

US-24 & 2nd Connection Travel Times

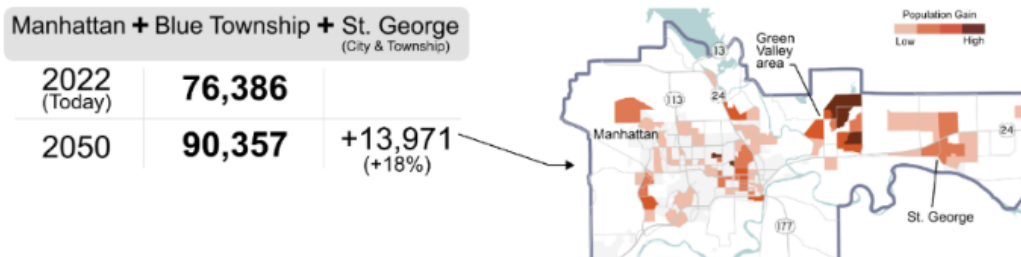
Maintaining and improving the connection between Manhattan and the Green Valley area is key to the region's success, now and in the future. To that end, the MPO has lead the 2nd Connection Cost-Benefit Analysis study. This site **explains the numerous routes studied**, and **travel time data** in a simple manner.

1 Input Data

This section provides a brief overview of the numerous variables and data that were used in the 2nd Connection Cost-Benefit Analysis.

Population

Using US Census & KS Certified Population data, the region's population was mapped to create an accurate representation of the region in **2022** (Base Year). Working with planning & public works staffs, industry standard future growth projections for **2050** (table) were mapped in areas of planned & likely development (map).



Road Networks

After the 2022 road network was created for the TDM, a series of future (2050) road networks were created with different options. Additionally, five **2nd Connection** routes (A-E) were also included in the analysis. Key to the impact of these five routes is the configuration of US-24. Currently US-24 is a **4-lane** roadway, but plans exist to expand the roadway to **6-lanes**.

**Planned
Road
Projects**

(Excel Rd extension,
Harvest Rd paving, etc.)



4-Lanes



6-Lanes

**2nd
Connection
Routes**

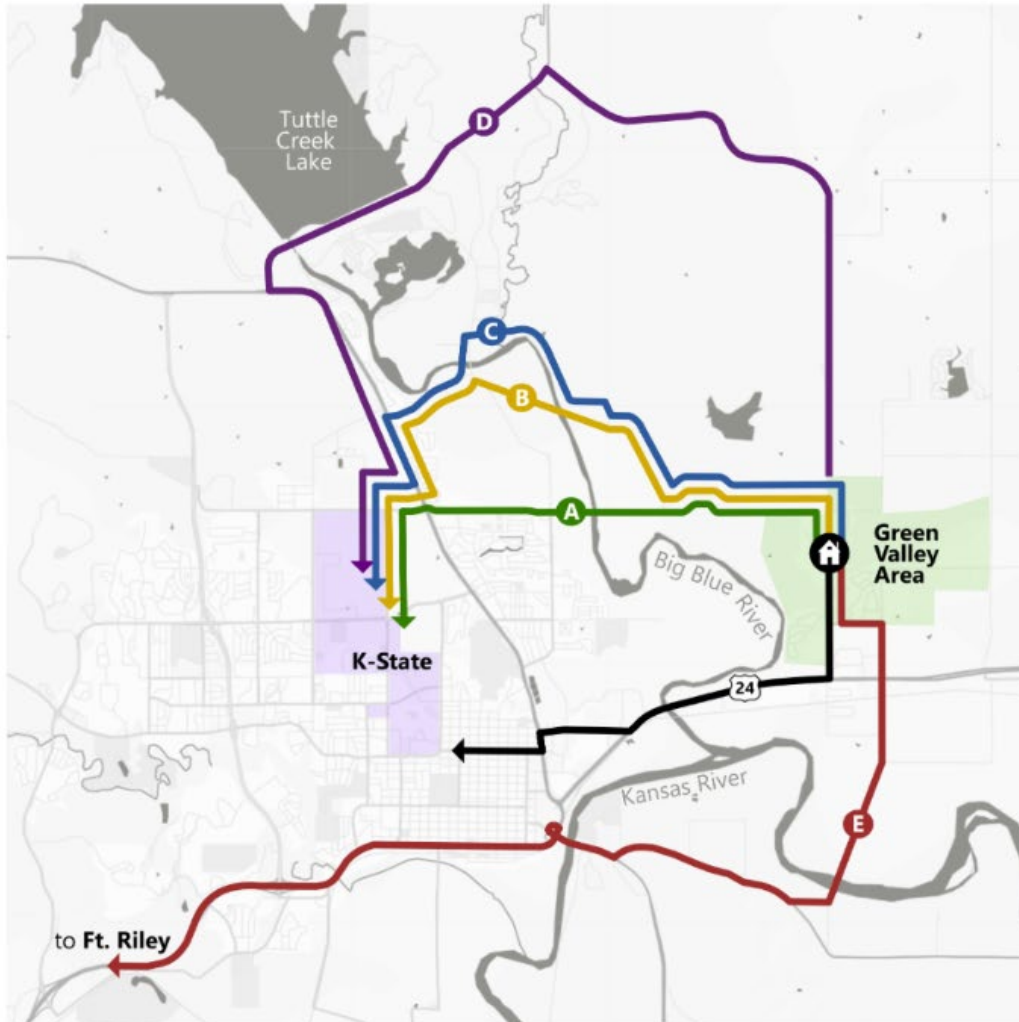
A B C D E

Travel Demand Model (TDM)

The Travel Demand Model (TDM) is a complex computer model that takes **Population** and **Road Network** data and runs a series of scenarios. The MPO's TDM has a base year of 2022, meaning it accurately reflects the traffic volumes and conditions seen in the real world today. The model can also run scenarios for the year 2050. Comparing current (2022) conditions to future (2050) conditions, across a variety of potential scenarios, allows our region to better prepare and plan for future needs.

2 Routes

Using the Travel Demand Model (TDM), the **2nd Connection Routes (A-E)** below were modeled with various configurations of US-24. Each route option was run with the base year (2022) and a future year of 2050 population. The goal of this extensive modeling is to directly compare 2nd Connection route options, and their impacts.



