

# Network calculations

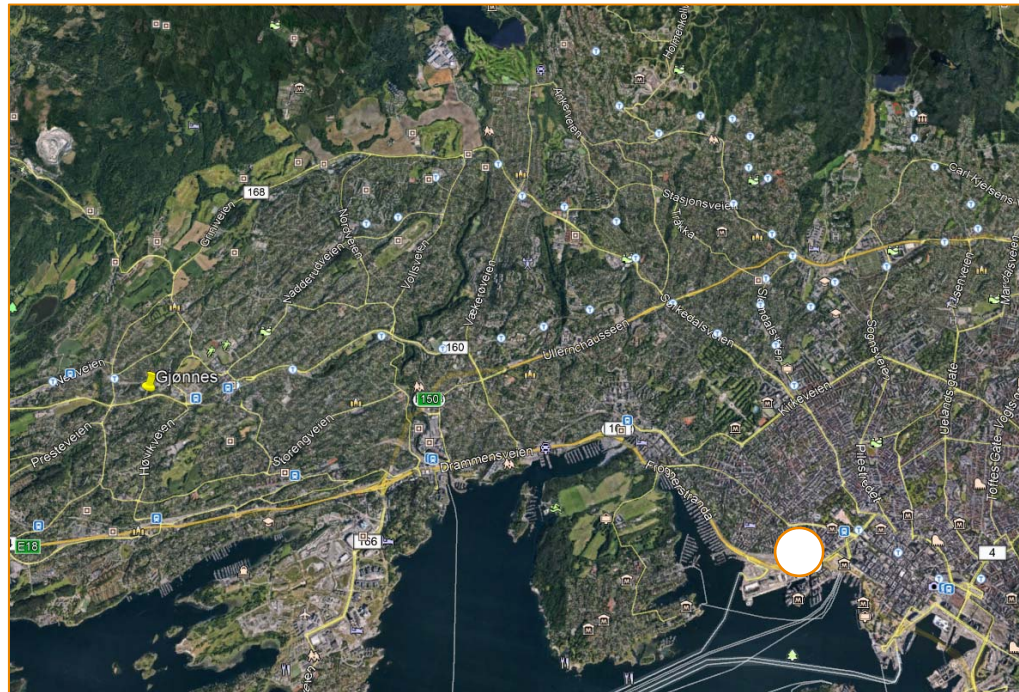
Workshop – Oslo

# Introduction

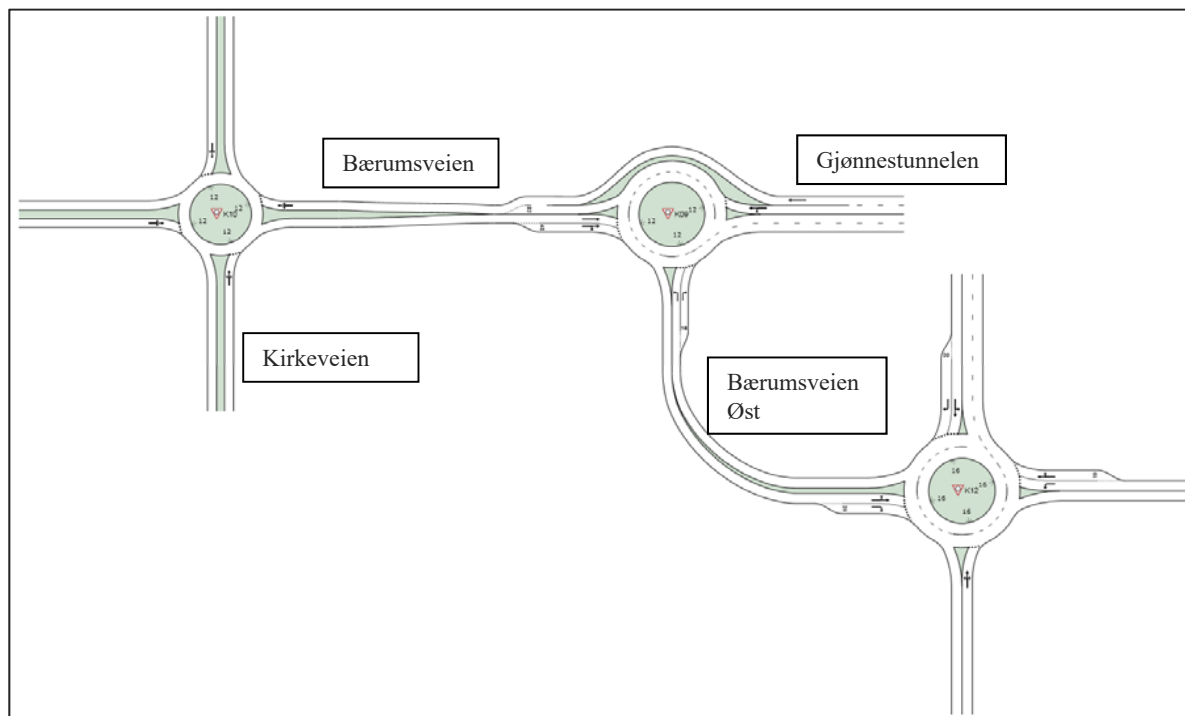
- Present two cases of network calculations:
  - Gjønnnes
  - Lysakerlokket



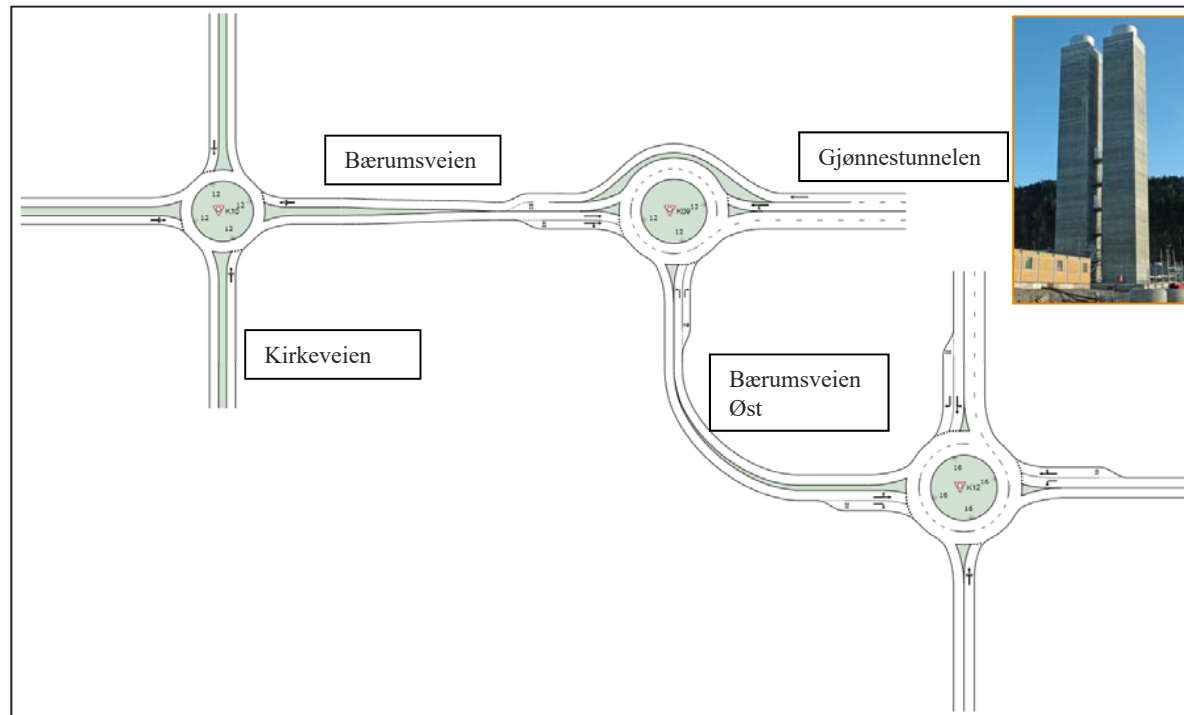
## Gjøannes:



