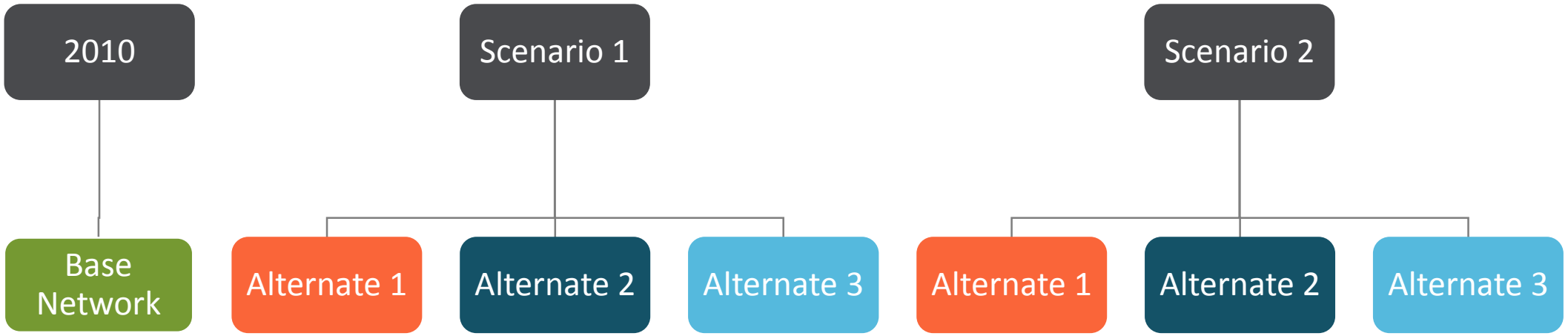
ENCOMPASS 2040

central oklahoma

Transportation Alternate Networks

June 2016

Encompass 2040 Networks and Scenarios



2040

Scenario 1: Historical Trend

- **Attractions:** Trend and schools
- **Housing:** Lower density residential developments
- **Employment:** Separated from housing, along transportation corridors
- **Transportation:** Auto-dependent

Scenario 2: Nodal Growth

- **Attractions:** Downtowns, service areas, TODs
- **Housing:** Mixed-use, infill, higher density developments
- **Employment:** Downtowns, TODs, mixed-use
- **Transportation:** More transportation options (including regional transit)

2010 Base Network

- Current conditions as of 2010
- Regional streets
- Fixed transit routes

Alternate 1

- No Build Alternate
- Present + Committed Projects
- Roadways and transit routes
- Improvements from 2010 to December 2016
- ODOT 8-Year Construction Work Plan (through 2016)

Alternate 2

- Future Improvements
- Member entity projects
- Roadway and transit routes
- Gap projects
- Long-range ODOT projects

Alternate 3

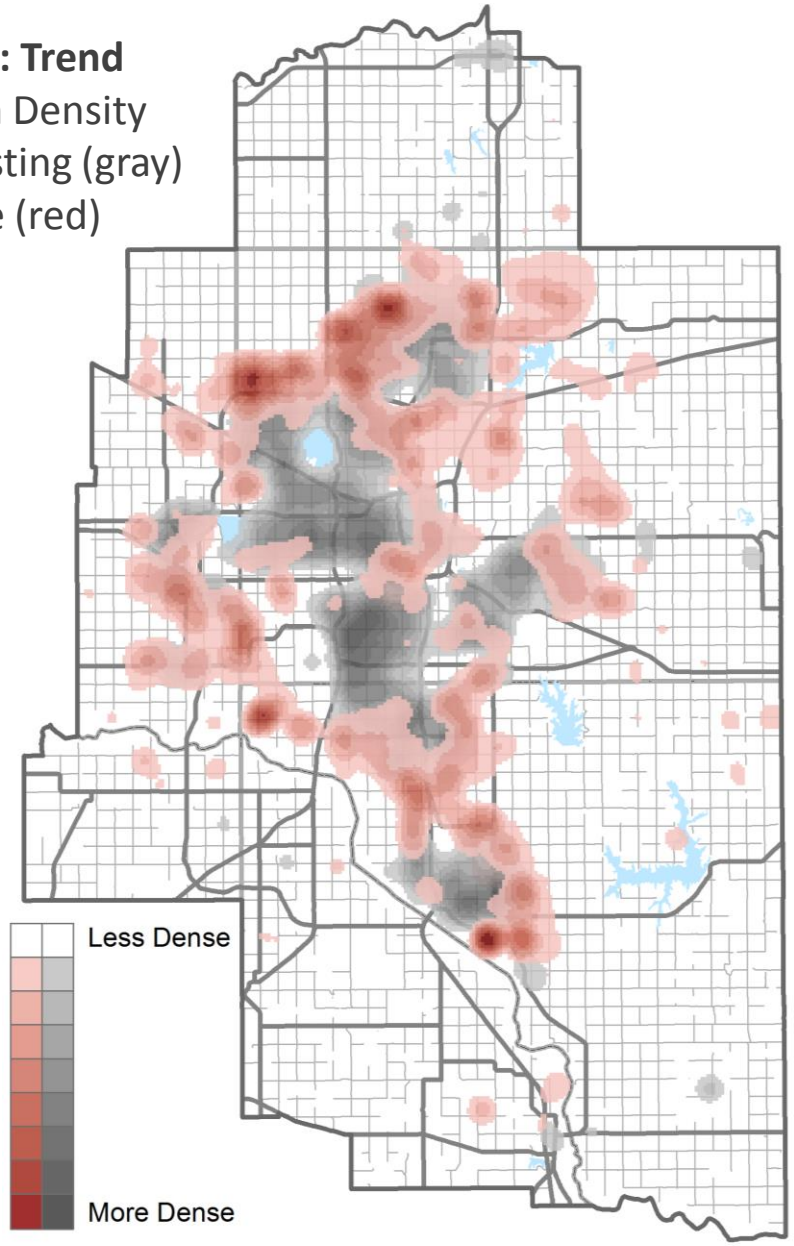
- Illustrative Alternate
- Regional transit
- No dedicated funding source