- A** Junietta Rd > new Bridge > Marlatt Rd > US-24
- B** Junietta Rd > Blue River Rd > new Bridge > Barnes Rd > US-24
- C** Paved & improved Junietta Rd & Blue River Rd > Barnes Rd > US-24
- D** New paved road > K-13 (across dam) > US-24
- E** Excell Rd > new Kansas River Bridge > K-18 > K-177

Details for each route of study can be found at the bottom of this page; see "Route Justification"

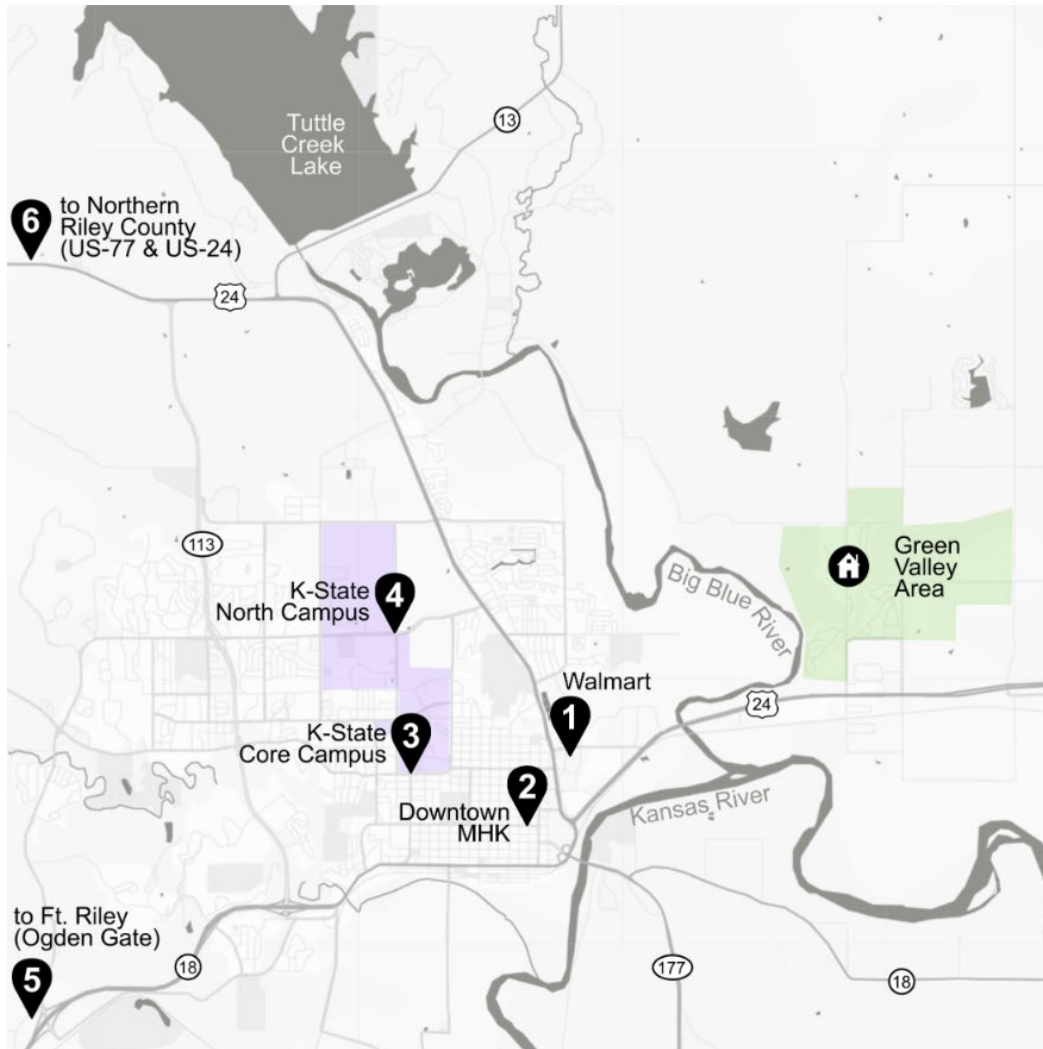
Scenarios Matrix

The table below shows all of the scenarios modeled. This extensive effort allows us to see what happens in terms of traffic and congestion if US-24 stays 4-lane, expands to 6-lanes, or if we add a 2nd Connection. The results of these scenarios can be found in section "4 - Results".

		2022 Population		2050 Population	
					
		4-Lanes	6-Lanes	4-Lanes	6-Lanes
No 2nd Connection		✓	✓	✓	✓
2-Lanes		✓	✓	✓	✓
		✓	✓	✓	✓
		✓	✓	✓	✓
		✓	✓	✓	✓
		✓	✓	✓	✓
4-Lanes		✓	✓	✓	✓

3 Home & Work

This map shows the different "Work" locations that drive time data will be shown further down the page.



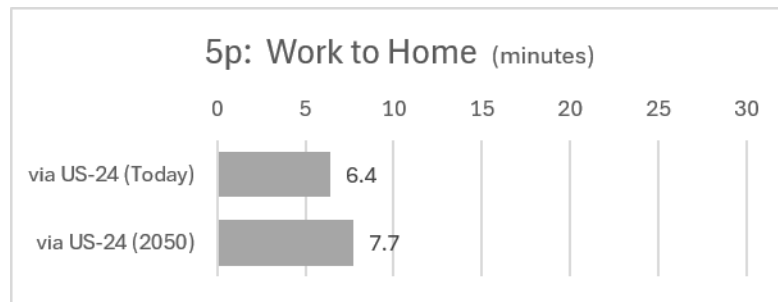
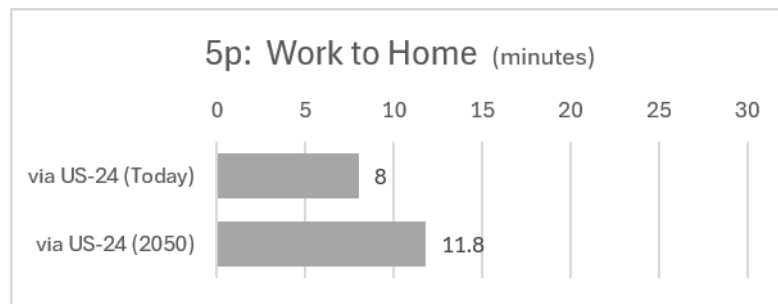
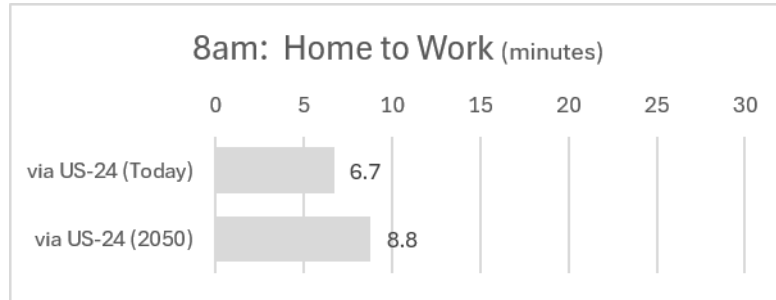
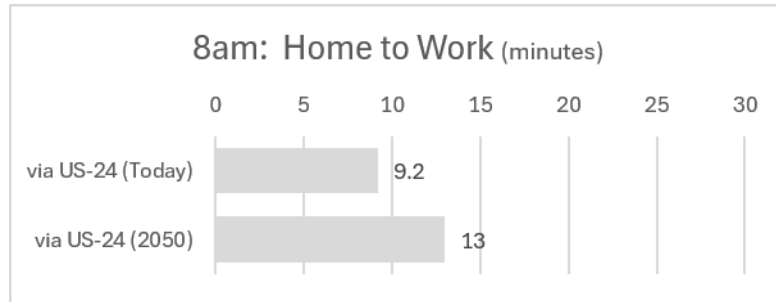
Note: The "Home" location was selected to be centralized, allowing for comparative modeling of key road segments/routes using the TDM. Green Valley Area = Green Valley Rd & Nature Ave. St. Therefore, local and neighborhood street connections from this location are not included in travel times.