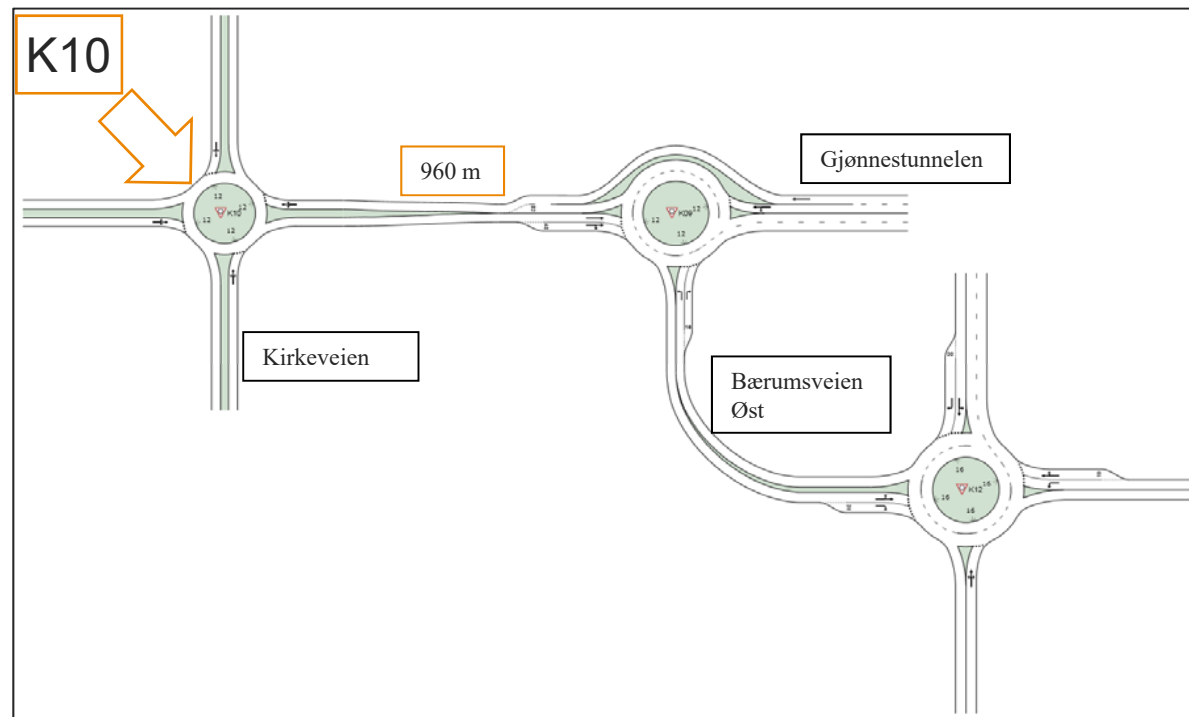
## Situation: Layout



## Do we need ventilation towers?



## The problem:



# The problem:

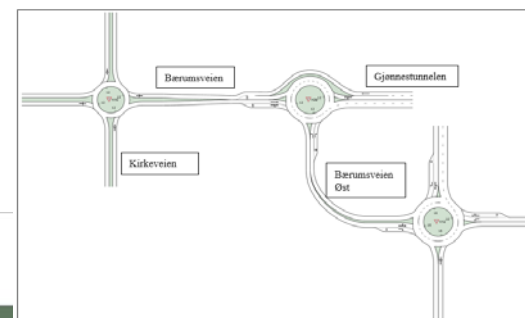
## LANE SUMMARY

Site: K10 [K10 - Etm - 30 %]

Rundkjøring - Kirkeveien x Bærumsveien

Site Category: (None)

Roundabout



| Lane Use and Performance |                          |                  |                           |                  |               |                     |                    |                         |                     |                          |           |                |                     |                   |                      |  |  |  |
|--------------------------|--------------------------|------------------|---------------------------|------------------|---------------|---------------------|--------------------|-------------------------|---------------------|--------------------------|-----------|----------------|---------------------|-------------------|----------------------|--|--|--|
|                          | Demand<br>Total<br>veh/h | Flows<br>HV<br>% | Arrival<br>Total<br>veh/h | Flows<br>HV<br>% | Cap.<br>veh/h | Deg.<br>Satn<br>v/c | Lane<br>Util.<br>% | Average<br>Delay<br>sec | Level of<br>Service | 95% Back of Queue<br>Veh | Dist<br>m | Lane<br>Config | Lane<br>Length<br>m | Cap.<br>Adj.<br>% | Prob.<br>Block.<br>% |  |  |  |
| South: Kirkeveien Sør    |                          |                  |                           |                  |               |                     |                    |                         |                     |                          |           |                |                     |                   |                      |  |  |  |
| Lane 1 <sup>d</sup>      | 927                      | 11,8             | 927                       | 11,8             | 467           | 1,987               | 100                | 904,9                   | LOS F               | 308,3                    | 2376,2    | Full           | 222                 | 0,0               | 100,0                |  |  |  |
| Approach                 | 927                      | 11,8             | 927                       | 11,8             |               | 1,987               |                    | 904,9                   | LOS F               | 308,3                    | 2376,2    |                |                     |                   |                      |  |  |  |
| East: Bærumsveien Øst    |                          |                  |                           |                  |               |                     |                    |                         |                     |                          |           |                |                     |                   |                      |  |  |  |
| Lane 1 <sup>d</sup>      | 1261                     | 11,8             | 1129                      | 11,8             | 716           | 1,576               | 100                | 533,6                   | LOS F               | 280,6                    | 2162,7    | Full           | 960                 | 0,0               | 40,5                 |  |  |  |
| Approach                 | 1261                     | 11,8             | 1129 <sup>N1</sup>        | 11,8             |               | 1,576               |                    | 533,6                   | LOS F               | 280,6                    | 2162,7    |                |                     |                   |                      |  |  |  |
| North: Kirkeveien Nord   |                          |                  |                           |                  |               |                     |                    |                         |                     |                          |           |                |                     |                   |                      |  |  |  |
| Lane 1 <sup>d</sup>      | 716                      | 11,8             | 716                       | 11,8             | 420           | 1,706               | 100                | 656,0                   | LOS F               | 203,2                    | 1566,3    | Full           | 150                 | 0,0               | 100,0                |  |  |  |
| Approach                 | 716                      | 11,8             | 716                       | 11,8             |               | 1,706               |                    | 656,0                   | LOS F               | 203,2                    | 1566,3    |                |                     |                   |                      |  |  |  |
| West: Bærumsveien V      |                          |                  |                           |                  |               |                     |                    |                         |                     |                          |           |                |                     |                   |                      |  |  |  |
| Lane 1 <sup>d</sup>      | 1325                     | 11,8             | 1325                      | 11,8             | 706           | 1,876               | 100                | 800,9                   | LOS F               | 410,3                    | 3162,8    | Full           | 450                 | 0,0               | 100,0                |  |  |  |
| Approach                 | 1325                     | 11,8             | 1325                      | 11,8             |               | 1,876               |                    | 800,9                   | LOS F               | 410,3                    | 3162,8    |                |                     |                   |                      |  |  |  |
| Intersection             | 4229                     | 11,8             | 4097 <sup>N1</sup>        | 12,2             |               | 1,987               |                    | 725,5                   | LOS F               | 410,3                    | 3162,8    |                |                     |                   |                      |  |  |  |

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

Roundabout LOS Method: Same as Signalised Intersections.

Lane LOS values are based on average delay per lane.

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

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

<sup>d</sup> Dominant lane on roundabout approach

<sup>N1</sup> Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

## Length pr car

- Demand = 1 261 *veh/h*
- Capacity = 716 *veh/h*
- Cars in queue = 1 261 - 716 = 545 *veh*
- Queue length = 2 162 *m*
- Length pr car =  $\frac{2\,162\,m}{545\,\frac{veh}{h}} = 3,97\,\frac{m}{veh}$
- 11,8 % large veh



## LANE SUMMARY

Site: K09 [K9 - etm - Alt 1 - 30 %]

Network: N101 [ETM - K9 & K10 & K12]

Rundkjøring - Gjønnnes  
Site Category: (None)  
Roundabout

| Lane Use and Performance |                                |         |                                 |         |               |                     |                    |                         |                     |                          |                     |                |                     |                     |                      |
|--------------------------|--------------------------------|---------|---------------------------------|---------|---------------|---------------------|--------------------|-------------------------|---------------------|--------------------------|---------------------|----------------|---------------------|---------------------|----------------------|
|                          | Demand Flows<br>Total<br>veh/h | HV<br>% | Arrival Flows<br>Total<br>veh/h | HV<br>% | Cap.<br>veh/h | Deg.<br>Satn<br>v/c | Lane<br>Util.<br>% | Average<br>Delay<br>sec | Level of<br>Service | 95% Back of Queue<br>Veh | Dist<br>m           | Lane<br>Config | Lane<br>Length<br>m | Cap.<br>Adj.<br>%   | Prob.<br>Block.<br>% |
| South: Bærumsveien Øst   |                                |         |                                 |         |               |                     |                    |                         |                     |                          |                     |                |                     |                     |                      |
| Lane 1 <sup>d</sup>      | 613                            | 11,8    | 600                             | 11,8    | 477           | 1,258               | 100                | 255,7                   | LOS F               | 34,2 <sup>N4</sup>       | 263,4 <sup>N4</sup> | Full           | 106                 | -40,5 <sup>N3</sup> | 49,9                 |
| Lane 2                   | 274                            | 11,8    | 268                             | 11,8    | 595           | 0,450               | 100                | 9,3                     | LOS A               | 3,1                      | 23,6                | Short          | 16                  | 0,0                 | NA                   |
| Approach                 | 886                            | 11,8    | 868 <sup>N1</sup>               | 11,8    |               | 1,258               |                    | 179,6                   | LOS F               | 34,2                     | 263,4               |                |                     |                     |                      |
| East: Bærumsdiagonalen   |                                |         |                                 |         |               |                     |                    |                         |                     |                          |                     |                |                     |                     |                      |
| Lane 1 <sup>d</sup>      | 363                            | 11,8    | 363                             | 11,8    | 584           | 0,621               | 100                | 12,3                    | LOS B               | 4,5                      | 34,7                | Full           | 500                 | -17,4 <sup>N3</sup> | 0,0                  |
| Lane 2                   | 602                            | 11,8    | 602                             | 11,8    | 1775          | 0,339               | 55 <sup>6</sup>    | 3,3                     | LOS A               | 0,0                      | 0,0                 | Full           | 500                 | 0,0                 | 0,0                  |
| Approach                 | 964                            | 11,8    | 964                             | 11,8    |               | 0,621               |                    | 6,7                     | LOS A               | 4,5                      | 34,7                |                |                     |                     |                      |
| West: Bærumsveien V      |                                |         |                                 |         |               |                     |                    |                         |                     |                          |                     |                |                     |                     |                      |
| Lane 1                   | 698                            | 11,8    | 387                             | 11,8    | 957           | 0,404               | 99 <sup>5</sup>    | 5,2                     | LOS A               | 2,8                      | 21,6                | Full           | 960                 | 0,0                 | 0,0                  |
| Lane 2 <sup>d</sup>      | 711                            | 11,8    | 394                             | 11,8    | 965           | 0,408               | 100                | 5,6                     | LOS A               | 2,8                      | 22,0                | Short          | 43                  | 0,0                 | NA                   |
| Approach                 | 1408                           | 11,8    | 781 <sup>N1</sup>               | 11,8    |               | 0,408               |                    | 5,4                     | LOS A               | 2,8                      | 22,0                |                |                     |                     |                      |
| Intersection             | 3259                           | 11,8    | 2613 <sup>N1</sup>              | 14,7    |               | 1,258               |                    | 63,7                    | LOS E               | 34,2                     | 263,4               |                |                     |                     |                      |

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

Roundabout LOS Method: Same as Signalised Intersections.

