Step 4: Display the link volume Total Link Volume

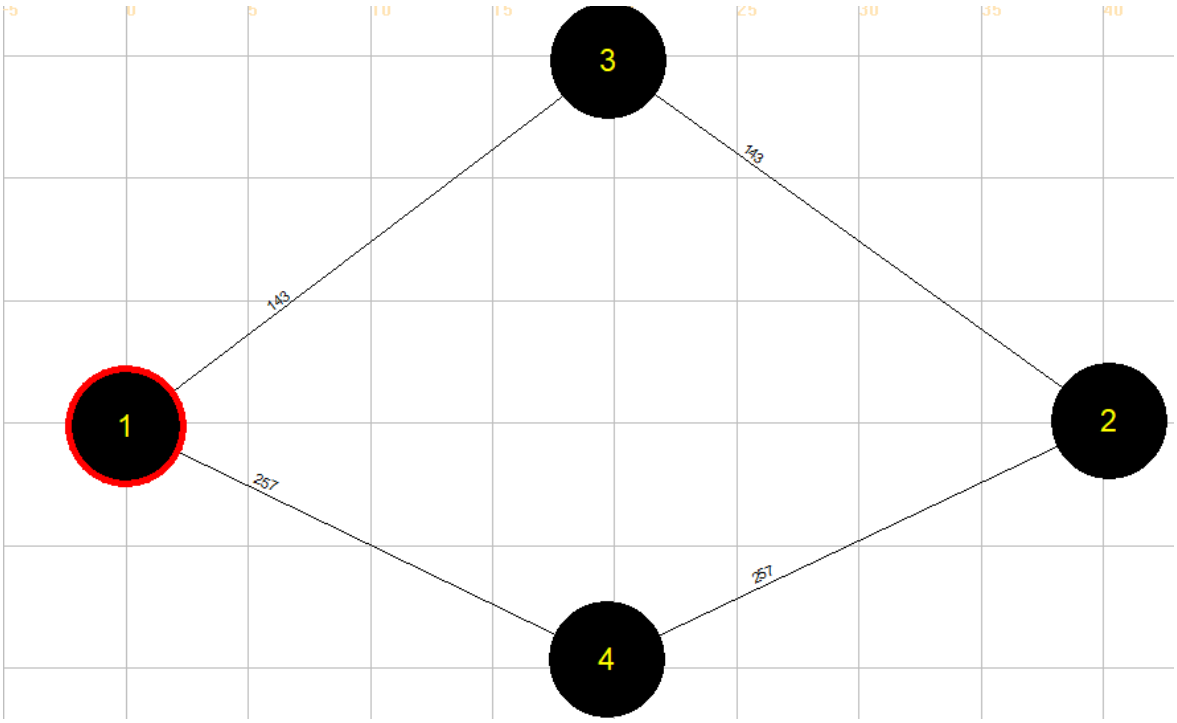


Figure 1: Total link volume

Step5) Prepare statistics for the base case scenario.

