Entry Lane, veh/h	1130	1130	726		
Entry HV Adj Factor	0.980	0.980	1.000		
Flow Entry, veh/h	434	435	0		
Cap Entry, veh/h	1107	1107	726		
V/C Ratio	0.392	0.393	0.000		
Control Delay, s/veh	7.3	7.3	5.0		
LOS	A	A	A		
95th %tile Queue, veh	2	2	0		

### 1: Performance by approach

Approach	WB	NB	All
Denied Del/Veh (s)	0.0	0.3	0.2
Total Del/Veh (s)	2.8	2.6	2.7
Stop Del/Veh (s)	0.0	0.0	0.0
Stop/Veh	0.00	0.00	0.00
Avg Speed (kph)	32	30	31
HC Emissions (g)	1	1	2
CO Emissions (g)	21	28	49
NOx Emissions (g)	4	4	7

### 2: Performance by approach

Approach	EB	WB	All
Denied Del/Veh (s)	0.1	0.0	0.1
Total Del/Veh (s)	0.1	0.2	0.2
Stop Del/Veh (s)	0.0	0.0	0.0
Stop/Veh	0.00	0.00	0.00
Avg Speed (kph)	49	49	49
HC Emissions (g)	3	1	4
CO Emissions (g)	57	24	82
NOx Emissions (g)	8	4	12

### 3: Performance by approach

Approach	EB	WB	NE	All
Denied Del/Veh (s)	0.0	0.3	0.0	0.1
Total Del/Veh (s)	0.4	0.5	2.5	0.8
Stop Del/Veh (s)	0.0	0.0	1.2	0.2
Stop/Veh	0.00	0.00	0.18	0.03
Avg Speed (kph)	48	37	28	40
HC Emissions (g)	3	2	0	5
CO Emissions (g)	48	124	8	179
NOx Emissions (g)	8	7	1	15

### Total Network Performance

Denied Del/Veh (s)	0.2
Total Del/Veh (s)	2.4
Stop Del/Veh (s)	0.2
Stop/Veh	0.03
Avg Speed (kph)	42
HC Emissions (g)	36
CO Emissions (g)	1022
NOx Emissions (g)	110



Intersection: 1:

Movement
Directions Served
Maximum Queue (m)
Average Queue (m)
95th Queue (m)
Link Distance (m)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (m)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 2:

Movement
Directions Served
Maximum Queue (m)
Average Queue (m)
95th Queue (m)
Link Distance (m)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (m)
Storage Blk Time (%)
Queuing Penalty (veh)

## Queuing and Blocking Report Baseline

Centura metropolitana Cluj - Napoca  
Anexa 1 - Nod 2 - an 2025

### Intersection: 3:

Movement	NE
Directions Served	R
Maximum Queue (m)	22.1
Average Queue (m)	9.8
95th Queue (m)	21.5
Link Distance (m)	77.5
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

### Network Summary

Network wide Queuing Penalty: 0
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Intersection					
Intersection Delay, s/veh	5.2				
Intersection LOS	A				
Approach	EB	WB	NB	SB	SE
Entry Lanes	1	1	1	1	0
Conflicting Circle Lanes	2	2	2	2	2
Adj Approach Flow, veh/h	0	249	223	0	0
Demand Flow Rate, veh/h	0	254	227	0	0
Vehicles Circulating, veh/h	254	0	0	254	254
Vehicles Exiting, veh/h	0	0	254	0	0
Follow-Up Headway, s	3.186	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	5.3	5.1	0.0	0.0
Approach LOS	-	A	A	-	-
Lane	Left	Left	Left	Left	
Designated Moves	R	L	R	T	
Assumed Moves	R	L	R	T	
RT Channelized					
Lane Util	1.000	1.000	1.000	1.000	
Critical Headway, s	4.113	4.113	4.113	4.113	
Entry Flow, veh/h	0	254	227	0	
Cap Entry Lane, veh/h	946	1130	1130	946	
Entry HV Adj Factor	1.000	0.980	0.982	1.000	
Flow Entry, veh/h	0	249	223	0	
Cap Entry, veh/h	946	1108	1110	946	
V/C Ratio	0.000	0.225	0.201	0.000	
Control Delay, s/veh	3.8	5.3	5.1	3.8	
LOS	A	A	A	A	
95th %tile Queue, veh	0	1	1	0	

Intersection

Intersection Delay, s/veh

Intersection LOS

Approach NW

Entry Lanes 0

Conflicting Circle Lanes 2

Adj Approach Flow, veh/h 0

Demand Flow Rate, veh/h 0

Vehicles Circulating, veh/h 0

Vehicles Exiting, veh/h 227

Follow-Up Headway, s 3.186

Ped Vol Crossing Leg, #/h 0

Ped Cap Adj 1.000

Approach Delay, s/veh 0.0

Approach LOS -

Lane

Designated Moves

Assumed Moves

RT Channelized

Lane Util

Critical Headway, s

Entry Flow, veh/h

Cap Entry Lane, veh/h

Entry HV Adj Factor

Flow Entry, veh/h

Cap Entry, veh/h

V/C Ratio

Control Delay, s/veh

LOS

95th %tile Queue, veh

### 1: Performance by approach

Approach	EB	WB	NB	All
Denied Del/Veh (s)	0.0	0.0	3.1	1.5
Total Del/Veh (s)	2.8	4.8	2.8	3.8
Stop Del/Veh (s)	0.0	1.4	0.0	0.7
Stop/Veh	0.00	0.30	0.00	0.15
Avg Speed (kph)	29	27	29	28
HC Emissions (g)	0	2	2	4
CO Emissions (g)	0	34	82	116
NOx Emissions (g)	0	5	9	14