Alternate 3 Components

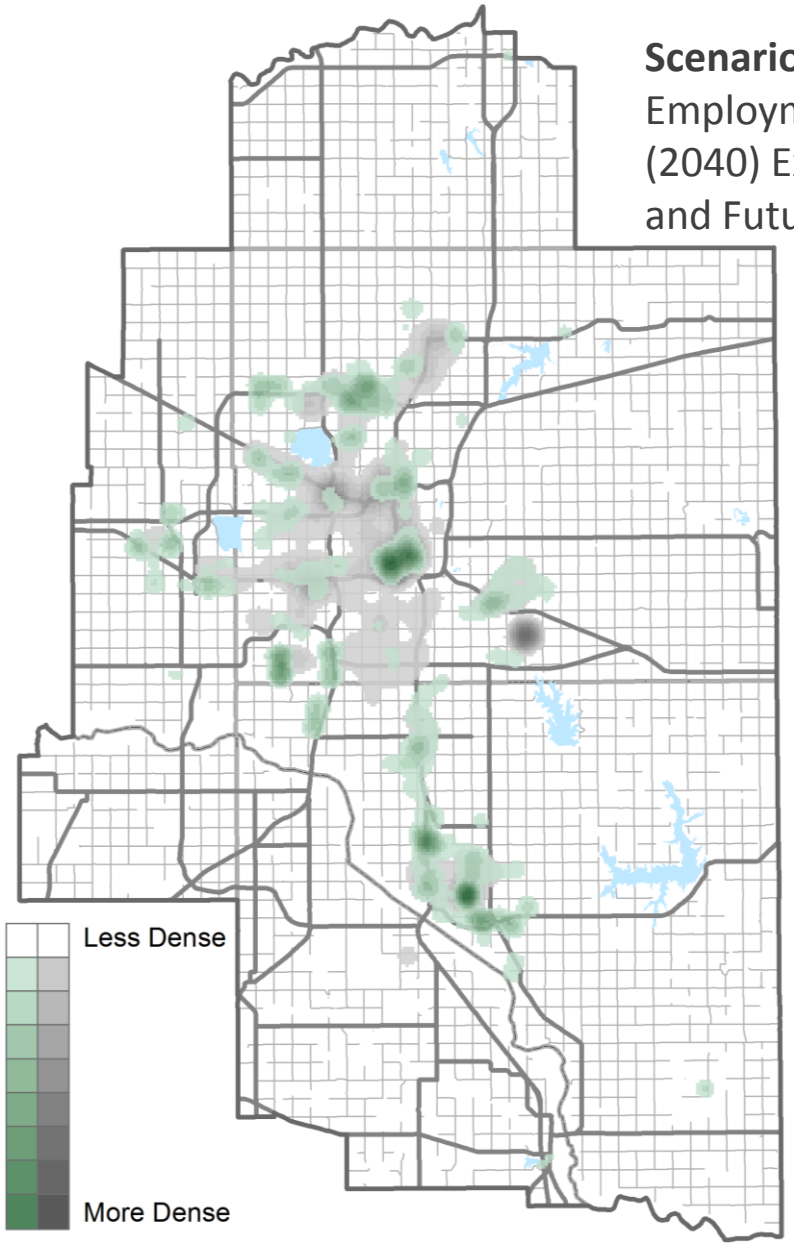
- Base Network
- Present + Committed Network (Alternate 1)
- Future Transportation Improvements (Alternate 2)
  - Encompass 2040 Transportation Projects (member submitted)
  - ODOT Projects (long-range)
  - OTA Turnpikes
  - Gap Projects
  - Streetcar
- Regional Transit (1% mode share)
  - Commuter Rail
  - Bus Rapid Transit (BRT)
  - Supportive Bus Routes

Scenario 1

Scenario 1: Trend
Population Density
(2040) Existing (gray)
and Future (red)



Scenario 1: Trend
Employment Density
(2040) Existing (gray)
and Future (green)