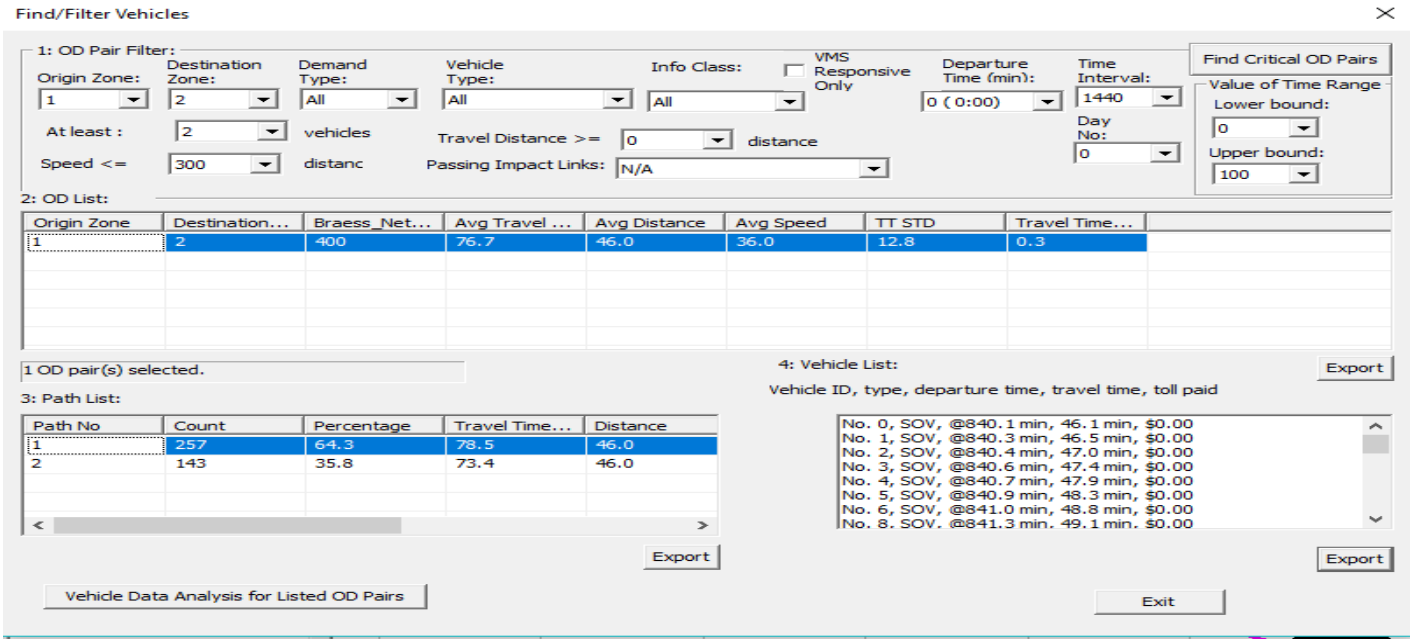


Figure 2: Path selection information and vehicle list

Step 6: Use the “summary” button to verify the overall network performance.