### 2: Performance by approach

Approach	EB	WB	SW	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.1
Total Del/Veh (s)	0.2	0.5	2.6	0.5
Stop Del/Veh (s)	0.0	0.0	2.0	0.1
Stop/Veh	0.00	0.00	0.33	0.02
Avg Speed (kph)	48	48	25	46
HC Emissions (g)	7	2	0	9
CO Emissions (g)	141	35	1	177
NOx Emissions (g)	19	6	0	25

### 3: Performance by approach

Approach	EB	WB	NE	All
Denied Del/Veh (s)	0.0	0.4	0.0	0.2
Total Del/Veh (s)	0.7	1.4	5.2	1.8
Stop Del/Veh (s)	0.0	0.2	3.4	0.7
Stop/Veh	0.00	0.04	0.43	0.09
Avg Speed (kph)	46	30	22	36
HC Emissions (g)	8	4	0	12
CO Emissions (g)	138	169	10	316
NOx Emissions (g)	21	12	1	33

### Total Network Performance

Denied Del/Veh (s)	0.8
Total Del/Veh (s)	4.5
Stop Del/Veh (s)	1.0
Stop/Veh	0.15
Avg Speed (kph)	39
HC Emissions (g)	74
CO Emissions (g)	2078
NOx Emissions (g)	224

## Queuing and Blocking Report Baseline

Centura metropolitata Cluj - Napoca  
Anexa 2 - Nod 2 - an 2045

### Intersection: 1:

Movement	WB
Directions Served	L
Maximum Queue (m)	23.9
Average Queue (m)	13.7
95th Queue (m)	23.3
Link Distance (m)	80.9
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

### Intersection: 2:

Movement	SW
Directions Served	R
Maximum Queue (m)	9.3
Average Queue (m)	7.2
95th Queue (m)	13.1
Link Distance (m)	60.5
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

## Queuing and Blocking Report

### Baseline

Centura metropolitata Cluj - Napoca  
Anexa 2 - Nod 2 - an 2045

#### Intersection: 3:

Movement	WB	NE
Directions Served	TR	R
Maximum Queue (m)	31.1	33.8
Average Queue (m)	8.1	20.7
95th Queue (m)	28.0	34.1
Link Distance (m)	51.8	75.8
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

#### Network Summary

Network wide Queuing Penalty: 0



HCM 2010 Roundabout  
Intersectia 1:

Centura metropolitana Cluj - Napaoca  
Anexa 2 - Nod 2 - an 2045

Intersection					
Intersection Delay, s/veh	7.2				
Intersection LOS	A				
Approach	EB	WB	NB	SB	SE
Entry Lanes	1	1	2	1	0
Conflicting Circle Lanes	2	2	2	2	2
Adj Approach Flow, veh/h	5	436	502	0	0
Demand Flow Rate, veh/h	5	445	512	0	0
Vehicles Circulating, veh/h	445	89	0	534	445
Vehicles Exiting, veh/h	0	0	450	0	89
Follow-Up Headway, s	3.186	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.4	8.0	6.5	0.0	0.0
Approach LOS	A	A	A	-	-
Lane	Left	Left	Left	Right	Left
Designated Moves	R	L	L	TR	T
Assumed Moves	R	L	L	TR	T
RT Channelized					
Lane Util	1.000	1.000	0.174	0.826	1.000
Critical Headway, s	4.113	4.113	4.293	4.113	4.113
Entry Flow, veh/h	5	445	89	423	0
Cap Entry Lane, veh/h	828	1062	1130	1130	778
Entry HV Adj Factor	1.000	0.980	0.978	0.981	1.000
Flow Entry, veh/h	5	436	87	415	0
Cap Entry, veh/h	828	1040	1105	1109	778
V/C Ratio	0.006	0.419	0.079	0.374	0.000
Control Delay, s/veh	4.4	8.0	3.9	7.0	4.6
LOS	A	A	A	A	A
95th %tile Queue, veh	0	2	0	2	0

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Intersection

Intersection Delay, s/veh

Intersection LOS

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Approach	NW
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Entry Lanes	0
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Conflicting Circle Lanes	2
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Adj Approach Flow, veh/h	0
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Demand Flow Rate, veh/h	0
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Vehicles Circulating, veh/h	89
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Vehicles Exiting, veh/h	423
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Follow-Up Headway, s	3.186
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Ped Vol Crossing Leg, #/h	0
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Ped Cap Adj	1.000
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Approach Delay, s/veh	0.0
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Approach LOS	-
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Lane