Lane LOS values are based on average delay per lane.

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

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

<sup>5</sup> Lane under-utilisation found by the program

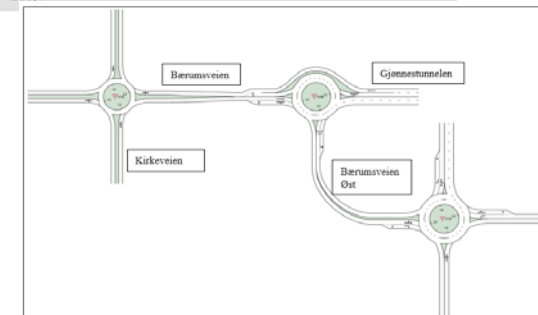
<sup>6</sup> Lane under-utilisation due to downstream effects

<sup>d</sup> Dominant lane on roundabout approach

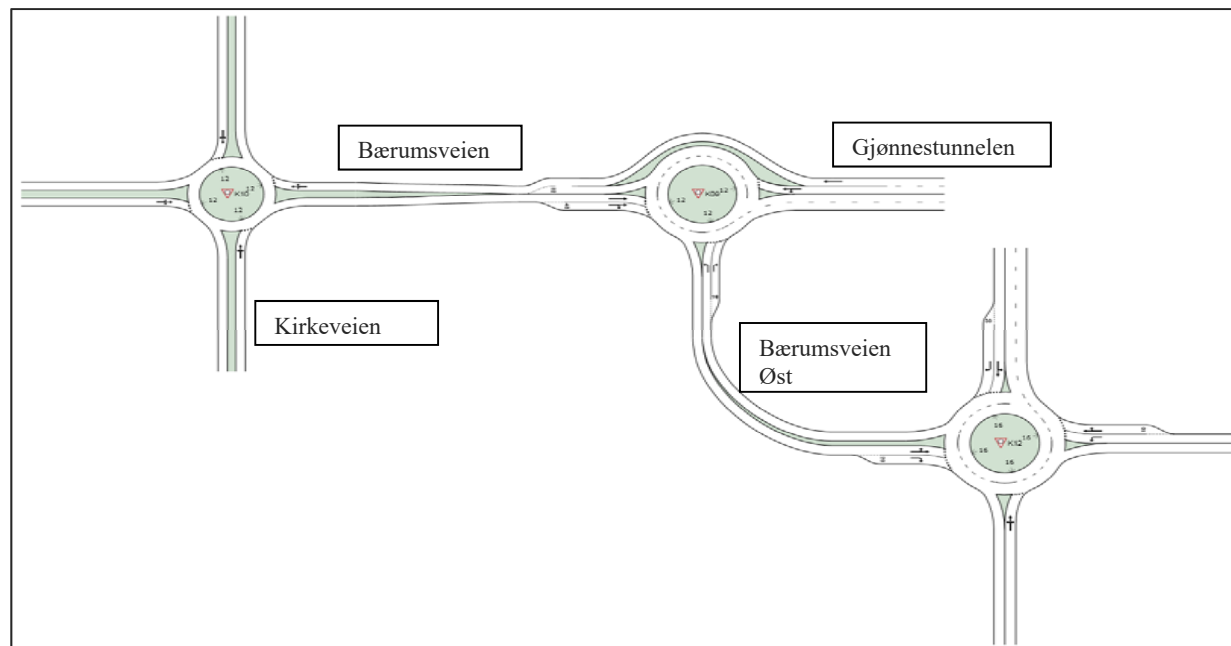
<sup>N1</sup> Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

<sup>N3</sup> Capacity Adjustment due to downstream lane blockage determined by the program.

<sup>N4</sup> Average back of queue has been restricted to the available queue storage space.

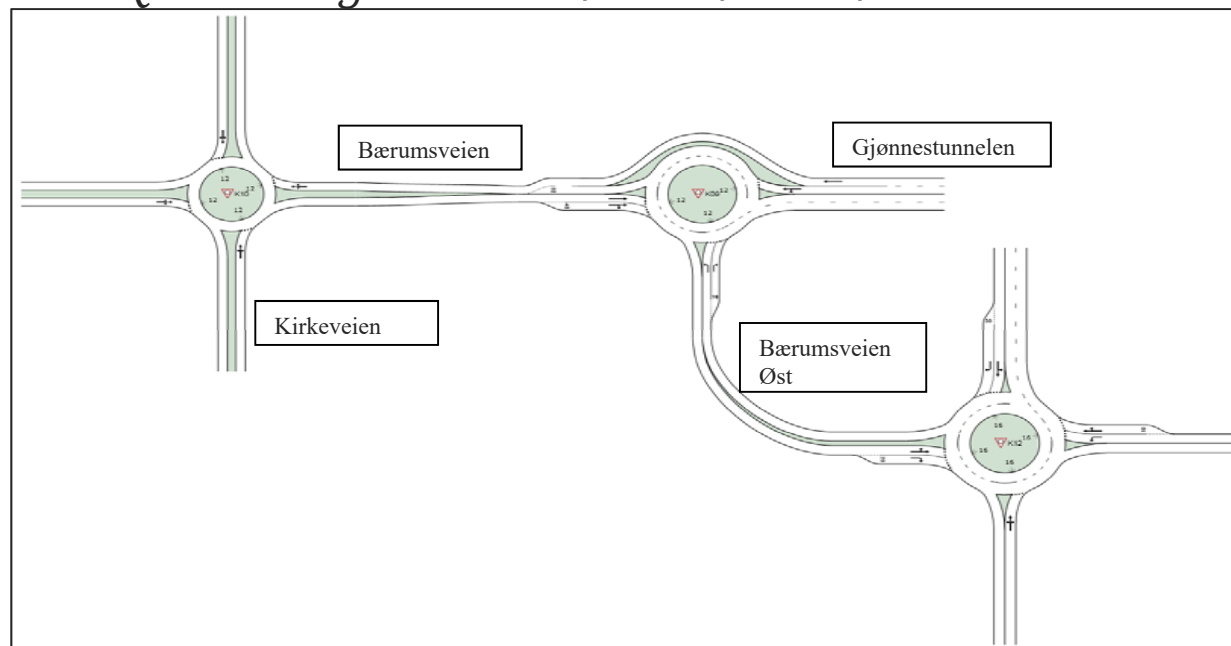


## Situation: Layout



## Situation: Layout

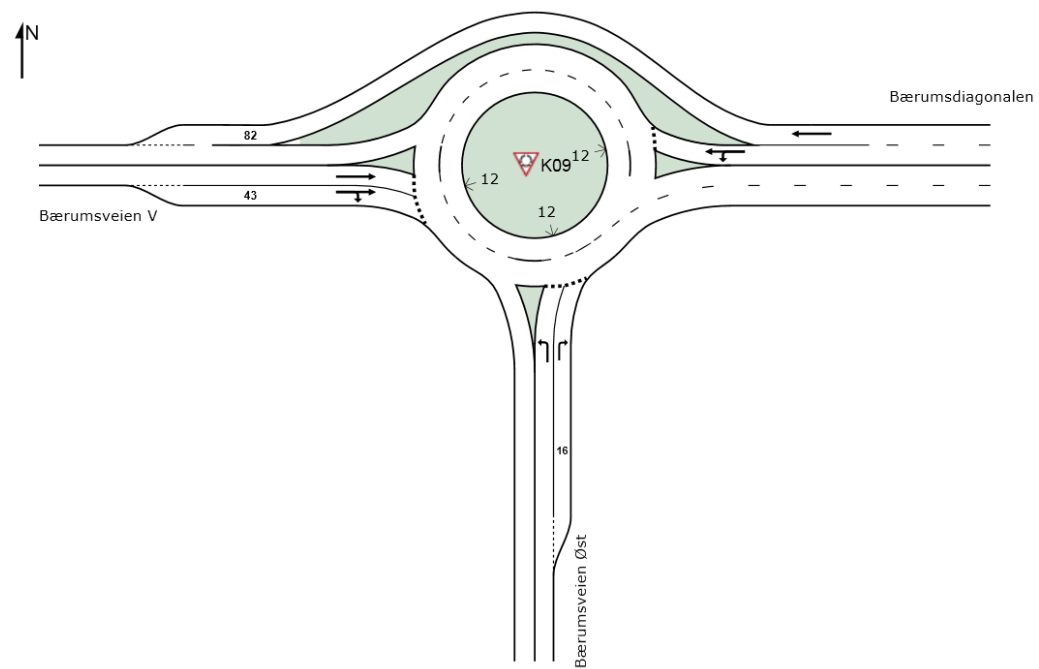
*Queue length = 960 + 263 + 696 + 317 = 2 236 m*



