

# How to Guide: Use NeXTA Visualization Features

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Xuesong Zhou [xzhou74@asu.edu](mailto:xzhou74@asu.edu)

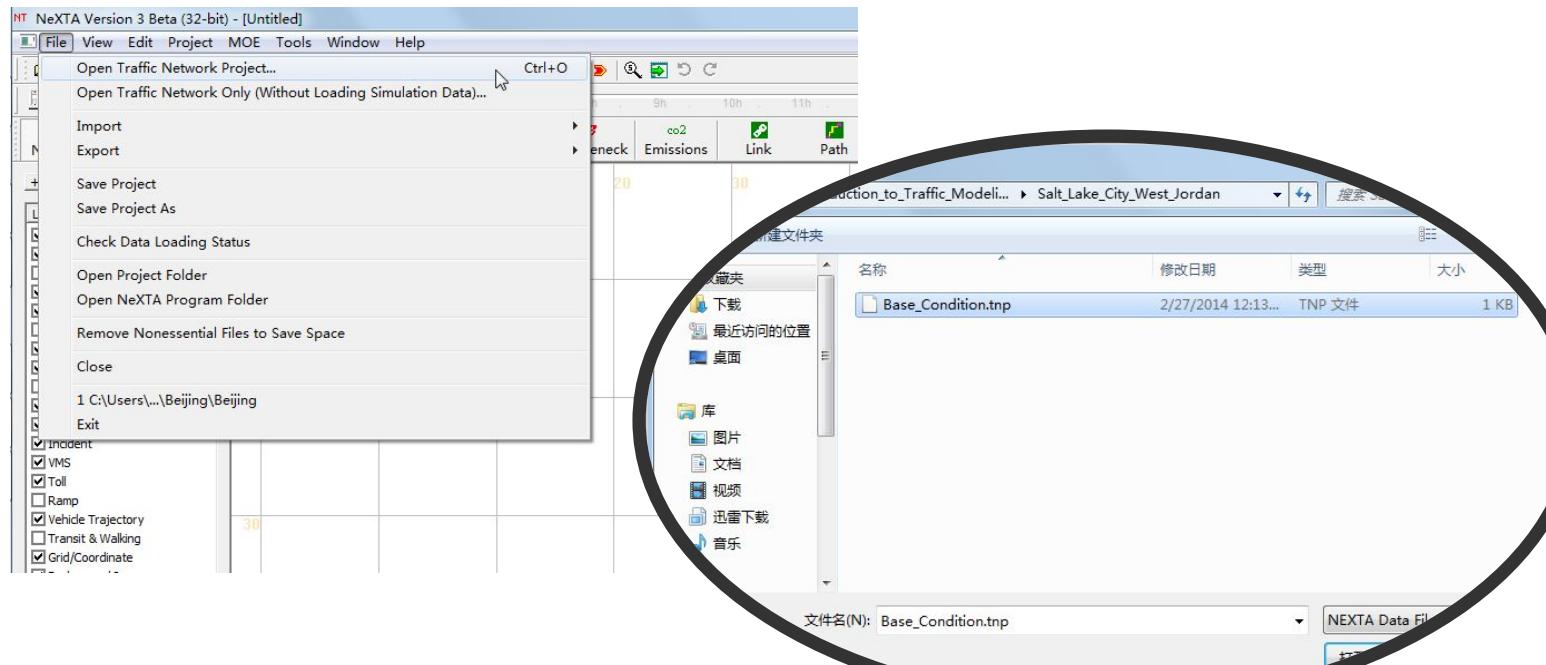
# How to open a data set?

1

Name	Date modified	Type	Size
NCSnet_fw.dll	1/11/2013 9:42 AM	Application extens...	60 KB
NCSEcw_fw.dll	1/11/2013 9:42 AM	Application extens...	1,136 KB
NCSEcwC_fw.dll	1/11/2013 9:42 AM	Application extens...	68 KB
NCSUtil_fw.dll	1/11/2013 9:42 AM	Application extens...	148 KB
netcdf.dll	1/11/2013 9:42 AM	Application extens...	200 KB
NEXTA Data Structure_for_RAS	1/11/2013 9:42 AM	Microsoft Word D...	102 KB
NT NEXTA_32	1/11/2013 9:42 AM	Application	2,484 KB
NT NEXTA_64	1/11/2013 9:42 AM	Application	3,042 KB
NEXTA_Settings	1/11/2013 12:41 PM	Configuration sett...	1 KB
ODME_settings	1/11/2013 9:42 AM	Text Document	1 KB
ogdi_32b1.dll	1/11/2013 9:42 AM	Application extens...	120 KB
ogr_LIBKML.dll	1/11/2013 9:42 AM	Application extens...	536 KB
ogr_wrap.dll	1/11/2013 9:42 AM	Application extens...	72 KB
osr_wrap.dll	1/11/2013 9:42 AM	Application extens...	52 KB
PhaseSettings	1/11/2013 9:42 AM	Configuration sett...	3 KB
proj.dll	1/11/2013 9:42 AM	Application extens...	252 KB
pthread.dll	1/11/2013 9:42 AM	Application extens...	25 KB
python23.dll	1/11/2013 9:42 AM	Application extens...	953 KB
QEM_log	1/11/2013 9:42 AM	Microsoft Excel C...	217 KB
QEM_SIG	1/11/2013 9:42 AM	Microsoft Excel 97...	475 KB

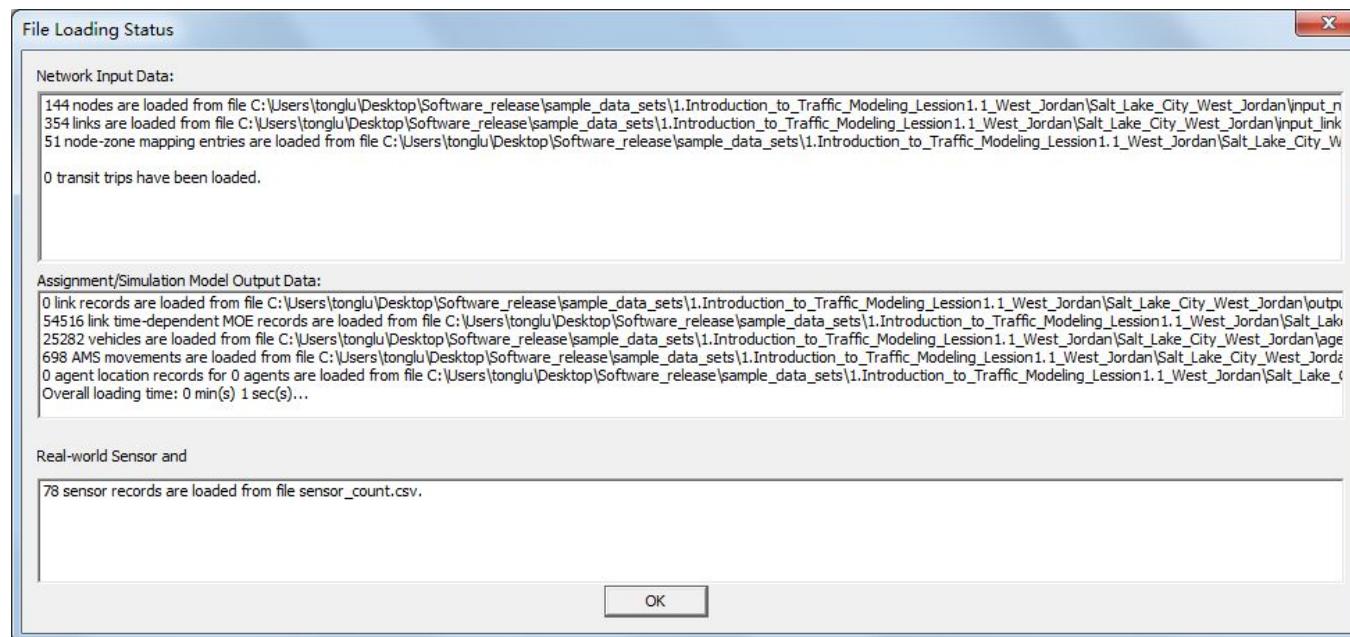
# How to open a data set?

2

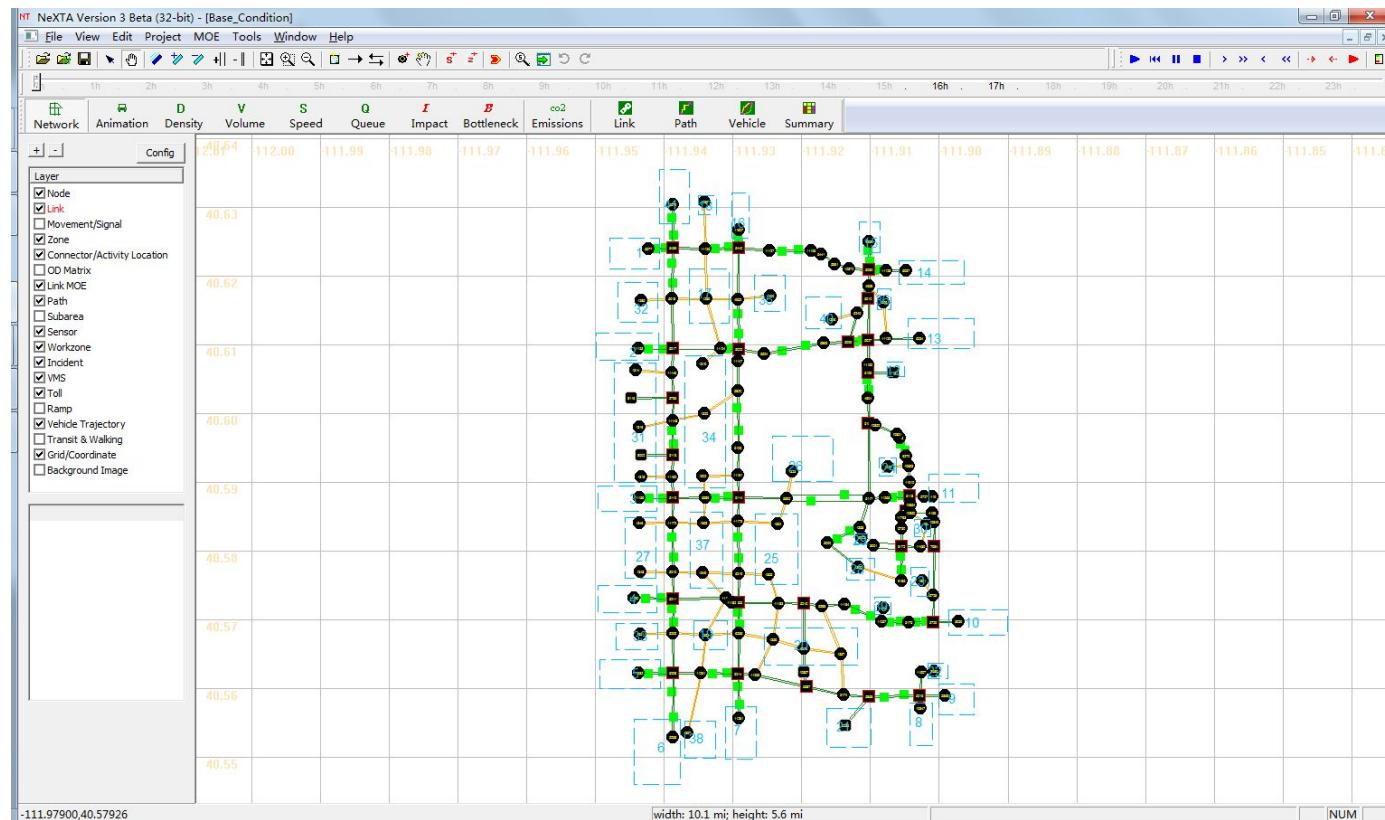


# How to open a data set?

3



# How to open a data set?



# Outline

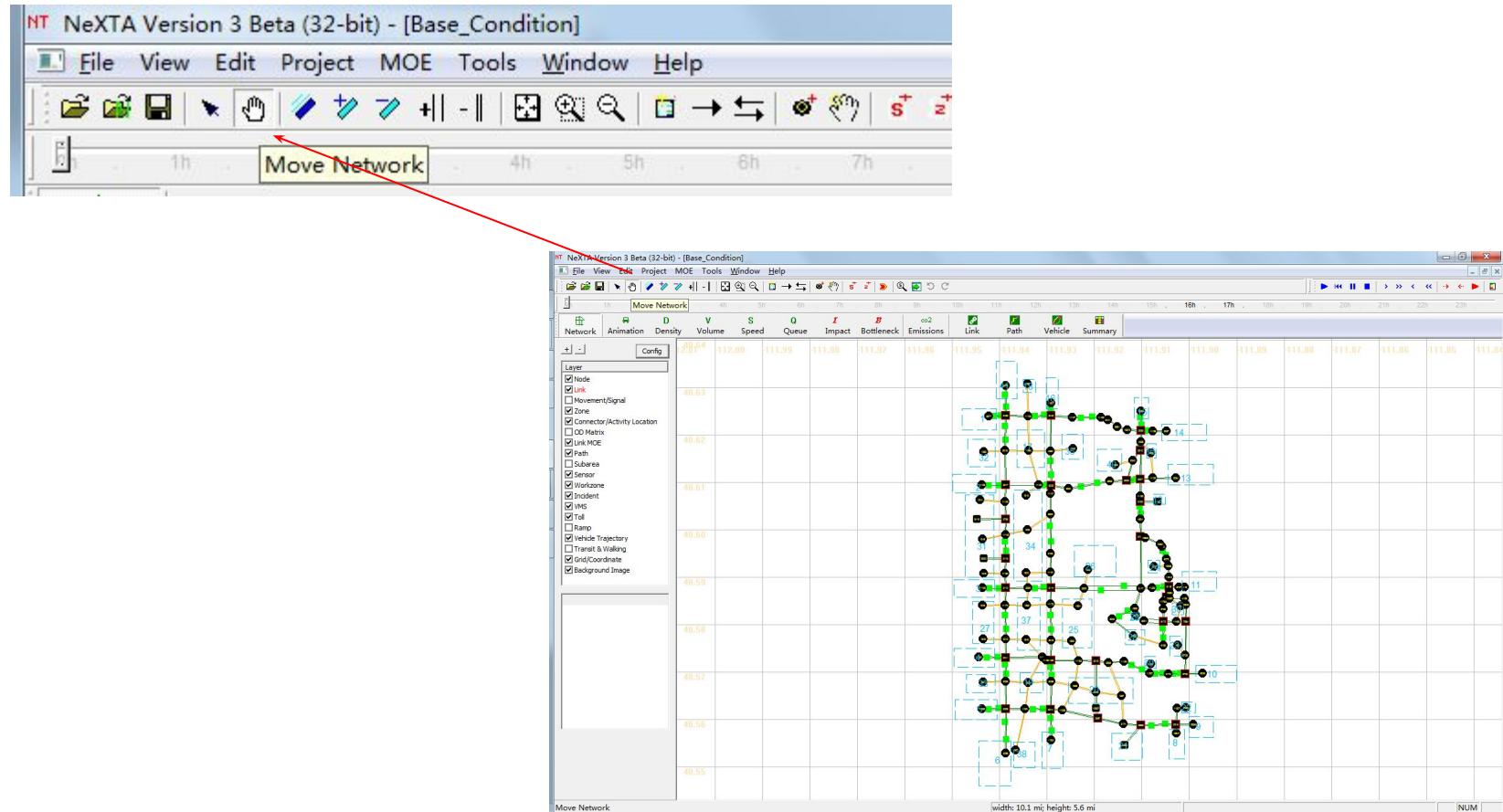
- 1. Network-related Display
- 2. Time-dependent Simulation Result Display
- 3. Advanced Analysis Features
- 4. Changing Network Data

*Nex*

*TA*

**Network-related Display**

# How to move a network?

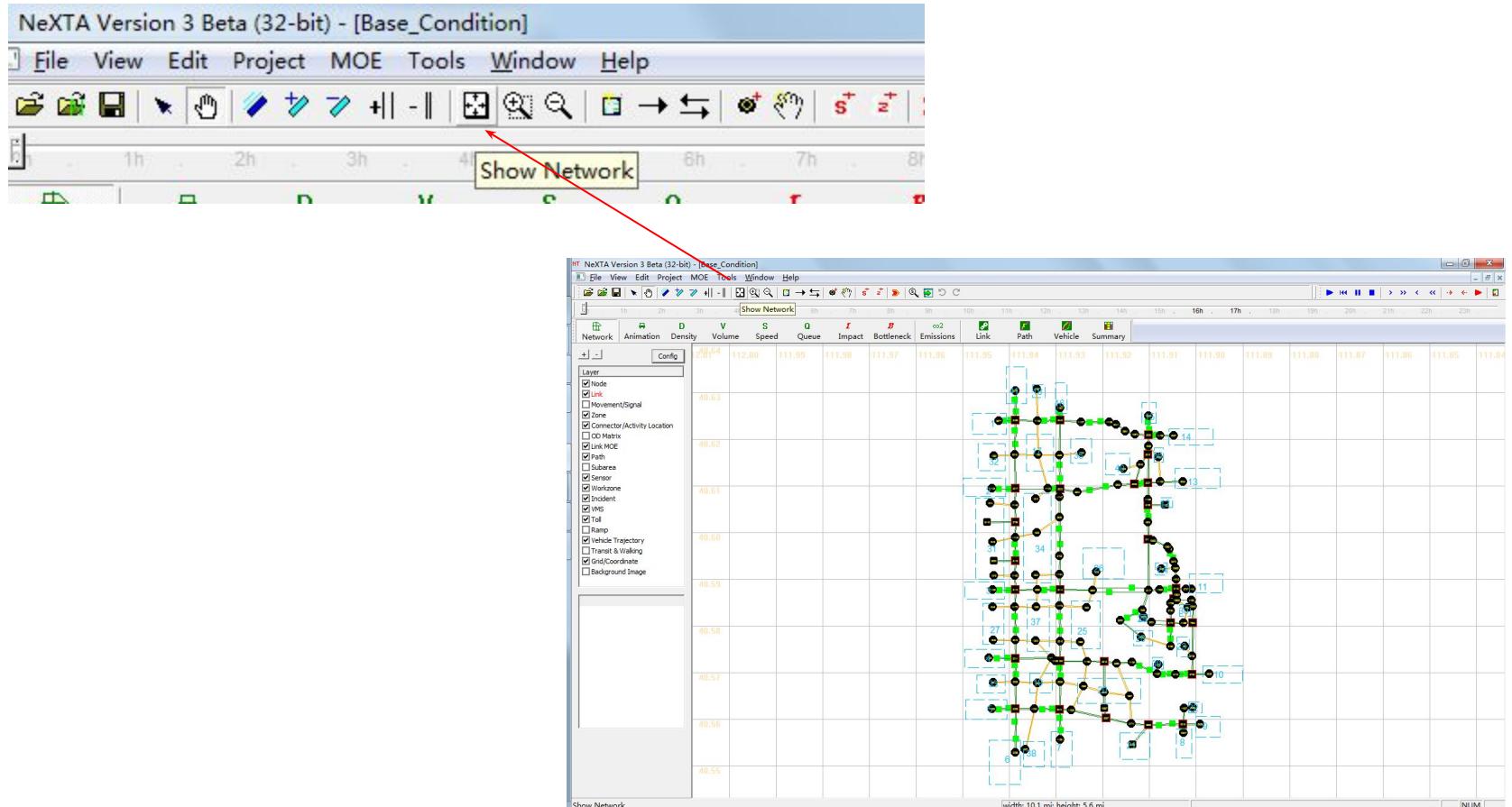


# How to use GIS layer panel?

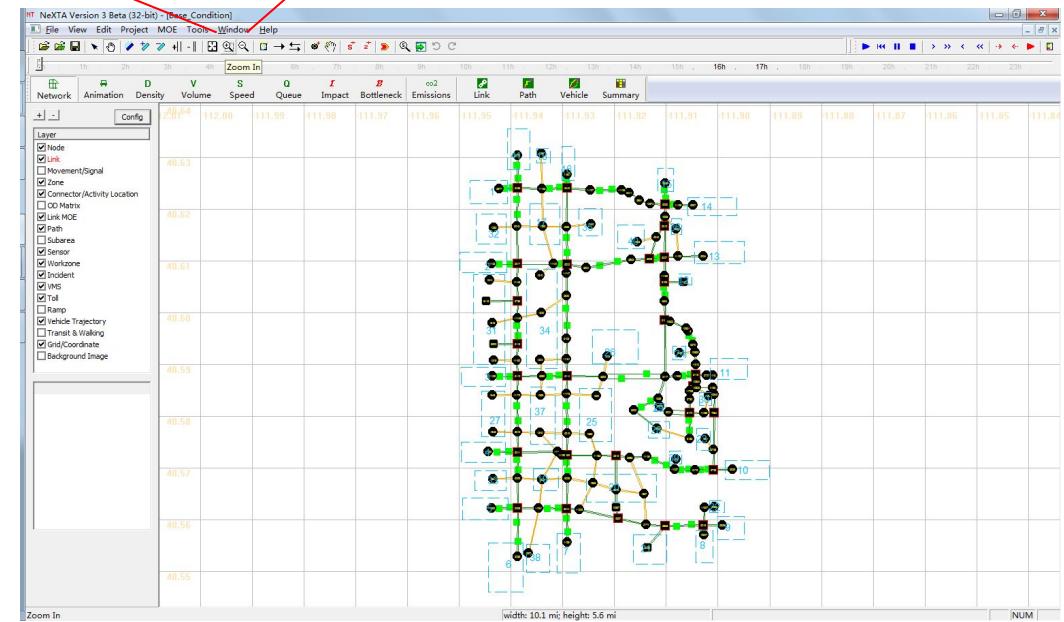
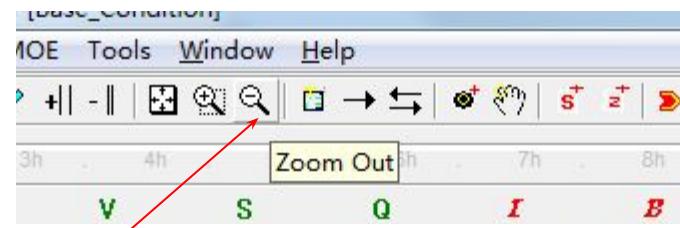
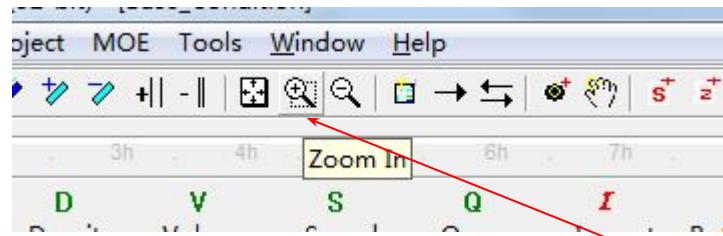
- Link layer is selected.



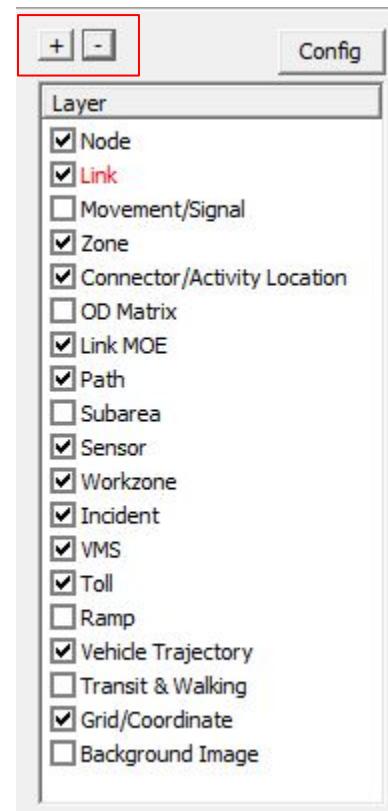
# How to reset the network display?