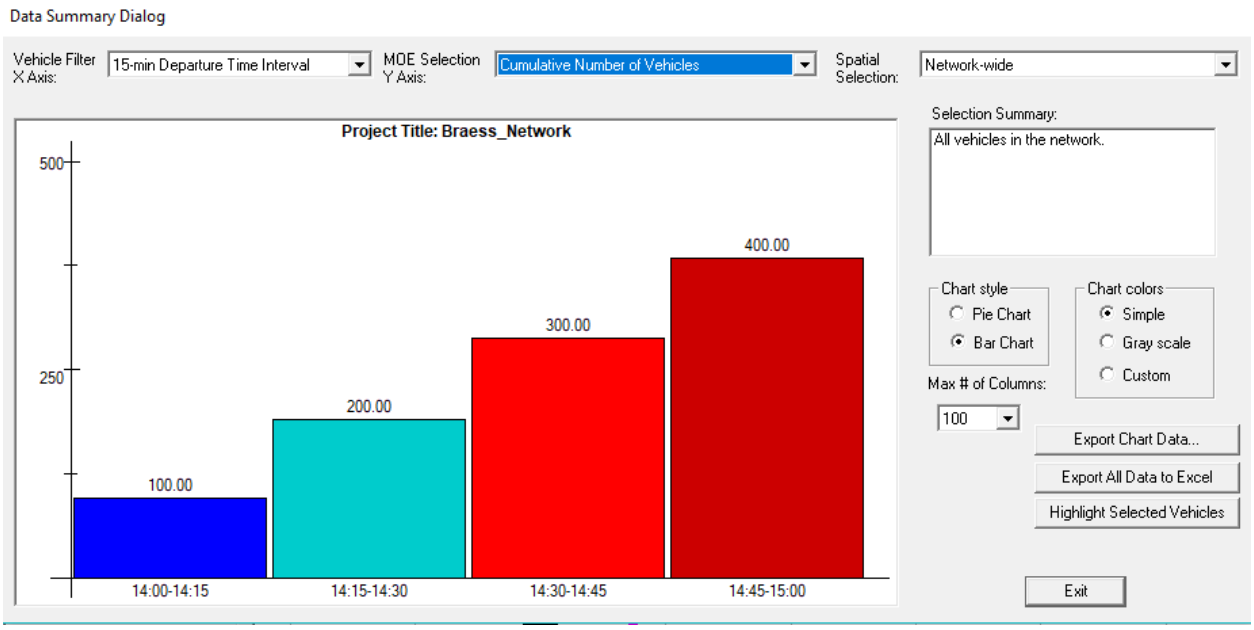


Figure 3: Cumulative number of vehicles for 15-min departure time interval

Figure 4: The average travel time using bar chart

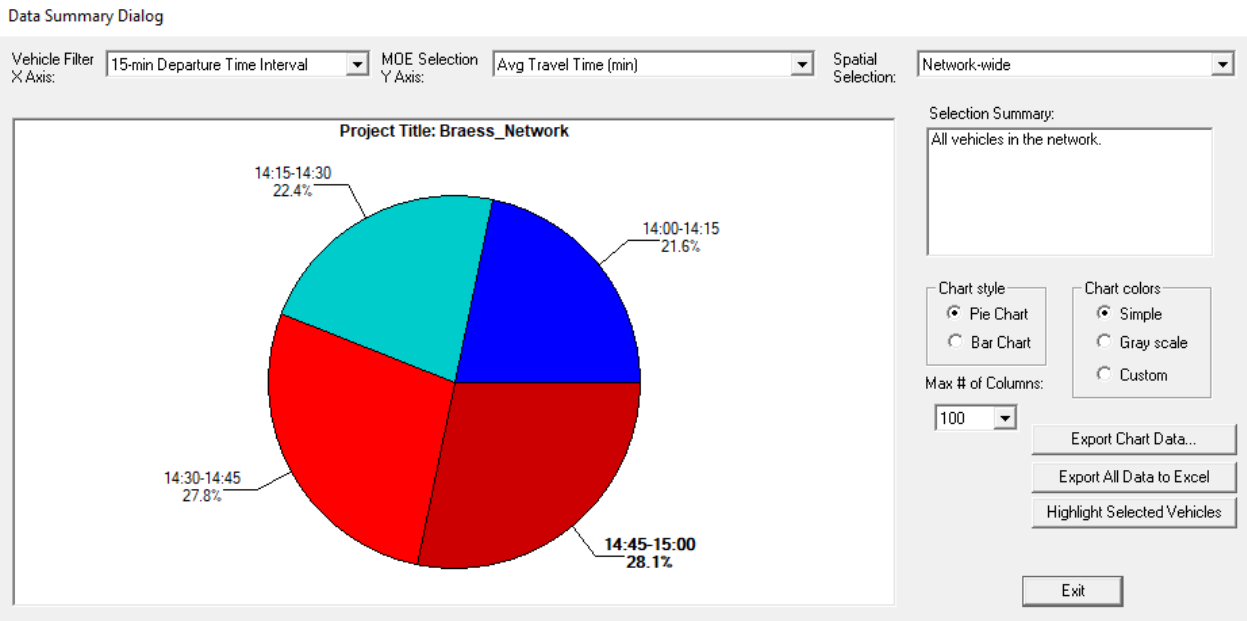


Figure 5: Average travel time using pie chart

Task 4: Using NEXTA to display the shortest path in Braess network.

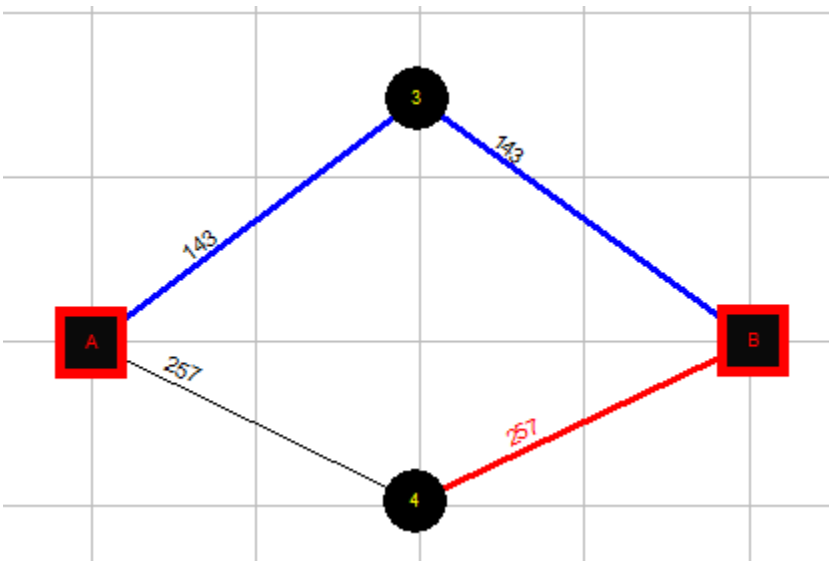


Figure 6: The shortest path (blue links) from A (1) to 3 to B (2)