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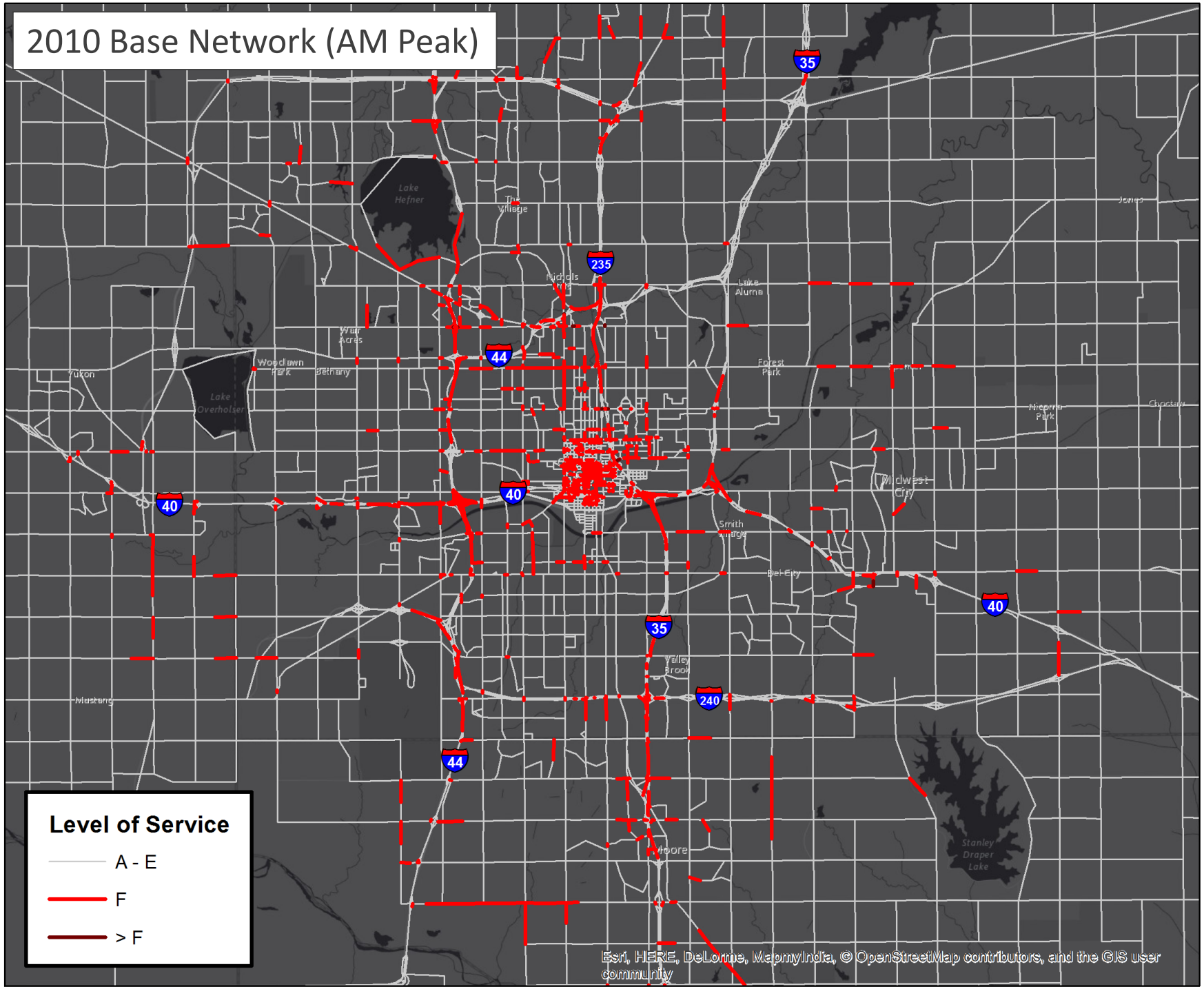
2010 Base Network (AM Peak)



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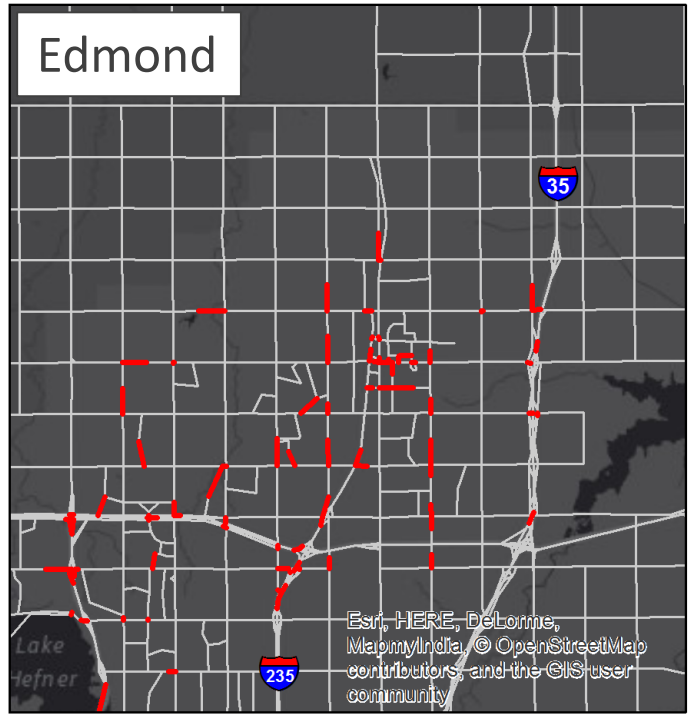