# How to zoom in and zoom out?

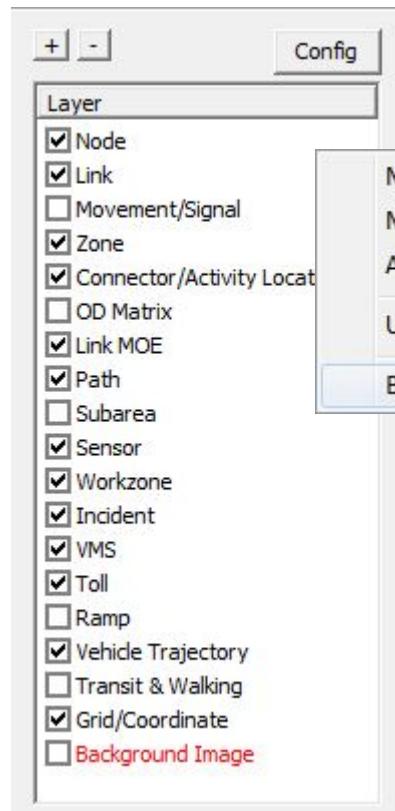


# How to increase/decrease the size of node?

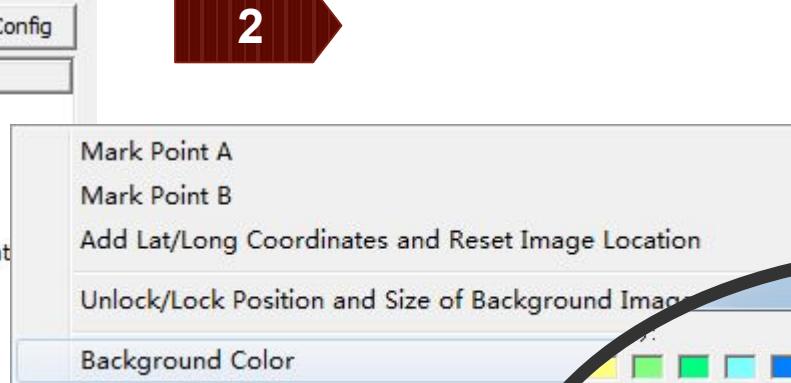


# How to change background color?

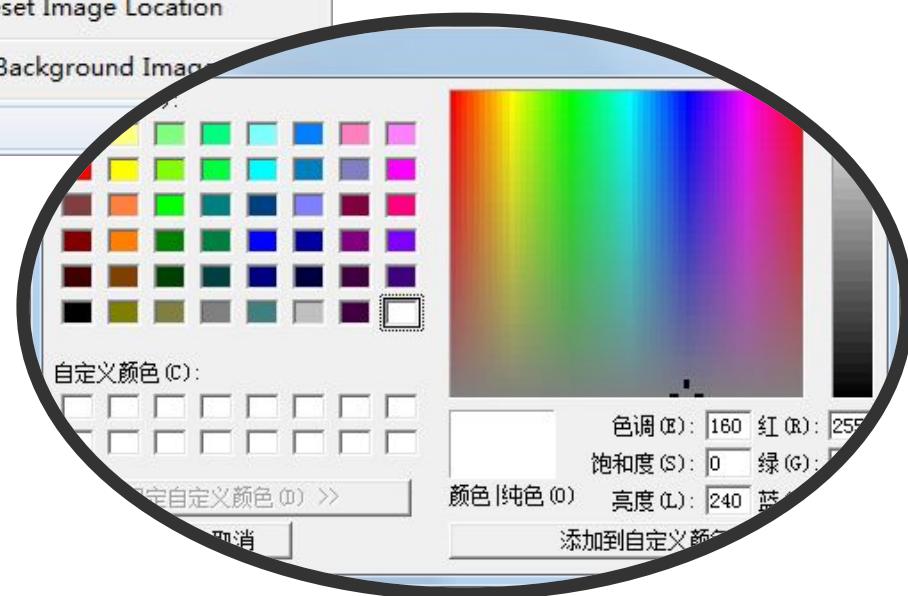
1



2

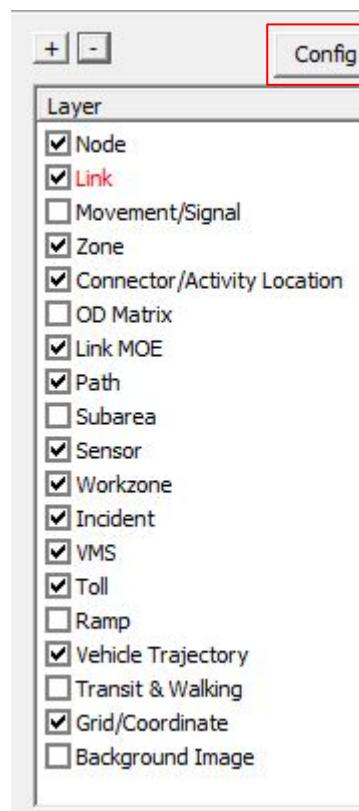


3

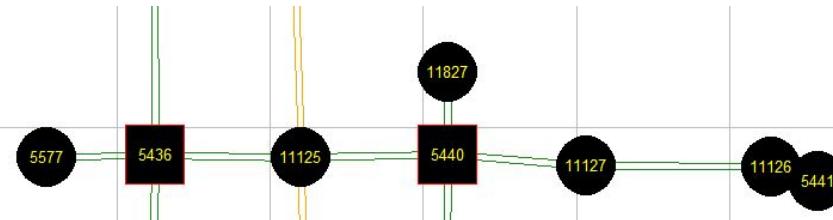
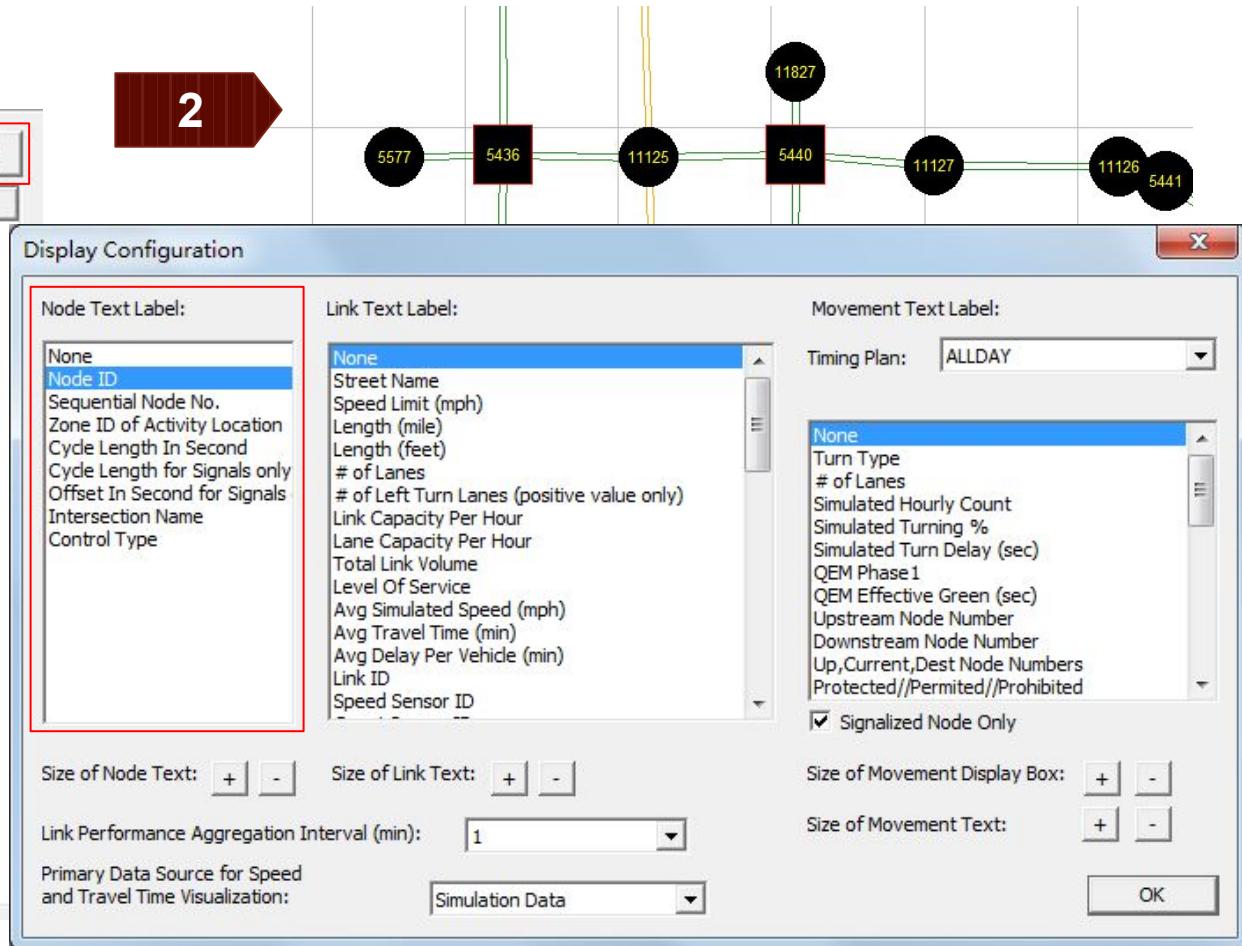


# How to show node label?

1



2

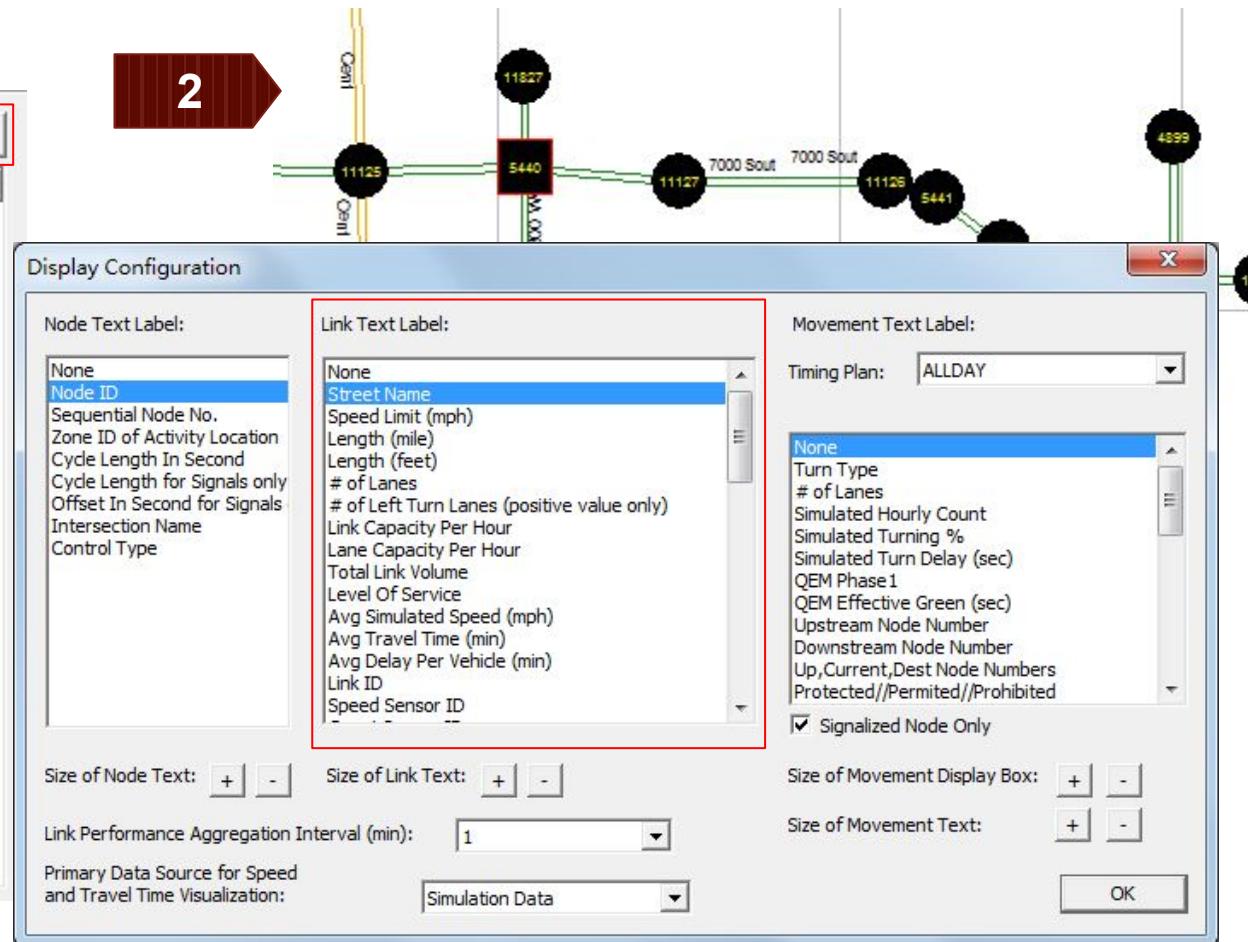


# How to show link label?

1



2

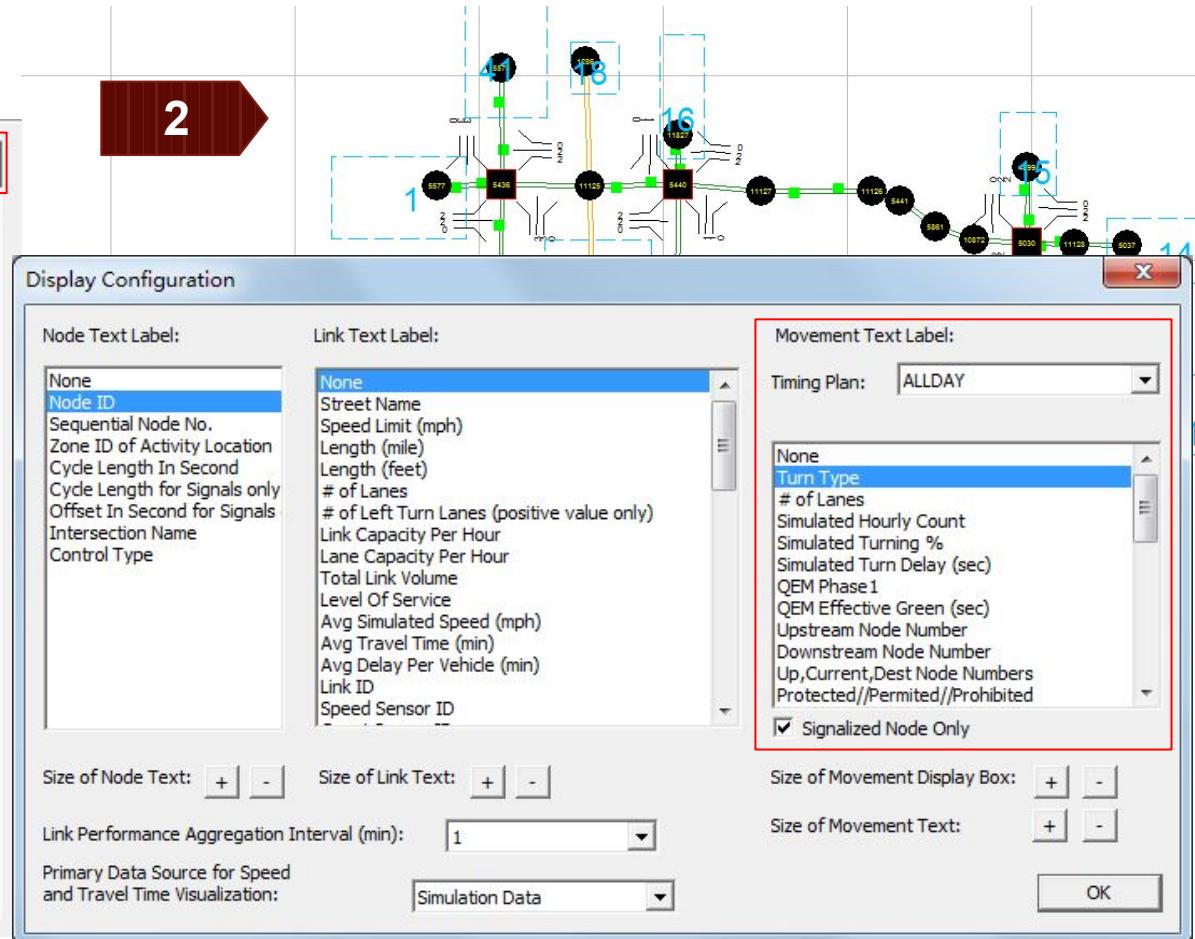


# How to show movement label?

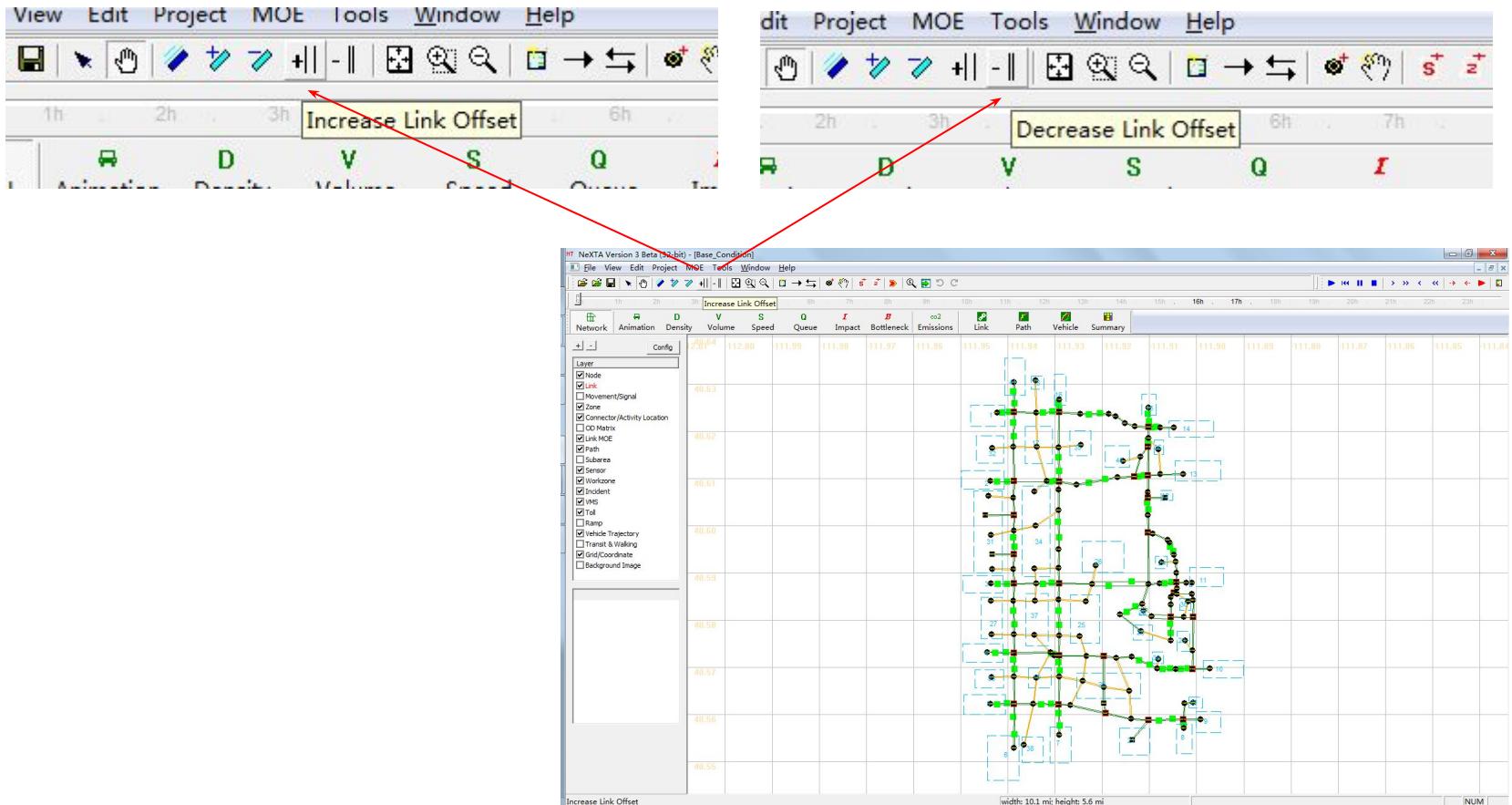
1



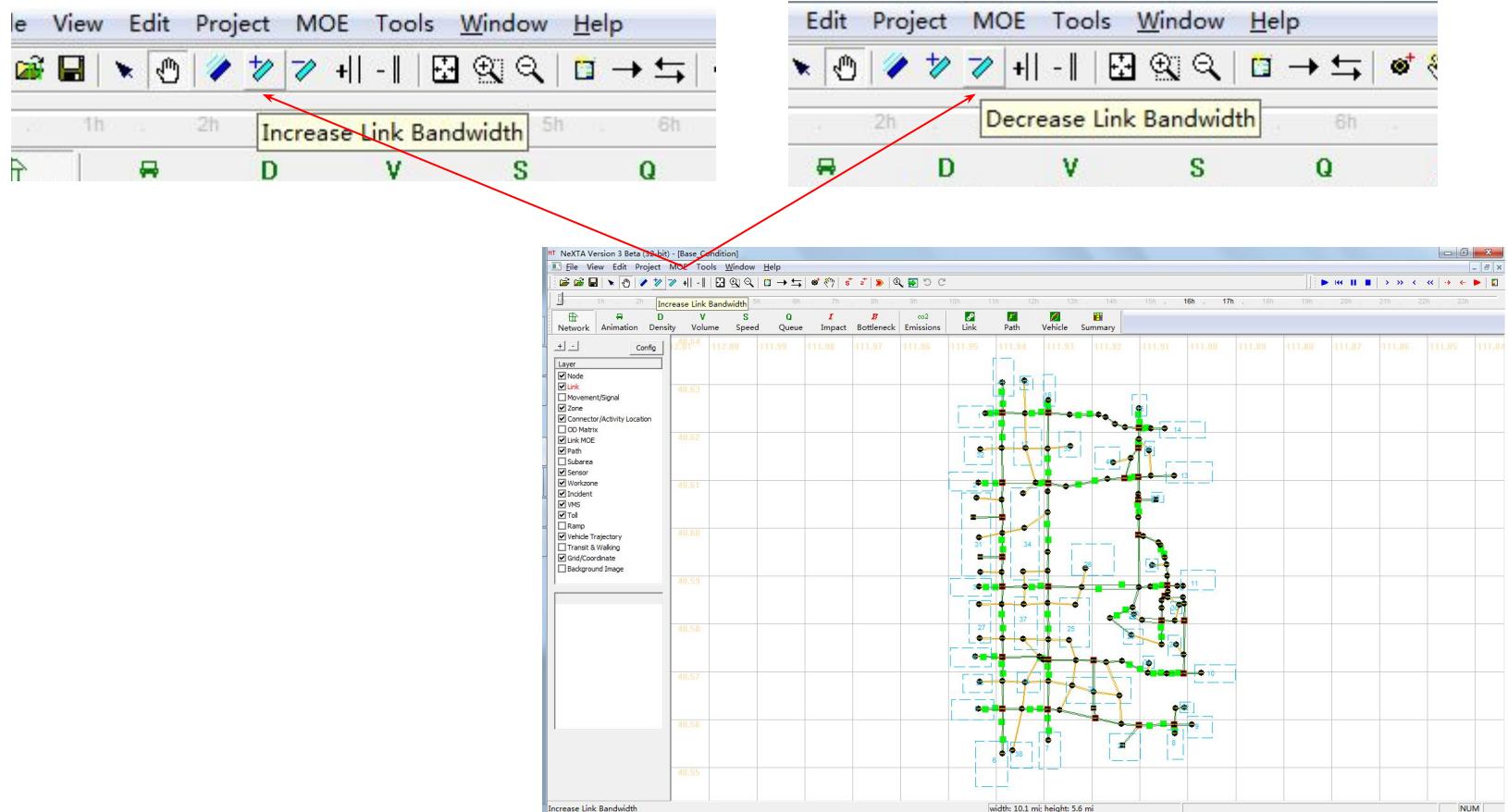
2



# How to increase/decrease offset between links?

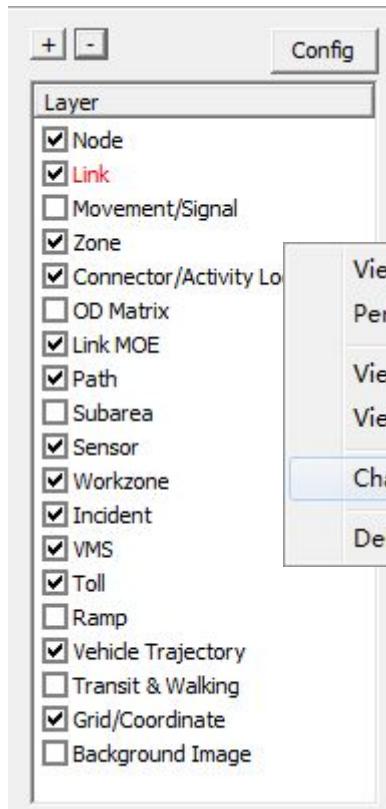


# How to increase the bandwidth of a link?

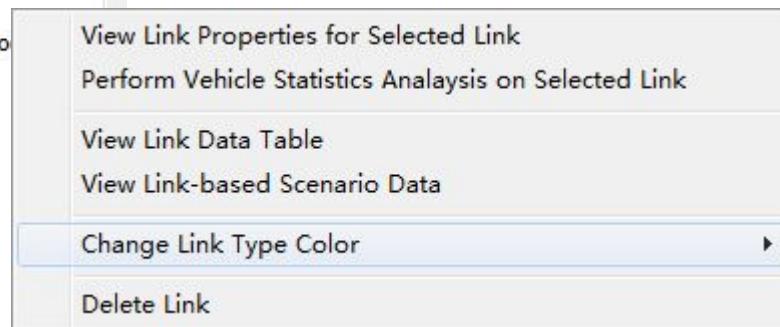


# How to change link color?

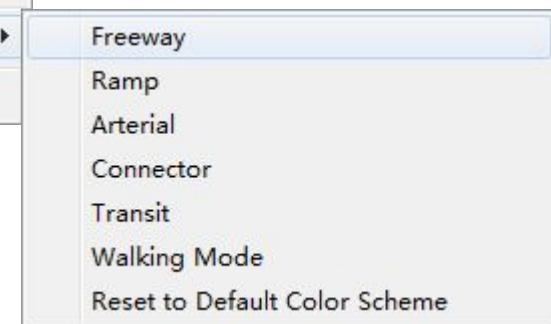
1



2

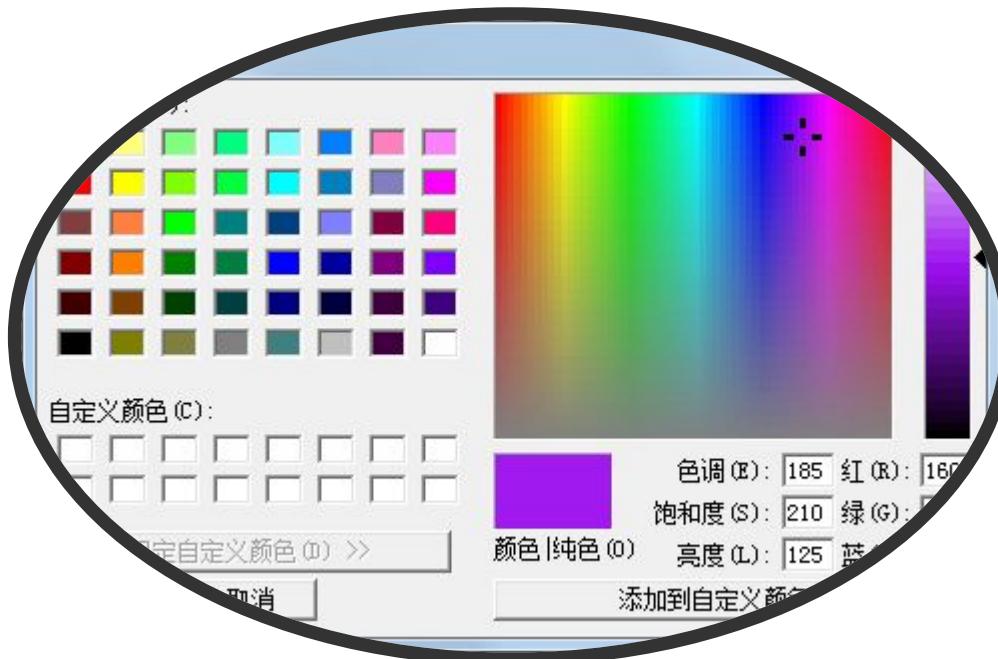


3



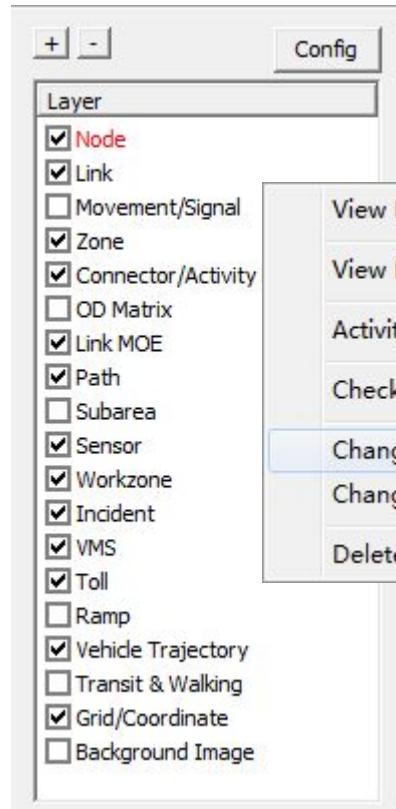
# How to change link color?