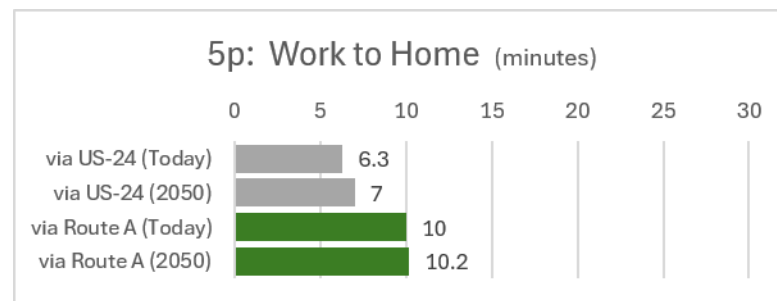
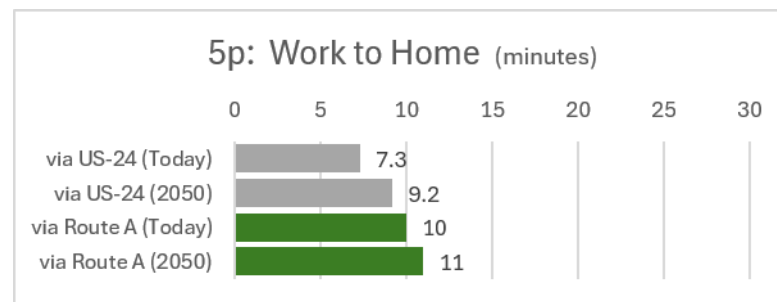
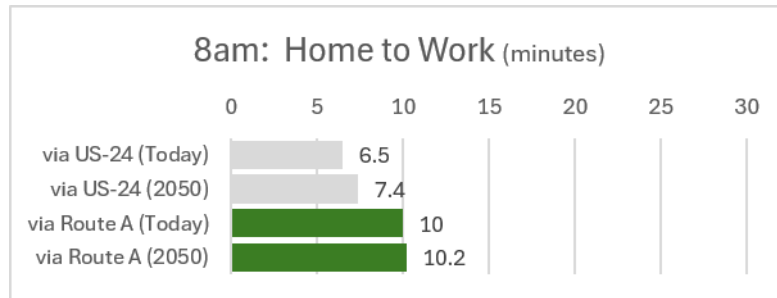
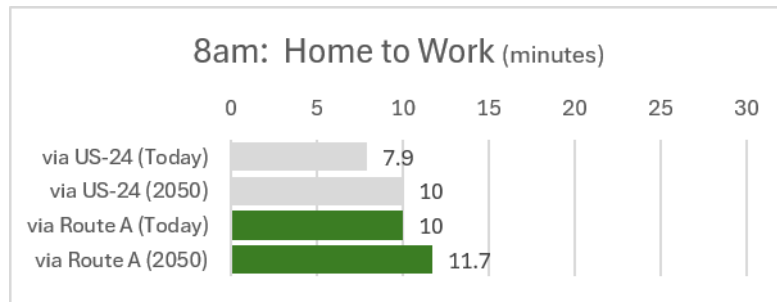
4 Results

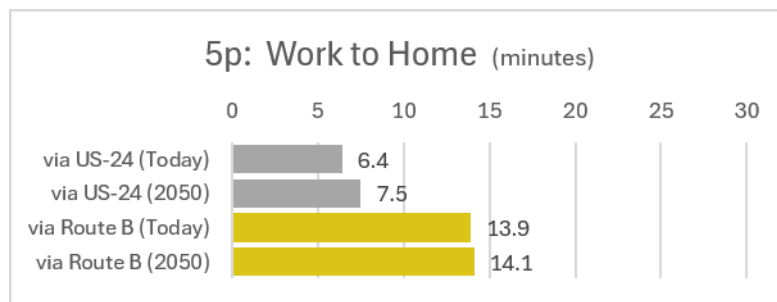
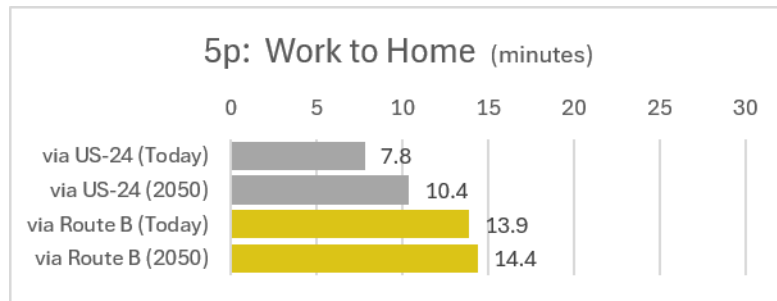
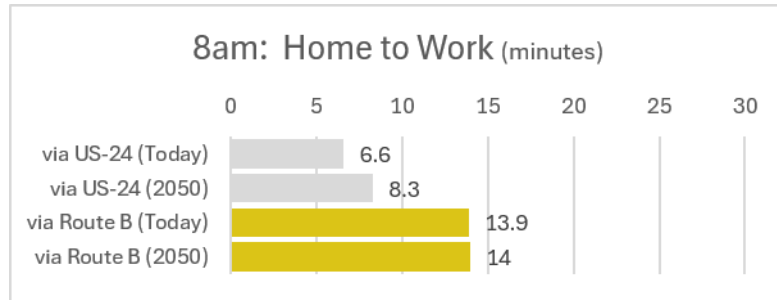
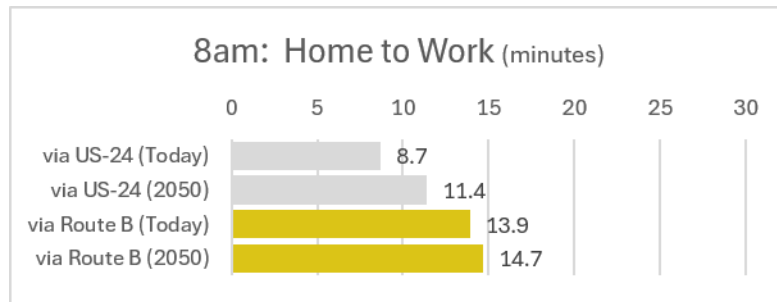
TRAVEL TIME