## SITE LAYOUT

 **Site: K09** [K9 - etm - Alt 1 - 30 %]

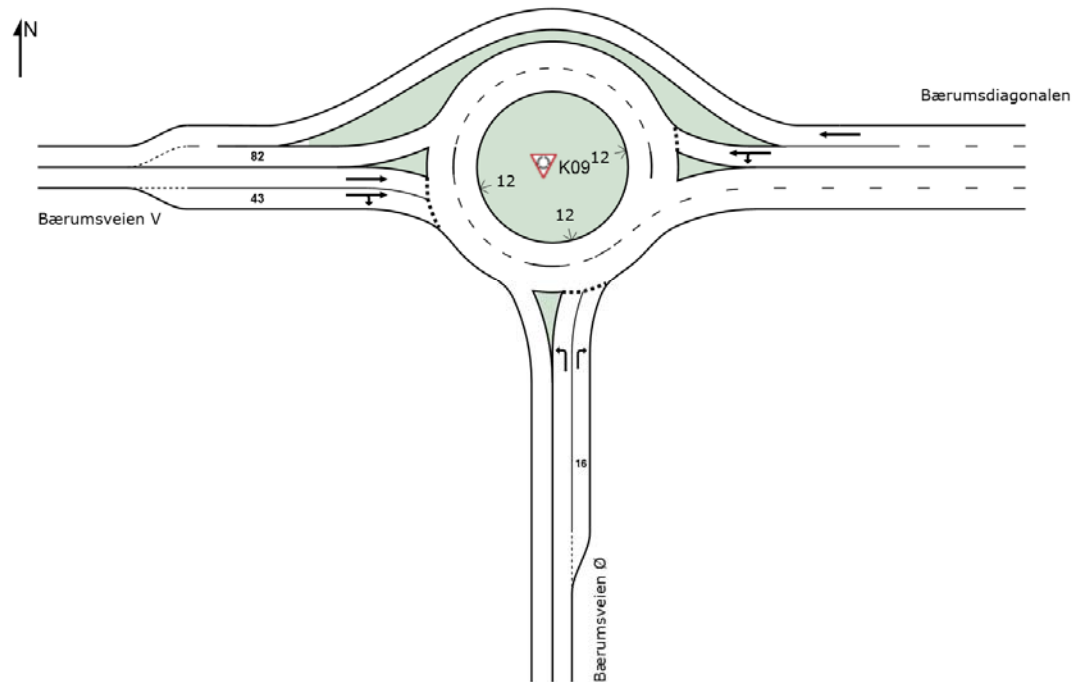
Rundkjøring - Gjønn  
 Site Category: (None)  
 Roundabout



## SITE LAYOUT

 **Site: K09** [K9 - etm - Alt 1 - to felt fra S]

Rundkjøring - Gjønnen  
 Site Category: (None)  
 Roundabout



## LANE SUMMARY

Site: K09 [K9 - etm - Alt 1 - 30 %]

Network: N101 [ETM - K9 & K10 & K12]

Rundkjøring - Gjøannes  
Site Category: (None)  
Roundabout

| Lane Use and Performance |              |      |                    |      |                  |               |                  |                   |                  |                    |                     |             |               |             |                |  |
|--------------------------|--------------|------|--------------------|------|------------------|---------------|------------------|-------------------|------------------|--------------------|---------------------|-------------|---------------|-------------|----------------|--|
|                          | Demand Flows |      | Arrival Flows      |      | Cap. veh/h       | Deg. Satn v/c | Lane Util. %     | Average Delay sec | Level of Service | 95% Back of Queue  |                     | Lane Config | Lane Length m | Cap. Adj. % | Prob. Block. % |  |
|                          | Total veh/h  | HV % | Total veh/h        | HV % |                  |               |                  |                   |                  | Veh                | Dist m              |             |               |             |                |  |
|                          |              |      |                    |      |                  |               |                  |                   |                  |                    |                     |             |               |             |                |  |
| South: Bærumsveien Øst   |              |      |                    |      |                  |               |                  |                   |                  |                    |                     |             |               |             |                |  |
| Lane 1 <sup>d</sup>      | 613          | 11,8 | 609                | 11,8 | 675 <sup>1</sup> | 0,902         | 100              | 26,9              | LOS C            | 15,5               | 119,3               | Full        | 106           | 0,0         | 8,6            |  |
| Lane 2                   | 274          | 11,8 | 272                | 11,8 | 590              | 0,461         | 100              | 9,5               | LOS A            | 3,2                | 24,4                | Short       | 16            | 0,0         | NA             |  |
| Approach                 | 886          | 11,8 | 881 <sup>N1</sup>  | 11,8 |                  | 0,902         |                  | 21,5              | LOS C            | 15,5               | 119,3               |             |               |             |                |  |
| East: Bærumsdiagonalen   |              |      |                    |      |                  |               |                  |                   |                  |                    |                     |             |               |             |                |  |
| Lane 1 <sup>d</sup>      | 248          | 11,8 | 248                | 11,8 | 617              | 0,402         | 100 <sup>5</sup> | 12,1              | LOS B            | 2,8                | 21,9                | Full        | 500           | 0,0         | 0,0            |  |
| Lane 2                   | 716          | 11,8 | 716                | 11,8 | 1775             | 0,403         | 100              | 3,3               | LOS A            | 48,3 <sup>N5</sup> | 372,4 <sup>N5</sup> | Full        | 500           | 0,0         | 22,2           |  |
| Approach                 | 964          | 11,8 | 964                | 11,8 |                  | 0,403         |                  | 5,6               | LOS A            | 48,3               | 372,4               |             |               |             |                |  |
| West: Bærumsveien V      |              |      |                    |      |                  |               |                  |                   |                  |                    |                     |             |               |             |                |  |
| Lane 1                   | 698          | 11,8 | 388                | 11,8 | 951              | 0,408         | 99 <sup>5</sup>  | 5,2               | LOS A            | 2,8                | 21,8                | Full        | 960           | 0,0         | 0,0            |  |
| Lane 2 <sup>d</sup>      | 711          | 11,8 | 395                | 11,8 | 959              | 0,412         | 100              | 5,6               | LOS A            | 2,9                | 22,1                | Short       | 43            | 0,0         | NA             |  |
| Approach                 | 1408         | 11,8 | 783 <sup>N1</sup>  | 11,8 |                  | 0,412         |                  | 5,4               | LOS A            | 2,9                | 22,1                |             |               |             |                |  |
| Intersection             | 3259         | 11,8 | 2629 <sup>N1</sup> | 14,6 |                  | 0,902         |                  | 10,9              | LOS B            | 48,3               | 372,4               |             |               |             |                |  |

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

Roundabout LOS Method: Same as Signalised Intersections.

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Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

<sup>1</sup> Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.

<sup>5</sup> Lane under-utilisation found by the program

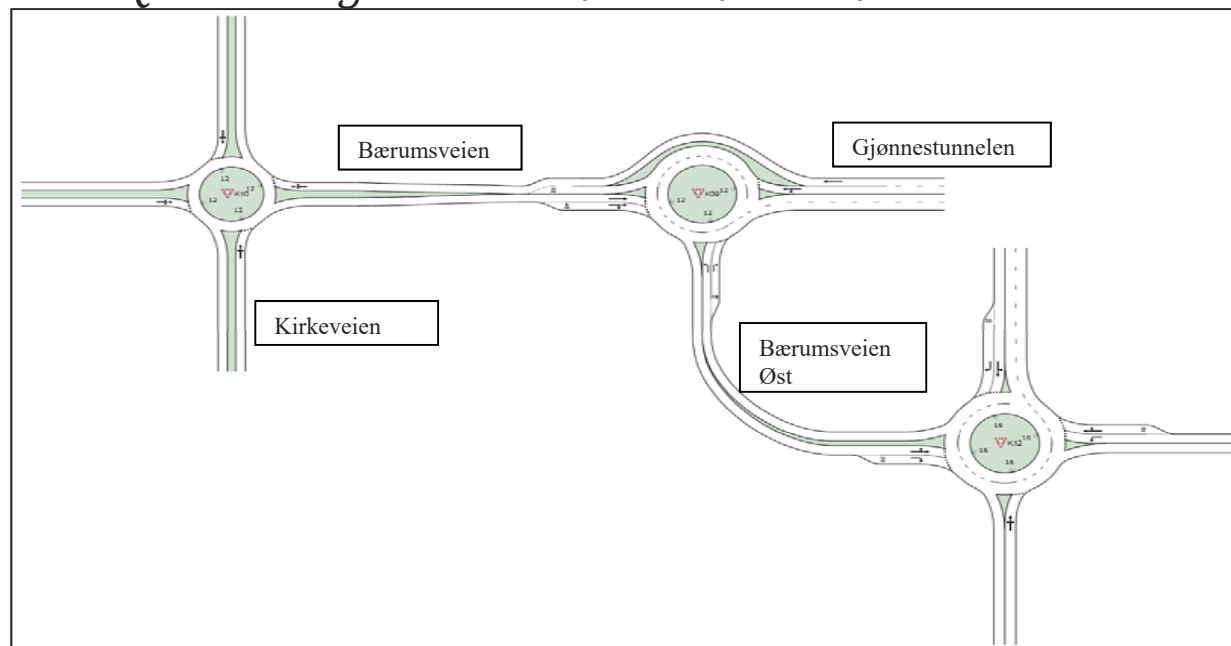
<sup>d</sup> Dominant lane on roundabout approach

<sup>N1</sup> Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

<sup>N5</sup> Continuous Lane results determined by Back of Queue values of downstream lanes.