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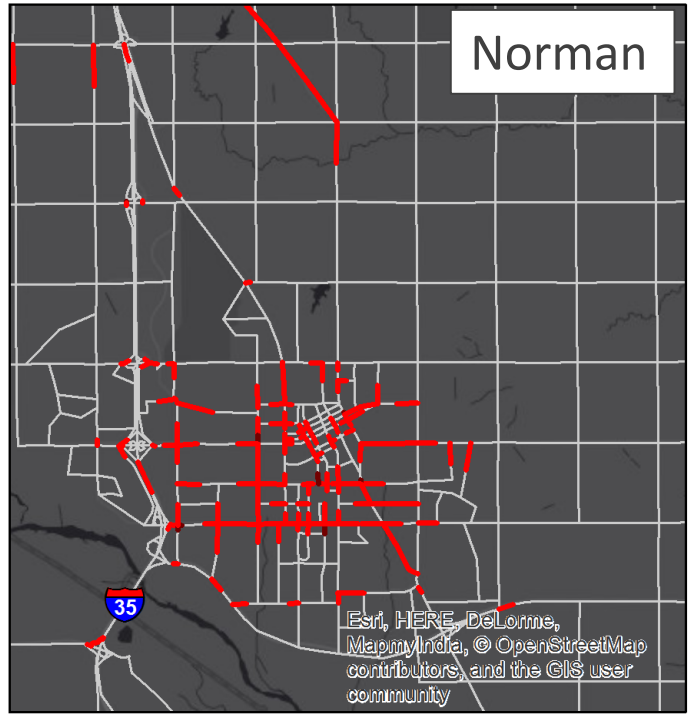

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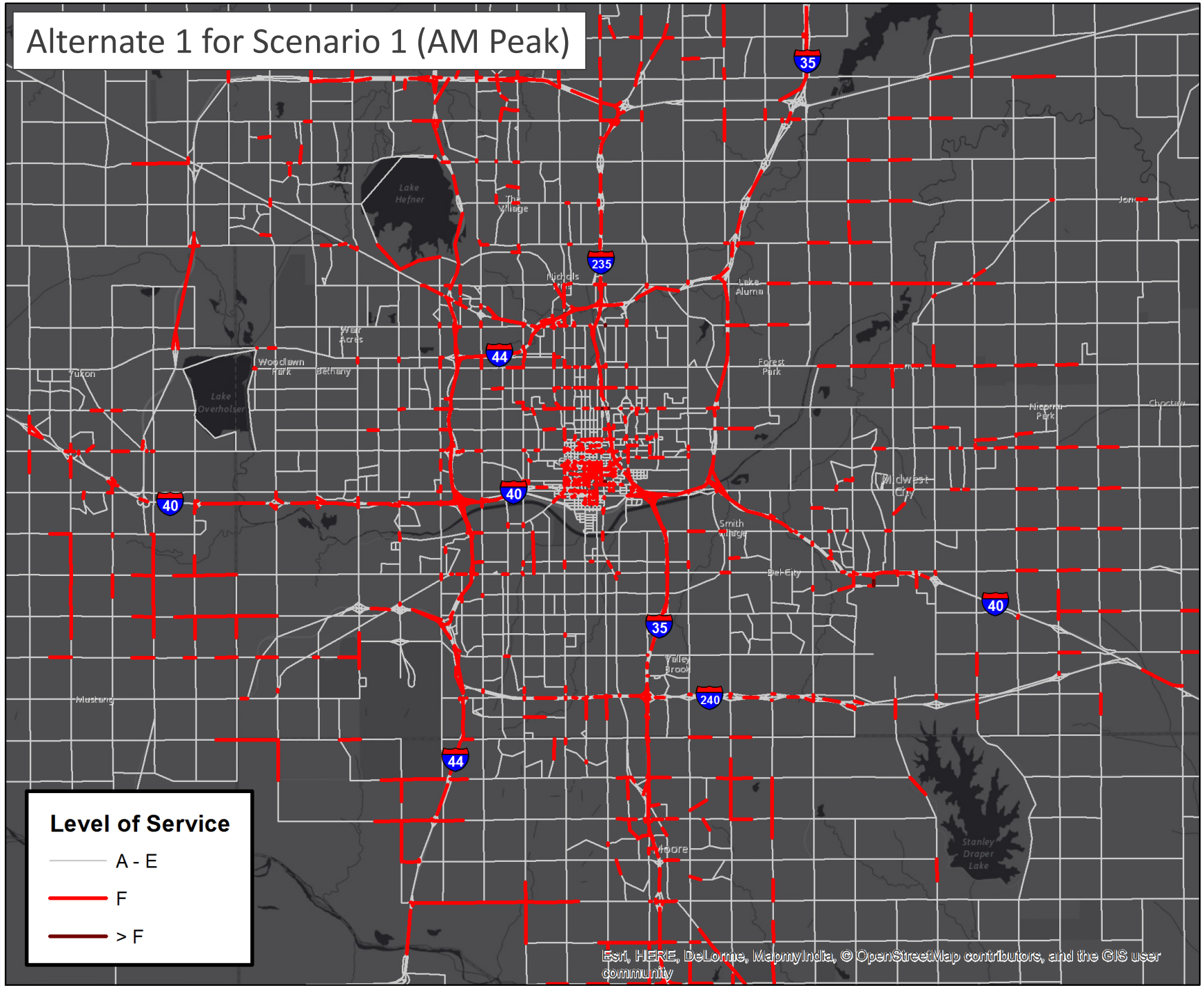
Alternate 1 for Scenario 1 (AM Peak)