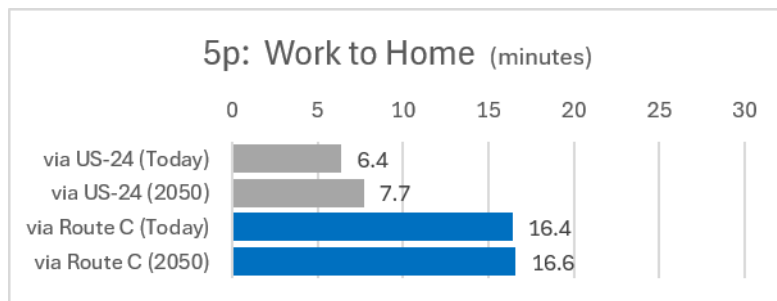
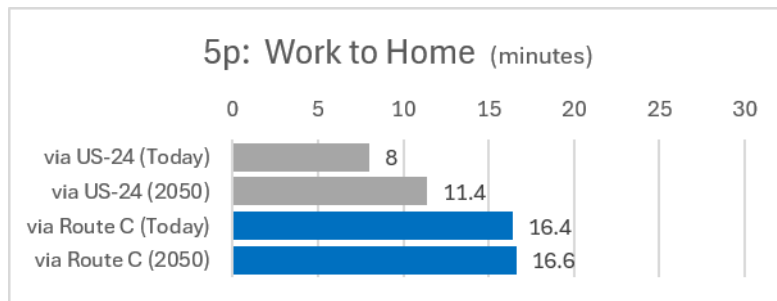
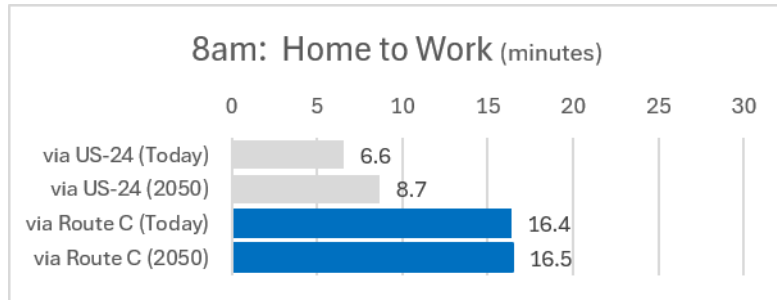
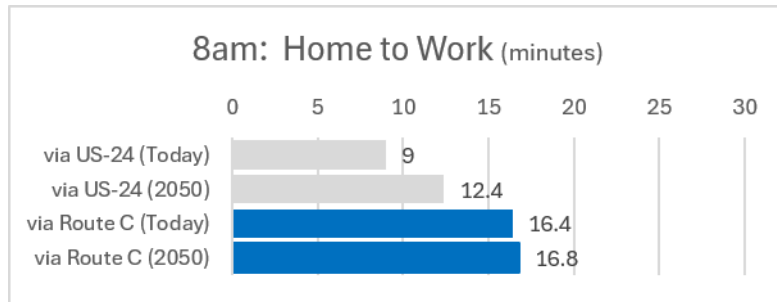
Based upon the Home & Work locations you selected above, the average travel time of your commutes (8a & 5p) are shown below*.

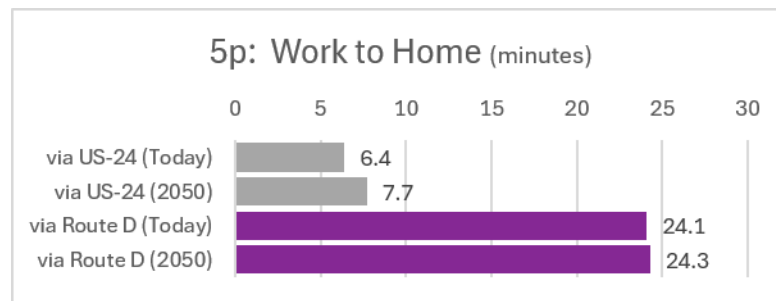
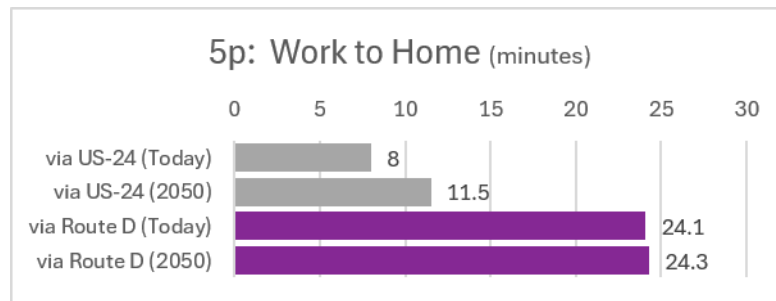
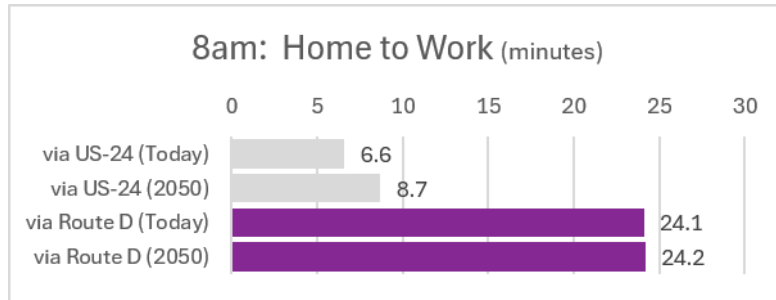
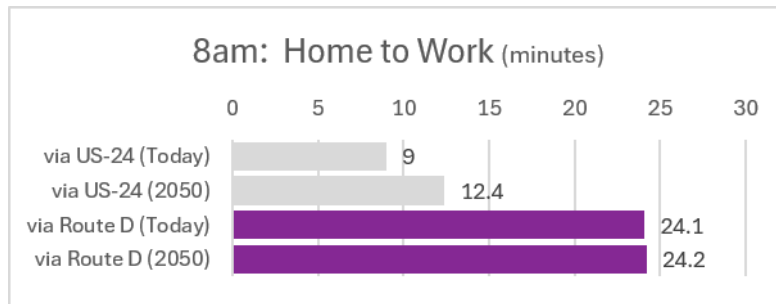
Today vs **2050**