Designated Moves

Assumed Moves

RT Channelized

Lane Util

Critical Headway, s

Entry Flow, veh/h

Cap Entry Lane, veh/h

Entry HV Adj Factor

Flow Entry, veh/h

Cap Entry, veh/h

V/C Ratio

Control Delay, s/veh

LOS

95th %tile Queue, veh

1: Performance by approach

Approach	EB	WB	NB	All
Denied Del/Veh (s)	0.0	0.0	2.3	1.3
Total Del/Veh (s)	2.2	2.4	2.6	2.5
Stop Del/Veh (s)	0.0	0.1	0.0	0.0
Stop/Veh	0.00	0.05	0.00	0.01
Avg Speed (kph)	29	28	32	30
HC Emissions (g)	0	0	1	1
CO Emissions (g)	5	5	49	59
NOx Emissions (g)	1	1	4	5

2: Performance by approach

Approach	EB	WB	SW	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.1
Total Del/Veh (s)	0.6	0.8	2.7	0.8
Stop Del/Veh (s)	0.0	0.0	2.0	0.2
Stop/Veh	0.00	0.00	0.18	0.02
Avg Speed (kph)	45	48	33	45
HC Emissions (g)	5	4	0	9
CO Emissions (g)	110	76	8	193
NOx Emissions (g)	13	12	1	26

### 3: Performance by approach

Approach	EB	WB	NE	All
Denied Del/Veh (s)	0.0	0.2	0.0	0.1
Total Del/Veh (s)	0.7	1.1	4.1	1.3
Stop Del/Veh (s)	0.0	0.1	3.4	0.4
Stop/Veh	0.00	0.01	0.36	0.05
Avg Speed (kph)	46	47	32	45
HC Emissions (g)	3	10	0	14
CO Emissions (g)	53	220	18	291
NOx Emissions (g)	9	28	1	38

### Total Network Performance

Denied Del/Veh (s)	0.5
Total Del/Veh (s)	4.3
Stop Del/Veh (s)	0.5
Stop/Veh	0.06
Avg Speed (kph)	43
HC Emissions (g)	65
CO Emissions (g)	1685
NOx Emissions (g)	195

## Queuing and Blocking Report Baseline

Centura metropolitana Cluj - Napoca  
Anexa 1 - Nod 3 - an 2025

### Intersection: 1:

Movement	WB
Directions Served	L
Maximum Queue (m)	8.5
Average Queue (m)	1.7
95th Queue (m)	7.3
Link Distance (m)	44.5
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

### Intersection: 2:

Movement	SW
Directions Served	R
Maximum Queue (m)	9.2
Average Queue (m)	6.3
95th Queue (m)	12.0
Link Distance (m)	145.7
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

## Queuing and Blocking Report Baseline

Centura metropolitana Cluj - Napoca  
Anexa 1 - Nod 3 - an 2025

### Intersection: 3:

Movement	WB	NE
Directions Served	TR	R
Maximum Queue (m)	16.3	15.9
Average Queue (m)	3.3	9.0
95th Queue (m)	14.1	18.9
Link Distance (m)	336.6	158.9
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

### Network Summary

Network wide Queuing Penalty: 0

HCM 2010 Roundabout  
Intersectia 1:

Centura metropolitana Cluj - Napoca  
Anexa 2 - Nod 3 - an 2045

Intersection					
Intersection Delay, s/veh	5.7				
Intersection LOS	A				
Approach	EB	WB	NB	SE	NW
Entry Lanes	1	1	2	0	0
Conflicting Circle Lanes	2	2	2	2	2
Adj Approach Flow, veh/h	293	159	452	0	0
Demand Flow Rate, veh/h	299	162	461	0	0
Vehicles Circulating, veh/h	162	258	0	162	258
Vehicles Exiting, veh/h	0	0	461	258	203
Follow-Up Headway, s	3.186	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000	1.000
Approach Delay, s/veh	6.7	5.6	5.1	0.0	0.0
Approach LOS	A	A	A	-	-
Lane	Left	Left	Left	Right	
Designated Moves	R	L	L	TR	
Assumed Moves	R	L	L	TR	
RT Channelized					
Lane Util	1.000	1.000	0.560	0.440	
Critical Headway, s	4.113	4.113	4.293	4.113	
Entry Flow, veh/h	299	162	258	203	
Cap Entry Lane, veh/h	1009	943	1130	1130	
Entry HV Adj Factor	0.980	0.981	0.981	0.980	
Flow Entry, veh/h	293	159	253	199	
Cap Entry, veh/h	989	926	1108	1108	
V/C Ratio	0.296	0.172	0.228	0.180	
Control Delay, s/veh	6.7	5.6	5.3	4.9	
LOS	A	A	A	A	
95th %tile Queue, veh	1	1	1	1	

1: Performance by approach

Approach	EB	WB	NB	All
Denied Del/Veh (s)	0.0	0.0	2.3	1.3
Total Del/Veh (s)	2.2	2.4	2.6	2.5
Stop Del/Veh (s)	0.0	0.1	0.0	0.0
Stop/Veh	0.00	0.05	0.00	0.01
Avg Speed (kph)	29	28	32	30
HC Emissions (g)	0	0	1	1
CO Emissions (g)	5	5	49	59
NOx Emissions (g)	1	1	4	5

2: Performance by approach

Approach	EB	WB	SW	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.1
Total Del/Veh (s)	0.6	0.8	2.7	0.8
Stop Del/Veh (s)	0.0	0.0	2.0	0.2
Stop/Veh	0.00	0.00	0.18	0.02
Avg Speed (kph)	45	48	33	45
HC Emissions (g)	5	4	0	9
CO Emissions (g)	110	76	8	193
NOx Emissions (g)	13	12	1	26