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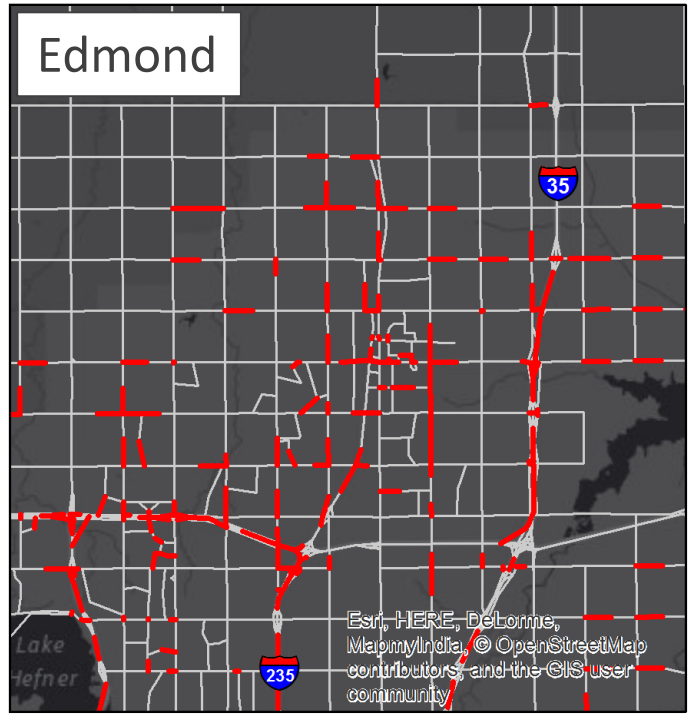

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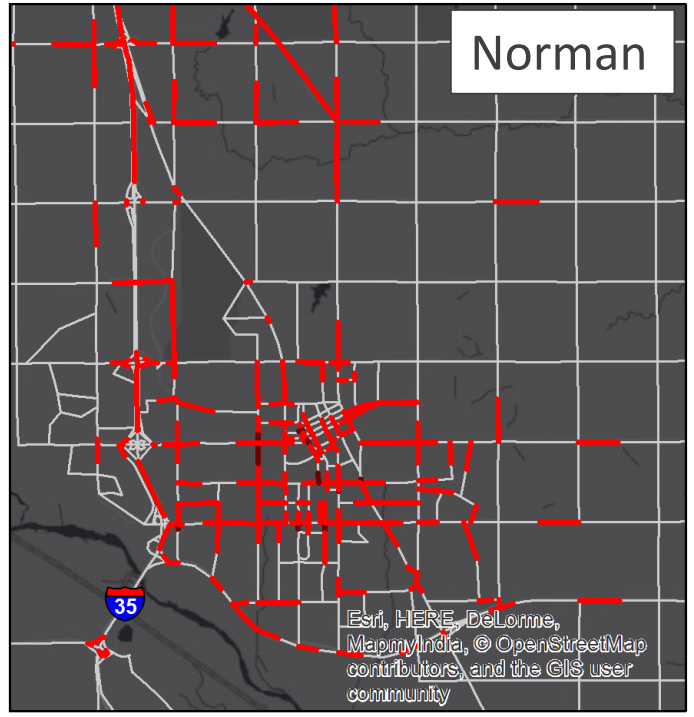