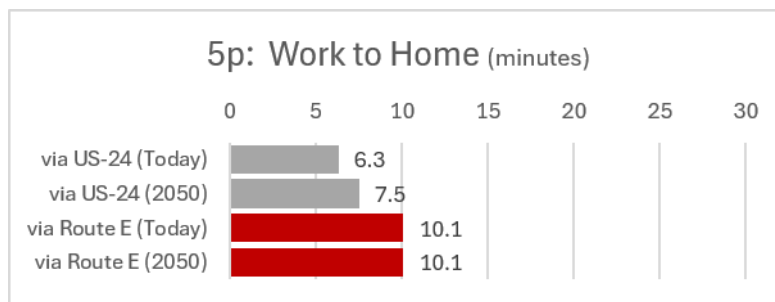
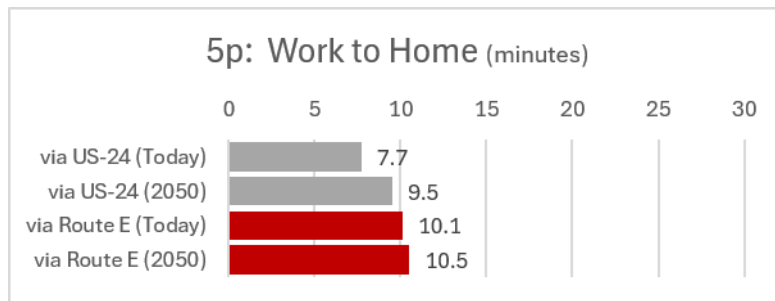
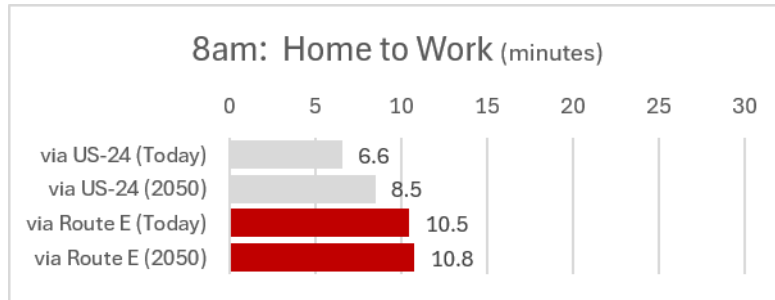
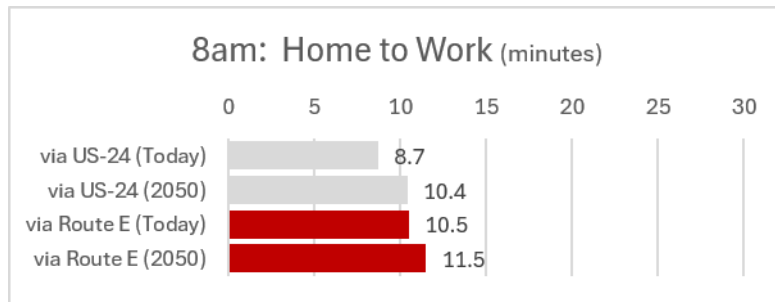