4

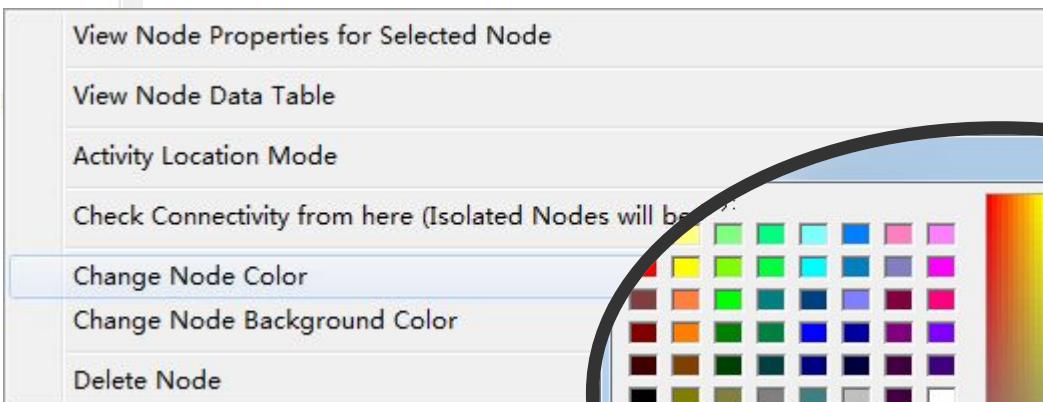


# How to change node color?

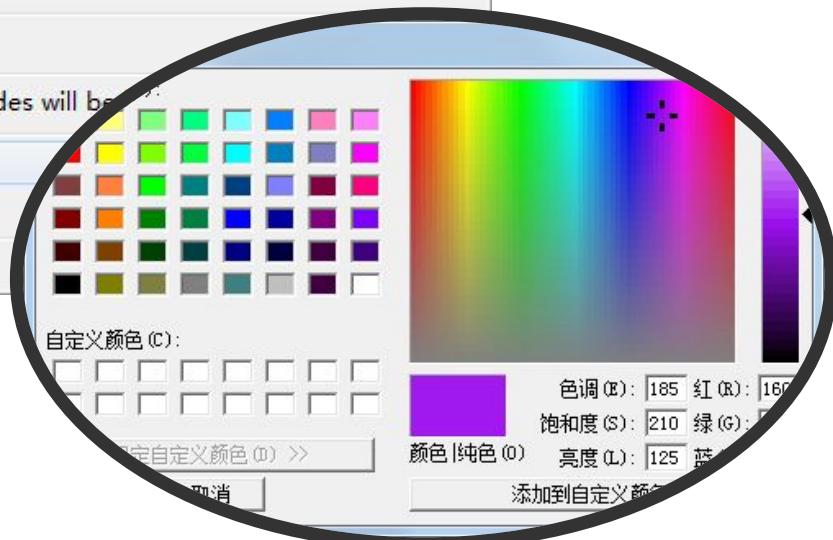
1



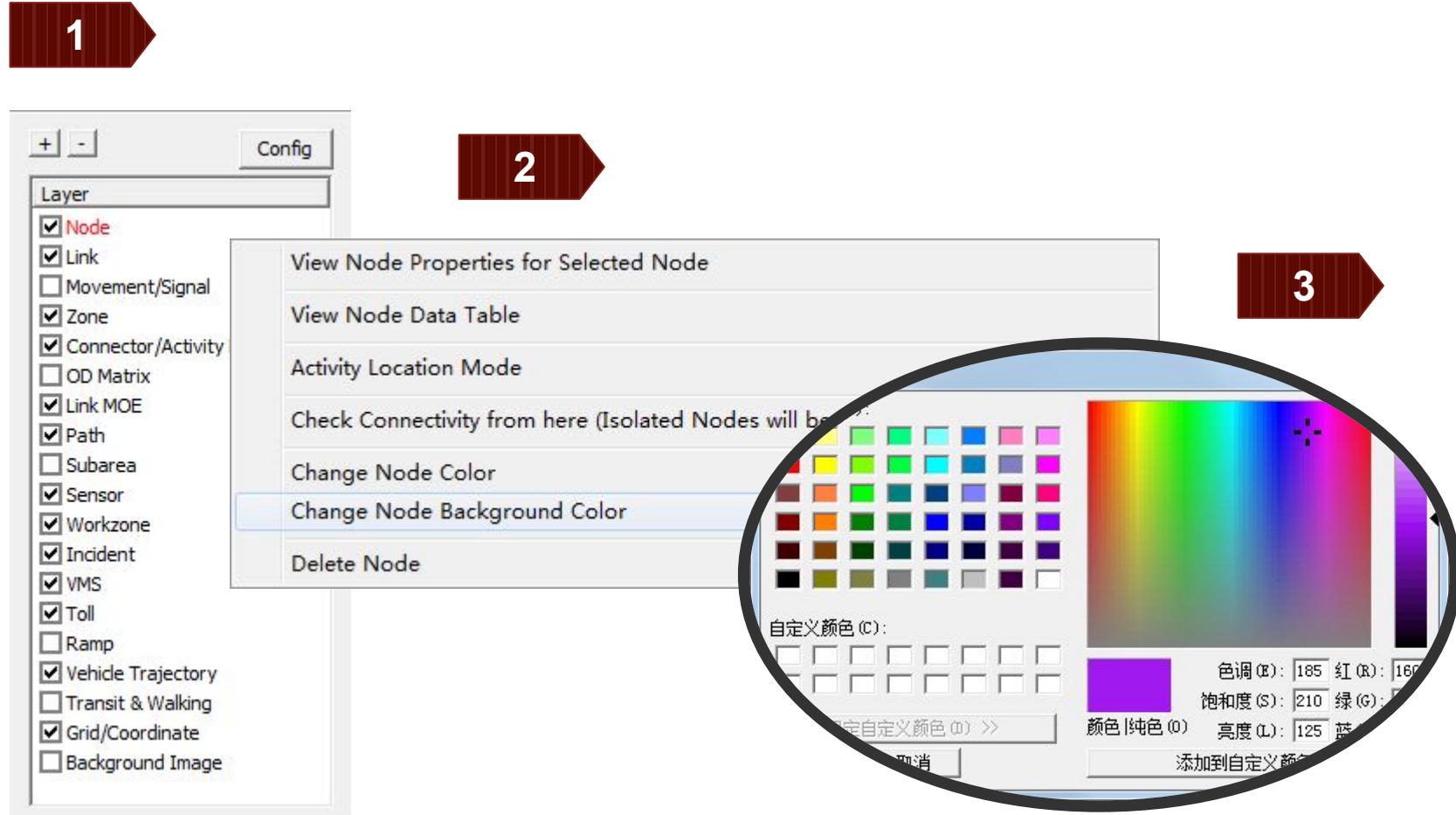
2



3

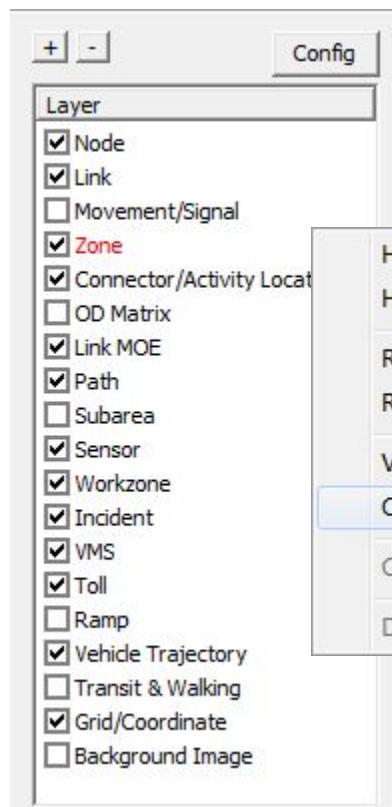


# How to change node background color?

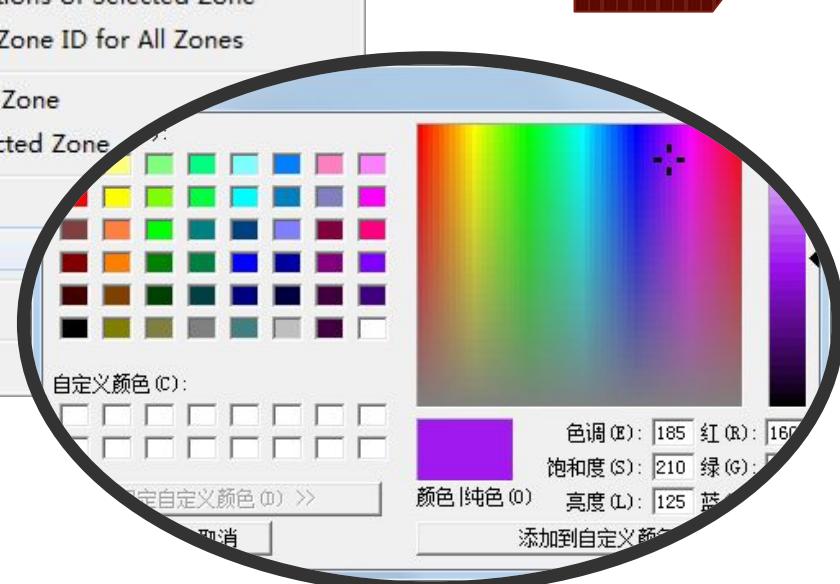


# How to change zone color?

1



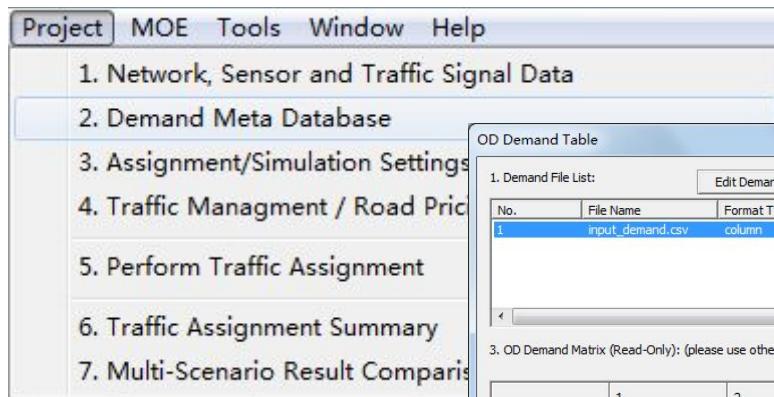
2



3

# How to show OD matrix?

1



2

The screenshot shows the 'OD Demand Table' dialog box. It contains two main sections:

- 1. Demand File List:** A table with columns: No., File Name, Format Type, Loading Multiplier, Start Time (min), and End Time (min). One row is shown for 'input\_demand.csv'.
- 2. Associated Demand Type for Select Demand:** A table with columns: No., Demand Type, Avg VOT, and Pricing Type. One row is shown for 'SOV'.

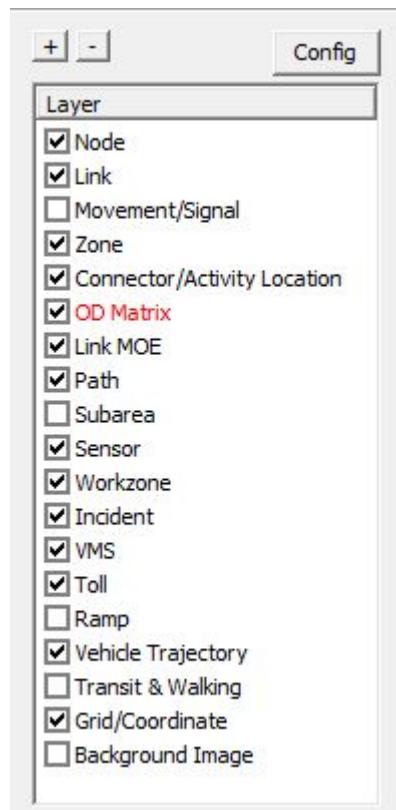
Below these sections is a large table titled '3. OD Demand Matrix (Read-Only): (please use other text editors to change the demand file)'. The table has 12 rows labeled 1 through 12 and 9 columns labeled 1 through 9. The data in the table is as follows:

	1	2	3	4	5	6	7	8	9
1	40.513	30.369	61.239	2.943	21.039	28.052	19.724	3.131	134.564
2	30.338	22.742	45.859	2.204	15.755	21.007	14.770	2.345	100.767
3	61.176	45.859	92.474	4.444	31.770	42.360	29.784	4.728	203.196
4	2.940	2.204	4.444	0.214	1.527	2.036	1.431	0.227	9.765
5	21.039	15.771	31.802	1.528	10.926	14.568	10.243	1.626	69.879
6	28.044	21.022	42.392	2.037	14.564	19.419	13.654	2.167	93.149
7	19.683	14.755	29.753	1.430	10.222	13.629	9.583	1.521	65.377
8	3.128	2.345	4.728	0.227	1.624	2.166	1.523	0.242	10.388
9	14.929	11.191	22.567	1.085	7.753	10.337	7.268	1.154	49.587
10	0.980	0.735	1.481	0.071	0.509	0.679	0.477	0.076	3.255
11	19.913	14.927	30.100	1.447	10.341	13.788	9.695	1.539	66.139
12	13.199	9.894	19.951	0.959	6.854	9.139	6.426	1.020	43.839

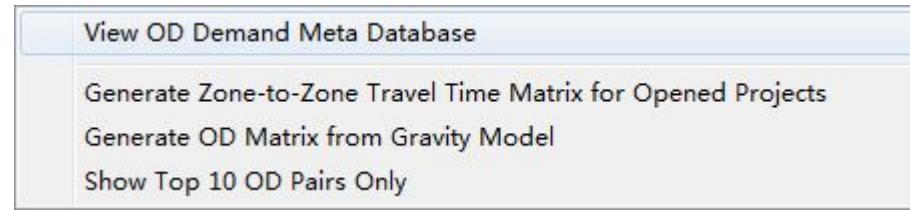
At the bottom right of the dialog box is an 'Exit' button.

# How to show OD matrix?

1



2



3

No.	File Name	Format Type	Loading Multiplier	Start Time (min)	End Time (min)
1	INPUT_demand.csv	column	1.000	03:30 PM	05:30 PM

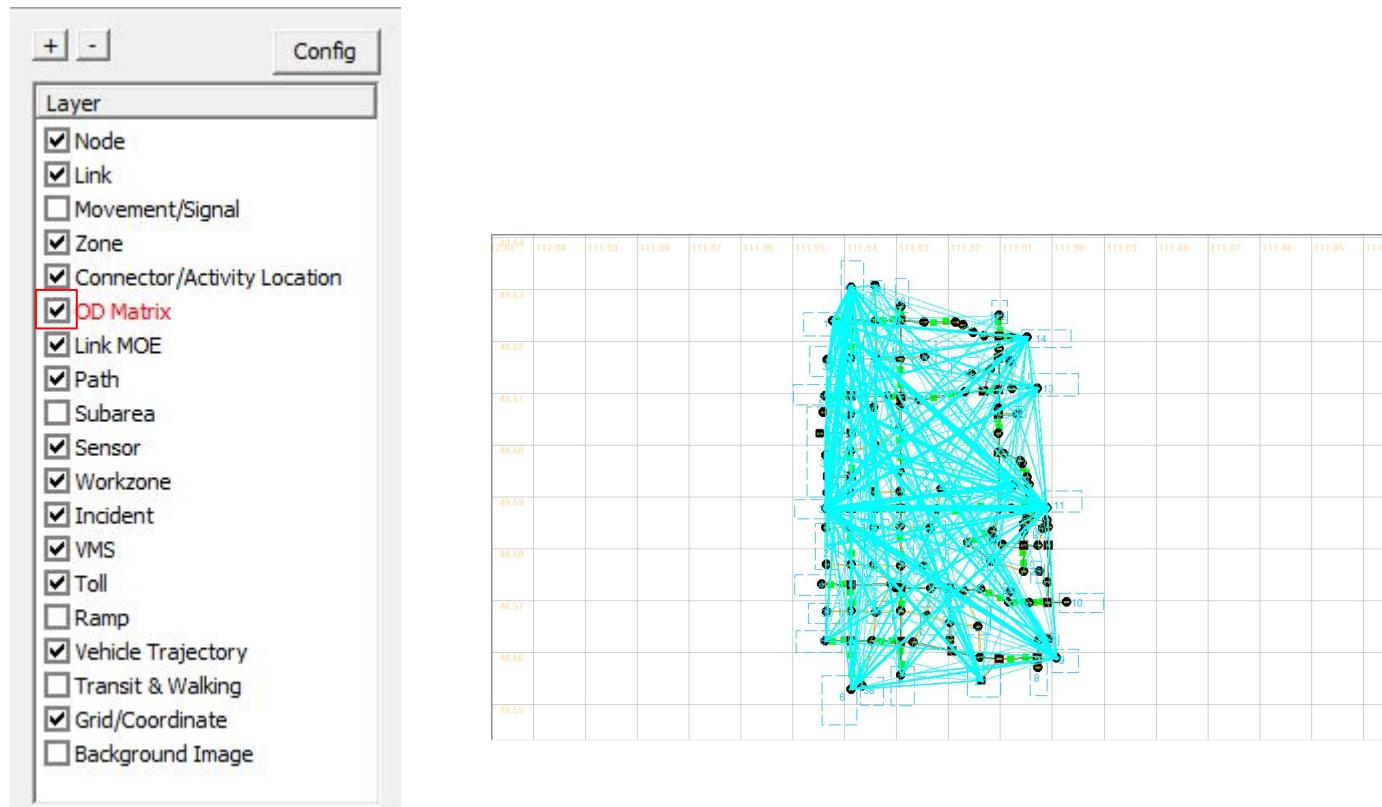
  

No.	Demand Type	Avg VOT	Pricing Type
1	SOV	30.00	SOV

3. OD Demand Matrix (Read-Only): (please use other text editors to change the demand file)									
Reload Demand Matrix   Export to Matrix Format   Export to Column Format									
1	2	3	4	5	6	7	8	9	A
1	40.513	30.369	61.239	2.943	21.039	28.052	19.724	3.131	134.564
2	30.338	22.742	45.859	2.204	15.755	21.007	14.770	2.345	100.767
3	61.176	45.859	92.474	4.444	31.770	42.360	29.784	4.728	203.196
4	2.940	2.204	4.444	0.214	1.527	2.036	1.431	0.227	9.765
5	21.039	15.771	31.802	1.528	10.926	14.568	10.243	1.626	69.879
6	28.044	21.022	42.392	2.037	14.564	19.419	13.654	2.167	93.149
7	19.683	14.755	29.753	1.430	10.222	13.629	9.583	1.521	65.377
8	3.128	2.345	4.728	0.227	1.624	2.166	1.523	0.242	10.388
9	14.929	11.191	22.567	1.085	7.753	10.337	7.268	1.154	49.587
10	0.980	0.735	1.481	0.071	0.509	0.679	0.477	0.076	3.255
11	19.913	14.927	30.100	1.447	10.341	13.788	9.695	1.539	66.139
12	13.199	9.894	19.951	0.959	6.854	9.139	6.426	1.020	43.839