3: Performance by approach

Approach	EB	WB	NE	All
Denied Del/Veh (s)	0.0	0.2	0.0	0.1
Total Del/Veh (s)	0.7	1.1	4.1	1.3
Stop Del/Veh (s)	0.0	0.1	3.4	0.4
Stop/Veh	0.00	0.01	0.36	0.05
Avg Speed (kph)	46	47	32	45
HC Emissions (g)	3	10	0	14
CO Emissions (g)	53	220	18	291
NOx Emissions (g)	9	28	1	38

Total Network Performance

Denied Del/Veh (s)	0.5
Total Del/Veh (s)	4.3
Stop Del/Veh (s)	0.5
Stop/Veh	0.06
Avg Speed (kph)	43
HC Emissions (g)	65
CO Emissions (g)	1685
NOx Emissions (g)	195



Intersection: 1:

Movement	WB
Directions Served	L
Maximum Queue (m)	8.5
Average Queue (m)	1.7
95th Queue (m)	7.3
Link Distance (m)	44.5
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2:

Movement	SW
Directions Served	R
Maximum Queue (m)	9.2
Average Queue (m)	6.3
95th Queue (m)	12.0
Link Distance (m)	145.7
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3:

Movement	WB	NE
Directions Served	TR	R
Maximum Queue (m)	16.3	15.9
Average Queue (m)	3.3	9.0
95th Queue (m)	14.1	18.9
Link Distance (m)	336.6	158.9
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0
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HCM 2010 Roundabout  
Intersectia 1:

Centura metropolitana Cluj - Napoca  
Anexa 2 - Nod 3 - an 2045

Intersection					
Intersection Delay, s/veh	5.7				
Intersection LOS	A				
Approach	EB	WB	NB	SE	NW
Entry Lanes	1	1	2	0	0
Conflicting Circle Lanes	2	2	2	2	2
Adj Approach Flow, veh/h	293	159	452	0	0
Demand Flow Rate, veh/h	299	162	461	0	0
Vehicles Circulating, veh/h	162	258	0	162	258
Vehicles Exiting, veh/h	0	0	461	258	203
Follow-Up Headway, s	3.186	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000	1.000
Approach Delay, s/veh	6.7	5.6	5.1	0.0	0.0
Approach LOS	A	A	A	-	-
Lane	Left	Left	Left	Right	
Designated Moves	R	L	L	TR	
Assumed Moves	R	L	L	TR	
RT Channelized					
Lane Util	1.000	1.000	0.560	0.440	
Critical Headway, s	4.113	4.113	4.293	4.113	
Entry Flow, veh/h	299	162	258	203	
Cap Entry Lane, veh/h	1009	943	1130	1130	
Entry HV Adj Factor	0.980	0.981	0.981	0.980	
Flow Entry, veh/h	293	159	253	199	
Cap Entry, veh/h	989	926	1108	1108	
V/C Ratio	0.296	0.172	0.228	0.180	
Control Delay, s/veh	6.7	5.6	5.3	4.9	
LOS	A	A	A	A	
95th %tile Queue, veh	1	1	1	1	

1: Performance by approach

Approach	NB	SB	SE	NW	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.1	0.1
Total Del/Veh (s)	2.2	2.2	2.2	2.8	2.4
Stop Del/Veh (s)	0.0	0.0	0.0	0.0	0.0
Stop/Veh	0.00	0.00	0.00	0.00	0.00
Avg Speed (kph)	32	28	31	31	31
HC Emissions (g)	0	0	0	0	0
CO Emissions (g)	2	0	1	8	11
NOx Emissions (g)	0	0	0	1	2

2: Performance by approach

Approach	SB	NE	SW	All
Denied Del/Veh (s)	0.0	0.1	0.0	0.1
Total Del/Veh (s)	1.0	0.3	0.2	0.3
Stop Del/Veh (s)	0.0	0.0	0.0	0.0
Stop/Veh	0.00	0.00	0.00	0.00
Avg Speed (kph)	38	47	48	47
HC Emissions (g)	1	3	3	7
CO Emissions (g)	13	89	43	145
NOx Emissions (g)	2	9	9	20

### 3: Performance by approach

Approach	NB	NE	SW	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.0
Total Del/Veh (s)	2.2	0.4	0.1	0.3
Stop Del/Veh (s)	1.6	0.0	0.0	0.0
Stop/Veh	0.50	0.00	0.00	0.01
Avg Speed (kph)	36	47	49	47
HC Emissions (g)	0	3	3	6
CO Emissions (g)	2	39	69	110
NOx Emissions (g)	0	7	9	16

### Total Network Performance

Denied Del/Veh (s)	0.1
Total Del/Veh (s)	1.9
Stop Del/Veh (s)	0.0
Stop/Veh	0.01
Avg Speed (kph)	47
HC Emissions (g)	49
CO Emissions (g)	962
NOx Emissions (g)	143

Intersection: 1:

Movement
Directions Served
Maximum Queue (m)
Average Queue (m)
95th Queue (m)
Link Distance (m)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (m)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 2:

Movement
Directions Served
Maximum Queue (m)
Average Queue (m)
95th Queue (m)
Link Distance (m)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (m)
Storage Blk Time (%)
Queuing Penalty (veh)

## Queuing and Blocking Report Baseline

Centura metropolitana Cluj - Napoca  
Anexa 1 - Nod 4 - an 2025

### Intersection: 3:

Movement	NB
Directions Served	R
Maximum Queue (m)	9.3
Average Queue (m)	1.9
95th Queue (m)	8.0
Link Distance (m)	185.7
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

### Network Summary

Network wide Queuing Penalty: 0
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Intersection					
Intersection Delay, s/veh	3.5				
Intersection LOS	A				
Approach	EB	WB	NB	SB	SE
Entry Lanes	0	0	1	1	1
Conflicting Circle Lanes	2	2	2	2	2
Adj Approach Flow, veh/h	0	0	27	8	20
Demand Flow Rate, veh/h	0	0	28	8	20
Vehicles Circulating, veh/h	20	28	20	28	28
Vehicles Exiting, veh/h	28	20	0	0	8
Follow-Up Headway, s	3.186	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	0.0	3.6	3.3	3.4
Approach LOS	-	-	A	A	A
Lane	Left	Left	Left	Left	Left
Designated Moves	R	R	LT		L
Assumed Moves	R	R	LT		L
RT Channelized					
Lane Util	1.000	1.000	1.000		1.000
Critical Headway, s	4.113	4.113	4.113		4.113
Entry Flow, veh/h	28	8	20		28
Cap Entry Lane, veh/h	1114	1108	1108		1114
Entry HV Adj Factor	0.964	1.000	1.000		0.964
Flow Entry, veh/h	27	8	20		27
Cap Entry, veh/h	1074	1108	1108		1074
V/C Ratio	0.025	0.007	0.018		0.025
Control Delay, s/veh	3.6	3.3	3.4		3.6
LOS	A	A	A		A
95th %tile Queue, veh	0	0	0		0

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Intersection

Intersection Delay, s/veh

Intersection LOS

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Approach	NW
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Entry Lanes	1
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Conflicting Circle Lanes	2
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Adj Approach Flow, veh/h	27
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Demand Flow Rate, veh/h	28
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Vehicles Circulating, veh/h	20
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Vehicles Exiting, veh/h	28
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Follow-Up Headway, s	3.186
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Ped Vol Crossing Leg, #/h	0
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Ped Cap Adj	1.000
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Approach Delay, s/veh	3.6
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Approach LOS	A
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Lane

Designated Moves

Assumed Moves

RT Channelized

Lane Util

Critical Headway, s

Entry Flow, veh/h

Cap Entry Lane, veh/h

Entry HV Adj Factor

Flow Entry, veh/h

Cap Entry, veh/h

V/C Ratio

Control Delay, s/veh

LOS

95th %tile Queue, veh



1: Performance by approach

Approach	NB	SB	SE	NW	All
Denied Del/Veh (s)	0.0	0.0	0.2	0.1	0.1
Total Del/Veh (s)	2.2	2.2	2.7	3.0	2.5
Stop Del/Veh (s)	0.0	0.0	0.1	0.6	0.1
Stop/Veh	0.00	0.00	0.05	0.25	0.04
Avg Speed (kph)	32	28	28	29	29
HC Emissions (g)	0	2	0	0	2
CO Emissions (g)	2	42	18	1	63
NOx Emissions (g)	0	6	2	0	9

2: Performance by approach

Approach	SB	NE	SW	All
Denied Del/Veh (s)	0.0	0.2	0.0	0.1
Total Del/Veh (s)	2.6	0.3	0.4	0.4
Stop Del/Veh (s)	2.4	0.0	0.0	0.1
Stop/Veh	0.38	0.00	0.00	0.01
Avg Speed (kph)	34	48	47	47
HC Emissions (g)	0	4	2	6
CO Emissions (g)	1	107	25	133
NOx Emissions (g)	0	12	5	17

### 3: Performance by approach

Approach	NB	NE	SW	All
Denied Del/Veh (s)	0.0	0.0	0.3	0.1
Total Del/Veh (s)	7.3	0.6	1.1	1.6
Stop Del/Veh (s)	5.8	0.0	0.0	0.6
Stop/Veh	0.70	0.00	0.00	0.08
Avg Speed (kph)	29	47	42	41
HC Emissions (g)	1	4	7	11
CO Emissions (g)	22	61	199	282
NOx Emissions (g)	2	11	19	32

### Total Network Performance

Denied Del/Veh (s)	0.2
Total Del/Veh (s)	3.8
Stop Del/Veh (s)	0.7
Stop/Veh	0.08
Avg Speed (kph)	44
HC Emissions (g)	74
CO Emissions (g)	1921
NOx Emissions (g)	219

## Queuing and Blocking Report Baseline

Centura metropolitana Cluj - Napoca  
Anexa 2 - Nod 4 - an 2045

### Intersection: 1:

Movement	SE	NW
Directions Served	LT	L
Maximum Queue (m)	9.1	8.9
Average Queue (m)	3.7	3.6
95th Queue (m)	11.0	10.8
Link Distance (m)	70.1	85.4
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

### Intersection: 2:

Movement	SB
Directions Served	R
Maximum Queue (m)	7.8
Average Queue (m)	4.4
95th Queue (m)	10.3
Link Distance (m)	147.3
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