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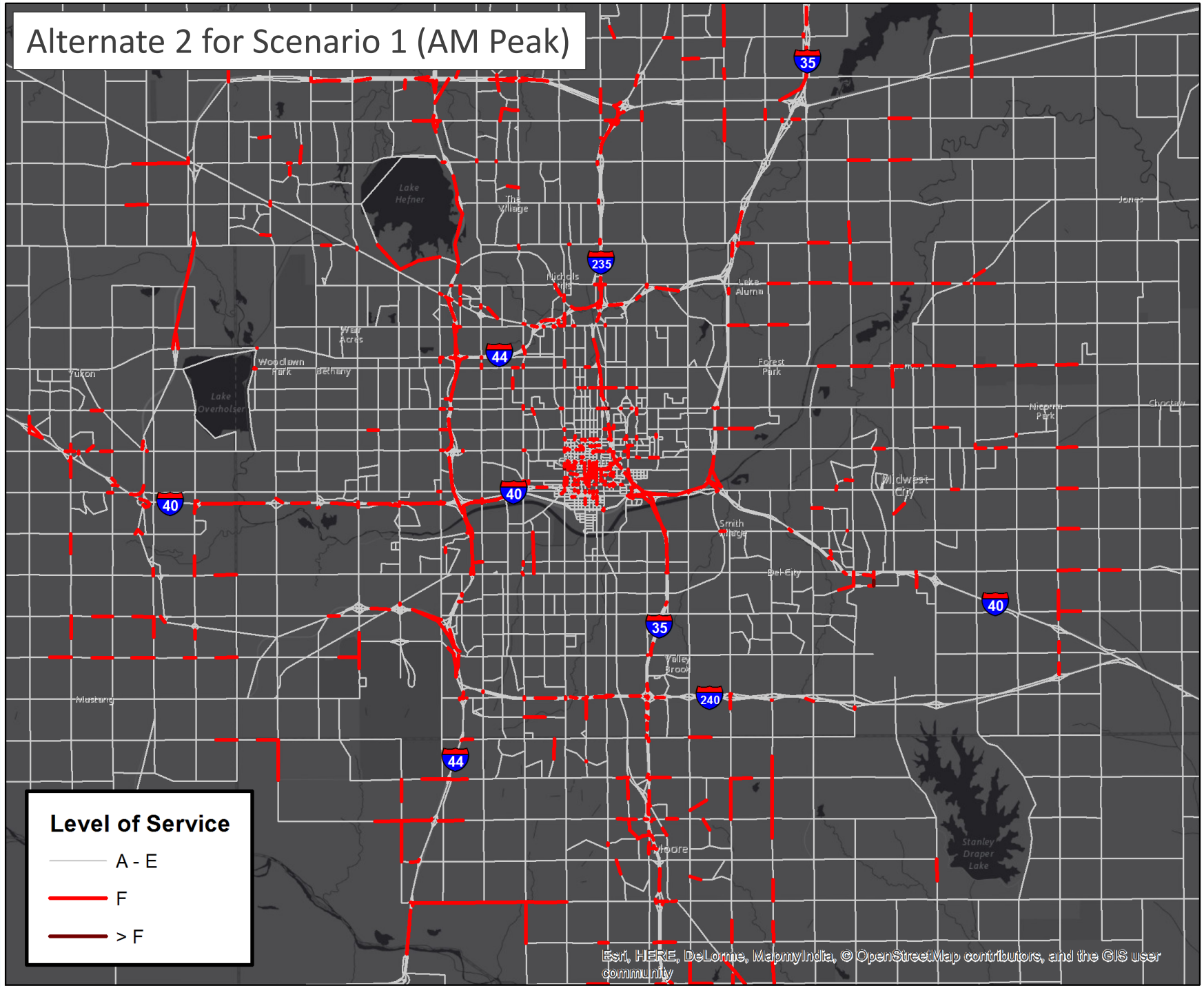
Alternate 2 for Scenario 1 (AM Peak)



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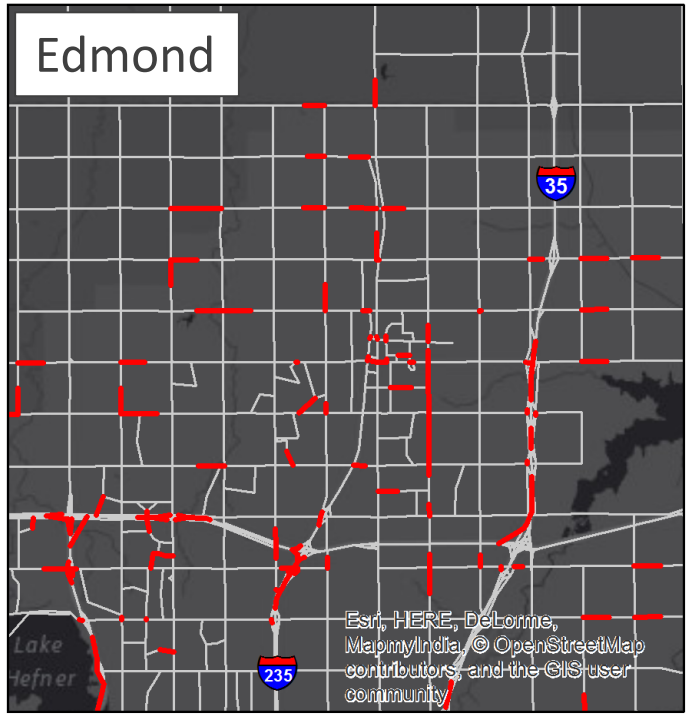

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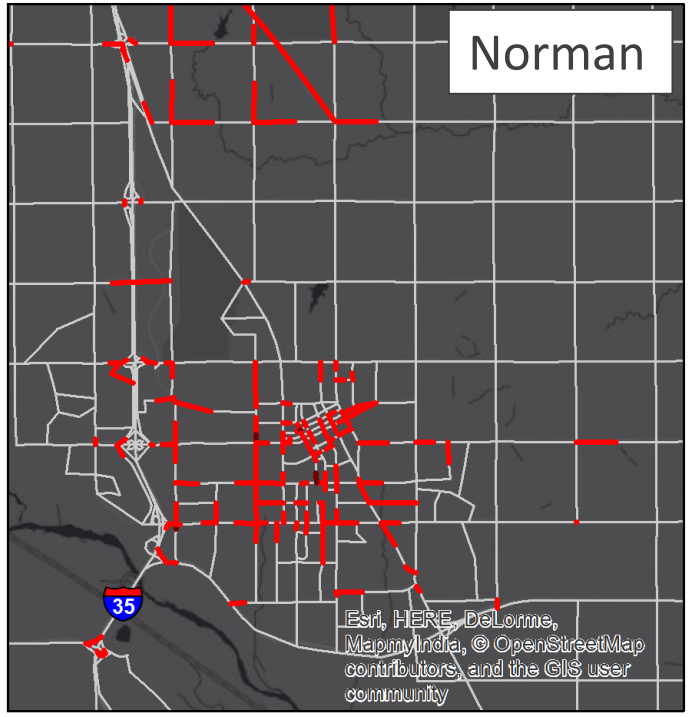