# How to show OD matrix?

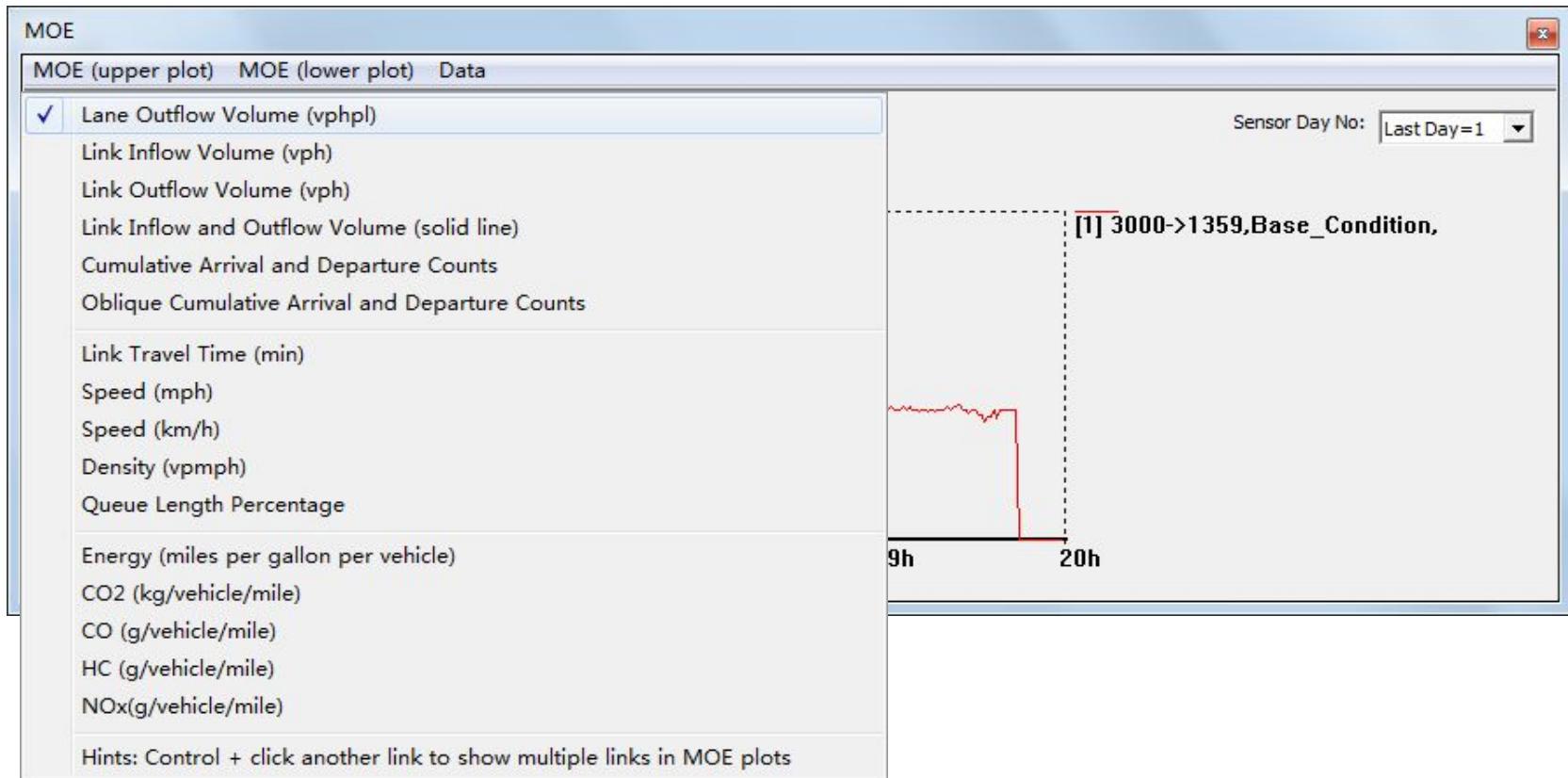


# How to show link MOE?

1

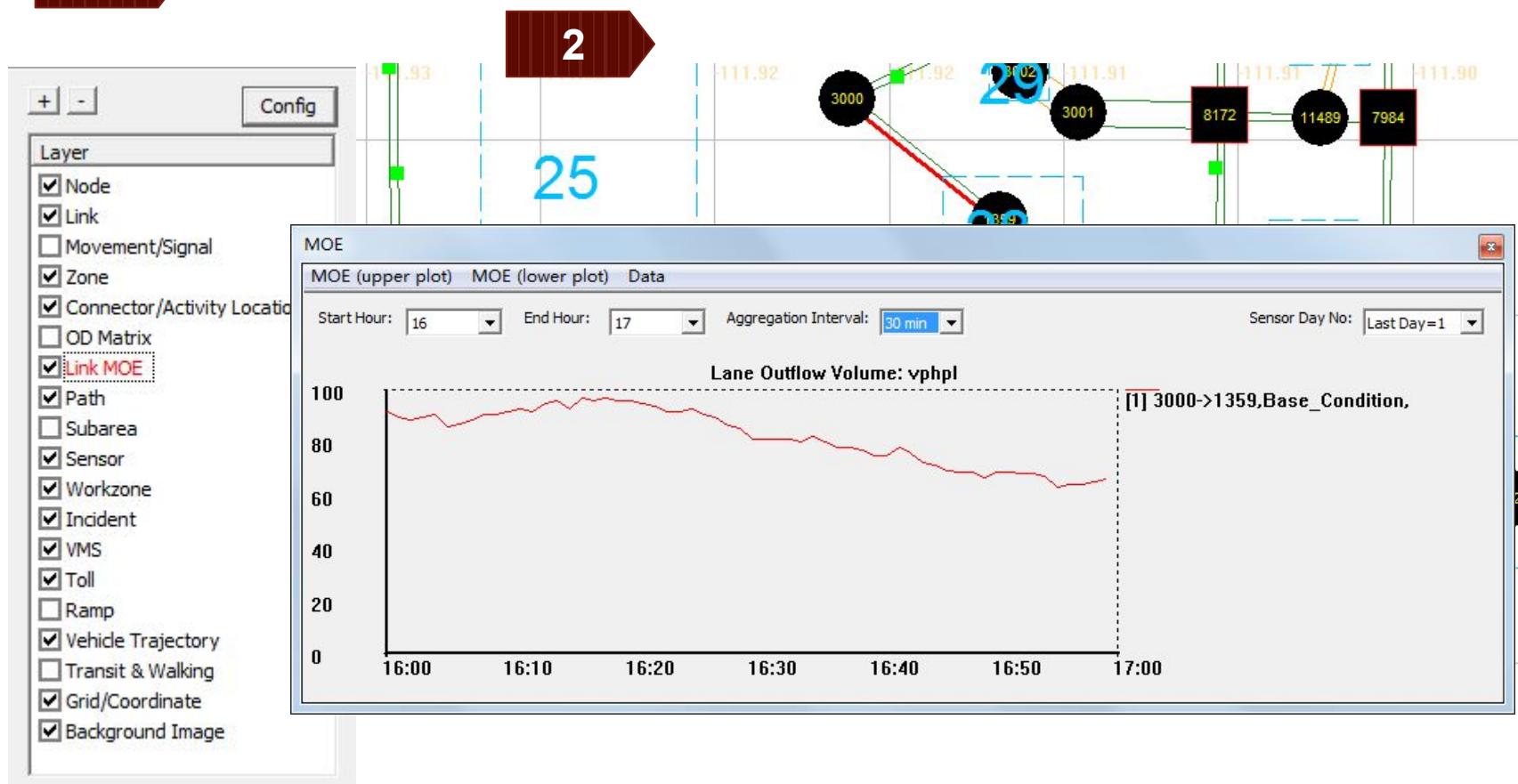


# How to show link MOE?



# How to show two MOEs simultaneously?

1

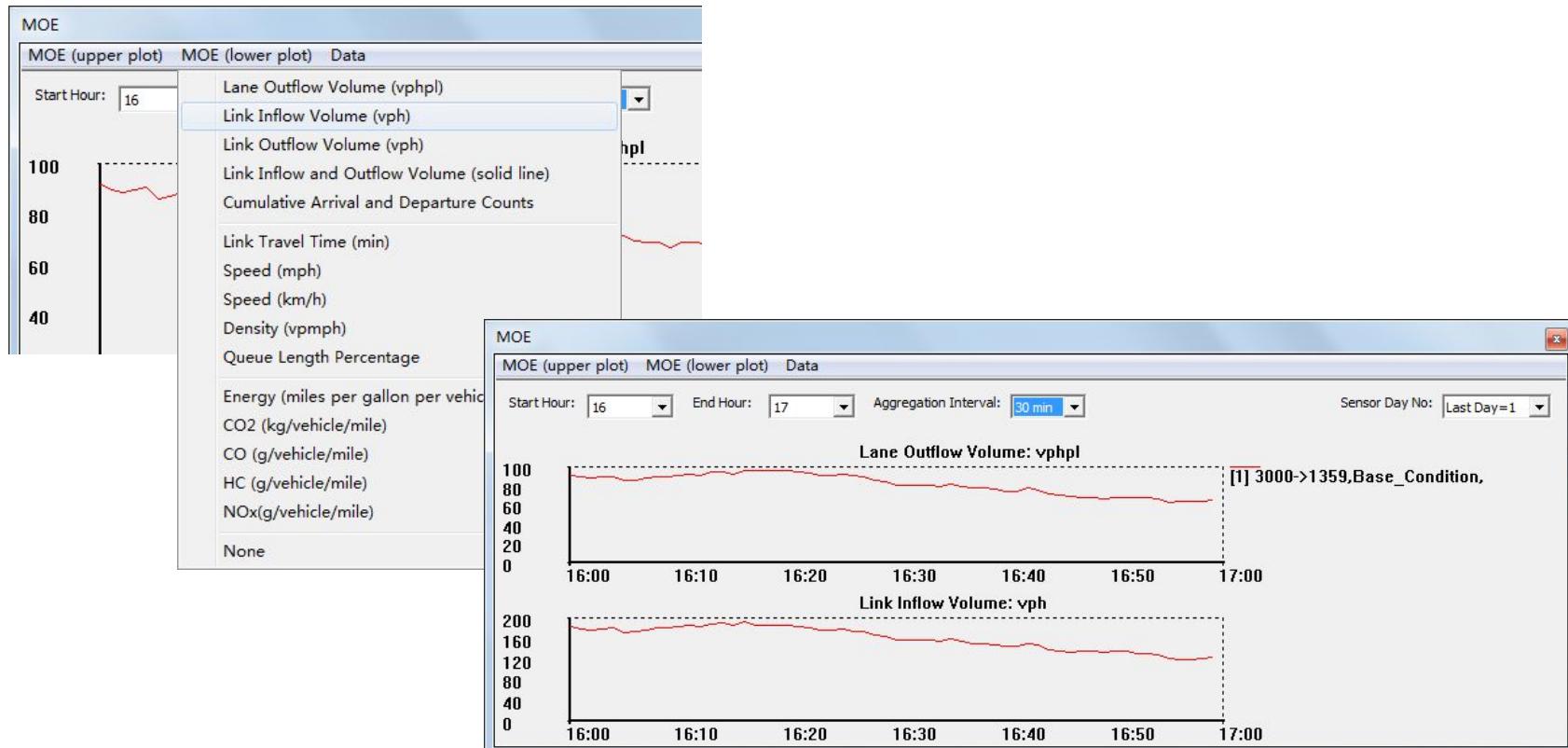


2

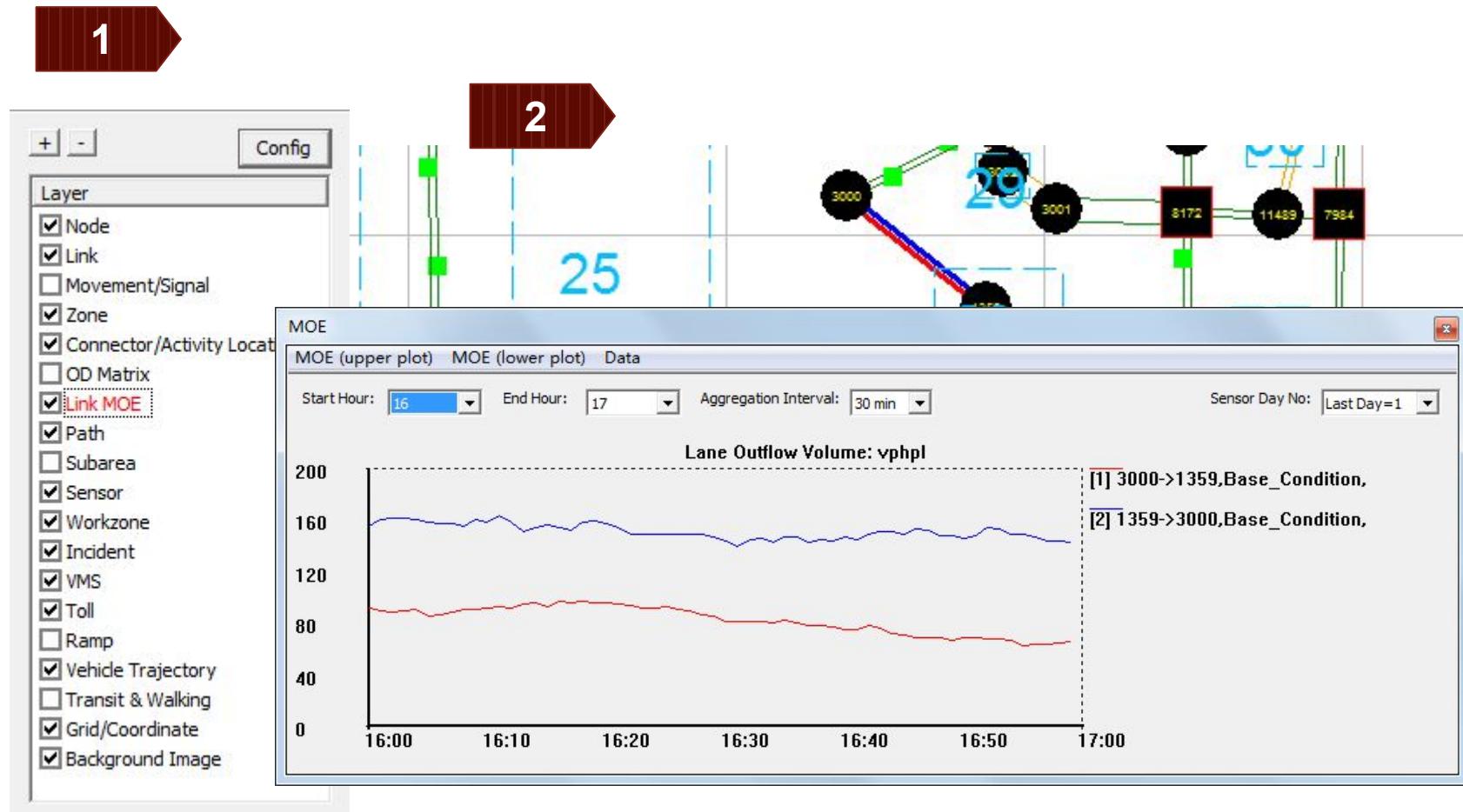
25

# How to show two MOEs simultaneously?

3

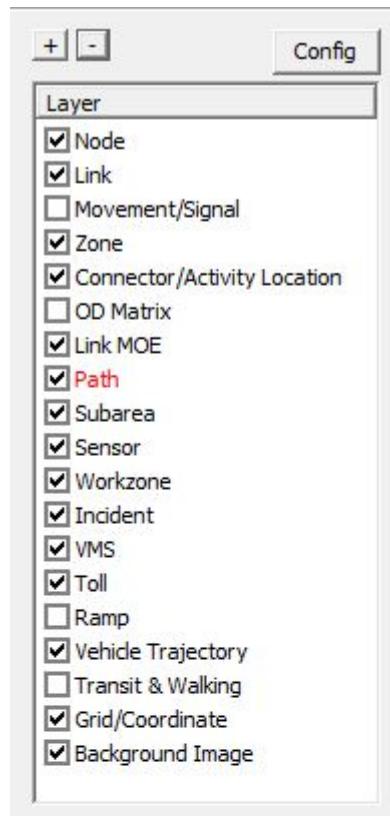


# How to show MOE of two links?

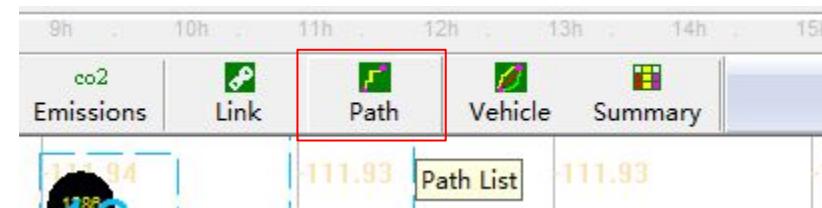


# How to select a path?

1

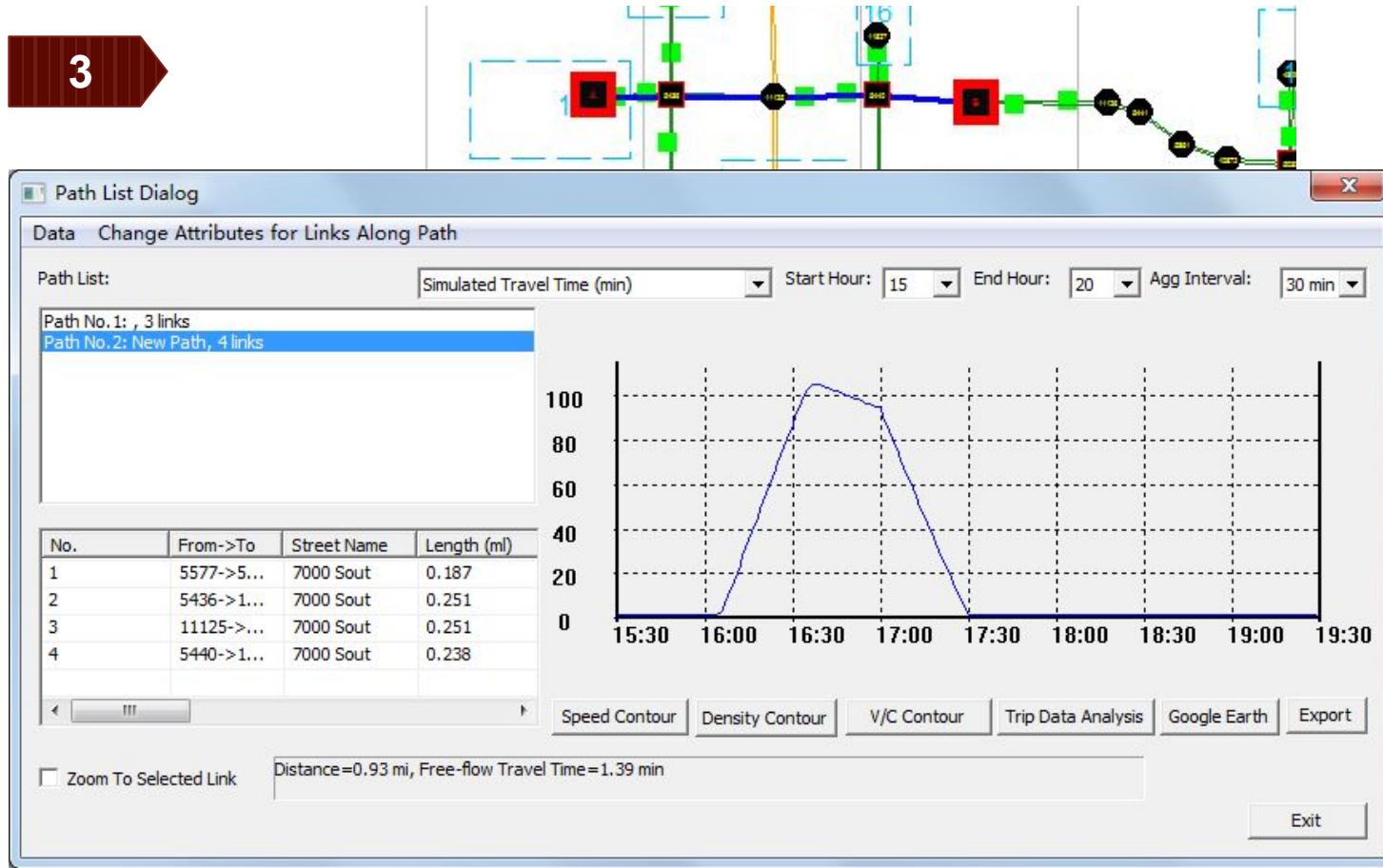


2



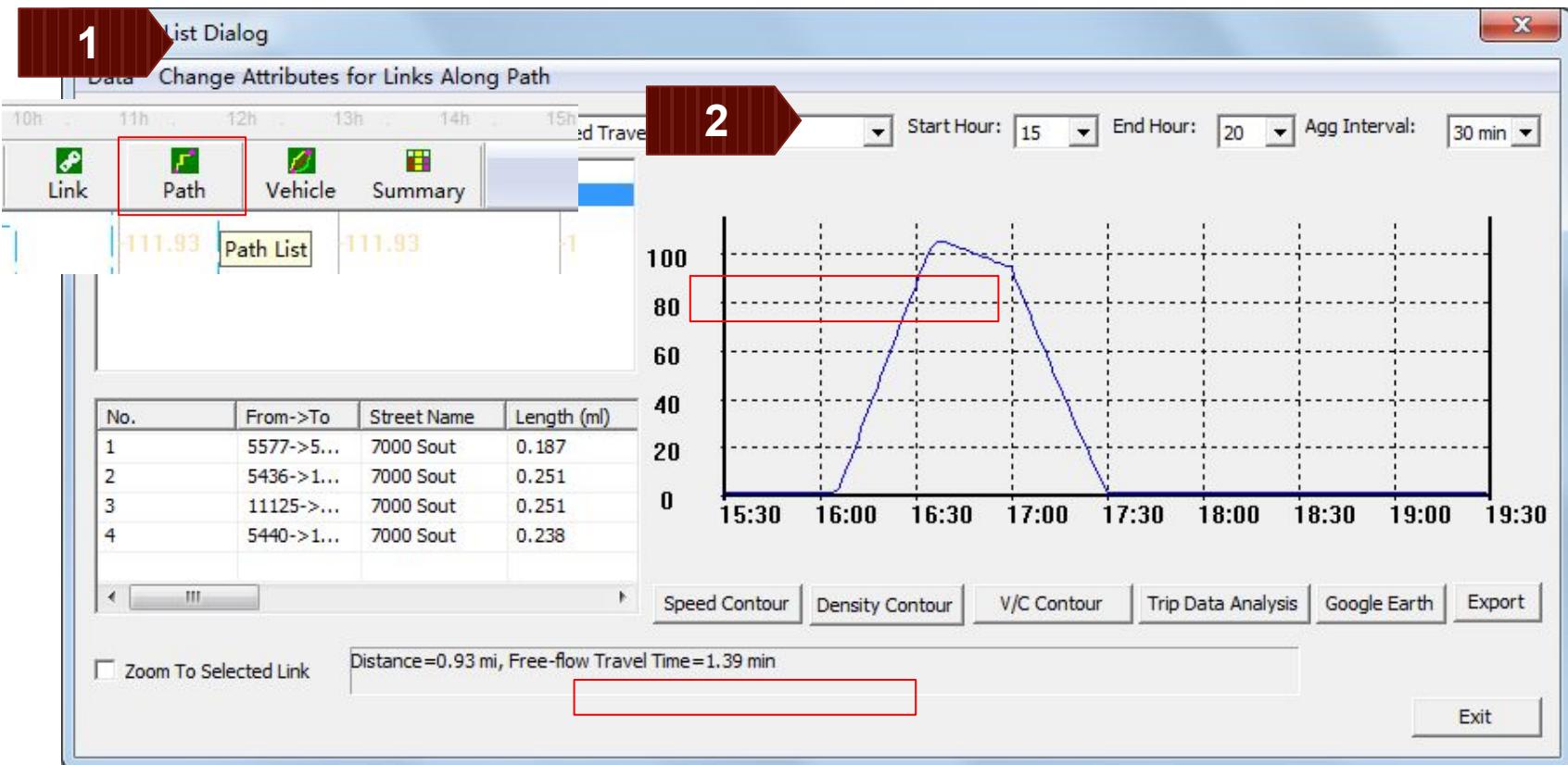
# How to select a path?

3



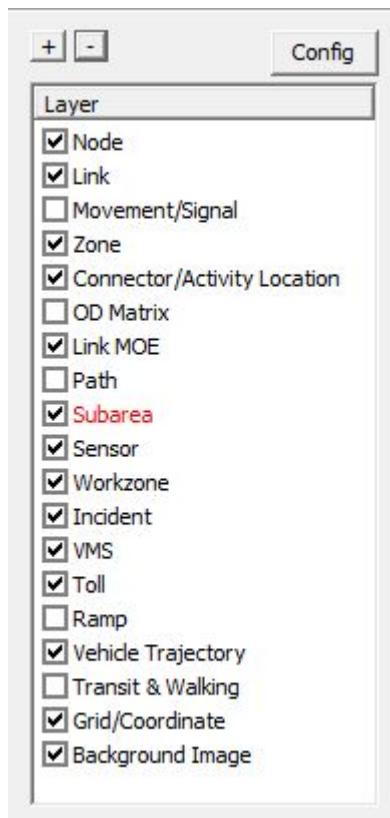
# How to show path based visualization?

# How to show path based travel time?

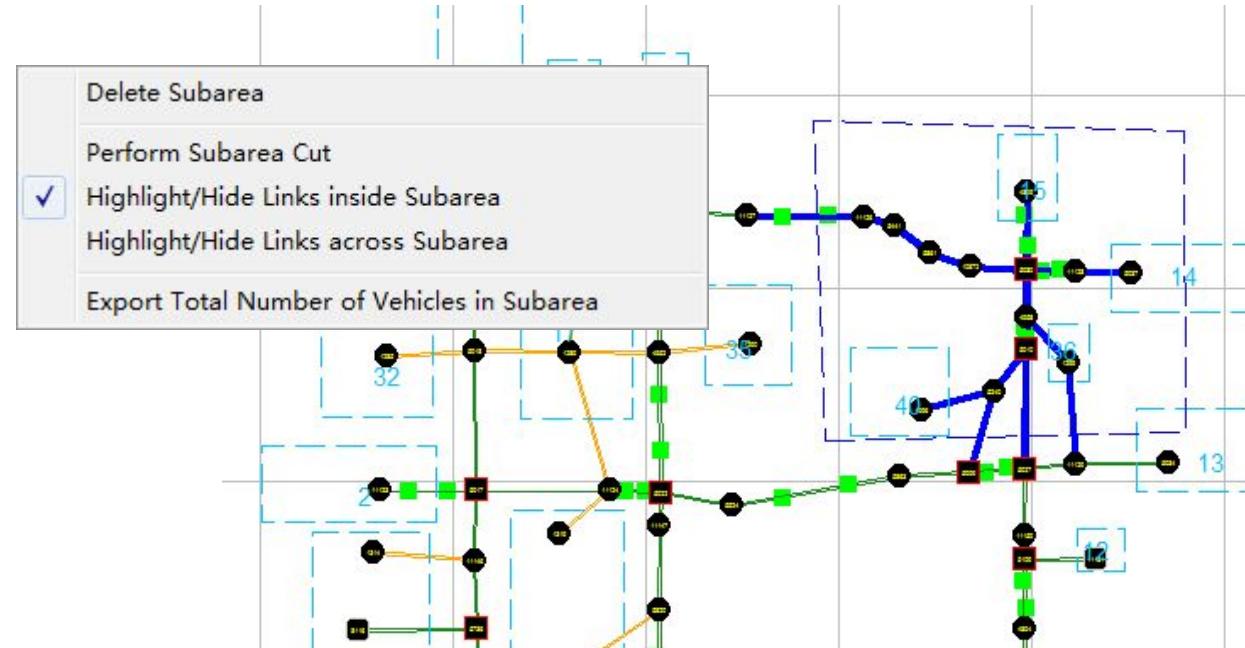


# How to highlight links in subarea?

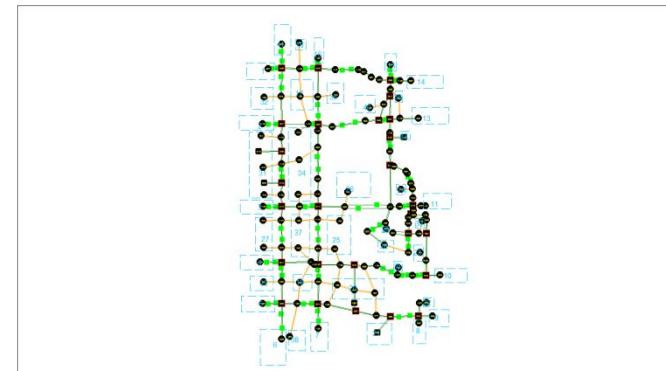
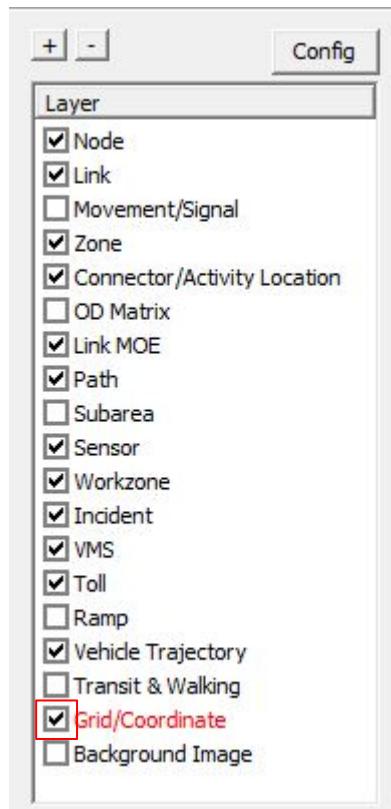
1



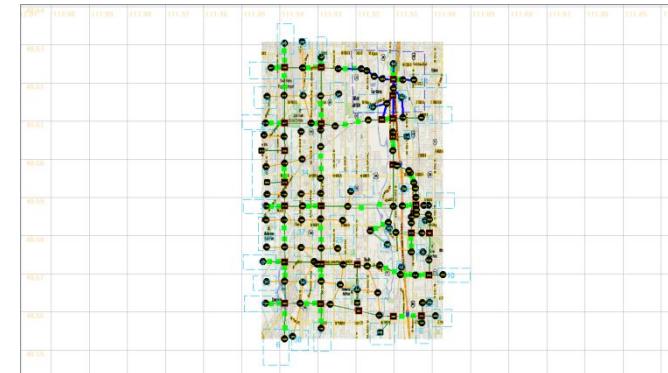
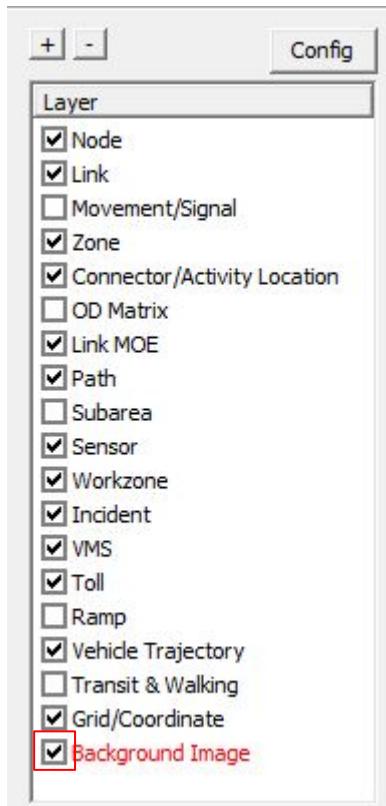
2



# How to show/hide grid?

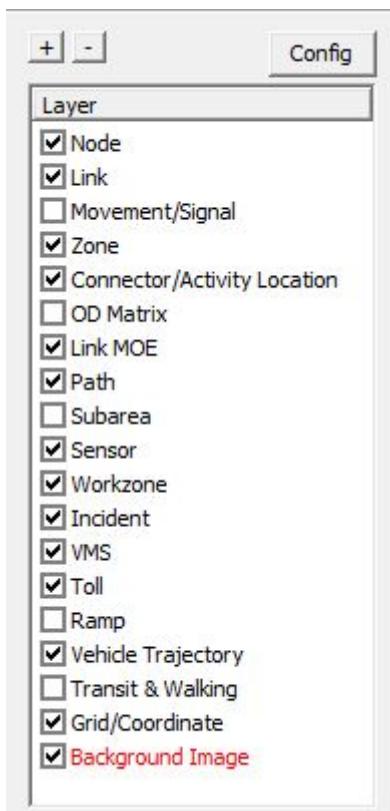


# How to show/hide background image?

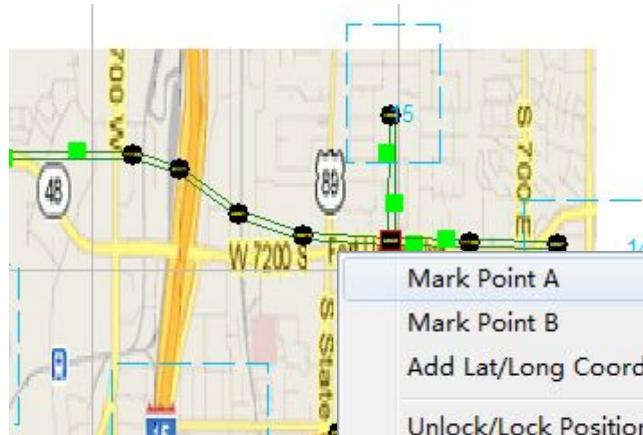


# How to change background image x or y resolution, shift to a new position?

1

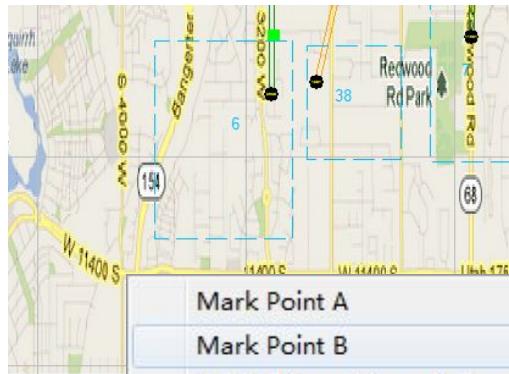


2

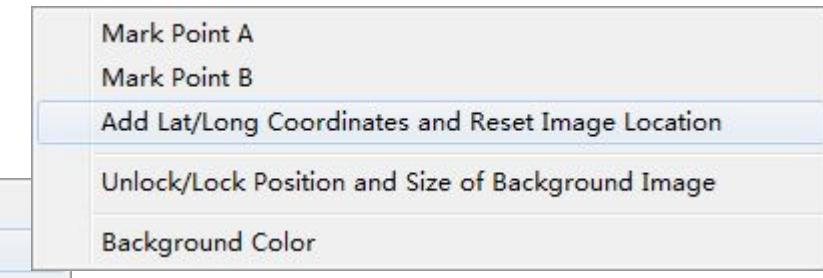


# How to change background image x or y resolution, shift to a new position?

3

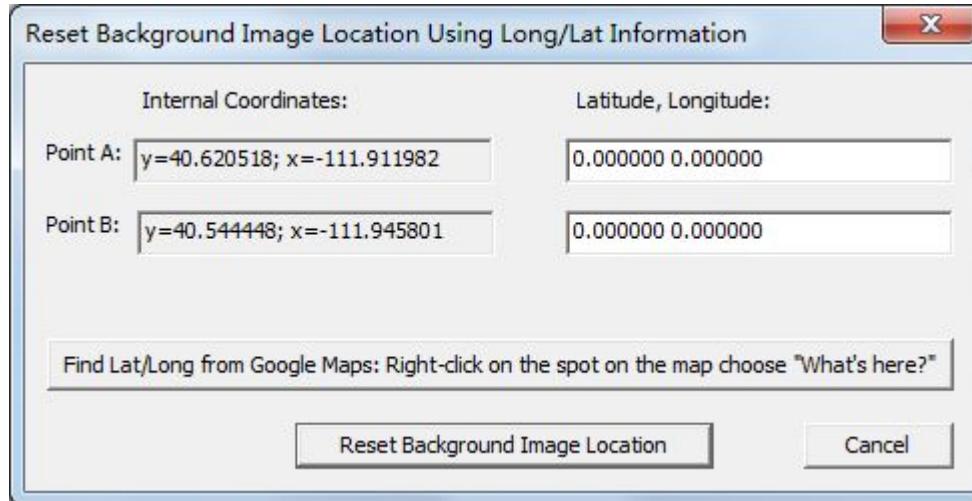


4



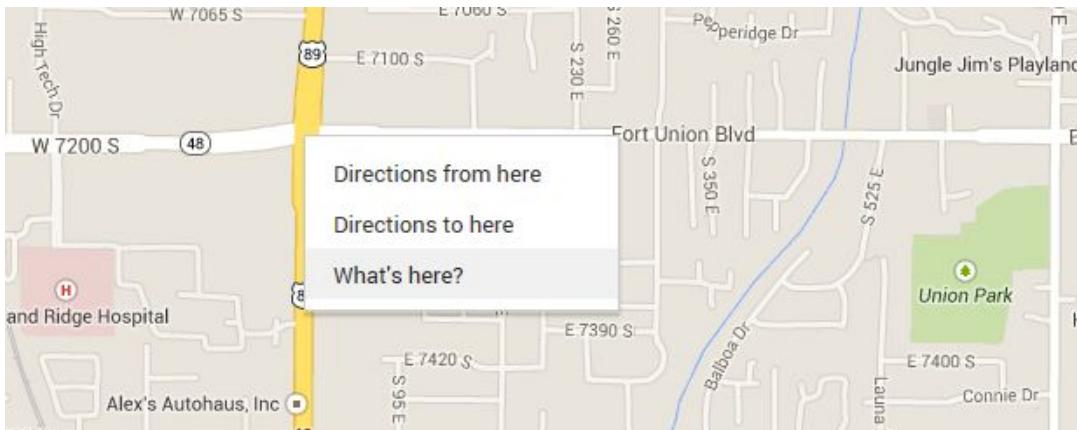
# How to change background image x or y resolution, shift to a new position?