For example, I avoided node number 3

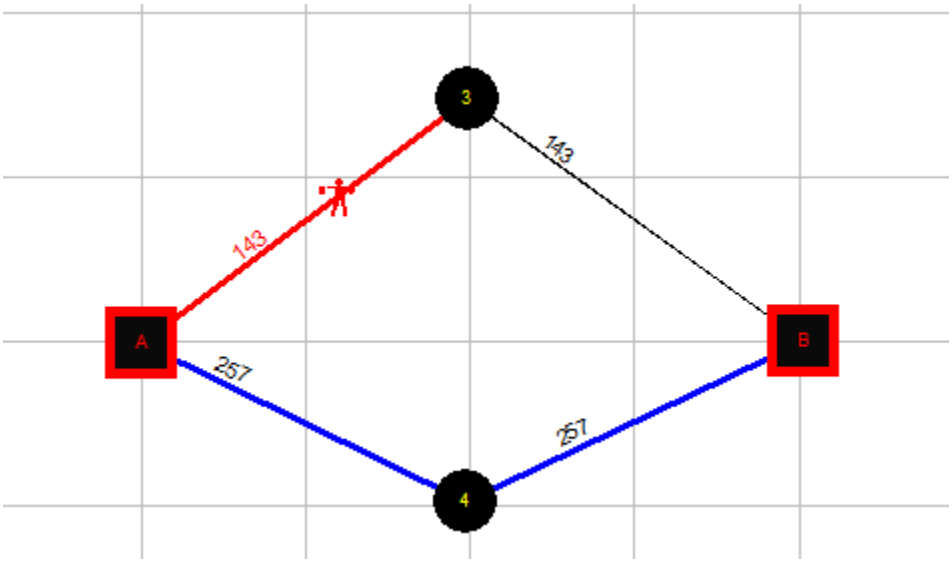
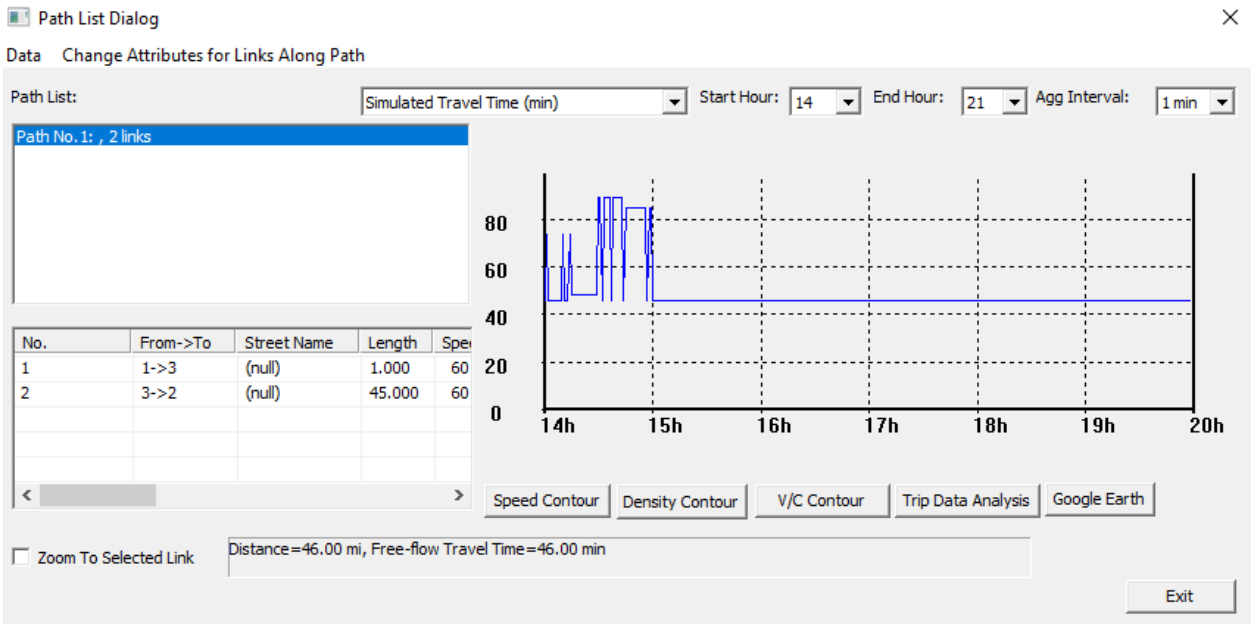


Figure 7: The shortest path has changed after avoiding node number 3



Free-flow Travel Time (min)	# of lanes	Lane Satur
1.00	1	1800.00
45.00	3	1800.00

Lane Capacity	Link Type	Sensor Type	Count
100.00	Freeway		
1900.00	Freeway		

Figure 8: Travel time and flow and other links data

Task 5: Compare System-wide Performance Differences between Two Networks.