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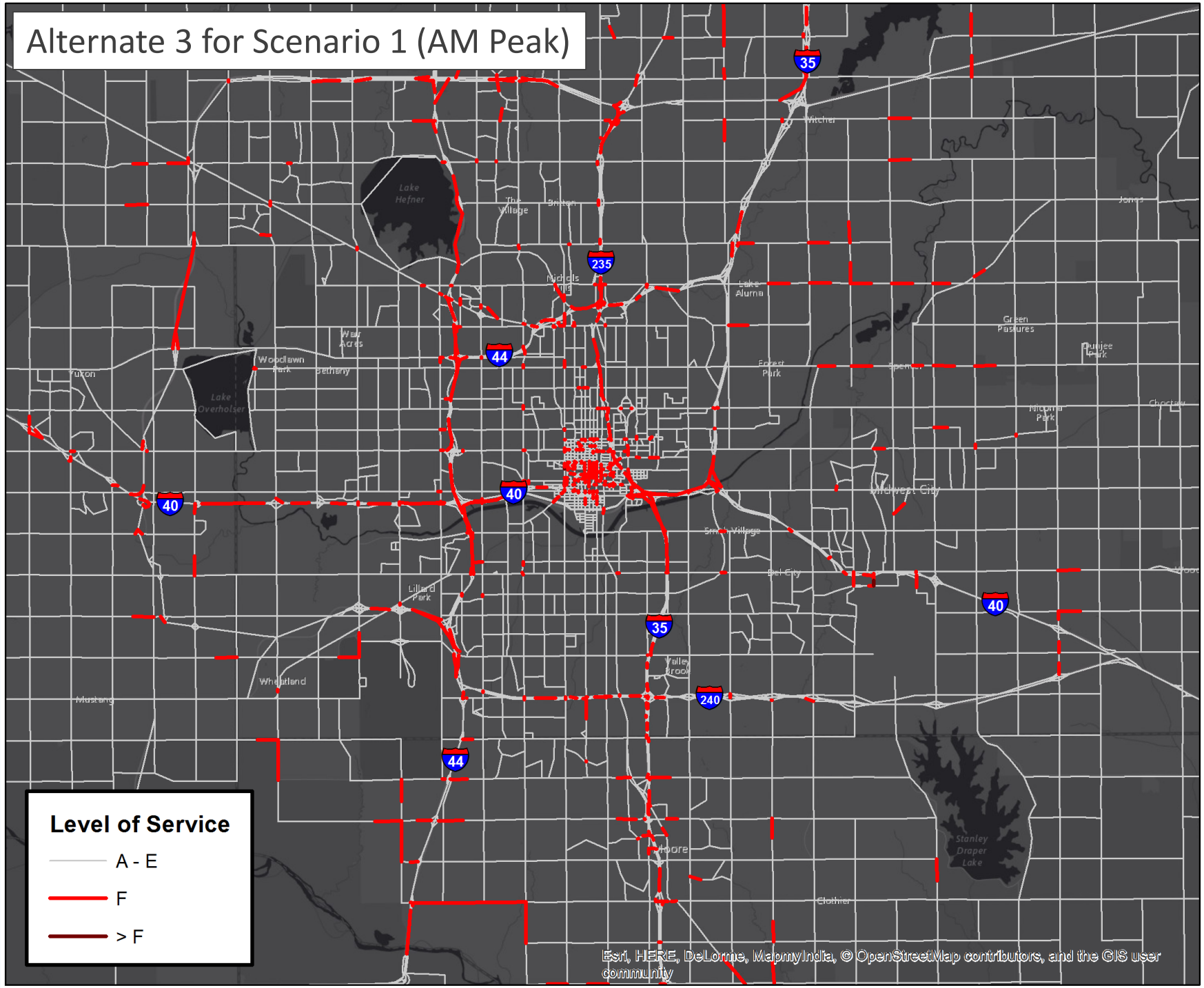
Alternate 3 for Scenario 1 (AM Peak)



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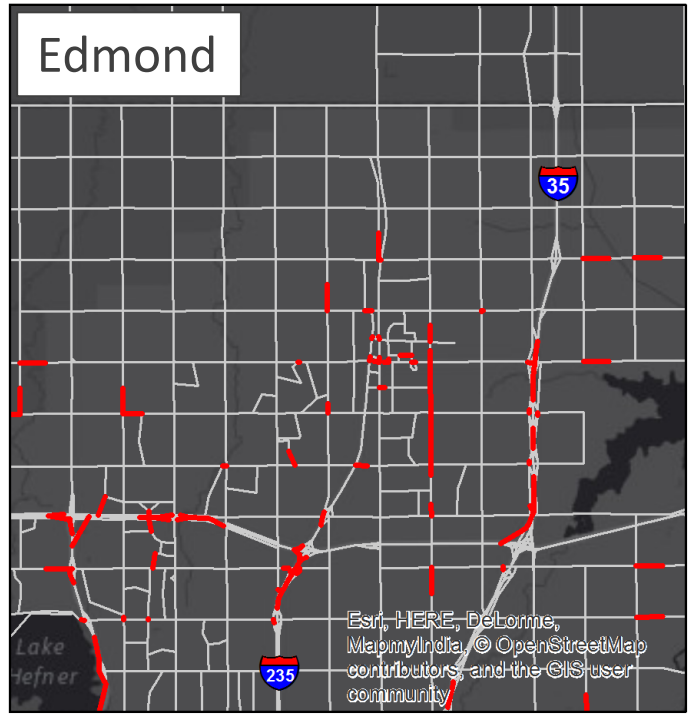