5



# How to change background image x or y resolution, shift to a new position?

6



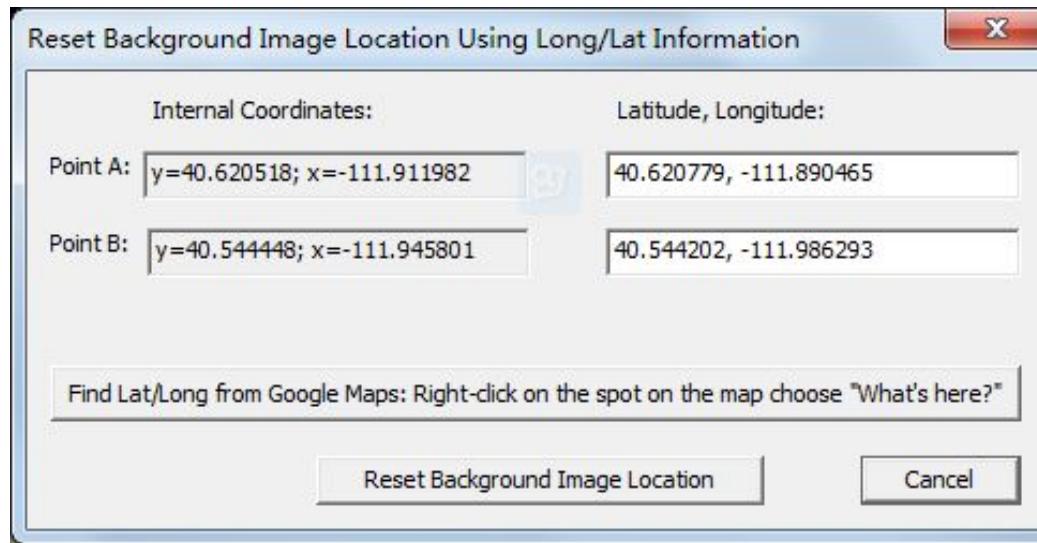
7



# How to change background image x or y resolution, shift to a new position?

8

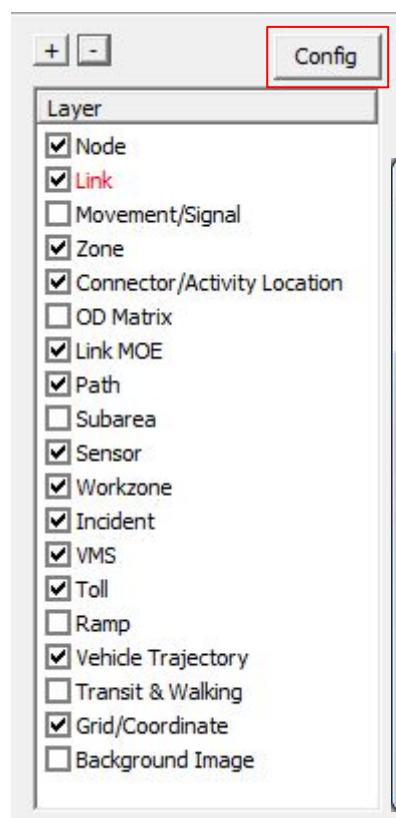
9



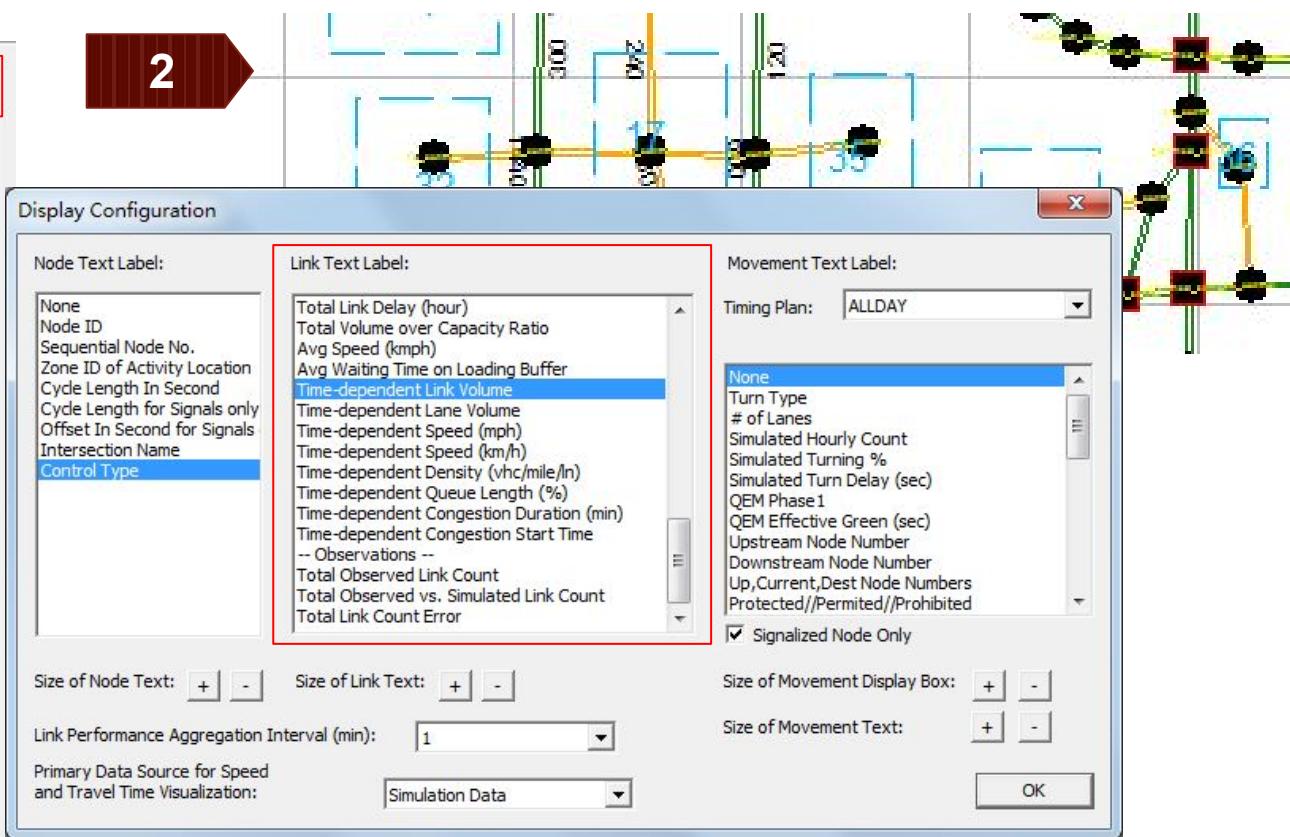
# *Nex* *TA*Time-dependent Simulation Result Display

# How to display time-dependent simulation result?

1

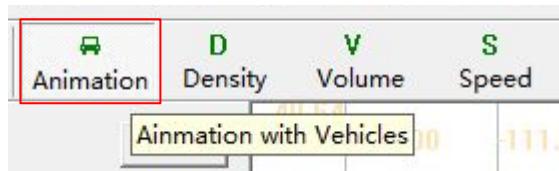


2

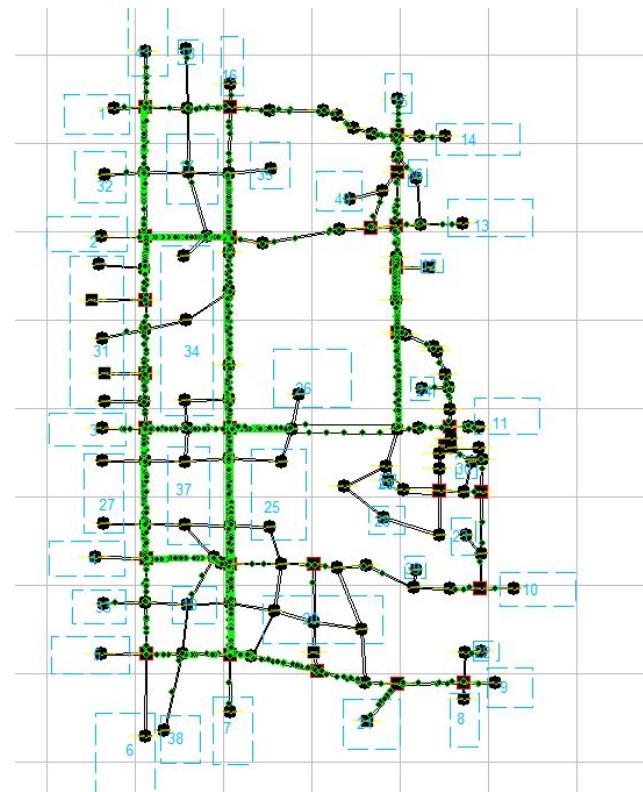
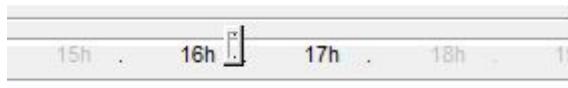


# How to display time-dependent simulation result?(Animation)

1

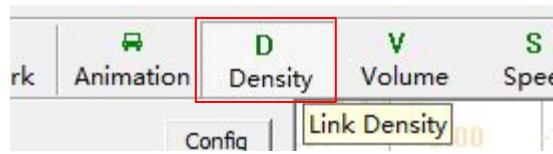


2

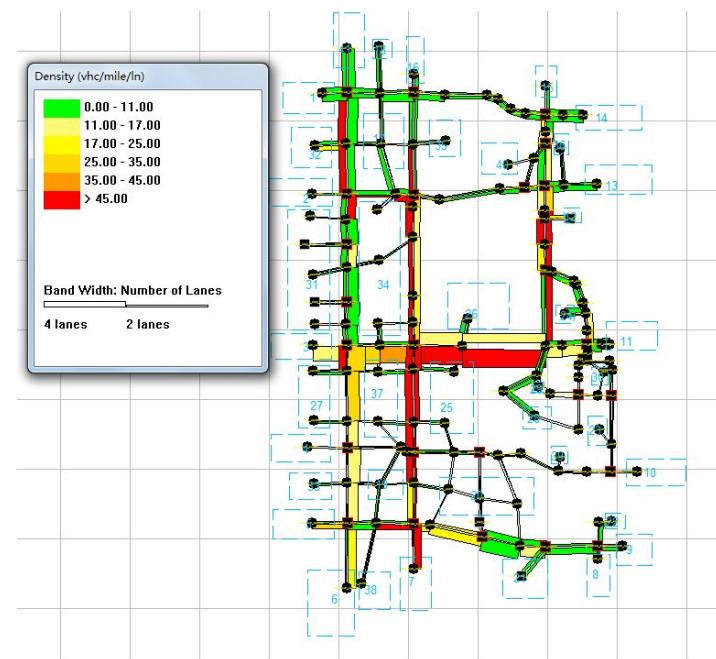


# How to display time-dependent simulation result?(Density)

1



2

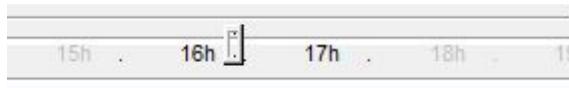


# How to display time-dependent simulation result?(Volume)

1

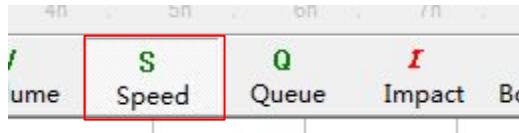
ty	V Volume	S Speed	Q Queue	I
01	40.64	Link Volume	111.99	111.98
01	111.98	111.97	111.96	111.95

2

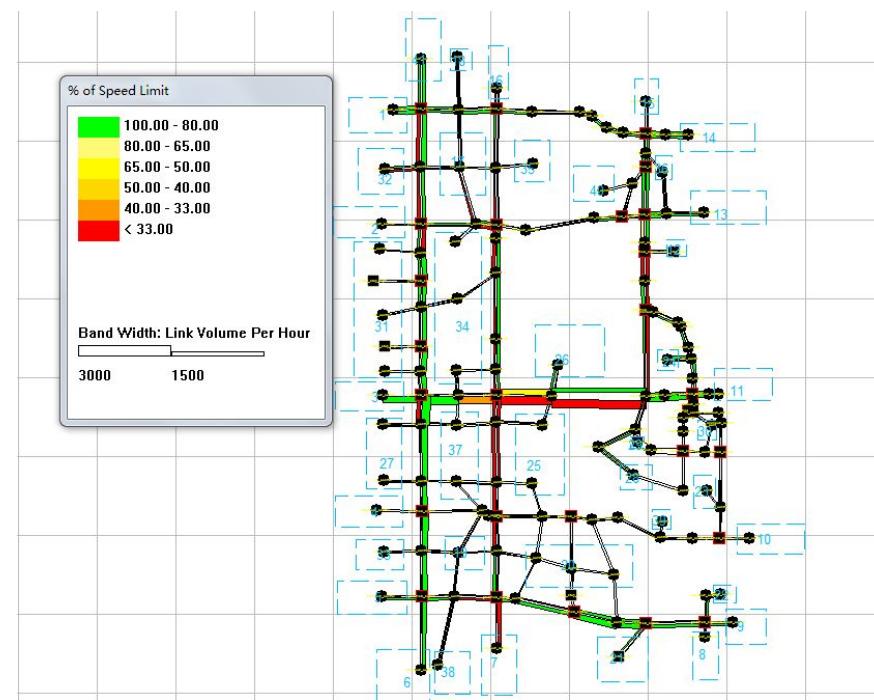


# How to display time-dependent simulation result?(Speed)

1

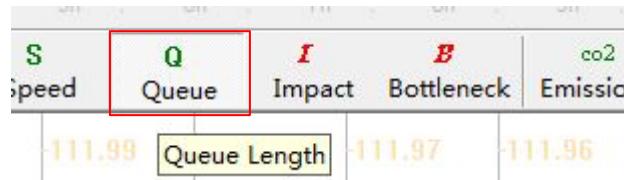


2

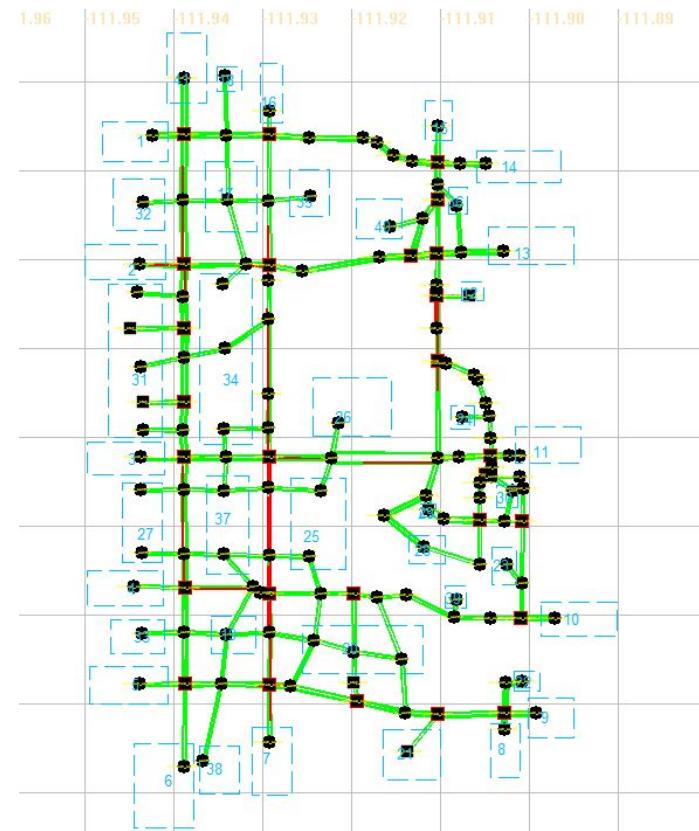
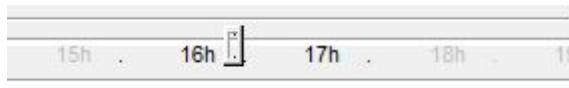


# How to display time-dependent simulation result?(Queue)

1



2

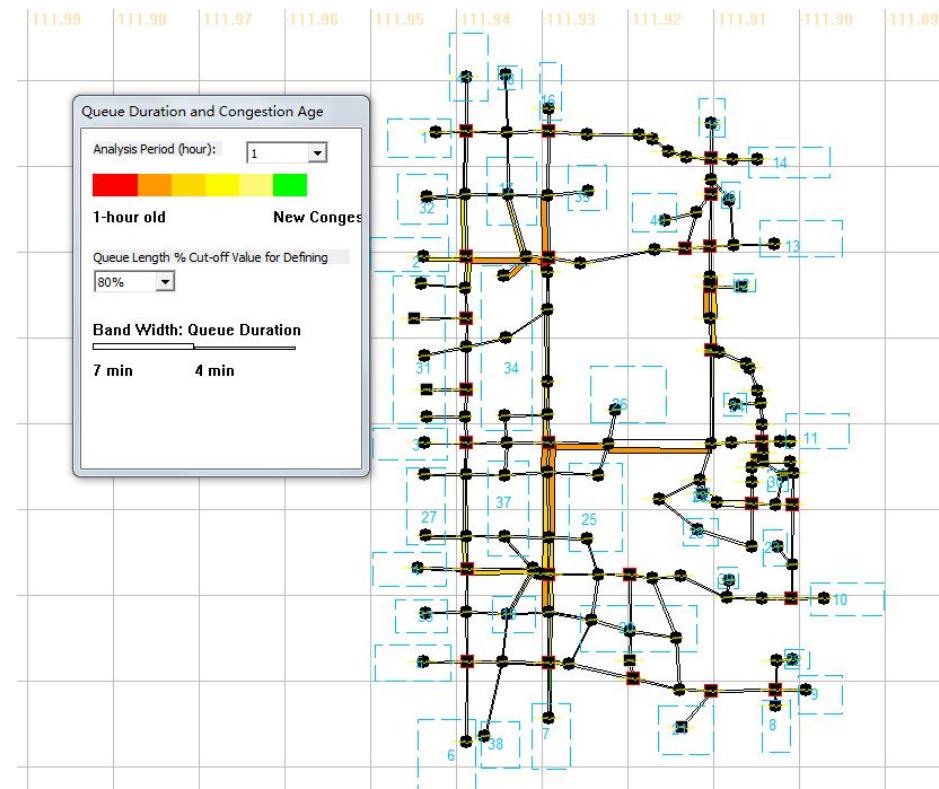
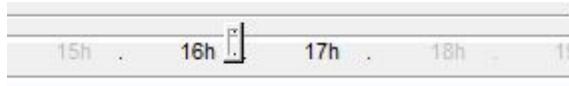


# How to display time-dependent simulation result?(Impact)

1

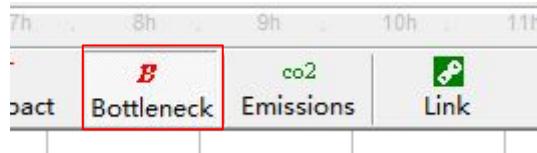


2

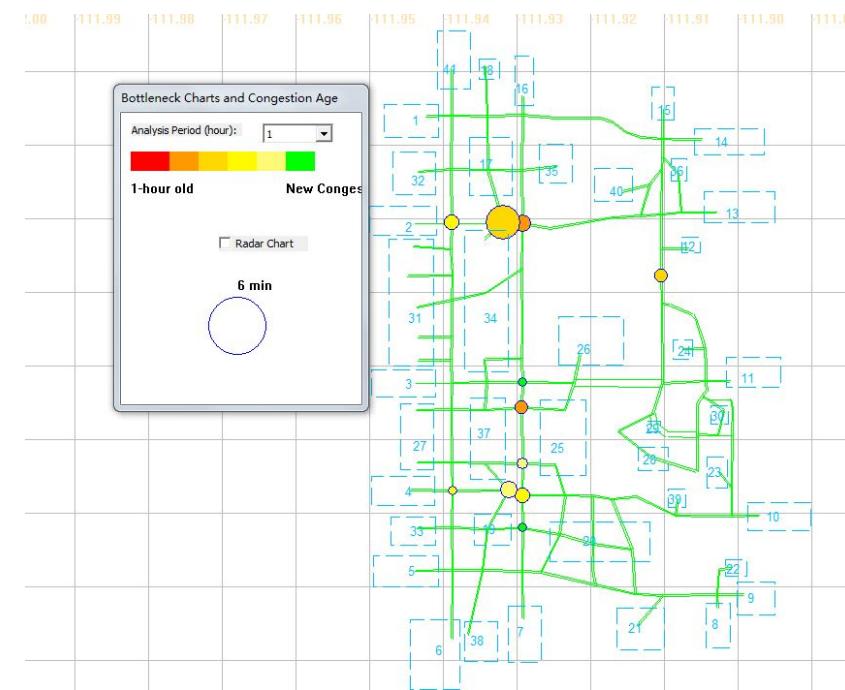
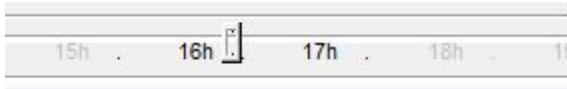


# How to display time-dependent simulation result?(Bottleneck)

1

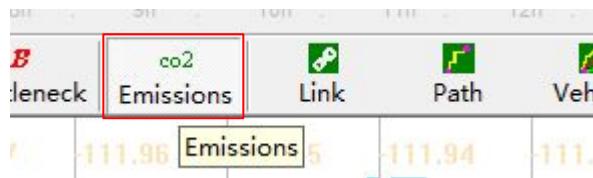


2

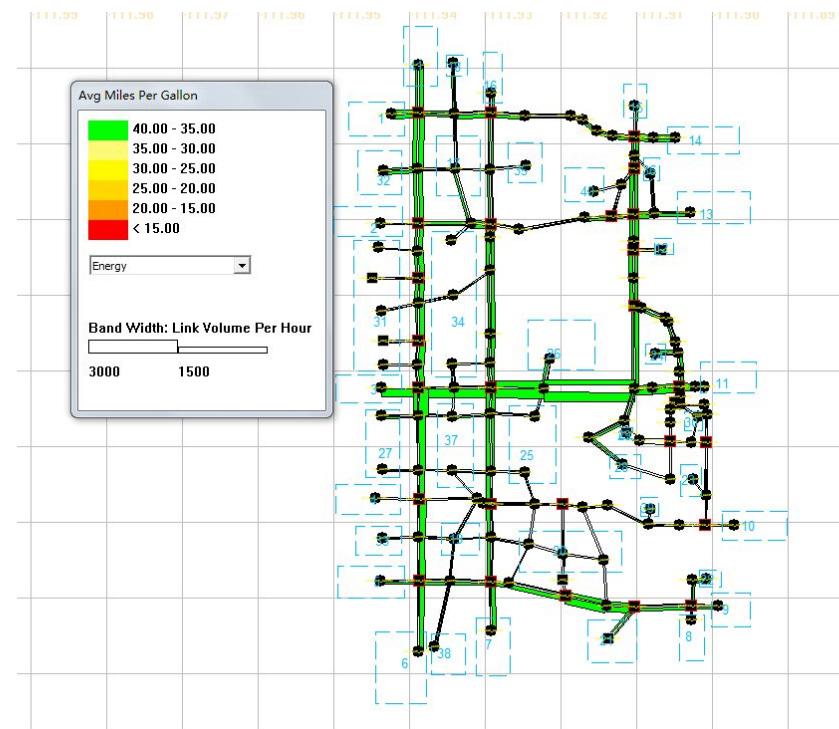
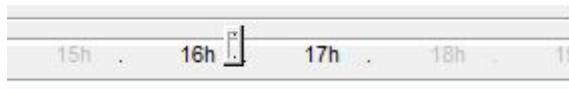