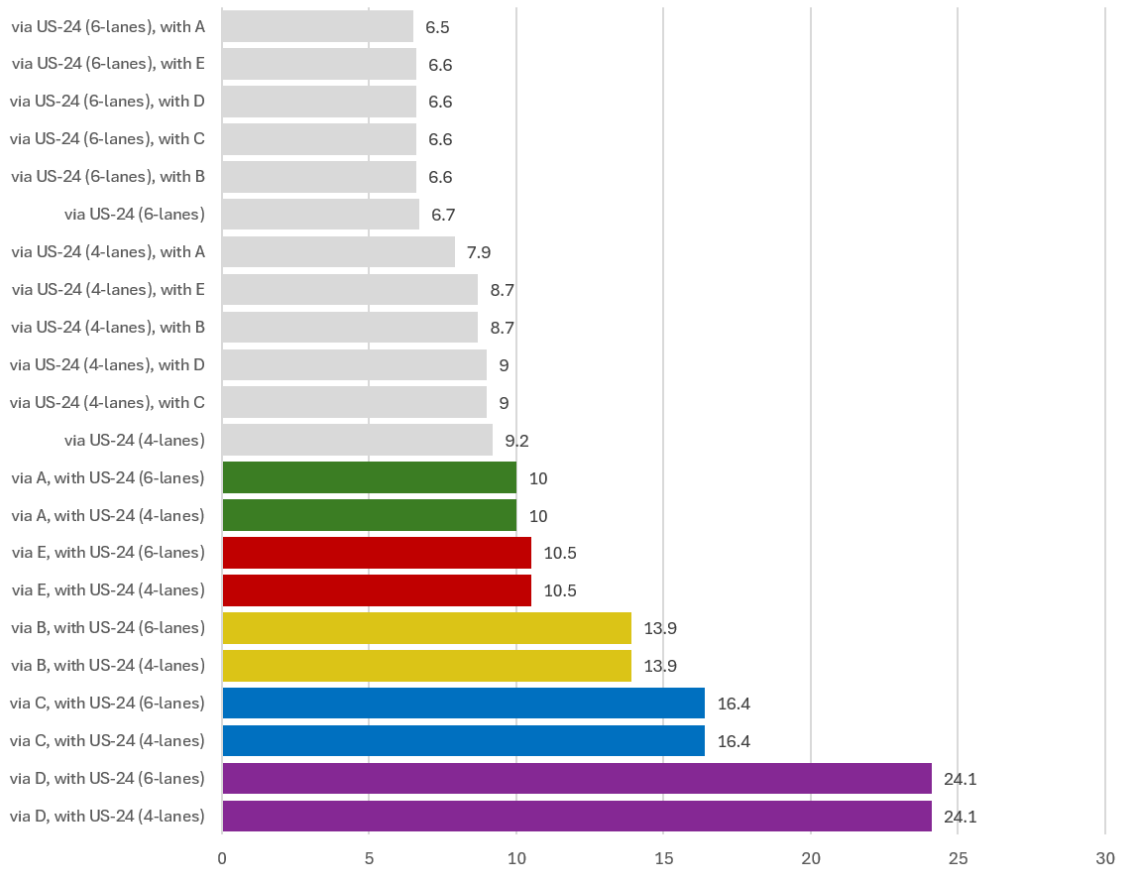




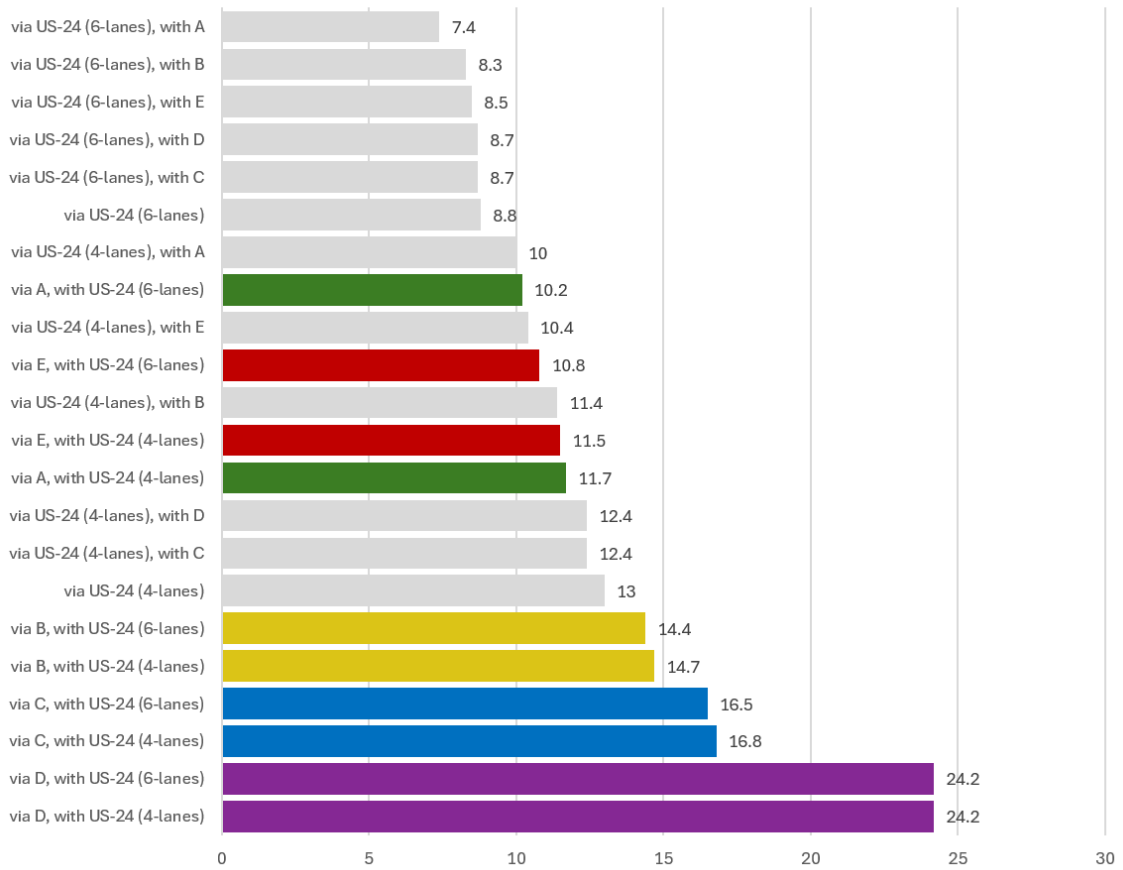




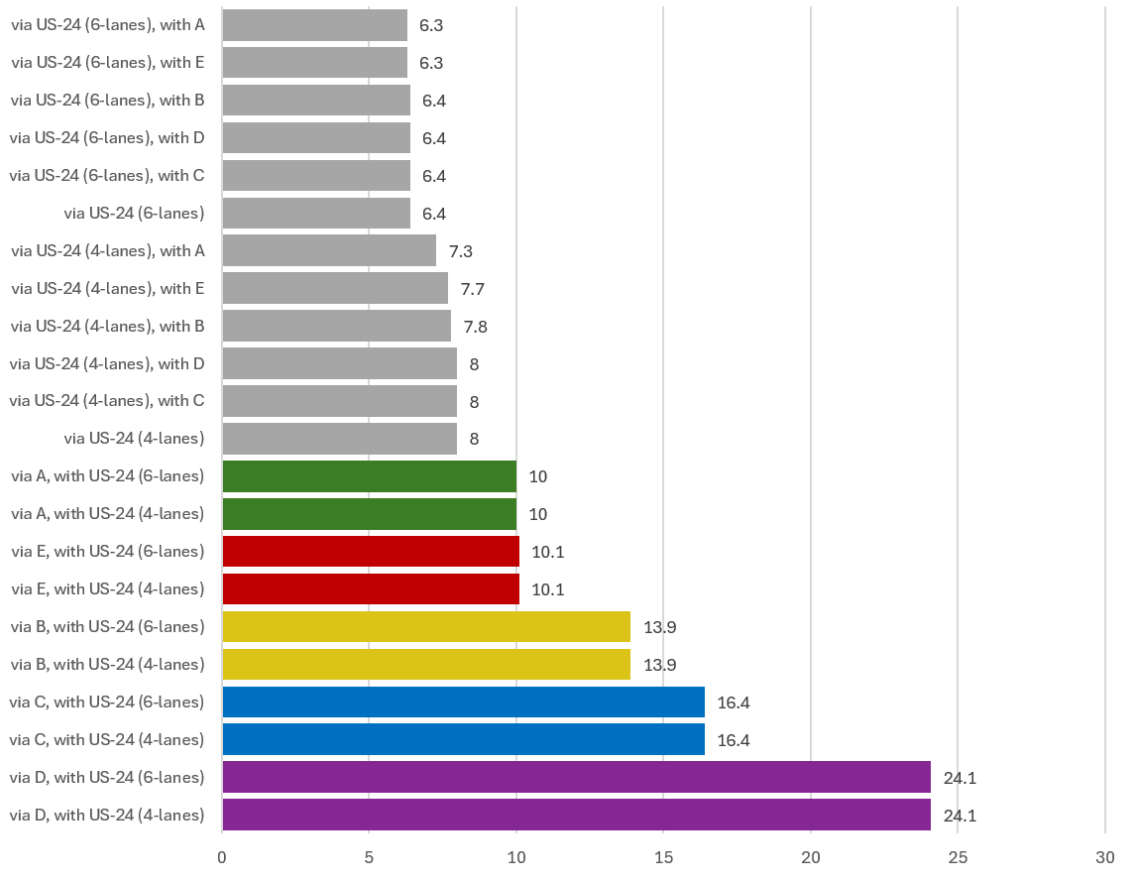
8am (Today): All Route Comparison



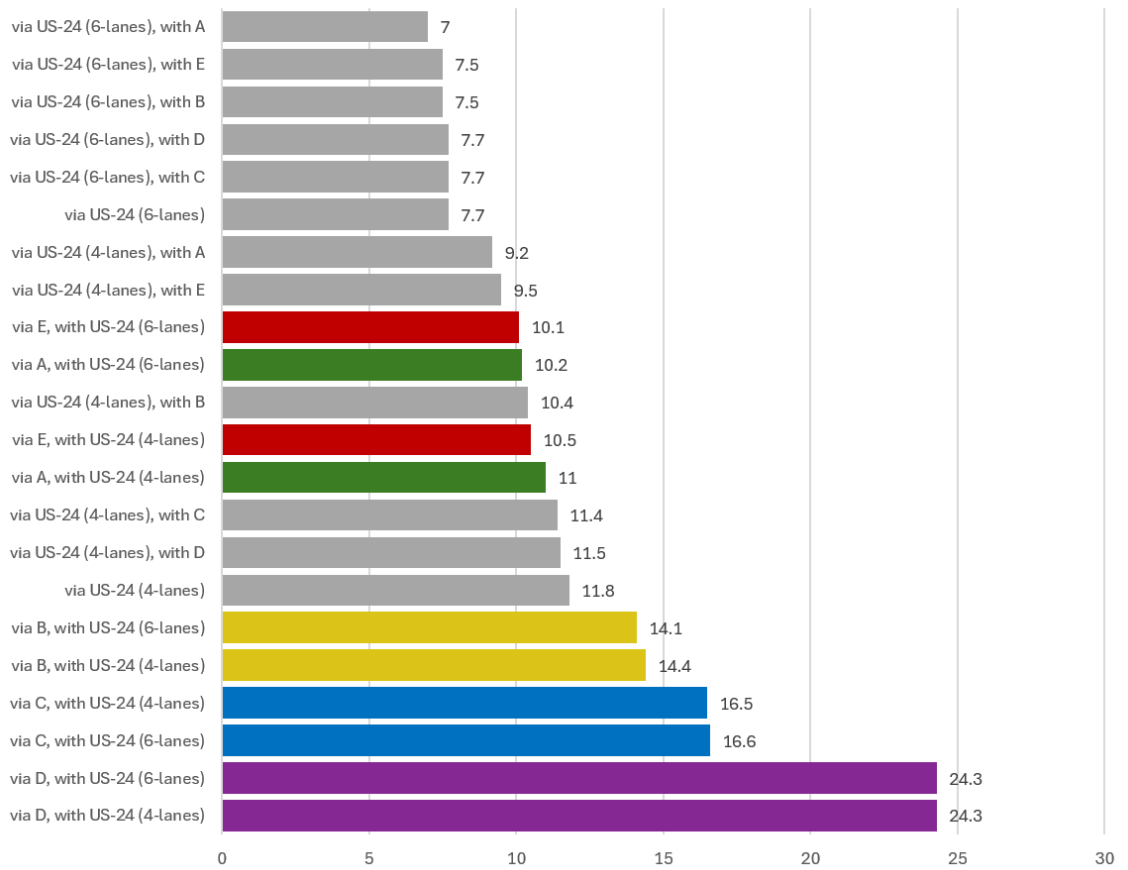
8am (2050): All Route Comparison



5pm (Today): All Route Comparison

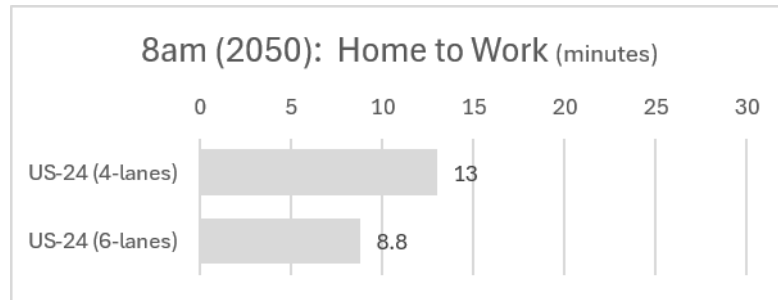
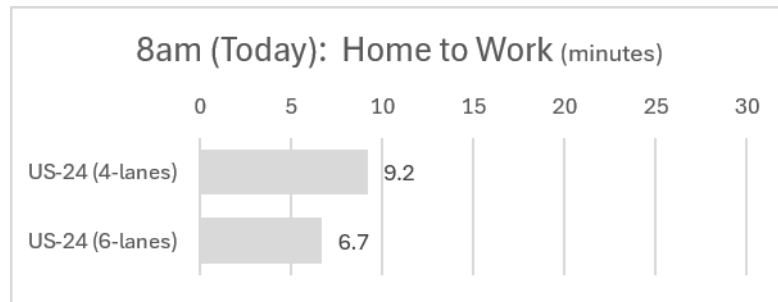


5pm (2050): All Route Comparison

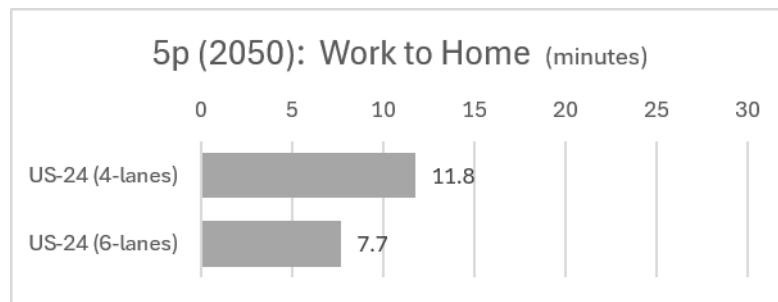