## Situation: Layout

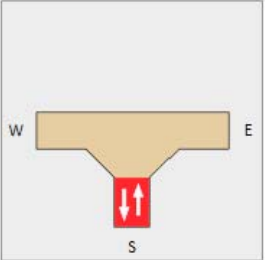
*Queue length = 960 + 375 + 119 + 313 = 1 767 m*



LANE GEOMETRY - K9 - etm - Alt 1 - 30 % - Copy

[Lane Configuration](#)
[Lane Disciplines](#)
[Lane Data](#)

Approach Selector

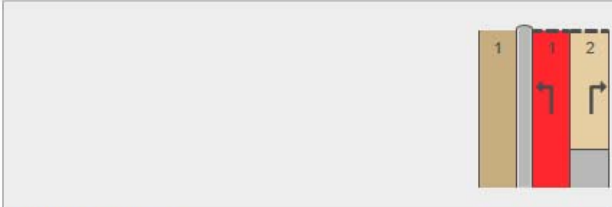


Bærumsveien Ø

Legend: Lane Selector

- Approach Lane
- Exit Lane
- Selected Lane/Island
- Strip Island/Short Lane

Lane Editor



South Approach Lane 1

← App Lan

Approach Lane Data

Basic Saturation Flow: NA

Lane Utilisation Ratio: Program

Saturation Speed: Program

Capacity Adjustment: -42.9 %

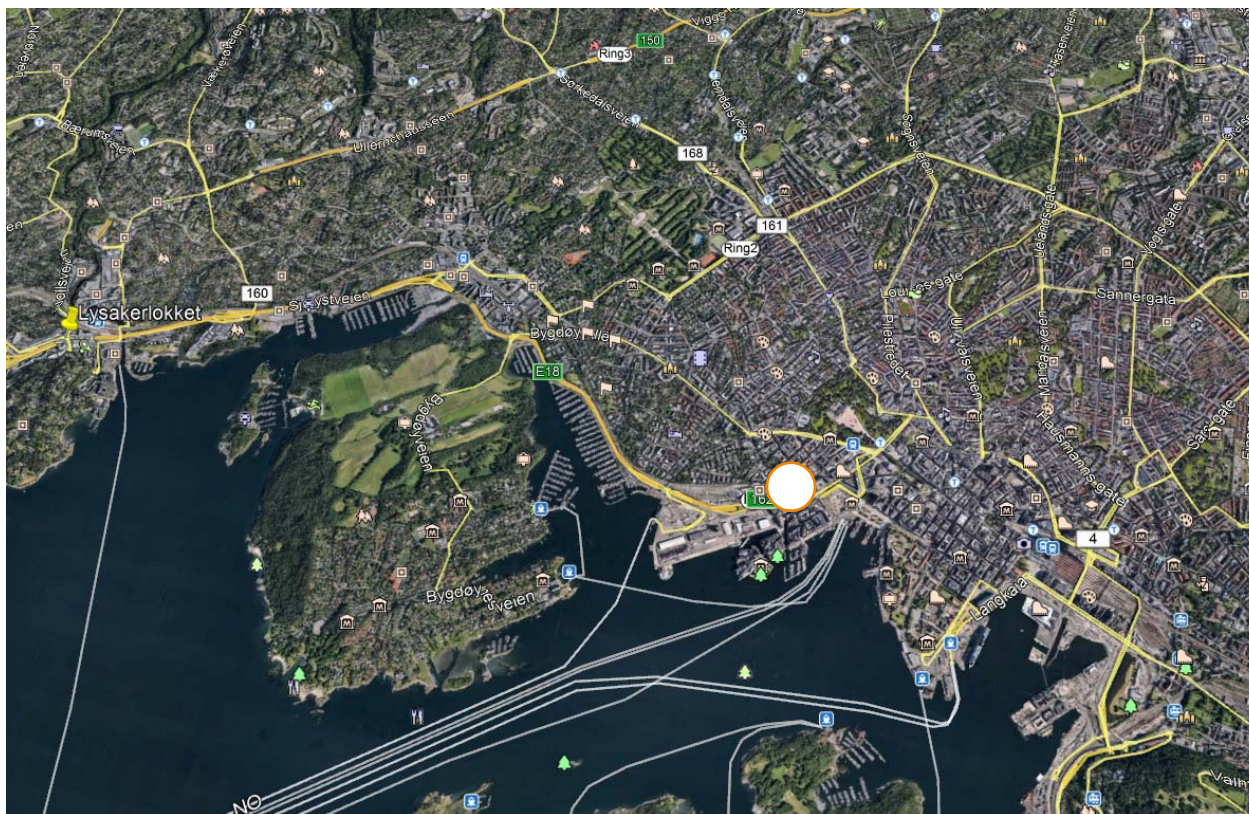
☒ Use Given Capacity Adjustment Value for Network Analysis

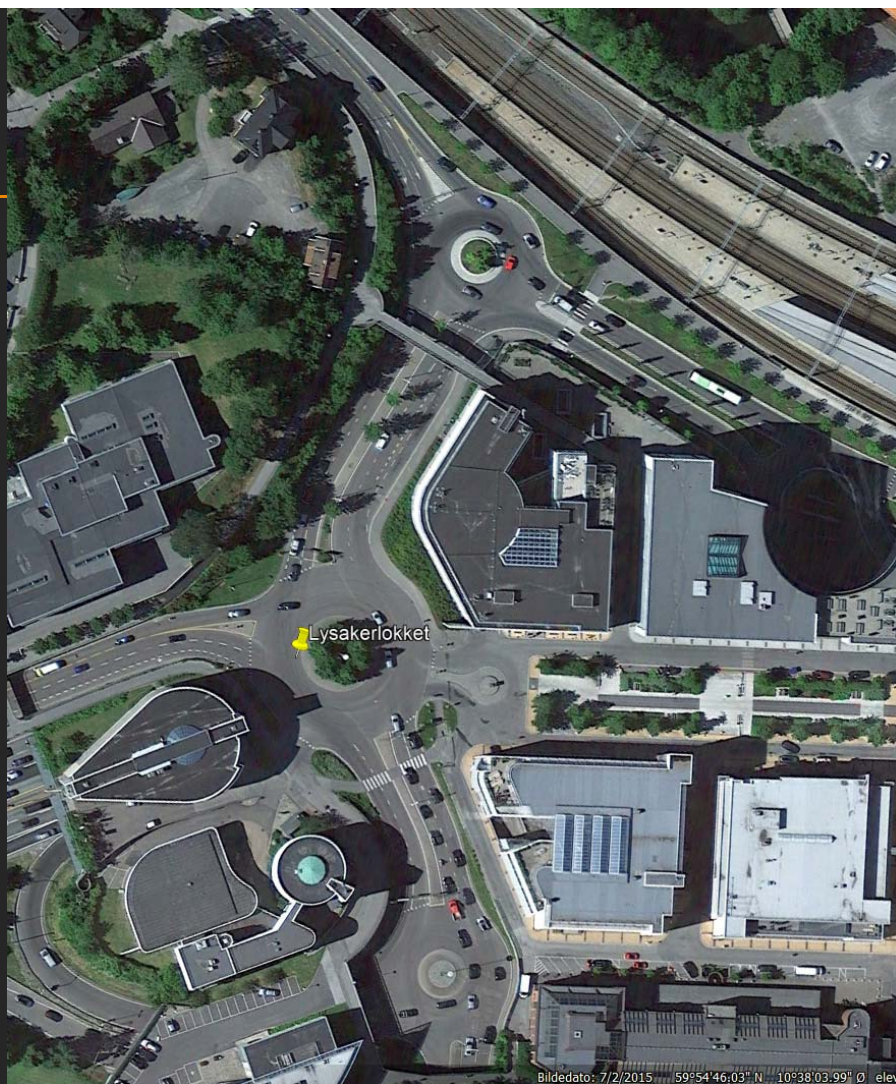
Roundabouts

Dominant Lane: Program

☐ Include Exclusive Slip/Bypass Lane in Entry Lane Count









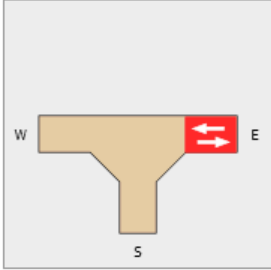


PEDESTRIANS - Kryss K2 - Morgen

Pedestrian Movements
Pedestrian Movement Data

Import Volume Data
Quick Input
View Display

Approach Selector



Rampar E18

Movement Definitions

Main Crossing

- ☒ None
- ☐ Full Crossing
- ☐ Staged Crossing

For Roundabouts, only the Staged Crossing option can be used. The Full Crossing option is not allowed since the approach and exit sides are treated separately.

Volume Data

No Pedestrian Movements exist in the East Approach.