# How to display time-dependent simulation result?(Emissions)

1



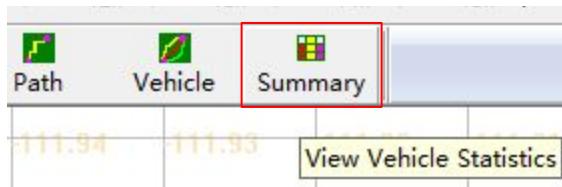
2



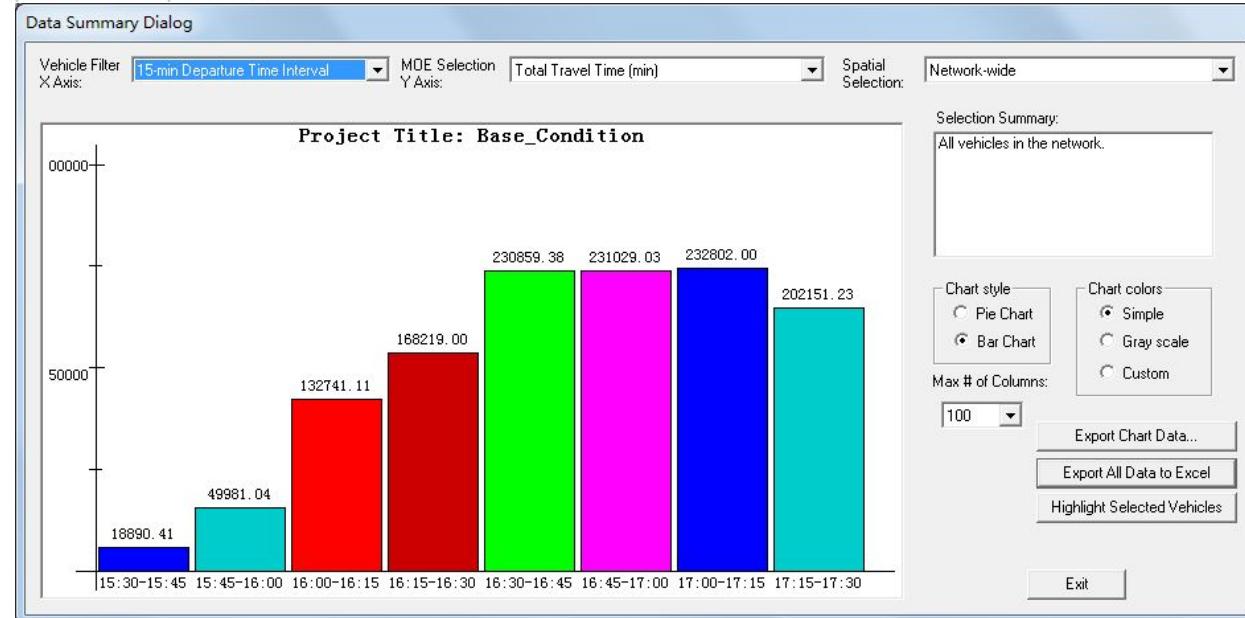
# Nex TA Advanced Analysis Features

# How to do overall network statistics?

1

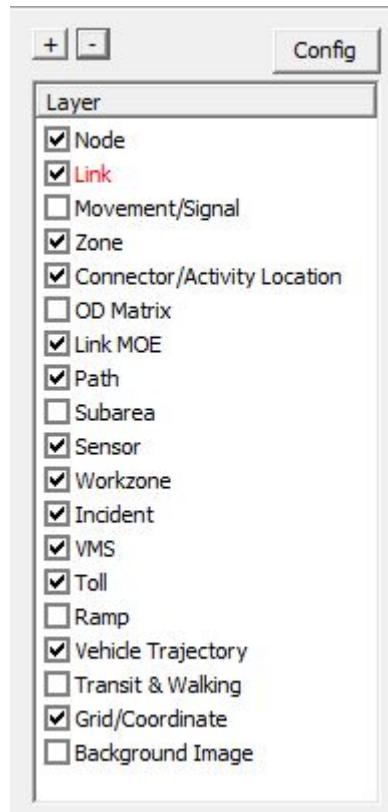


2

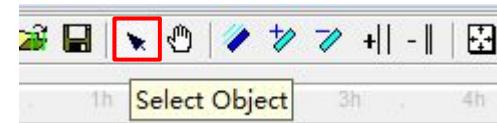


# How to select link analysis?

1

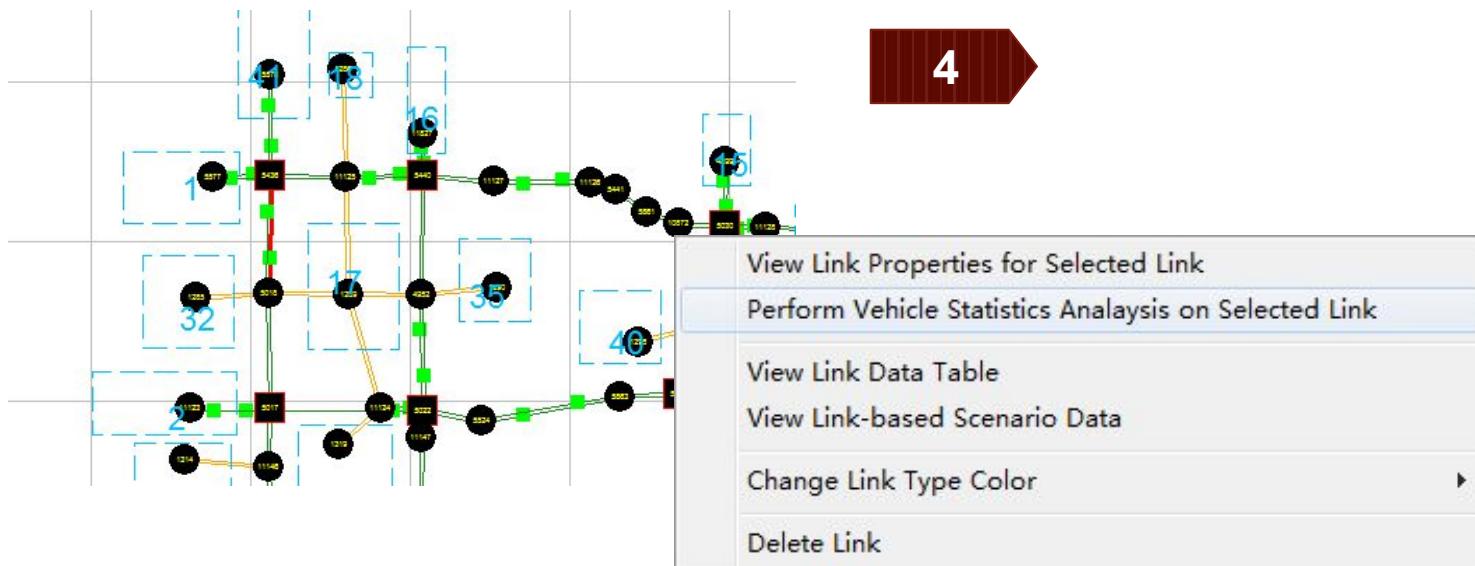


2



# How to select link analysis?

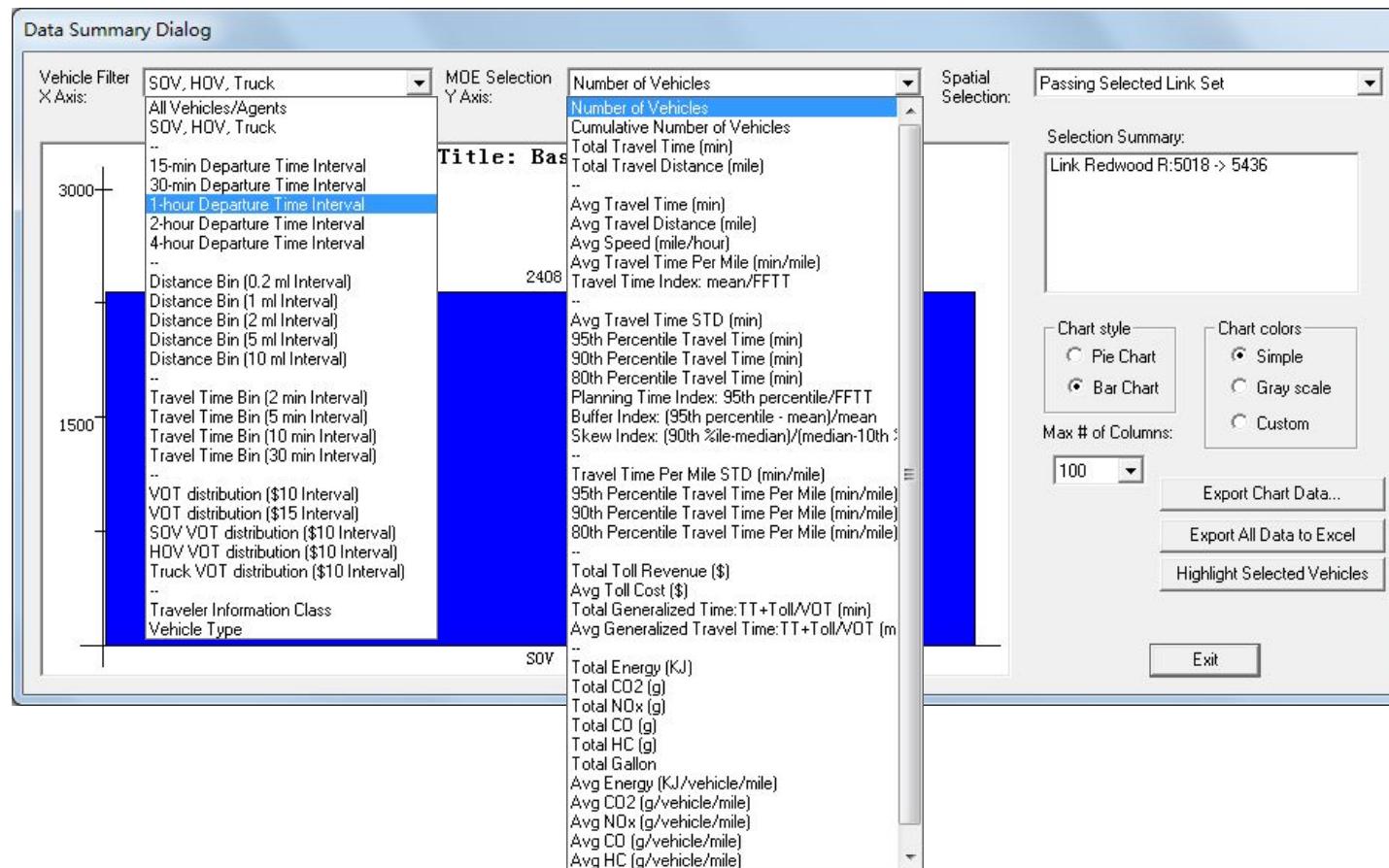
3



4

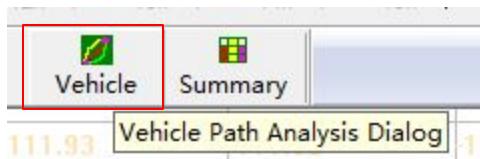
# How to select link analysis?

5

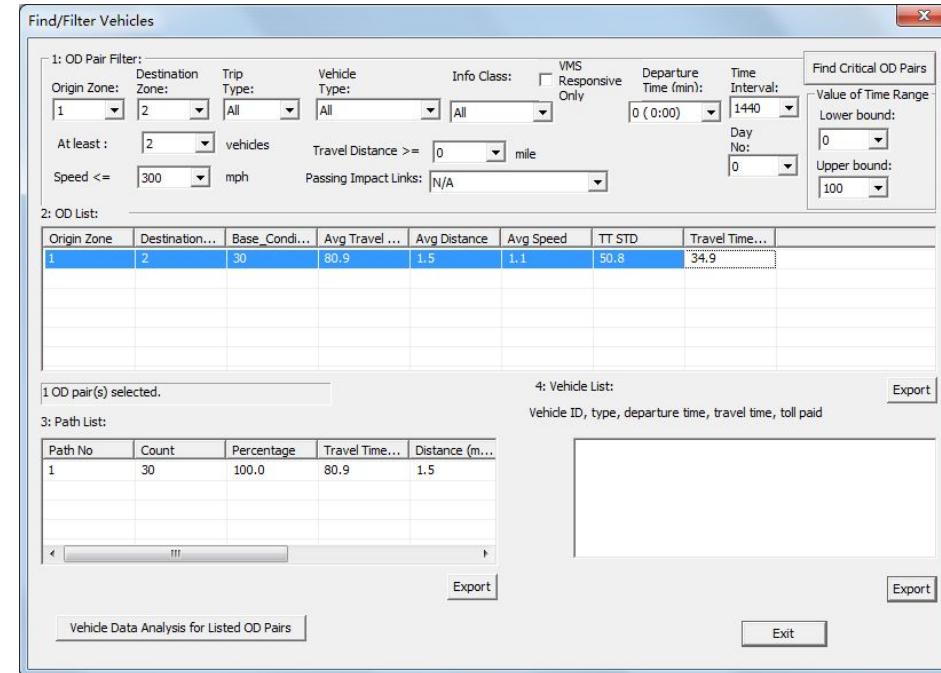


# How to select OD analysis?

1

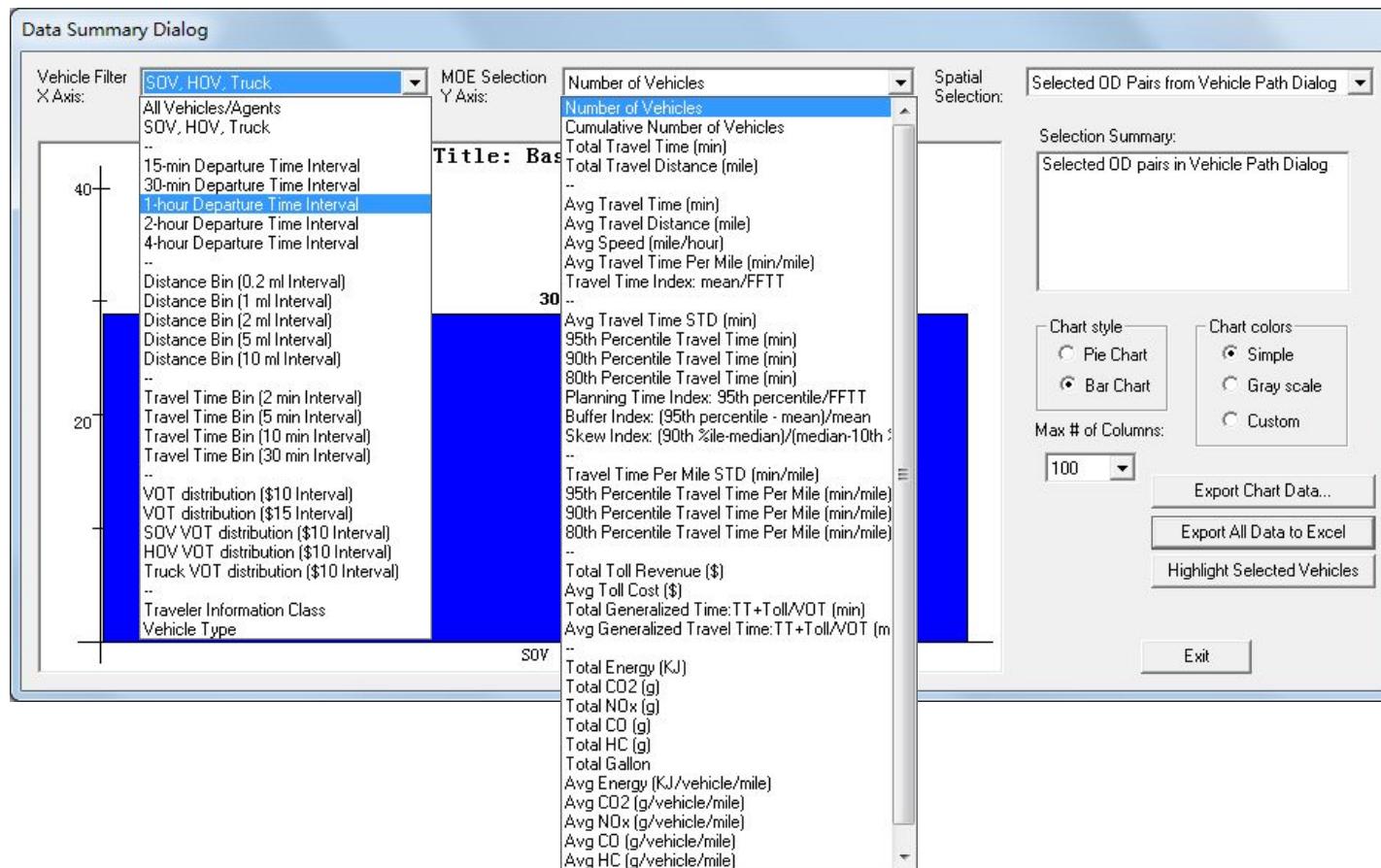


2



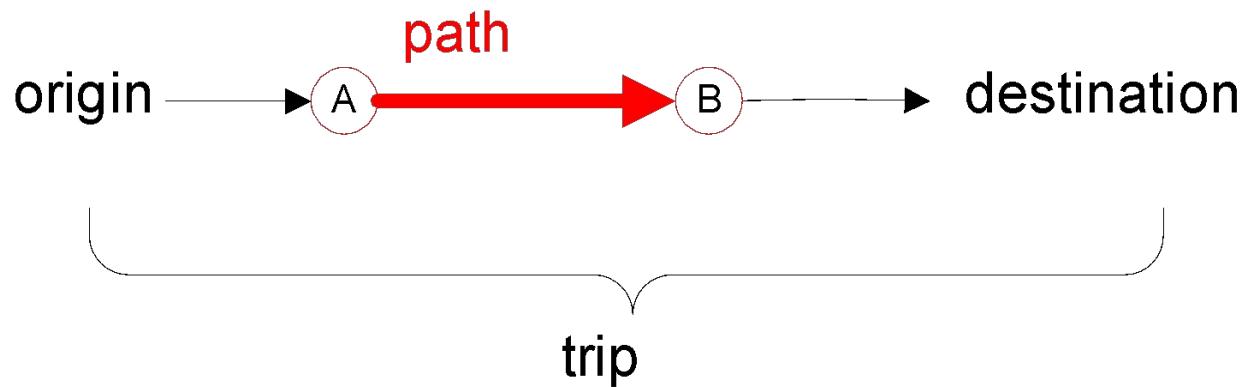
# How to select link analysis?

3



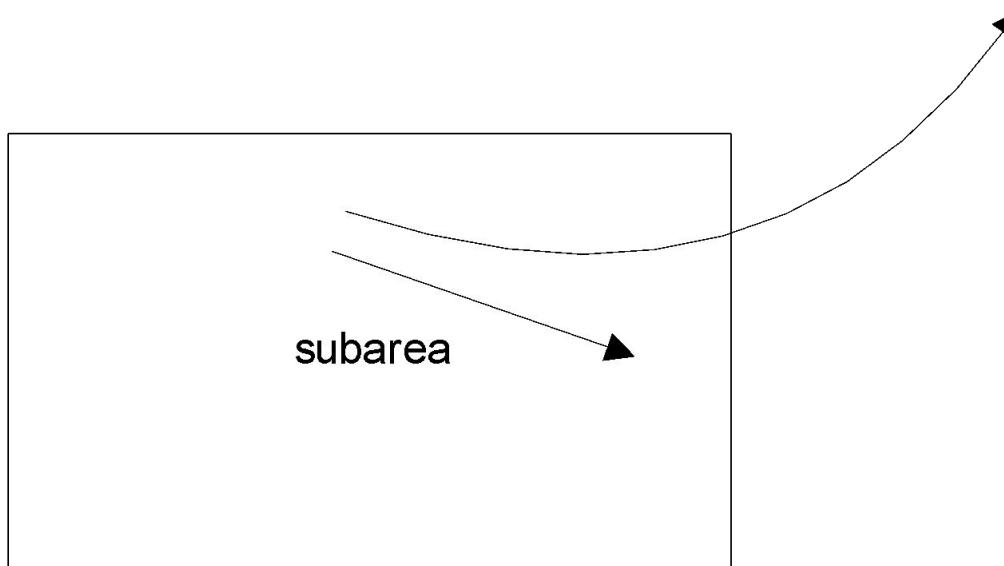
# How to define vehicle selection categories?

- Trips Passing Selected Path
- Partial Trips Passing Selected Path



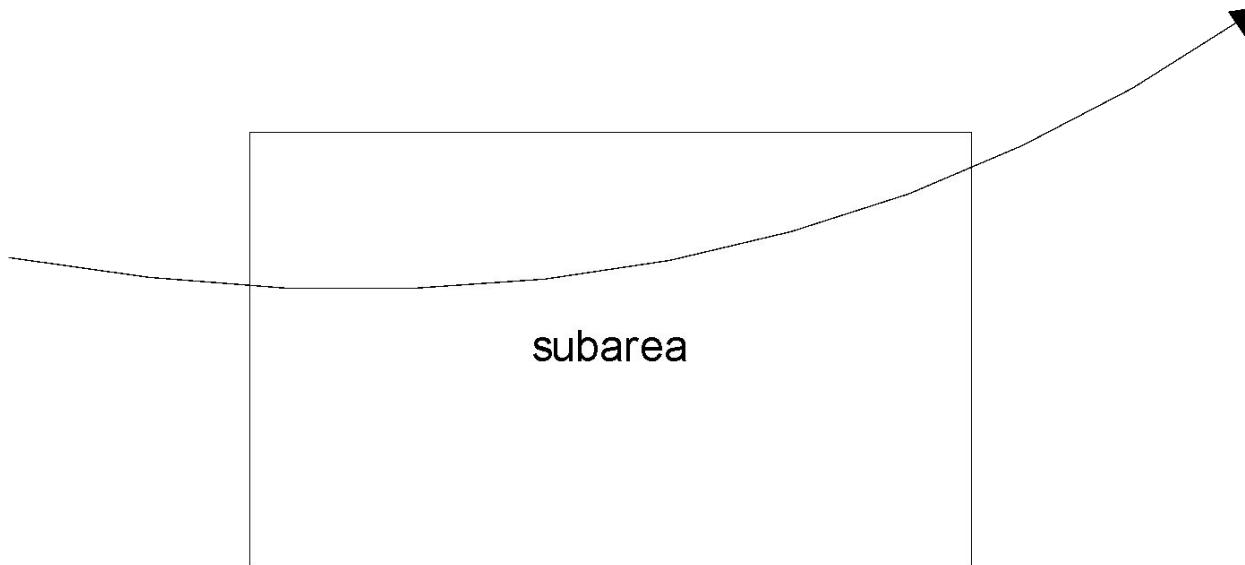
# How to define vehicle selection categories?

- Originating from Subarea



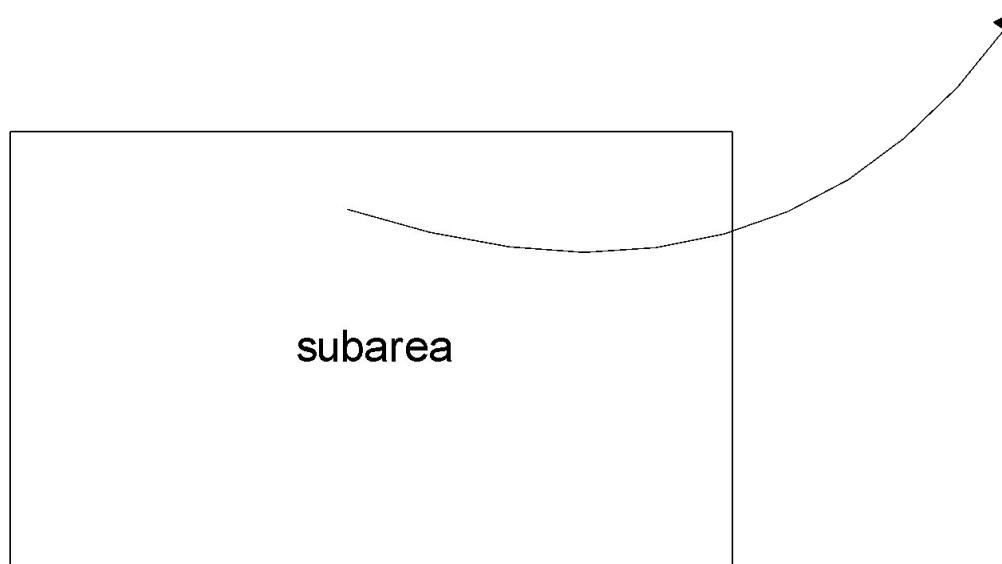
# How to define vehicle selection categories?

- Traversing through Subarea



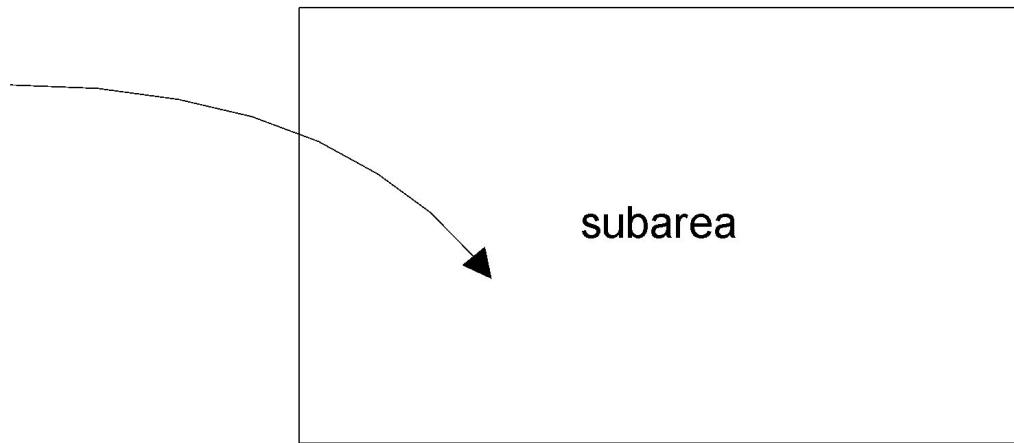
# How to define vehicle selection categories?

- Subarea Internal-to-External Trips



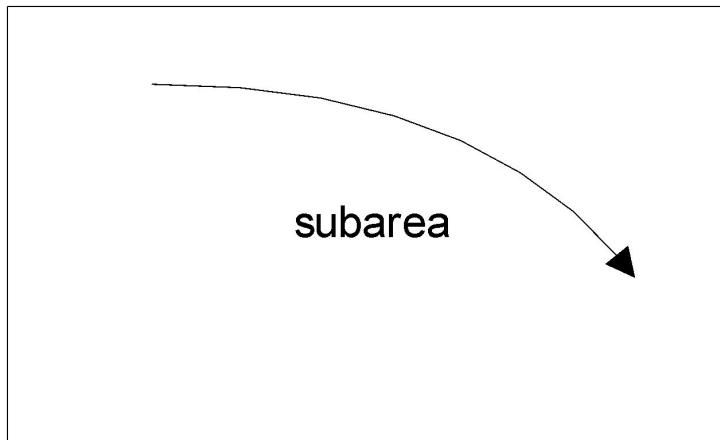
# How to define vehicle selection categories?

- Subarea External-to-Internal Trips



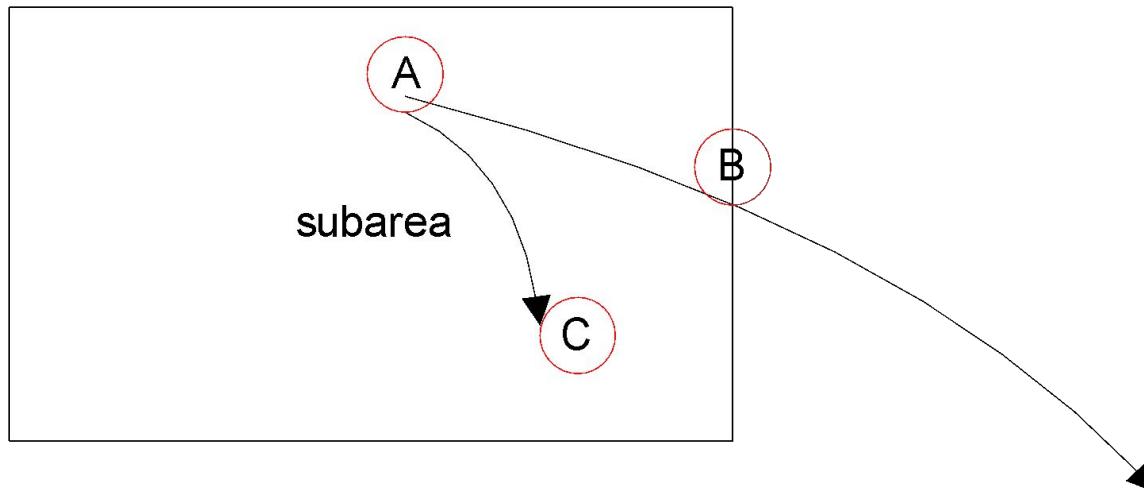
# How to define vehicle selection categories?

- Subarea Internal-to-Internal Trips



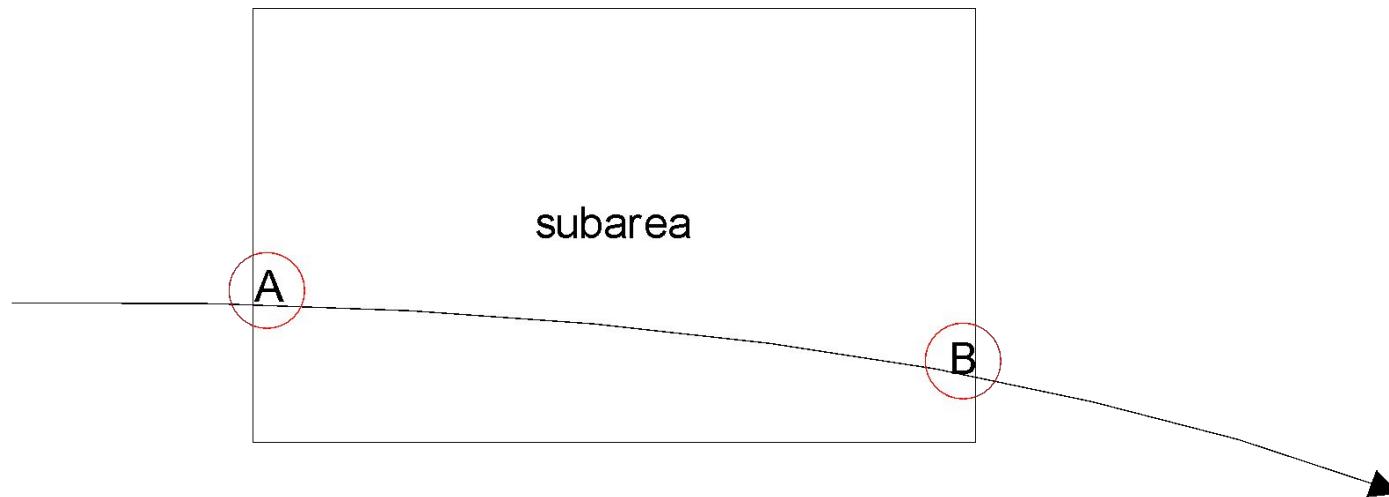
# How to define vehicle selection categories?