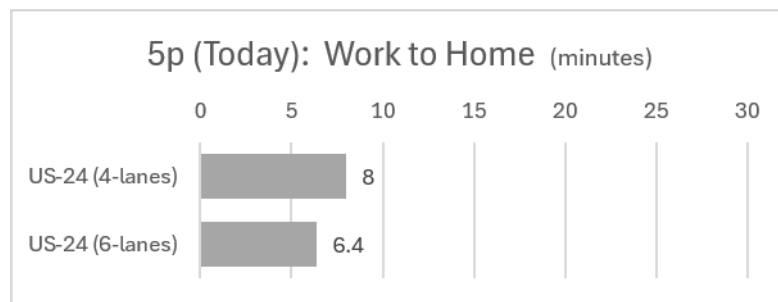


4-lanes vs 6-lanes


2nd
Connection

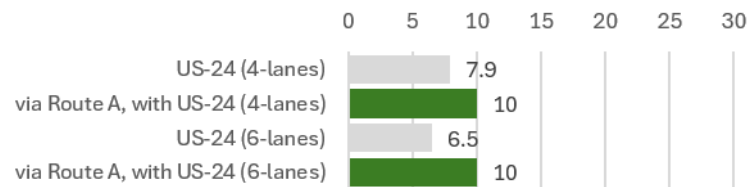



2nd
Connection

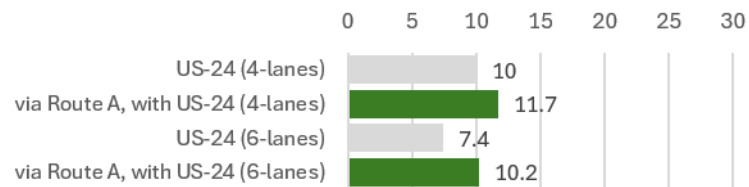




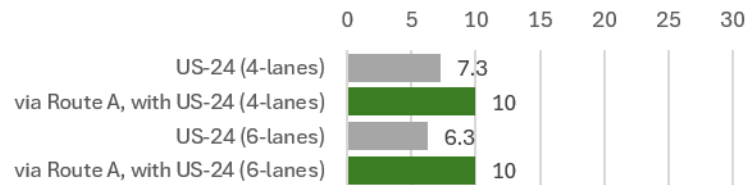
8am (Today): Home to Work (minutes)



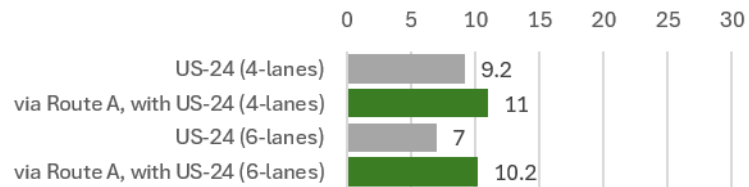
8am (2050): Home to Work (minutes)



5p (Today): Work to Home (minutes)

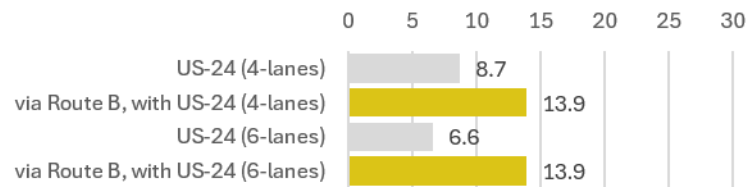


5p (2050): Work to Home (minutes)