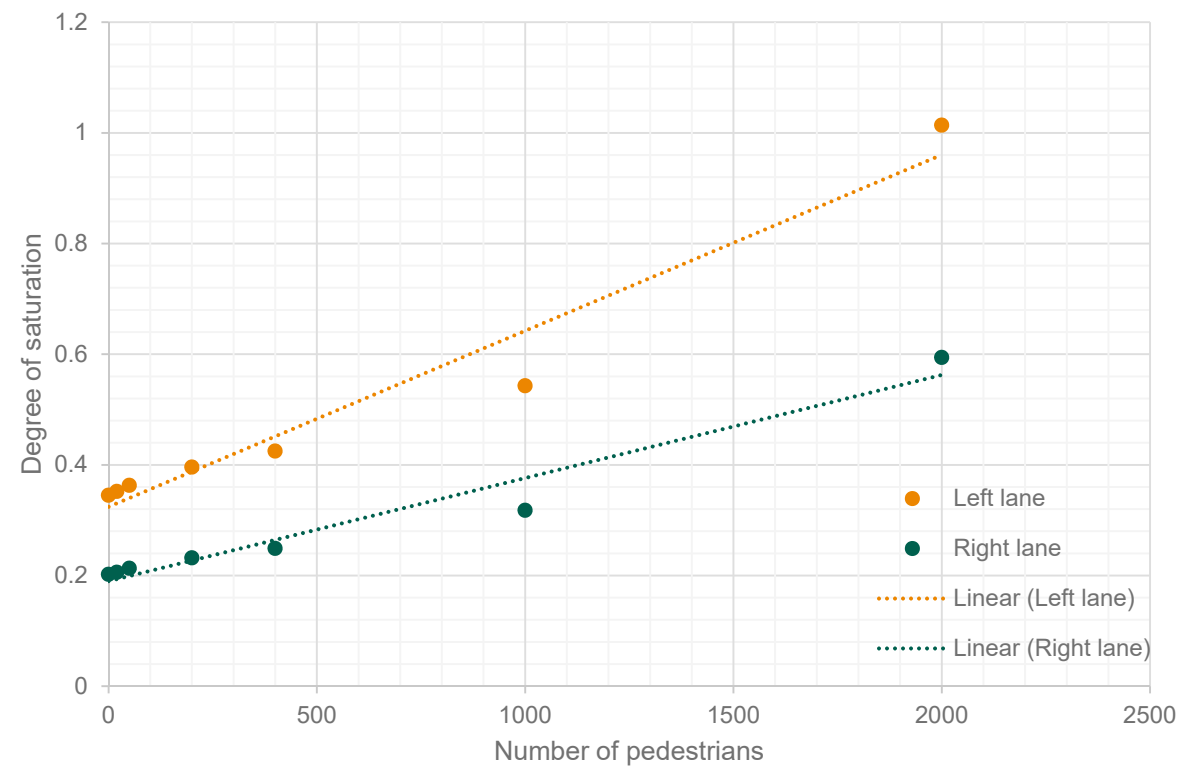
Unit Time for Volumes (60 minutes) and Peak Flow Period (60 minutes) set in the Volumes dialog apply to Pedestrian movements as well.

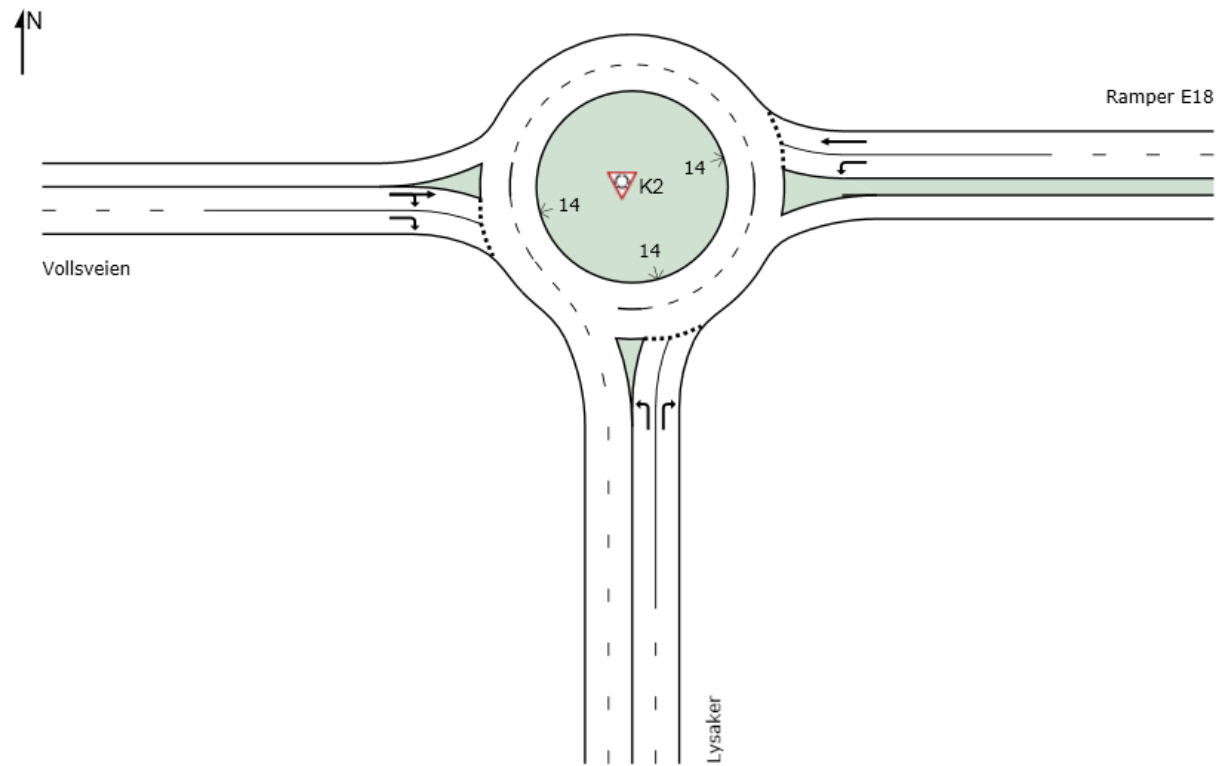
Dialog Tips

Help
OK
Cancel
Apply
Process Site

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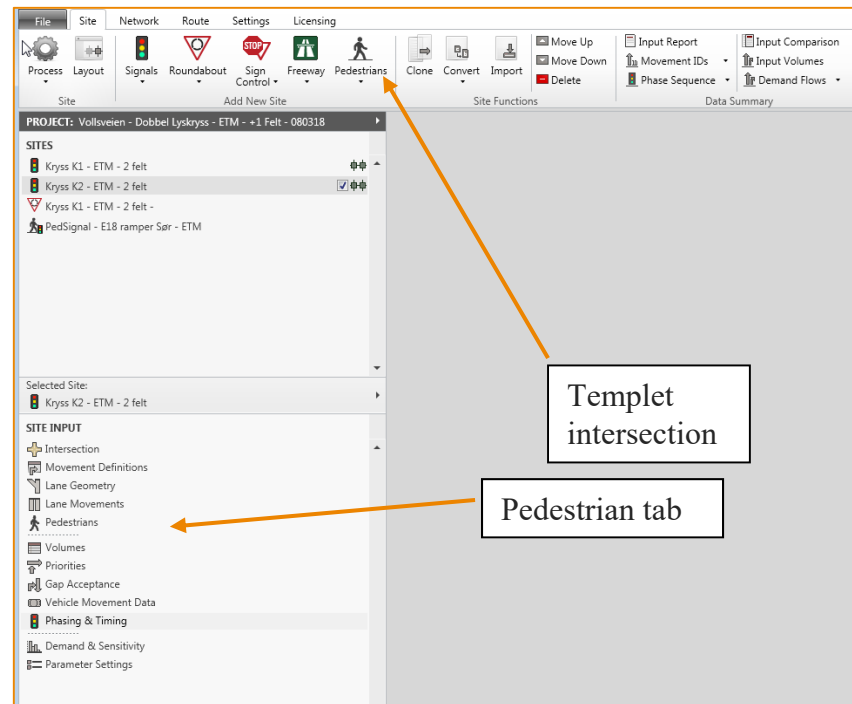
| <b>Number of pedestrians:</b> | <b>Degree of saturation:</b><br>(Left lane / right lane) |
|-------------------------------|--|
| 0                             | 0,345 / 0,202  |
| 20                            | 0,352 / 0,206  |
| 50                            | 0,363 / 0,213  |
| 200                           | 0,396 / 0,232  |
| 400                           | 0,425 / 0,249  |
| 1000                          | 0,543 / 0,318  |
| 2000                          | 1,014 / 0,594  |