- Complete and Partial Trips inside Subarea



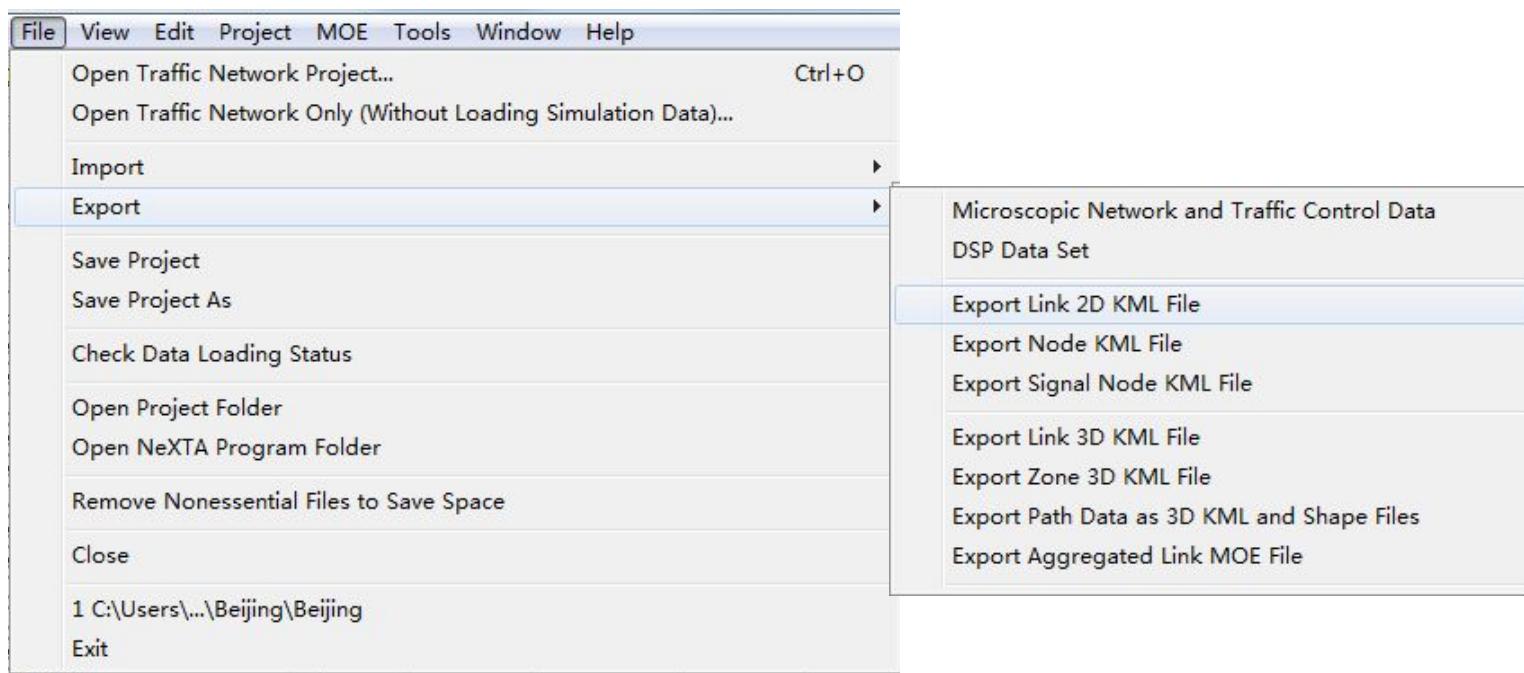
# How to define vehicle selection categories?

- Subarea Boundary-to-Boundary Trips



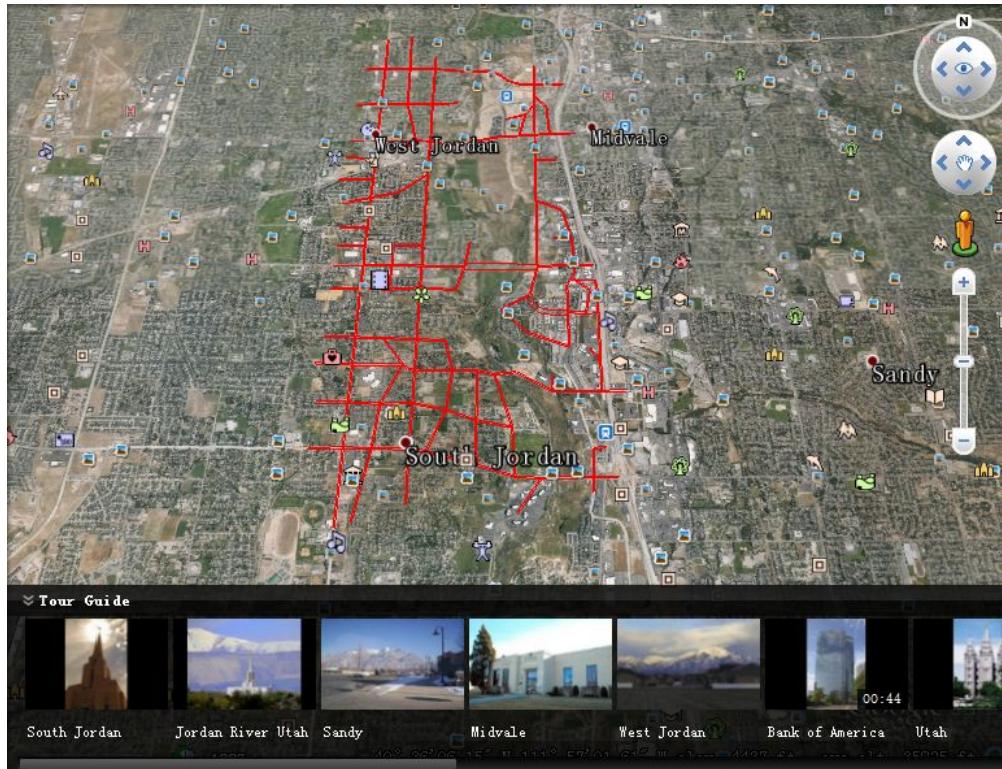
# How to exporting 2D links to Google Earth?

1



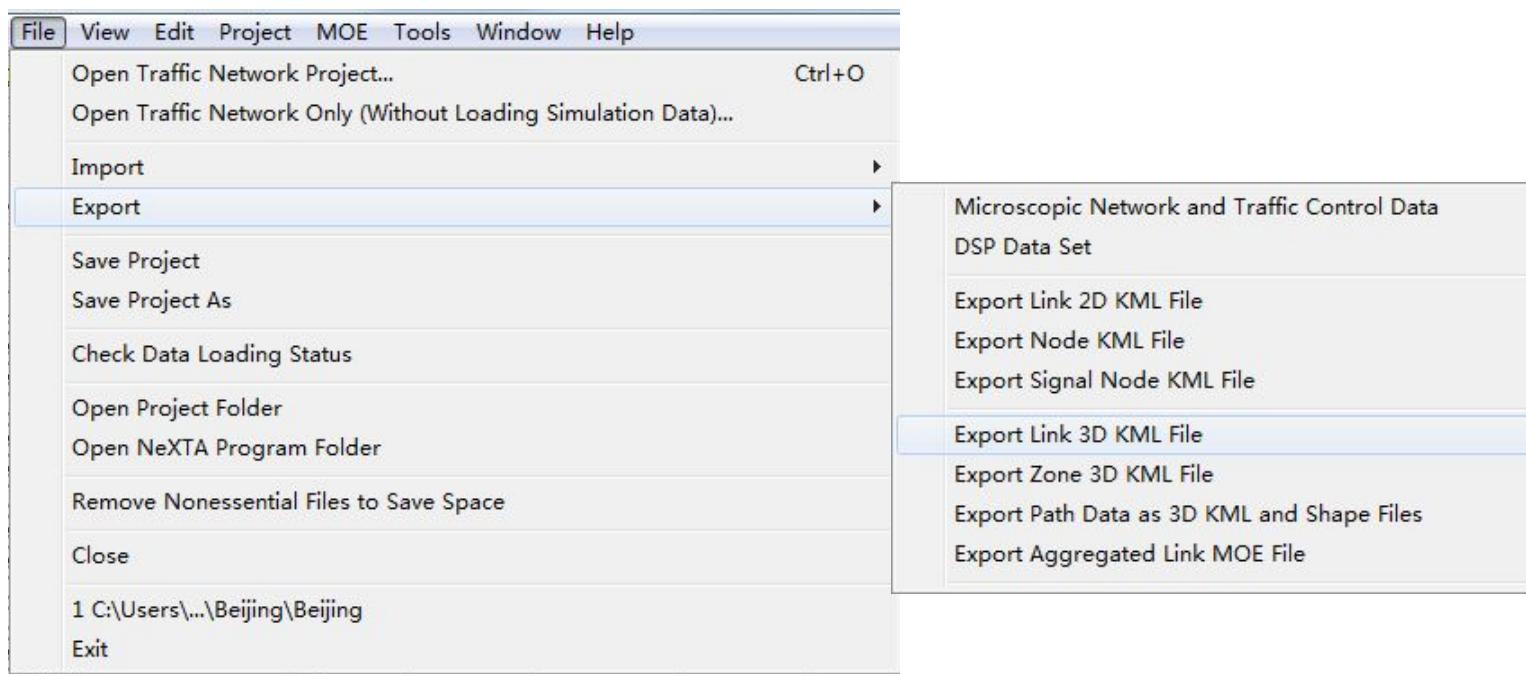
# How to exporting 2D links to Google Earth?

2



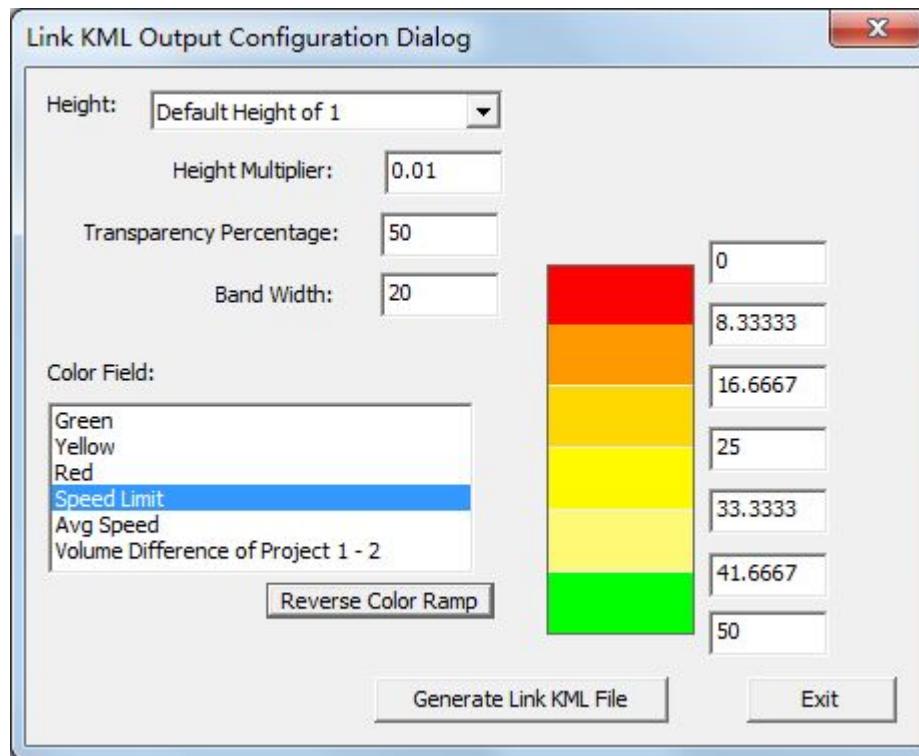
# How to exporting 3D links to Google Earth?

1



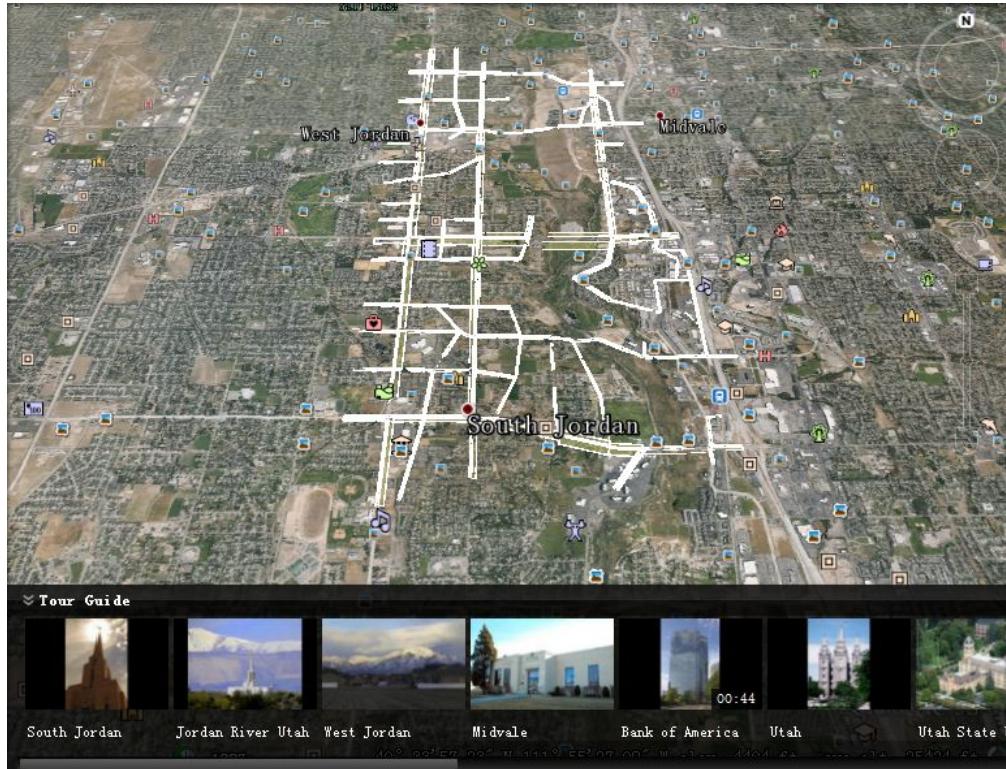
# How to exporting 3D links to Google Earth?

2



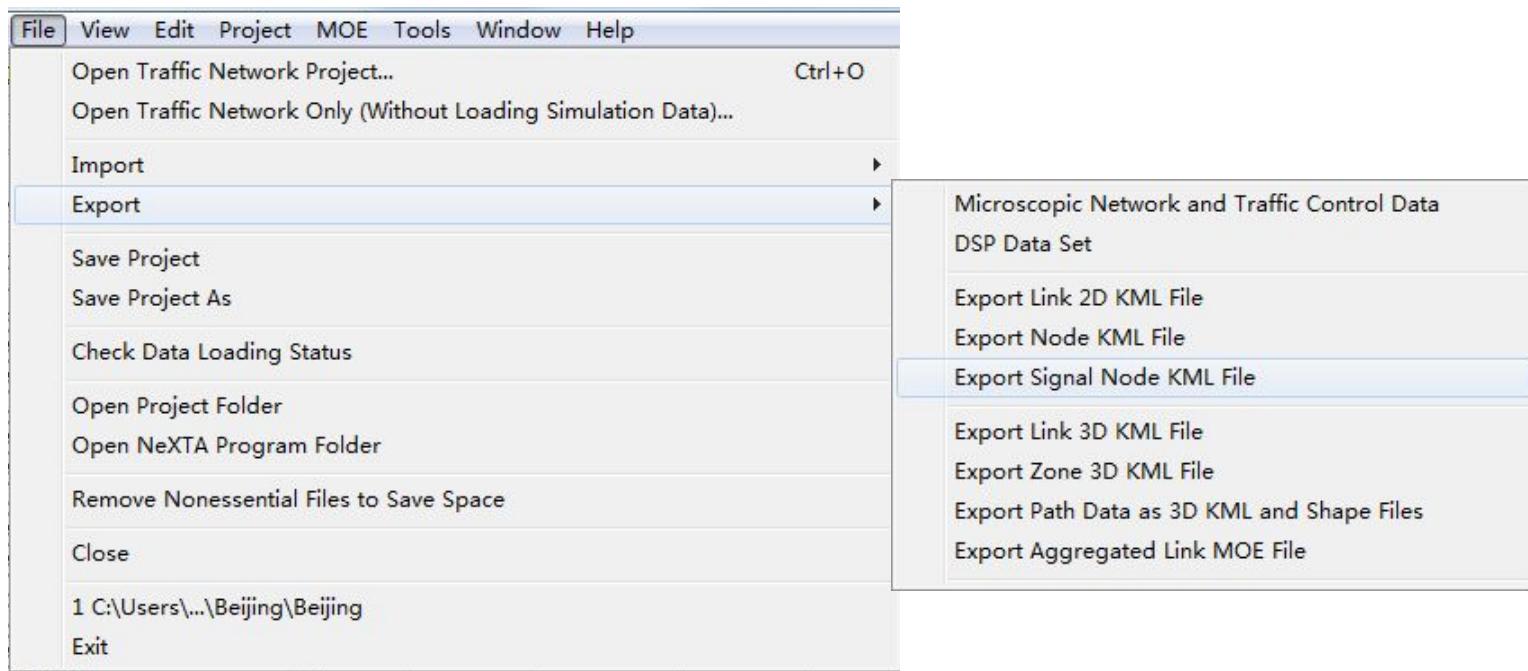
# How to exporting 3D links to Google Earth?

3



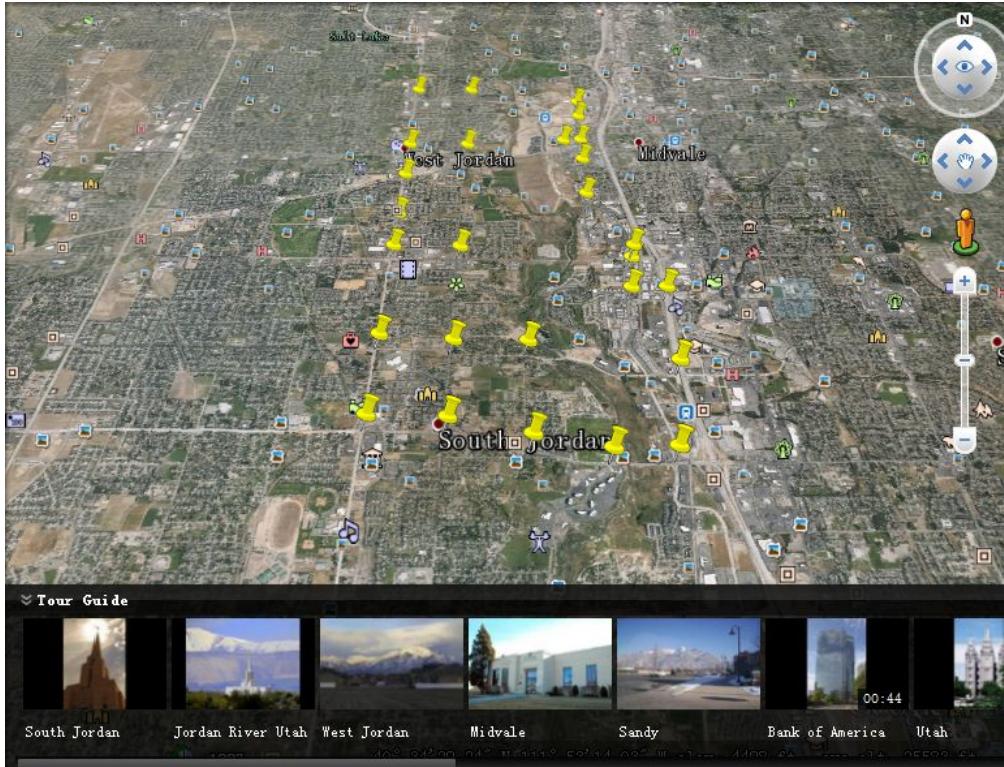
# How to exporting signalized nodes to Google Earth?

1



# How to exporting signalized nodes to Google Earth?

2

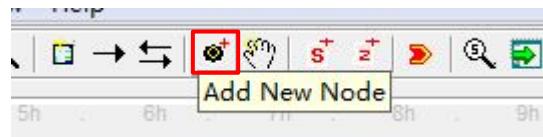


Nex  
TA

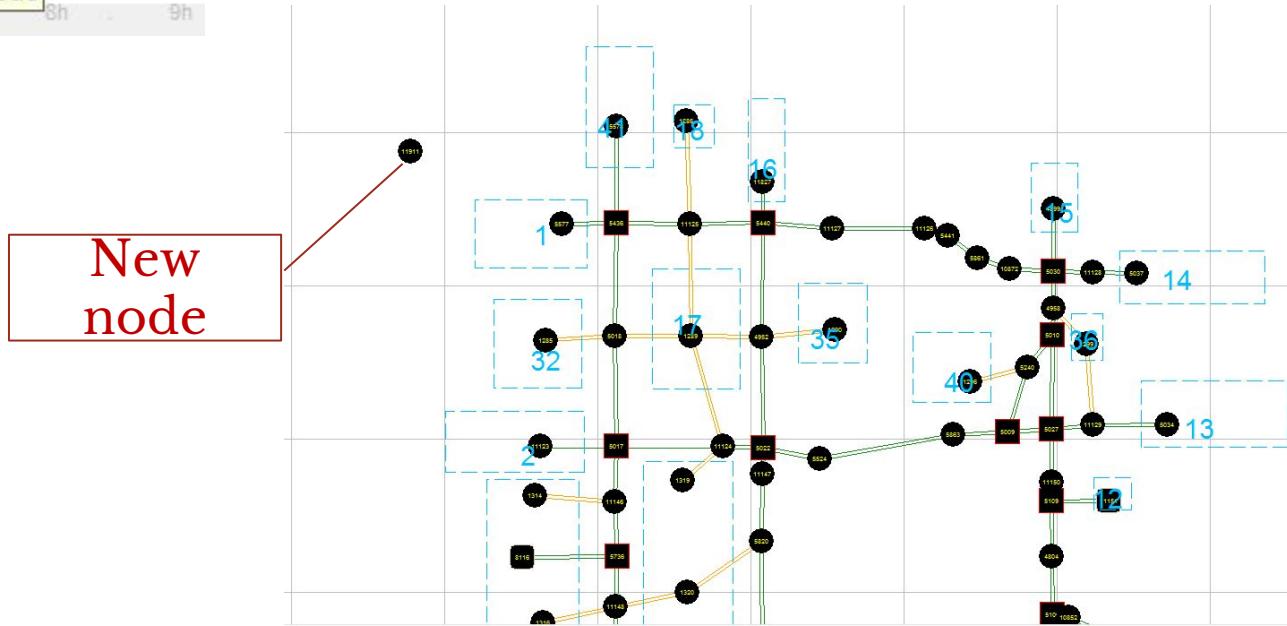
Changing Network Data

# How to add a node?

1

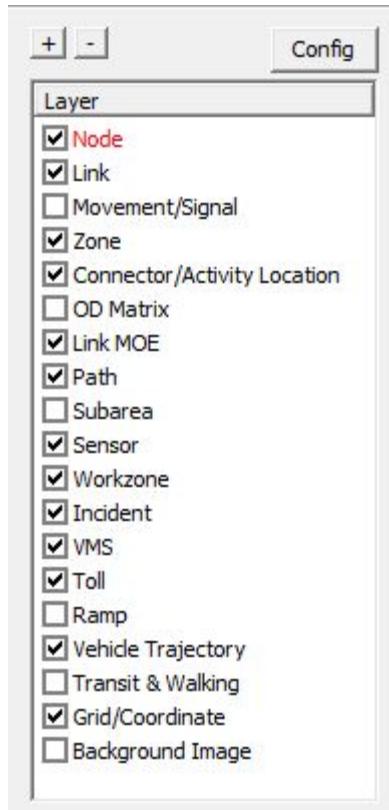


2

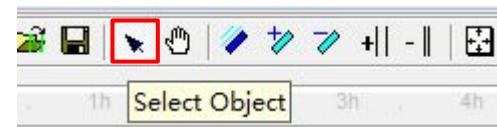


# How to delete a node?

1

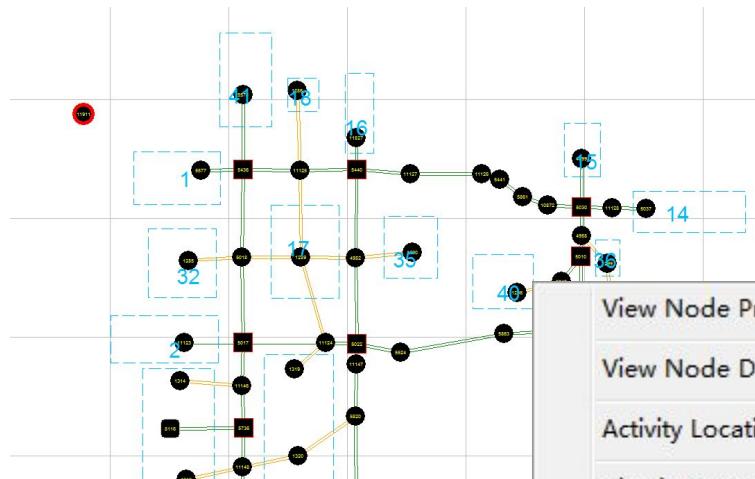


2

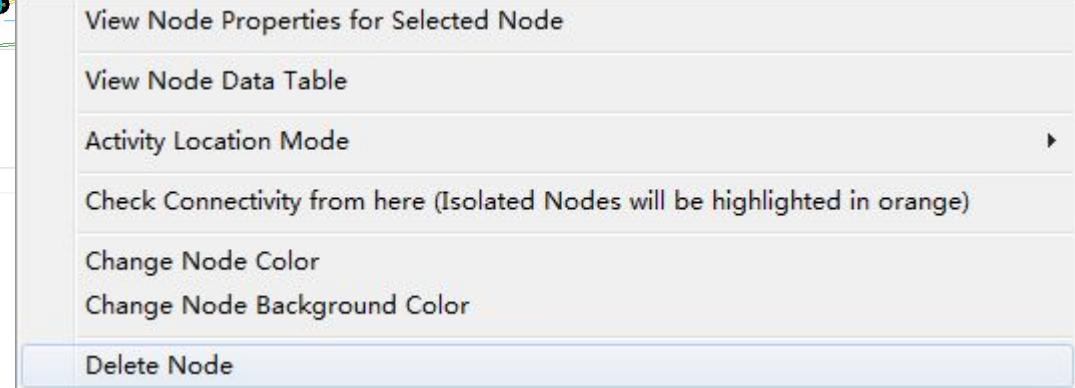


# How to delete a node?

3



4

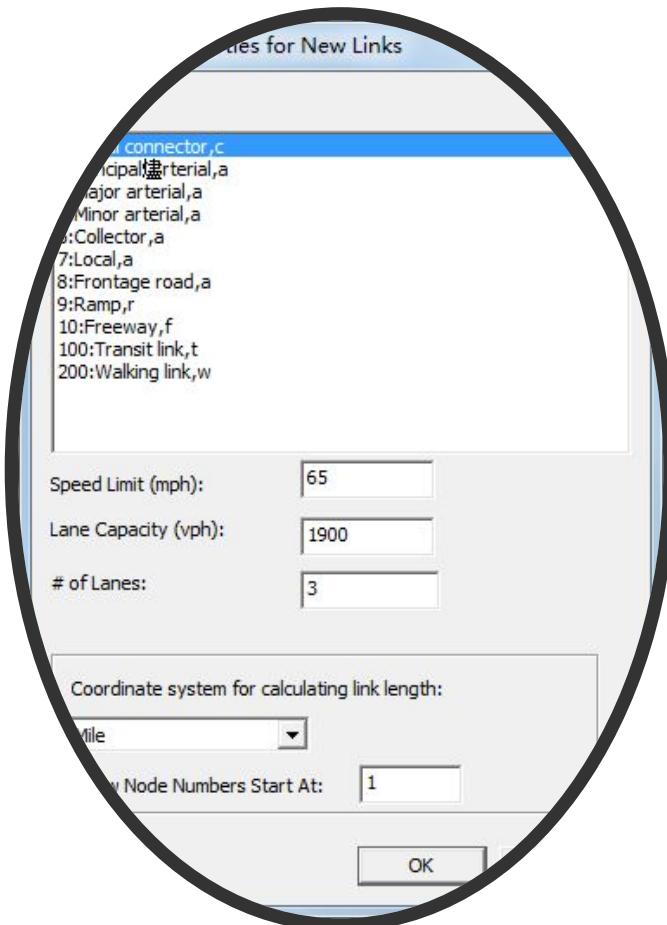


# How to add a link based on a given link type?

1

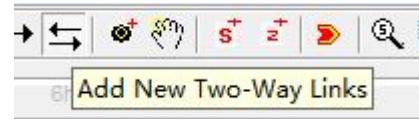
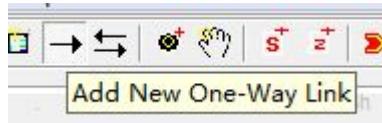