## Queuing and Blocking Report

### Baseline

Centura metropolitana Cluj - Napoca

Anexa 2 - Nod 4 - an 2045

#### Intersection: 3:

Movement	NB
Directions Served	R
Maximum Queue (m)	28.7
Average Queue (m)	22.0
95th Queue (m)	28.8
Link Distance (m)	185.7
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

#### Network Summary

Network wide Queuing Penalty: 0

HCM 2010 Roundabout  
Intersectia 1:

Centura metropolitana Cluj - Napoca  
Anexa 2 - Nod 4 - an 2045

Intersection					
Intersection Delay, s/veh	5.1				
Intersection LOS	A				
Approach	EB	WB	NB	SB	SE
Entry Lanes	0	0	1	1	1
Conflicting Circle Lanes	2	2	2	2	2
Adj Approach Flow, veh/h	0	0	38	208	232
Demand Flow Rate, veh/h	0	0	39	212	236
Vehicles Circulating, veh/h	236	39	236	39	39
Vehicles Exiting, veh/h	39	225	0	0	212
Follow-Up Headway, s	3.186	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	0.0	4.2	5.1	5.3
Approach LOS	-	-	A	A	A
Lane	Left	Left	Left	Left	Left
Designated Moves	R	R	LT		L
Assumed Moves	R	R	LT		L
RT Channelized					
Lane Util	1.000	1.000	1.000		1.000
Critical Headway, s	4.113	4.113	4.113		4.113
Entry Flow, veh/h	39	212	236		39
Cap Entry Lane, veh/h	958	1100	1100		965
Entry HV Adj Factor	0.974	0.981	0.982		0.974
Flow Entry, veh/h	38	208	232		38
Cap Entry, veh/h	933	1079	1080		941
V/C Ratio	0.041	0.193	0.215		0.040
Control Delay, s/veh	4.2	5.1	5.3		4.2
LOS	A	A	A		A
95th %tile Queue, veh	0	1	1		0

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Intersection

Intersection Delay, s/veh

Intersection LOS

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Approach	NW
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Entry Lanes	1
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Conflicting Circle Lanes	2
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Adj Approach Flow, veh/h	38
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Demand Flow Rate, veh/h	39
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Vehicles Circulating, veh/h	225
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Vehicles Exiting, veh/h	50
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Follow-Up Headway, s	3.186
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Ped Vol Crossing Leg, #/h	0
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Ped Cap Adj	1.000
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Approach Delay, s/veh	4.2
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Approach LOS	A
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Lane

Designated Moves

Assumed Moves

RT Channelized

Lane Util

Critical Headway, s

Entry Flow, veh/h

Cap Entry Lane, veh/h

Entry HV Adj Factor

Flow Entry, veh/h

Cap Entry, veh/h

V/C Ratio

Control Delay, s/veh

LOS

95th %tile Queue, veh

### 1: Performance by approach

Approach	NB	SB	NE	SW	All
Denied Del/Veh (s)	2.7	1.2	0.0	0.0	0.8
Total Del/Veh (s)	2.9	3.5	6.2	2.8	3.3
Stop Del/Veh (s)	0.0	0.2	3.6	0.0	0.3
Stop/Veh	0.06	0.06	0.70	0.02	0.08
Avg Speed (kph)	31	32	30	32	32
HC Emissions (g)	0	2	1	1	4
CO Emissions (g)	9	74	14	27	124
NOx Emissions (g)	1	9	2	3	15

### 2: Performance by approach

Approach	EB	WB	SW	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.1
Total Del/Veh (s)	0.3	0.6	1.6	0.5
Stop Del/Veh (s)	0.0	0.0	1.2	0.1
Stop/Veh	0.00	0.00	0.50	0.02
Avg Speed (kph)	47	47	37	47
HC Emissions (g)	3	5	1	9
CO Emissions (g)	95	89	13	197
NOx Emissions (g)	10	14	2	26

### 3: Performance by approach

Approach	EB	WB	NE	All
Denied Del/Veh (s)	0.0	0.2	0.0	0.1
Total Del/Veh (s)	0.9	1.2	31.4	6.3
Stop Del/Veh (s)	0.0	0.0	30.0	5.2
Stop/Veh	0.00	0.01	0.84	0.15
Avg Speed (kph)	45	40	7	27
HC Emissions (g)	2	4	0	6
CO Emissions (g)	54	130	16	200
NOx Emissions (g)	6	12	1	19

### Total Network Performance

Denied Del/Veh (s)	0.4
Total Del/Veh (s)	8.3
Stop Del/Veh (s)	4.6
Stop/Veh	0.17
Avg Speed (kph)	38
HC Emissions (g)	62
CO Emissions (g)	1904
NOx Emissions (g)	199



## Queuing and Blocking Report Baseline

Centura metropolitana Cluj - Napoca  
Anexa 1 - Nod 5 - an 2025

### Intersection: 1:

Movement	NB	SB	NE	SW
Directions Served	>	LT	L	>
Maximum Queue (m)	5.4	16.2	15.1	12.7
Average Queue (m)	1.1	7.9	10.3	2.5
95th Queue (m)	4.7	19.5	14.3	10.9
Link Distance (m)		112.3	132.2	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)	20.0			20.0
Storage Blk Time (%)		0	6	
Queuing Penalty (veh)		0	0	