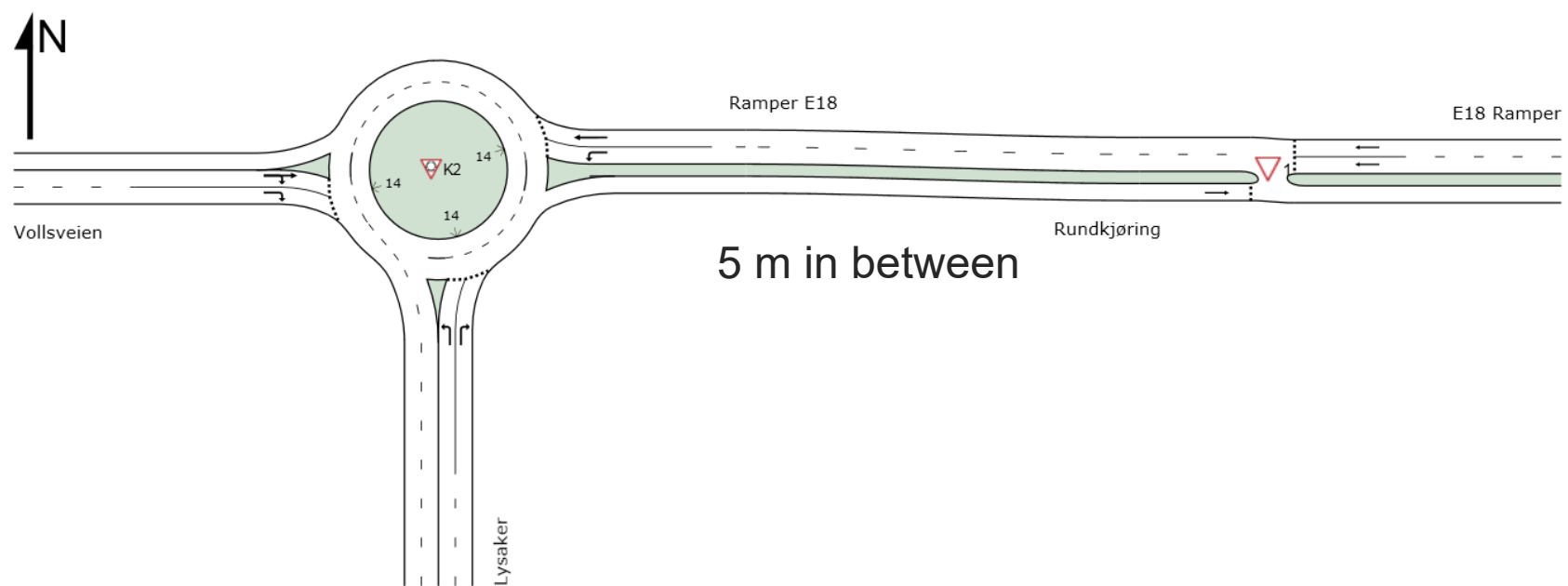




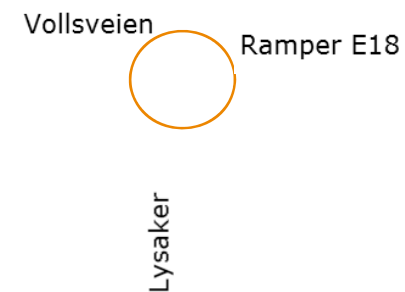
| Lane Use and Performance |                                |         |               |                     |                    |                         |                     |                          |           |                |                     |                   |                      |
|--------------------------|--------------------------------|---------|---------------|---------------------|--------------------|-------------------------|---------------------|--------------------------|-----------|----------------|---------------------|-------------------|----------------------|
|                          | Demand Flows<br>Total<br>veh/h | HV<br>% | Cap.<br>veh/h | Deg.<br>Satn<br>v/c | Lane<br>Util.<br>% | Average<br>Delay<br>sec | Level of<br>Service | 95% Back of Queue<br>Veh | Dist<br>m | Lane<br>Config | Lane<br>Length<br>m | Cap.<br>Adj.<br>% | Prob.<br>Block.<br>% |
| South: Lysaker           |                                |         |               |                     |                    |                         |                     |                          |           |                |                     |                   |                      |
| Lane 1                   | 166                            | 10,2    | 876           | 0,189               | 100                | 5,2                     | LOS A               | 1,1                      | 8,1       | Full           | 70                  | 0,0               | 0,0                  |
| Lane 2 <sup>d</sup>      | 237                            | 6,3     | 1011          | 0,234               | 100                | 2,6                     | LOS A               | 1,4                      | 10,6      | Full           | 70                  | 0,0               | 0,0                  |
| Approach                 | 403                            | 7,9     |               | 0,234               |                    | 3,7                     | LOS A               | 1,4                      | 10,6      |                |                     |                   |                      |
| East: Ramper E18         |                                |         |               |                     |                    |                         |                     |                          |           |                |                     |                   |                      |
| Lane 1 <sup>d</sup>      | 423                            | 5,7     | 996           | 0,425               | 100                | 4,1                     | LOS A               | 2,3                      | 16,5      | Full           | 300                 | 0,0               | 0,0                  |
| Lane 2                   | 176                            | 12,5    | 708           | 0,249               | 100                | 1,4                     | LOS A               | 1,1                      | 8,4       | Full           | 300                 | 0,0               | 0,0                  |
| Approach                 | 599                            | 7,7     |               | 0,425               |                    | 3,3                     | LOS A               | 2,3                      | 16,5      |                |                     |                   |                      |
| West: Vollsveien         |                                |         |               |                     |                    |                         |                     |                          |           |                |                     |                   |                      |
| Lane 1                   | 542                            | 4,0     | 915           | 0,593               | 100                | 5,0                     | LOS A               | 5,3                      | 38,5      | Full           | 200                 | 0,0               | 0,0                  |
| Lane 2 <sup>d</sup>      | 590                            | 2,9     | 995           | 0,593               | 100                | 4,9                     | LOS A               | 5,4                      | 38,6      | Full           | 200                 | 0,0               | 0,0                  |
| Approach                 | 1132                           | 3,4     |               | 0,593               |                    | 4,9                     | LOS A               | 5,4                      | 38,6      |                |                     |                   |                      |
| Intersection             | 2134                           | 5,5     |               | 0,593               |                    | 4,2                     | LOS A               | 5,4                      | 38,6      |                |                     |                   |                      |

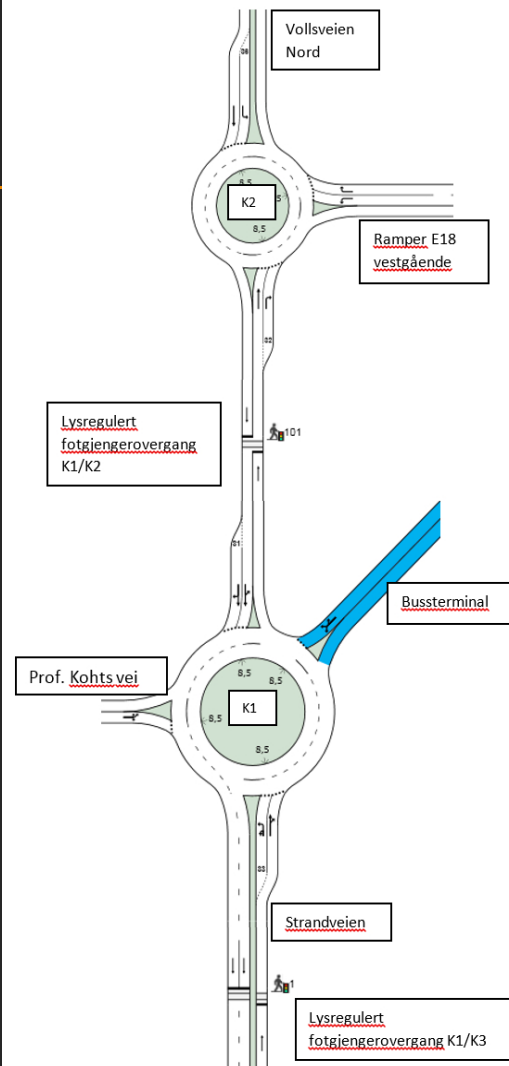






| Number of<br>pedestrians: | Cap. Adj % |               |            | Deg. Sat      |
|---------------------------|------------|---------------|------------|---------------|
|                           | Lysaker    | Ramper<br>E18 | Vollsveien | West / East   |
| 0                         | 0          | 0             | 0          | 0,205 / 0,216 |
| 20                        | -49,9 %    | -44,1         | -49,9 %    | 0,422 / 0,441 |
| 50                        | -49,9 %    | -49,9         | -49,9 %    | 0,438 / 0,438 |
| 200                       | -49,9 %    | -49,9         | -49,9 %    | 0,558 / 0,530 |
| 400                       | -49,9 %    | -49,9         | -49,9 %    | 0,690 / 0,730 |
| 1000                      | -49,9 %    | -49,9         | -49,9 %    | 1,483 / 1,586 |
| 2000                      | -49,9 %    | -49,9         | -49,9 %    | .....         |





## LANE SUMMARY

 Site: 2 [PedSignal - Vollsveien K1/K2 - Morgen]

 Network: N101 [Dobbelt rundkjøring - +1 Felt - Morgen - Signal]

New Site

Site Category: (None)

Pedestrian Crossing (Signals) - Fixed Time Isolated Cycle Time = 70 seconds (Site User-Given Cycle Time)

| Lane Use and Performance |                |         |                |         |               |                     |                    |                         |                     |                   |           |                |                     |                   |                      |
|--------------------------|----------------|---------|----------------|---------|---------------|---------------------|--------------------|-------------------------|---------------------|-------------------|-----------|----------------|---------------------|-------------------|----------------------|
|                          | Demand Flows   |         | Arrival Flows  |         | Cap.<br>veh/h | Deg.<br>Satn<br>v/c | Lane<br>Util.<br>% | Average<br>Delay<br>sec | Level of<br>Service | 95% Back of Queue |           | Lane<br>Config | Lane<br>Length<br>m | Cap.<br>Adj.<br>% | Prob.<br>Block.<br>% |
|                          | Total<br>veh/h | HV<br>% | Total<br>veh/h | HV<br>% |               |                     |                    |                         |                     | Veh               | Dist<br>m |                |                     |                   |                      |
|                          |                |         |                |         |               |                     |                    |                         |                     |                   |           |                |                     |                   |                      |
| South: Kryss K1          |                |         |                |         |               |                     |                    |                         |                     |                   |           |                |                     |                   |                      |
| Lane 1                   | 304            | 7,9     | 304            | 7,9     | 1473          | 0,206               | 100                | 2,0                     | LOS A               | 2,6               | 19,6      | Full           | 55                  | 0,0               | 0,0                  |
| Approach                 | 304            | 7,9     | 304            | 7,9     |               | 0,206               |                    | 2,0                     | LOS A               | 2,6               | 19,6      |                |                     |                   |                      |
| North: Kryss K2          |                |         |                |         |               |                     |                    |                         |                     |                   |           |                |                     |                   |                      |
| Lane 1                   | 826            | 8,8     | 826            | 8,8     | 1464          | 0,564               | 100                | 3,1                     | LOS A               | 10,8              | 81,2      | Full           | 55                  | 0,0               | 40,7                 |
| Approach                 | 826            | 8,8     | 826            | 8,8     |               | 0,564               |                    | 3,1                     | LOS A               | 10,8              | 81,2      |                |                     |                   |                      |
| Intersection             | 1130           | 8,6     | 1130           | 8,6     |               | 0,564               |                    | 2,8                     | LOS A               | 10,8              | 81,2      |                |                     |                   |                      |

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

Lane LOS values are based on average delay per lane.