2

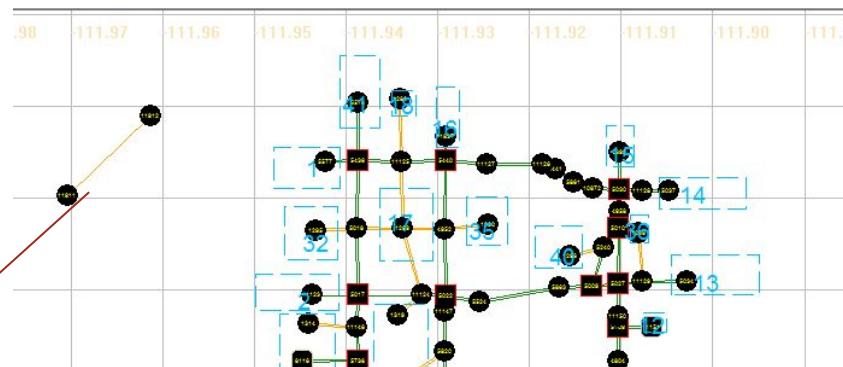


# How to add a link based on a given link type?

3



4



# How to delete a link?

1

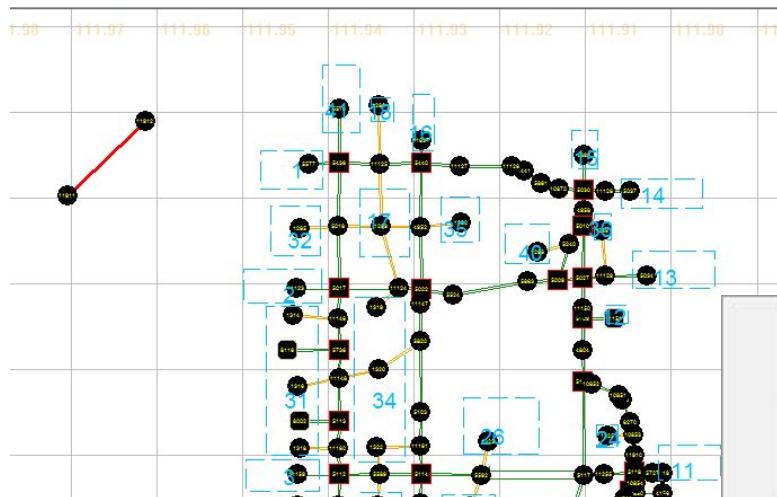


2

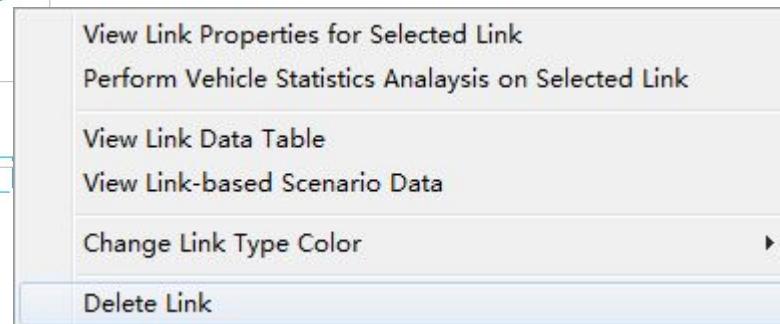


# How to delete a link?

3

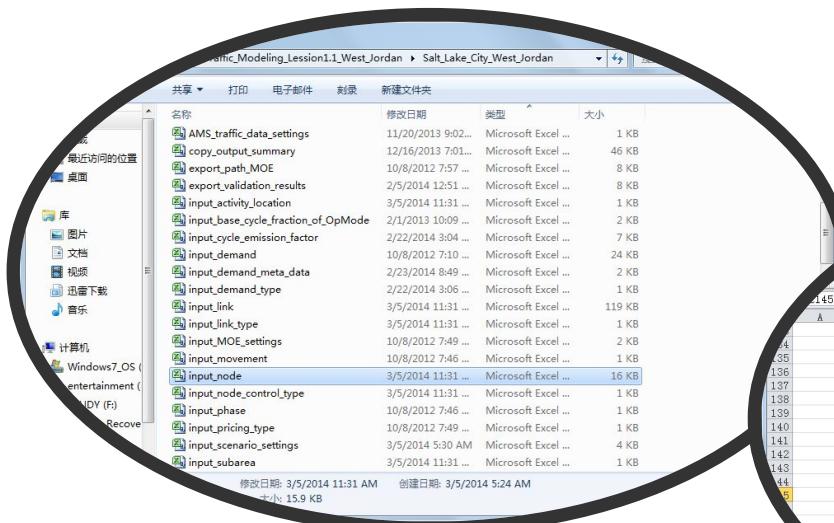


4



# How to add node in CSV file?

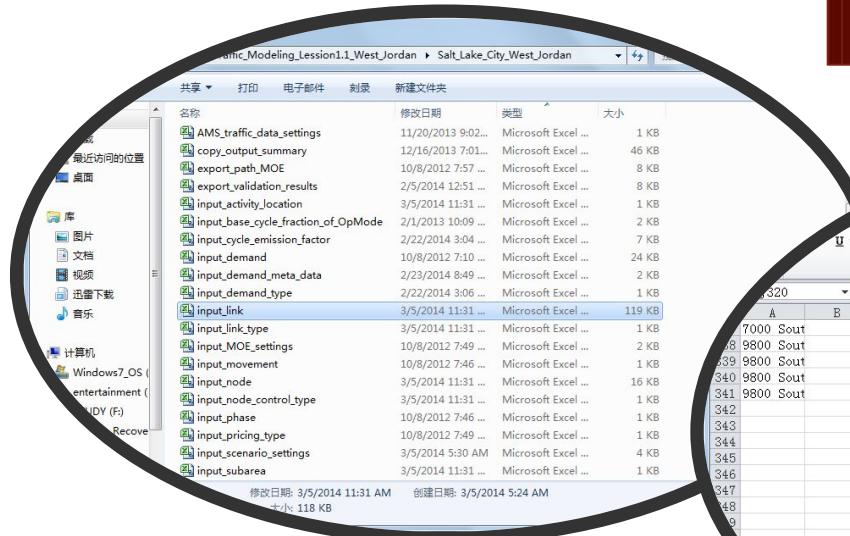
1



2

# How to add a link in CSV file?

1



2

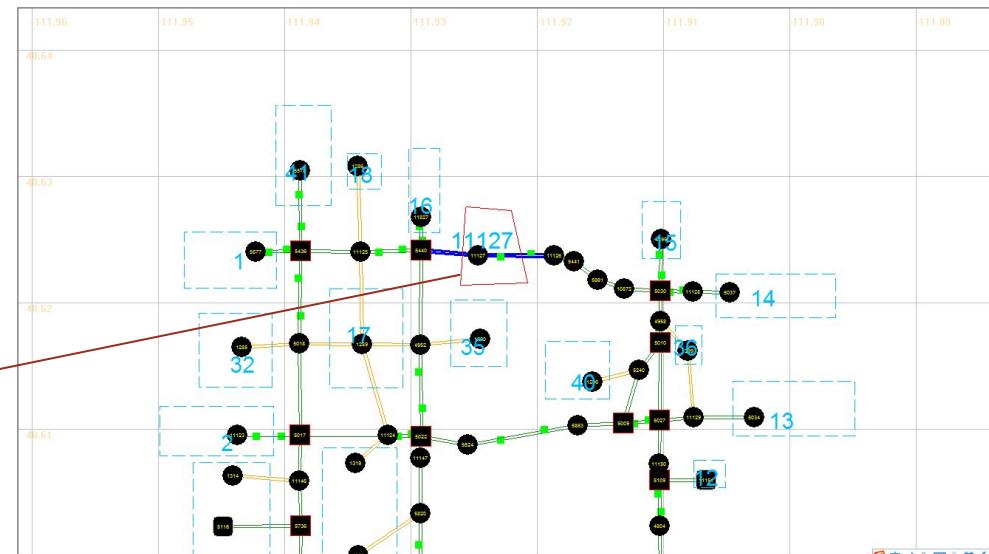
input_link - Microsoft Excel																
数据		审阅		视图		负载测试		团队		公式						
7000	Sout	0	0_BA			11127	11126	Major art	1	0.3179	2	40	1000	3	1	
9800	Sout	0	0_AB			11181	11182	Minor art	1	0.06164	1	40	800	4	190	
639	9800	Sout	0	0_BA		11182	11181	Minor art	1	0.06667	1	40	800	4	190	
340	9800	Sout	0	0_AB		11184	11127	Minor art	1	0.33499	1	40	800	4	190	
341	9800	Sout	0	0_BA		11257	11181	Minor art	1	0.33499	1	40	800	4	190	
342		0				5592	5117	Major art	1	0.01195	2	40	1000	3	180	
343		0				5117	5592	Major art	1	0.01195	2	40	1000	3	180	
344		0				5117	1358	Major art	1	0.00439	2	40	1000	3	180	
345		0				1358	5117	Major art	1	0.00439	2	40	1000	3	180	
346		0				1358	3000	Major art	1	0.00525	2	40	1000	3	180	
347		0				3000	1358	Major art	1	0.00525	2	40	1000	3	180	
348		0				3000	1359	Major art	1	0.0056	2	40	1000	3	180	
349		0				1359	3000	Major art	1	0.0056	2	40	1000	3	180	
		0				3002	1358	Zonal cor	1	0.00157	2	50	2000	1	180	
		0				1358	3002	Zonal cor	1	0.00157	2	50	2000	1	180	
		0				3001	3002	Zonal cor	1	0.00206	2	50	2000	1	180	
		0				3002	3001	Zonal cor	1	0.00206	2	50	2000	1	180	
		0				3001	8172	Major art	1	0.00407	2	40	1000			
		0				8172	3001	Major art	1	0.00407	2	40	1000			

# How to add a zone?

1



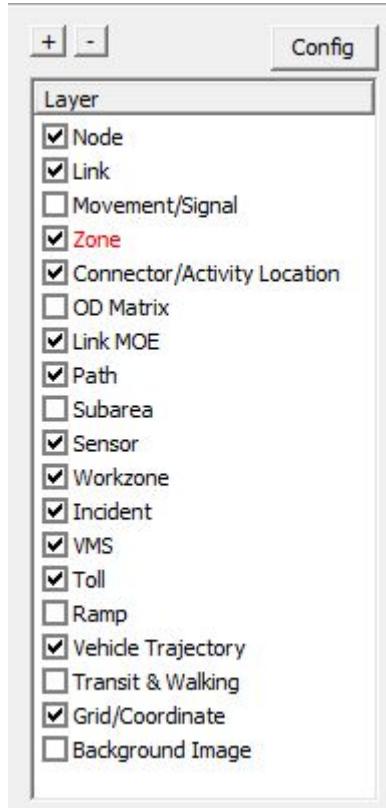
2



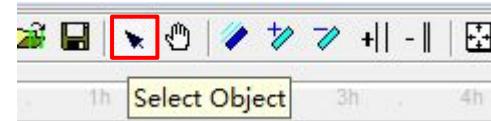
A new  
zone

# How to delete a zone?

1

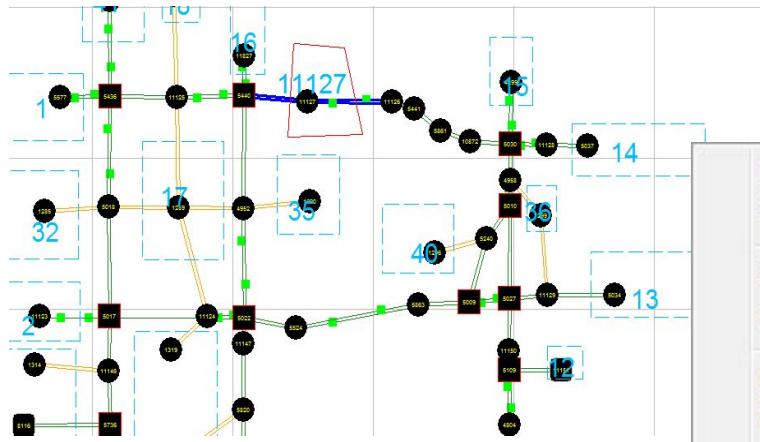


2

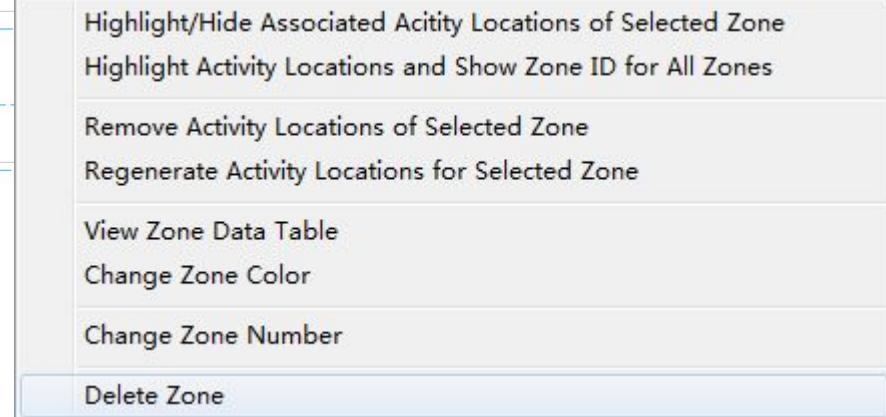


# How to delete a zone?

3

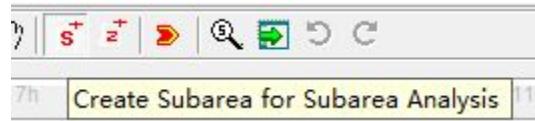


4

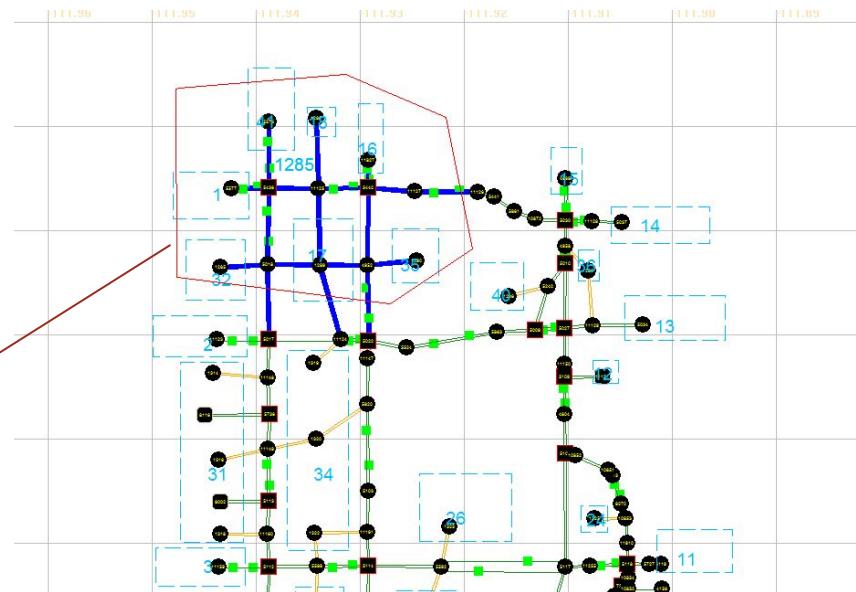


# How to add subarea?

1



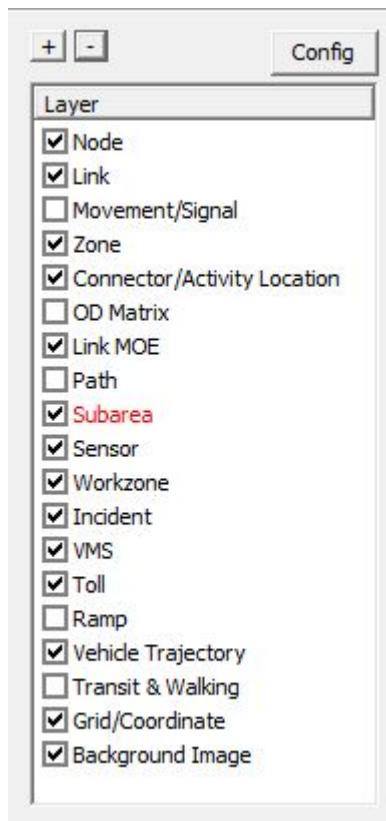
2



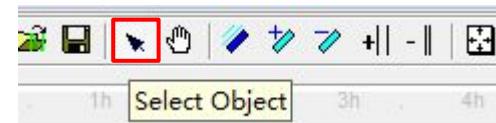
# A New subarea

# How to delete subarea?

1

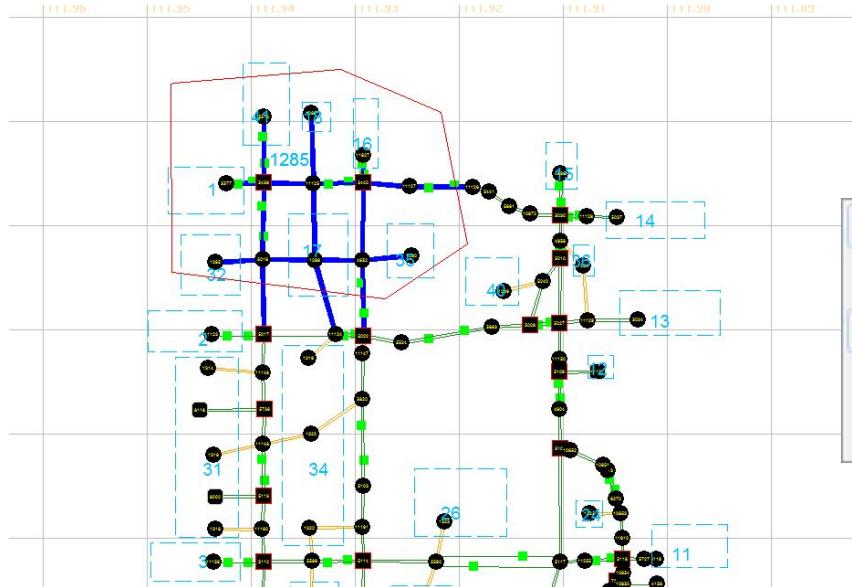


2

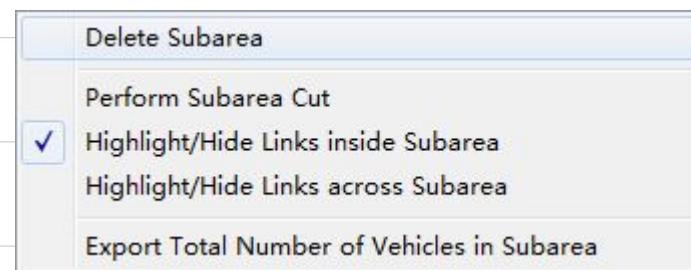


# How to delete subarea?

3

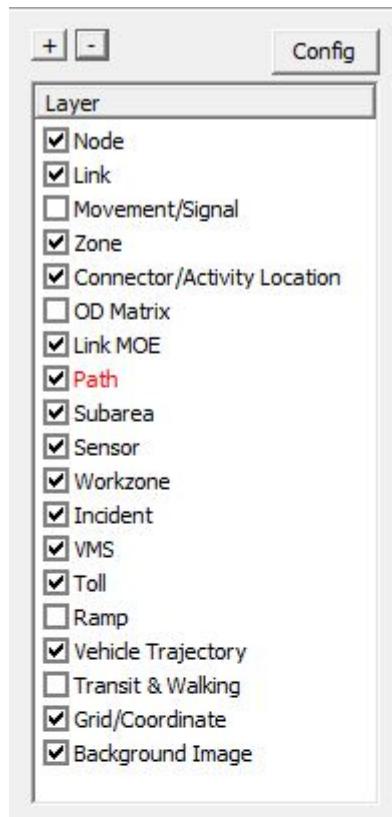


4

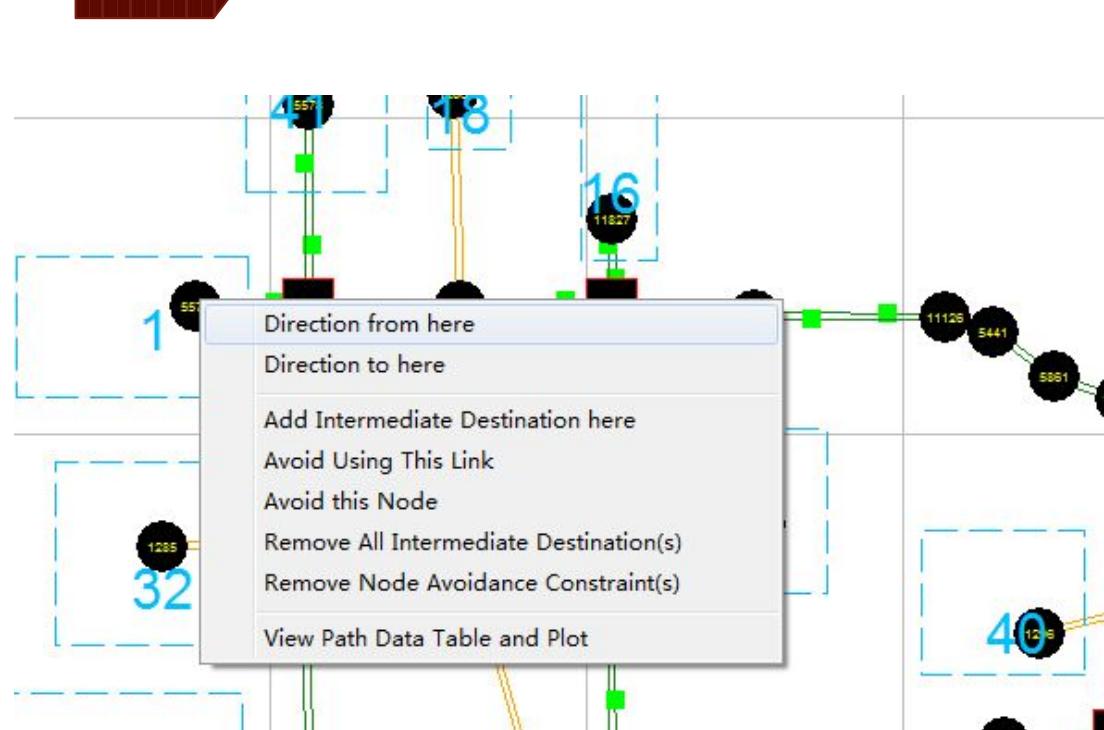


# How to define a path?

1



2



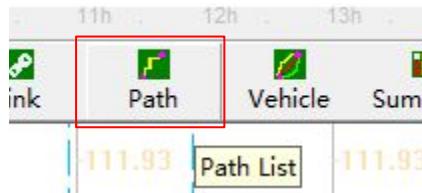
# How to define a path?

3

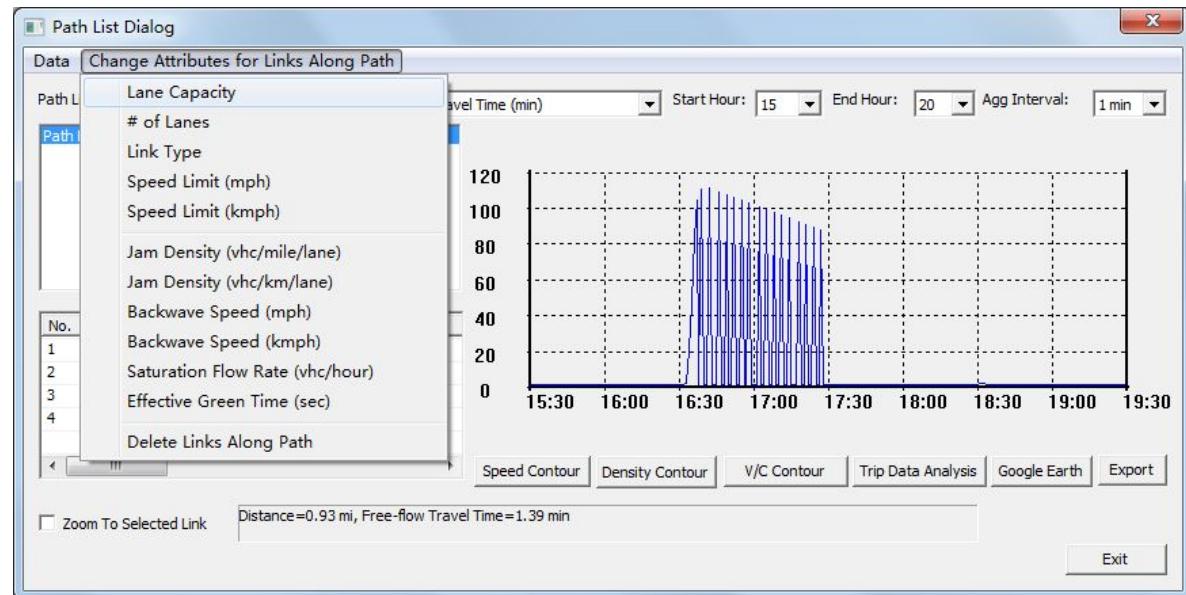


# How to change link attribute for links along a path?

1

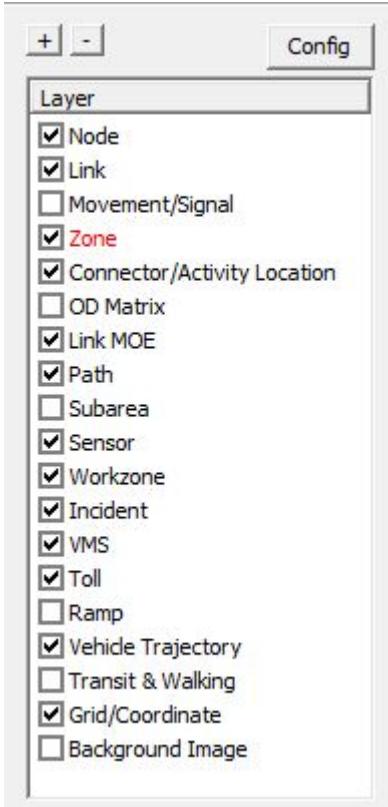


2



# How to remove activity locations for a zone?

1



2



# How to remove activity locations for a zone?

3