Task 6: Add Toll:

Link from node A (1) to node 3 was selected to be a toll link

A	B	C	D	E	F	G	H	I	J
Link	Scenario N	Start Day	End Day	Start Time	End Time	Toll for Demand Type 1	Toll for Demand Type 2	Toll for Demand Type 3	Toll for Demand Type 4
[1,3]	0	0	100	0	1440	1	1	1	0.5

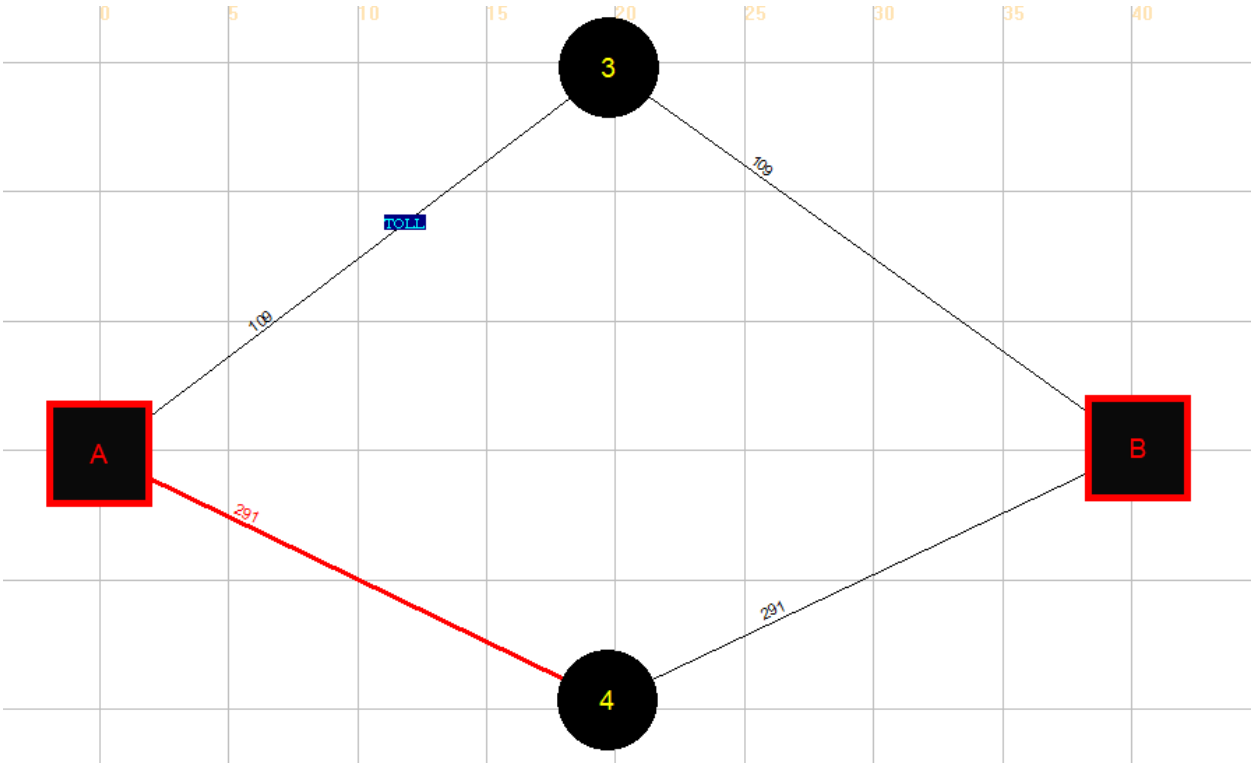


Figure 9: The toll was assigned for the link from 1 to 3

Due to the toll, some users shift their routes which impact the traffic volume to decrease from 149 to 109 as shown on the above figure.