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

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

## LANE SUMMARY

 Site: 2 [PedSignal - Vollsveien K1/K2 - Morgen]

 Network: N101 [Dobbelt rundkjøring - +1 Felt - Morgen - Signal]

New Site

Site Category: (None)

Pedestrian Crossing (Signals) - Fixed Time Isolated Cycle Time = 150 seconds (Site User-Given Cycle Time)

| Lane Use and Performance |                |         |                |         |               |                     |                    |                         |                     |                   |           |                |                     |                   |                      |  |
|--------------------------|----------------|---------|----------------|---------|---------------|---------------------|--------------------|-------------------------|---------------------|-------------------|-----------|----------------|---------------------|-------------------|----------------------|--|
|                          | Demand Flows   |         | Arrival Flows  |         | Cap.<br>veh/h | Deg.<br>Satn<br>v/c | Lane<br>Util.<br>% | Average<br>Delay<br>sec | Level of<br>Service | 95% Back of Queue |           | Lane<br>Config | Lane<br>Length<br>m | Cap.<br>Adj.<br>% | Prob.<br>Block.<br>% |  |
|                          | Total<br>veh/h | HV<br>% | Total<br>veh/h | HV<br>% |               |                     |                    |                         |                     | Veh               | Dist<br>m |                |                     |                   |                      |  |
|                          |                |         |                |         |               |                     |                    |                         |                     |                   |           |                |                     |                   |                      |  |
| South: Kryss K1          |                |         |                |         |               |                     |                    |                         |                     |                   |           |                |                     |                   |                      |  |
| Lane 1                   | 304            | 7,9     | 304            | 7,9     | 1674          | 0,182               | 100                | 1,1                     | LOS A               | 2,7               | 20,5      | Full           | 55                  | 0,0               | 0,0                  |  |
| Approach                 | 304            | 7,9     | 304            | 7,9     |               | 0,182               |                    | 1,1                     | LOS A               | 2,7               | 20,5      |                |                     |                   |                      |  |
| North: Kryss K2          |                |         |                |         |               |                     |                    |                         |                     |                   |           |                |                     |                   |                      |  |
| Lane 1                   | 826            | 8,8     | 826            | 8,8     | 1664          | 0,496               | 100                | 1,6                     | LOS A               | 11,2              | 84,6      | Full           | 55                  | 0,0               | 44,5                 |  |
| Approach                 | 826            | 8,8     | 826            | 8,8     |               | 0,496               |                    | 1,6                     | LOS A               | 11,2              | 84,6      |                |                     |                   |                      |  |
| Intersection             | 1130           | 8,6     | 1130           | 8,6     |               | 0,496               |                    | 1,5                     | LOS A               | 11,2              | 84,6      |                |                     |                   |                      |  |

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

Lane LOS values are based on average delay per lane.

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

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

## LANE SUMMARY

 Site: 2 [PedSignal - Vollsveien K1/K2 - Morgen]

 Network: N101 [Dobbelt rundkjøring - +1 Felt - Morgen - Signal]

New Site

Site Category: (None)

Pedestrian Crossing (Signals) - Fixed Time Isolated

Cycle Time = 40 seconds (Site User-Given Cycle Time)

| Lane Use and Performance |                |         |                |         |               |                     |                    |                         |                     |                   |           |                |                     |                   |                      |  |
|--------------------------|----------------|---------|----------------|---------|---------------|---------------------|--------------------|-------------------------|---------------------|-------------------|-----------|----------------|---------------------|-------------------|----------------------|--|
|                          | Demand Flows   |         | Arrival Flows  |         | Cap.<br>veh/h | Deg.<br>Satn<br>v/c | Lane<br>Util.<br>% | Average<br>Delay<br>sec | Level of<br>Service | 95% Back of Queue |           | Lane<br>Config | Lane<br>Length<br>m | Cap.<br>Adj.<br>% | Prob.<br>Block.<br>% |  |
|                          | Total<br>veh/h | HV<br>% | Total<br>veh/h | HV<br>% |               |                     |                    |                         |                     | Veh               | Dist<br>m |                |                     |                   |                      |  |
|                          |                |         |                |         |               |                     |                    |                         |                     |                   |           |                |                     |                   |                      |  |
| South: Kryss K1          |                |         |                |         |               |                     |                    |                         |                     |                   |           |                |                     |                   |                      |  |
| Lane 1                   | 304            | 7,9     | 304            | 7,9     | 1171          | 0,260               | 100                | 3,7                     | LOS A               | 2,7               | 20,1      | Full           | 55                  | 0,0               | 0,0                  |  |
| Approach                 | 304            | 7,9     | 304            | 7,9     |               | 0,260               |                    | 3,7                     | LOS A               | 2,7               | 20,1      |                |                     |                   |                      |  |
| North: Kryss K2          |                |         |                |         |               |                     |                    |                         |                     |                   |           |                |                     |                   |                      |  |
| Lane 1                   | 826            | 8,8     | 826            | 8,8     | 1165          | 0,709               | 100                | 6,3                     | LOS A               | 11,7              | 88,1      | Full           | 55                  | 0,0               | 48,2                 |  |
| Approach                 | 826            | 8,8     | 826            | 8,8     |               | 0,709               |                    | 6,3                     | LOS A               | 11,7              | 88,1      |                |                     |                   |                      |  |
| Intersection             | 1130           | 8,6     | 1130           | 8,6     |               | 0,709               |                    | 5,6                     | LOS A               | 11,7              | 88,1      |                |                     |                   |                      |  |

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

Lane LOS values are based on average delay per lane.

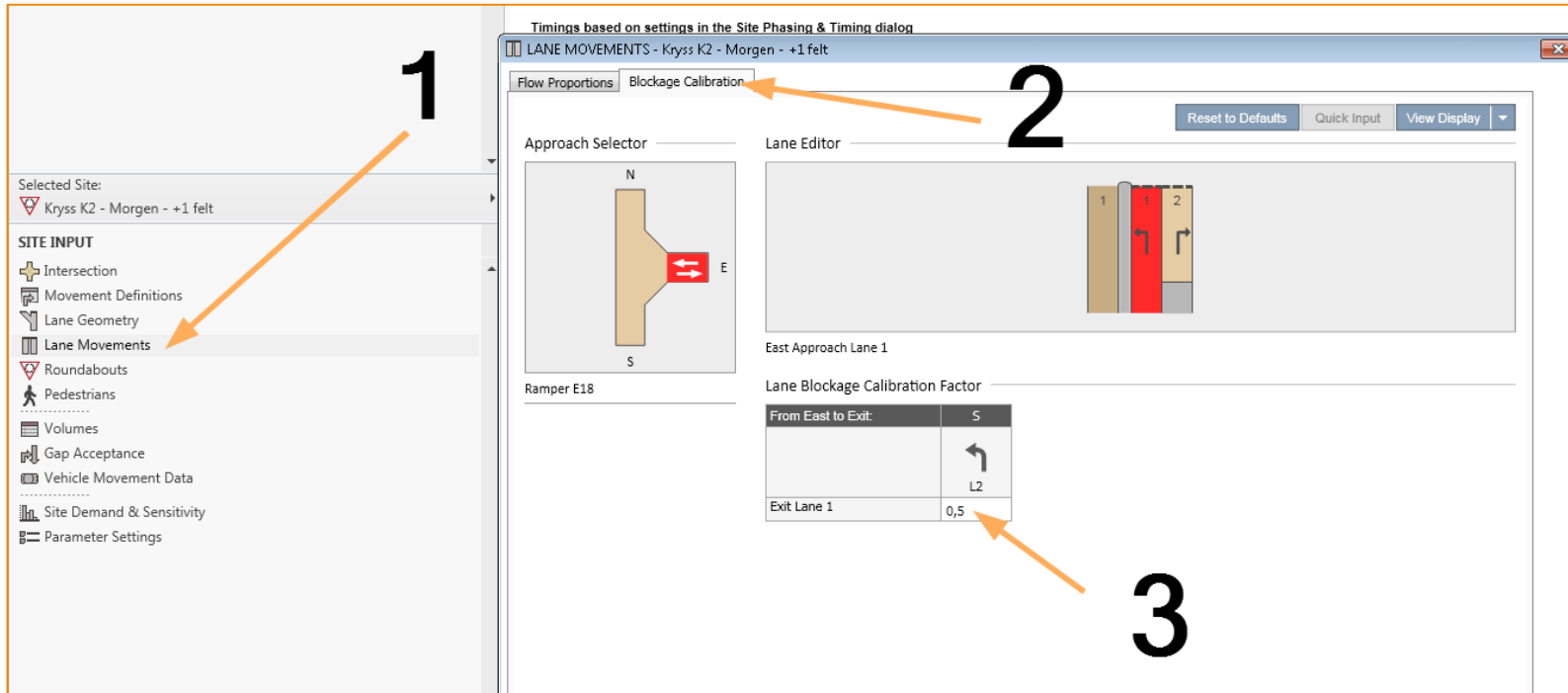
Intersection and Approach LOS values are based on average delay for all lanes.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

- *Lane Movements – Blockage Calibration*



Timings based on settings in the Site Phasing & Timing dialog

LANE MOVEMENTS - Kryss K2 - Morgen - +1 felt

Flow Proportions | Blockage Calibration

Reset to Defaults Quick Input View Display

Approach Selector

East Approach Lane 1

Lane Blockage Calibration Factor

| From East to Exit: | S   |
|--------------------|-----|
|                    | L2  |
| Exit Lane 1        | 0,5 |