### Intersection: 2:

Movement	SW
Directions Served	R
Maximum Queue (m)	9.3
Average Queue (m)	8.4
95th Queue (m)	9.3
Link Distance (m)	163.2
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

## Queuing and Blocking Report Baseline

Centura metropolitana Cluj - Napoca  
Anexa 1 - Nod 5 - an 2025

### Intersection: 3:

Movement	WB	NE
Directions Served	TR	R
Maximum Queue (m)	16.8	79.0
Average Queue (m)	3.4	55.2
95th Queue (m)	14.4	78.6
Link Distance (m)	132.2	70.7
Upstream Blk Time (%)		5
Queuing Penalty (veh)		18
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

### Network Summary

Network wide Queuing Penalty: 18

HCM 2010 Roundabout  
Intersectia 1:

Centura metropolitana Cluj - Napoca  
Anexa 1 - Nod 5 - an 2025

Intersection								
Intersection Delay, s/veh	5.9							
Intersection LOS	A							
Approach	EB	WB	NB	SB	NE			
Entry Lanes	0	0	2	2	2			
Conflicting Circle Lanes	2	2	2	2	2			
Adj Approach Flow, veh/h	0	0	131	397	82			
Demand Flow Rate, veh/h	0	0	134	405	84			
Vehicles Circulating, veh/h	449	120	378	118	449			
Vehicles Exiting, veh/h	74	392	155	410	0			
Follow-Up Headway, s	3.186	3.186	3.186	3.186	3.186			
Ped Vol Crossing Leg, #/h	0	0	0	0	0			
Ped Cap Adj	1.000	1.000	1.000	1.000	1.000			
Approach Delay, s/veh	0.0	0.0	5.2	6.3	5.6			
Approach LOS	-	-	A	A	A			
Lane	Left	Right	Left	Right	Left	Right	Left	Left
Designated Moves	LT	R	LT	R	L	TR		L
Assumed Moves	LT	R	LT	R	L	TR		L
RT Channelized								
Lane Util	0.269	0.731	0.817	0.183	1.000	0.000		0.289
Critical Headway, s	4.293	4.113	4.293	4.113	4.293	4.113		4.293
Entry Flow, veh/h	36	98	331	74	84	0		118
Cap Entry Lane, veh/h	851	867	1034	1040	807	825		1033
Entry HV Adj Factor	0.980	0.980	0.980	0.986	0.976	1.000		0.983
Flow Entry, veh/h	35	96	324	73	82	0		116
Cap Entry, veh/h	834	850	1013	1026	788	825		1015
V/C Ratio	0.042	0.113	0.320	0.071	0.104	0.000		0.114
Control Delay, s/veh	4.7	5.3	6.8	4.1	5.6	4.4		4.6
LOS	A	A	A	A	A	A		A
95th %tile Queue, veh	0	0	1	0	0	0		0

Intersection

Intersection Delay, s/veh

Intersection LOS

Approach SW

Entry Lanes 2

Conflicting Circle Lanes 2

Adj Approach Flow, veh/h 400

Demand Flow Rate, veh/h 408

Vehicles Circulating, veh/h 120

Vehicles Exiting, veh/h 0

Follow-Up Headway, s 3.186

Ped Vol Crossing Leg, #/h 0

Ped Cap Adj 1.000

Approach Delay, s/veh 5.8

Approach LOS A

Lane Right

Designated Moves TR

Assumed Moves TR

RT Channelized

Lane Util 0.711

Critical Headway, s 4.113

Entry Flow, veh/h 290

Cap Entry Lane, veh/h 1039

Entry HV Adj Factor 0.979

Flow Entry, veh/h 284

Cap Entry, veh/h 1017

V/C Ratio 0.279

Control Delay, s/veh 6.3

LOS A

95th %tile Queue, veh 1

### 1: Performance by approach

Approach	NB	SB	NE	SW	All
Denied Del/Veh (s)	1.4	2.4	0.0	0.0	1.4
Total Del/Veh (s)	4.4	5.4	4.1	3.1	4.6
Stop Del/Veh (s)	0.9	0.4	0.8	0.1	0.4
Stop/Veh	0.18	0.08	0.65	0.07	0.15
Avg Speed (kph)	28	24	34	31	27
HC Emissions (g)	1	3	1	1	7
CO Emissions (g)	21	100	24	40	185
NOx Emissions (g)	3	14	4	6	27

### 2: Performance by approach

Approach	EB	WB	SW	All
Denied Del/Veh (s)	0.2	0.0	0.0	0.1
Total Del/Veh (s)	0.6	1.0	8.6	2.1
Stop Del/Veh (s)	0.0	0.0	6.5	1.1
Stop/Veh	0.00	0.00	0.62	0.11
Avg Speed (kph)	44	47	23	41
HC Emissions (g)	3	8	1	12
CO Emissions (g)	112	132	17	261
NOx Emissions (g)	10	21	2	33