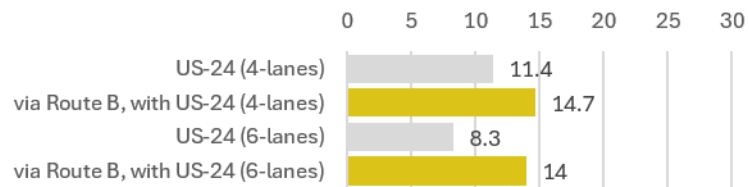




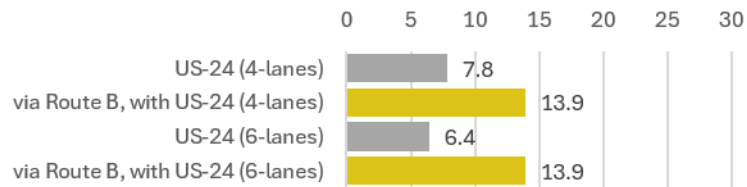
8am (Today): Home to Work (minutes)



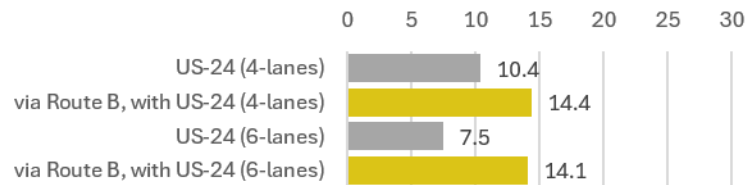
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5p (Today): Work to Home (minutes)

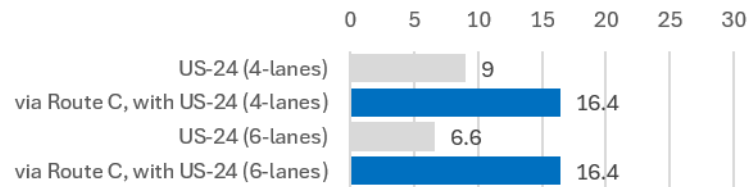


5p (2050): Work to Home (minutes)

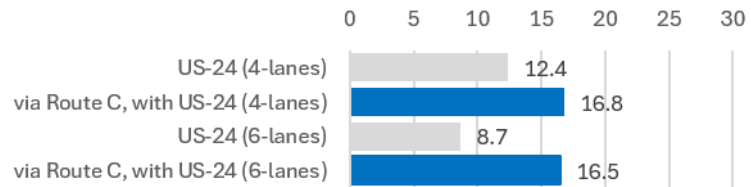




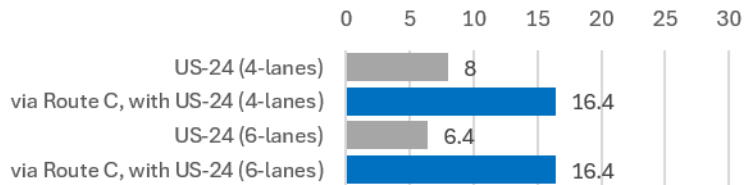
8am (Today): Home to Work (minutes)



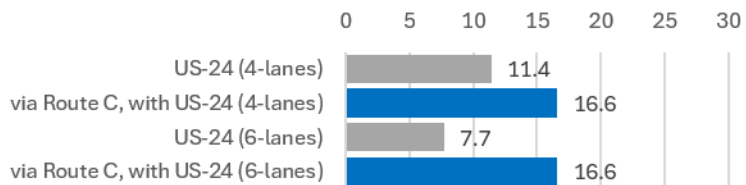
8am (2050): Home to Work (minutes)



5p (Today): Work to Home (minutes)

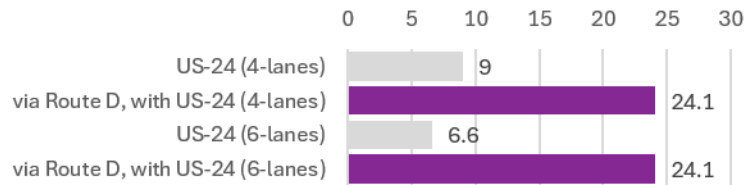


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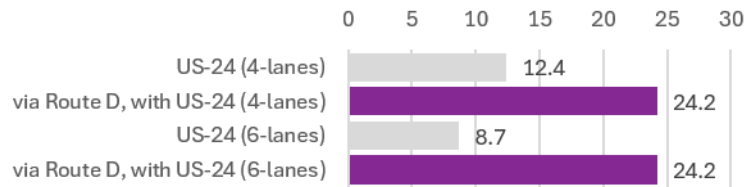




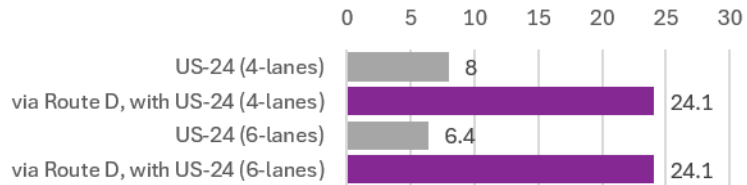
8am (Today): Home to Work (minutes)



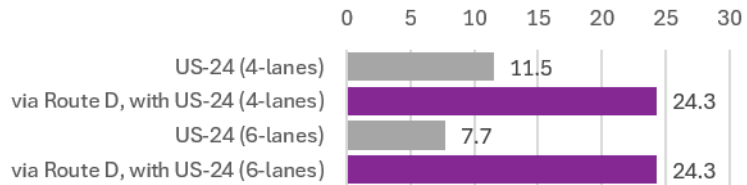
8am (2050): Home to Work (minutes)



5p (Today): Work to Home (minutes)

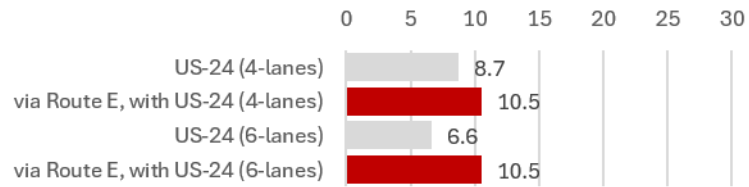


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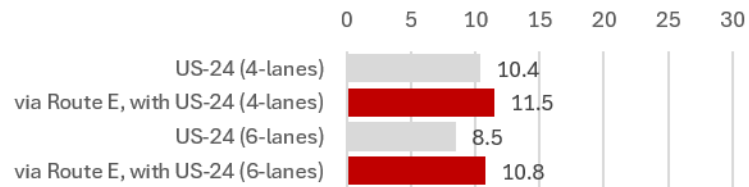




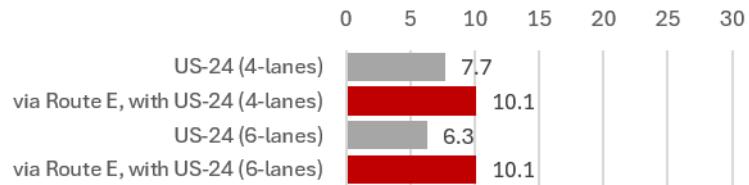
8am (Today): Home to Work (minutes)



8am (2050): Home to Work (minutes)



5p (Today): Work to Home (minutes)



5p (2050): Work to Home (minutes)