### 3: Performance by approach

Approach	EB	WB	NE	All
Denied Del/Veh (s)	0.0	0.2	0.0	0.1
Total Del/Veh (s)	0.6	1.3	70.9	16.6
Stop Del/Veh (s)	0.0	0.0	73.2	16.3
Stop/Veh	0.00	0.00	0.55	0.12
Avg Speed (kph)	46	40	4	17
HC Emissions (g)	1	6	5	12
CO Emissions (g)	35	179	97	310
NOx Emissions (g)	4	18	7	28

### Total Network Performance

Denied Del/Veh (s)	0.9
Total Del/Veh (s)	18.4
Stop Del/Veh (s)	14.1
Stop/Veh	0.30
Avg Speed (kph)	31
HC Emissions (g)	102
CO Emissions (g)	2920
NOx Emissions (g)	308

## Queuing and Blocking Report Baseline

Centura metropolitana Cluj - Napoca  
Anexa 2 - Nod 5 - an 2045

### Intersection: 1:

Movement	NB	NB	SB	NE	NE	SW	SW
Directions Served	LT	>	LT	L	>	L	>
Maximum Queue (m)	8.9	22.8	22.5	9.1	15.2	8.5	21.6
Average Queue (m)	5.1	4.6	10.8	5.2	10.4	1.7	11.6
95th Queue (m)	12.0	19.6	25.8	12.2	19.2	7.3	22.9
Link Distance (m)	79.0		82.6	132.2		78.2	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (m)		20.0			10.0		20.0
Storage Blk Time (%)		0	1	3	0		0
Queuing Penalty (veh)		0	4	5	0		0

### Intersection: 2:

Movement	SW
Directions Served	R
Maximum Queue (m)	42.4
Average Queue (m)	28.6
95th Queue (m)	43.9
Link Distance (m)	130.8
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

## Queuing and Blocking Report

### Baseline

Centura metropolitana Cluj - Napoca  
Anexa 2 - Nod 5 - an 2045

#### Intersection: 3:

Movement	NE	B13
Directions Served	R	T
Maximum Queue (m)	131.9	51.4
Average Queue (m)	102.2	28.8
95th Queue (m)	161.9	68.2
Link Distance (m)	95.5	39.0
Upstream Blk Time (%)	63	17
Queuing Penalty (veh)	314	82
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

#### Network Summary

Network wide Queuing Penalty: 406



HCM 2010 Roundabout  
Intersectia 1:

Centura metropolitana Cluj - Napoca  
Anexa 2 - Nod 5 - an 2045

Intersection								
Intersection Delay, s/veh	8.6							
Intersection LOS	A							
Approach	EB	WB	NB	SB	NE			
Entry Lanes	0	0	2	2	2			
Conflicting Circle Lanes	2	2	2	2	2			
Adj Approach Flow, veh/h	0	0	206	942	253			
Demand Flow Rate, veh/h	0	0	210	960	258			
Vehicles Circulating, veh/h	677	217	556	87	677			
Vehicles Exiting, veh/h	370	549	379	673	0			
Follow-Up Headway, s	3.186	3.186	3.186	3.186	3.186			
Ped Vol Crossing Leg, #/h	0	0	0	0	0			
Ped Cap Adj	1.000	1.000	1.000	1.000	1.000			
Approach Delay, s/veh	0.0	0.0	6.5	9.2	7.8			
Approach LOS	-	-	A	A	A			
Lane	Left	Right	Left	Right	Left	Right	Left	Left
Designated Moves	LT	R	LT	R	L	TR		L
Assumed Moves	LT	R	LT	R	L	TR		L
RT Channelized								
Lane Util	0.648	0.352	0.615	0.385	0.314	0.686		0.160
Critical Headway, s	4.293	4.113	4.293	4.113	4.293	4.113		4.293
Entry Flow, veh/h	136	74	590	370	81	177		87
Cap Entry Lane, veh/h	745	766	1059	1063	680	703		960
Entry HV Adj Factor	0.980	0.986	0.981	0.981	0.975	0.983		0.977
Flow Entry, veh/h	133	73	579	363	79	174		85
Cap Entry, veh/h	730	755	1038	1043	663	692		938
V/C Ratio	0.183	0.097	0.557	0.348	0.119	0.252		0.091
Control Delay, s/veh	6.9	5.8	10.5	7.0	6.8	8.2		4.7
LOS	A	A	B	A	A	A		A
95th %tile Queue, veh	1	0	4	2	0	1		0

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Intersection

Intersection Delay, s/veh

Intersection LOS

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Approach	SW
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Entry Lanes	2
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Conflicting Circle Lanes	2
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Adj Approach Flow, veh/h	532
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Demand Flow Rate, veh/h	543
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Vehicles Circulating, veh/h	217
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Vehicles Exiting, veh/h	0
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Follow-Up Headway, s	3.186
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Ped Vol Crossing Leg, #/h	0
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Ped Cap Adj	1.000
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Approach Delay, s/veh	8.7
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Approach LOS	A
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Lane	Right
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Designated Moves	TR
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Assumed Moves	TR
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RT Channelized

Lane Util	0.840
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Critical Headway, s	4.113
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Entry Flow, veh/h	456
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Cap Entry Lane, veh/h	971
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Entry HV Adj Factor	0.980
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Flow Entry, veh/h	447
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Cap Entry, veh/h	952
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V/C Ratio	0.470
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Control Delay, s/veh	9.4
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LOS	A
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95th %tile Queue, veh	3
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