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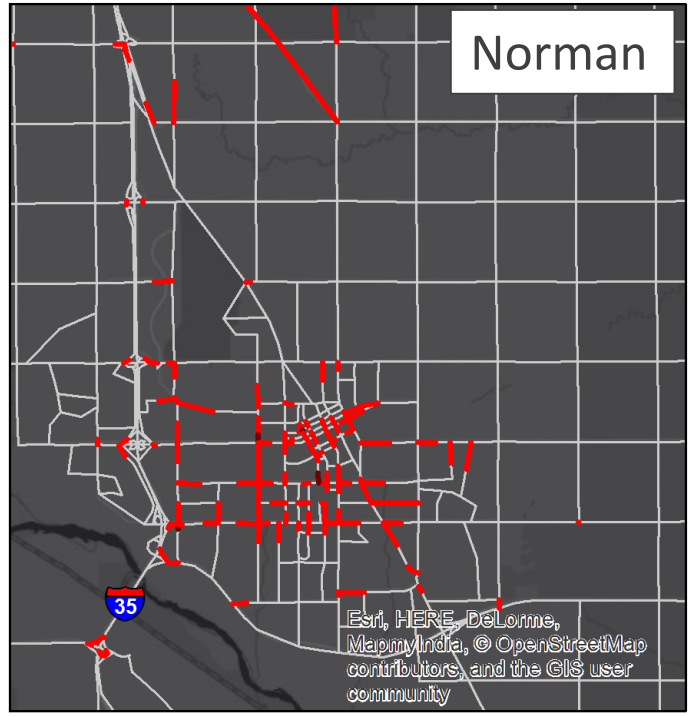
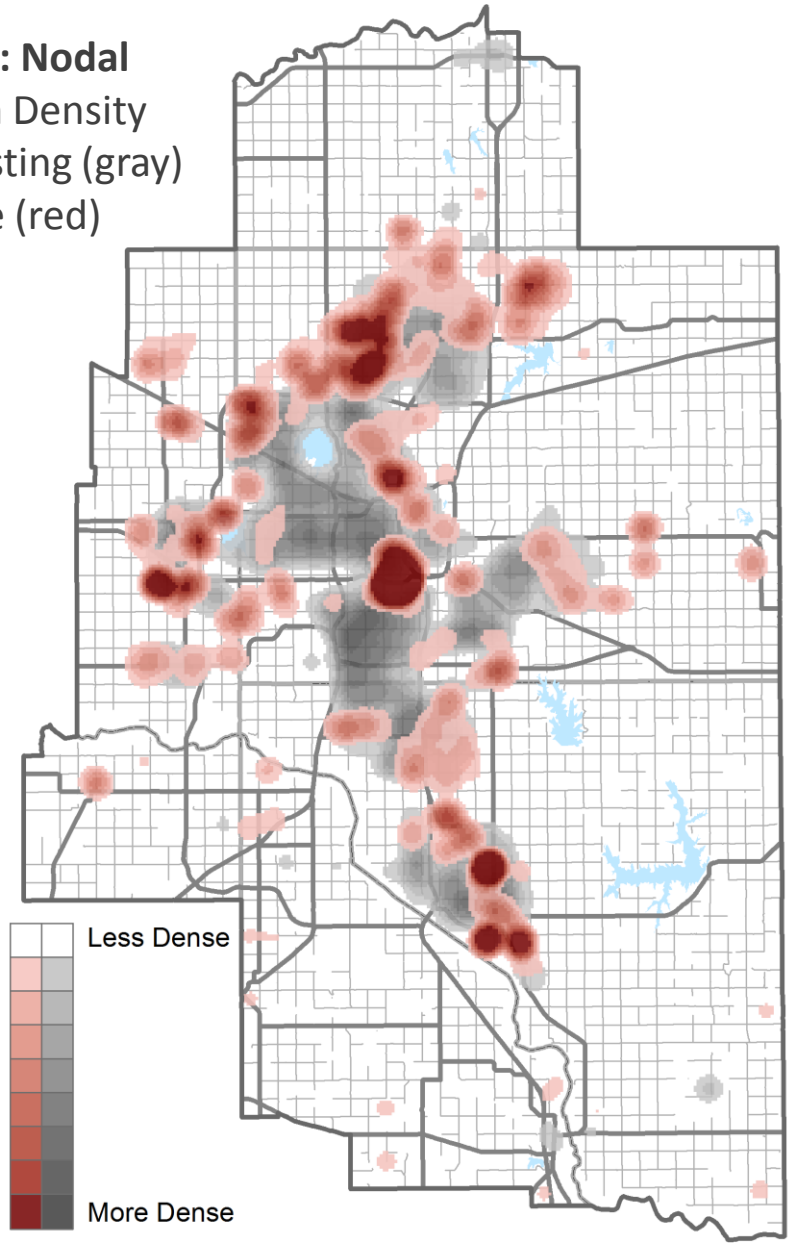
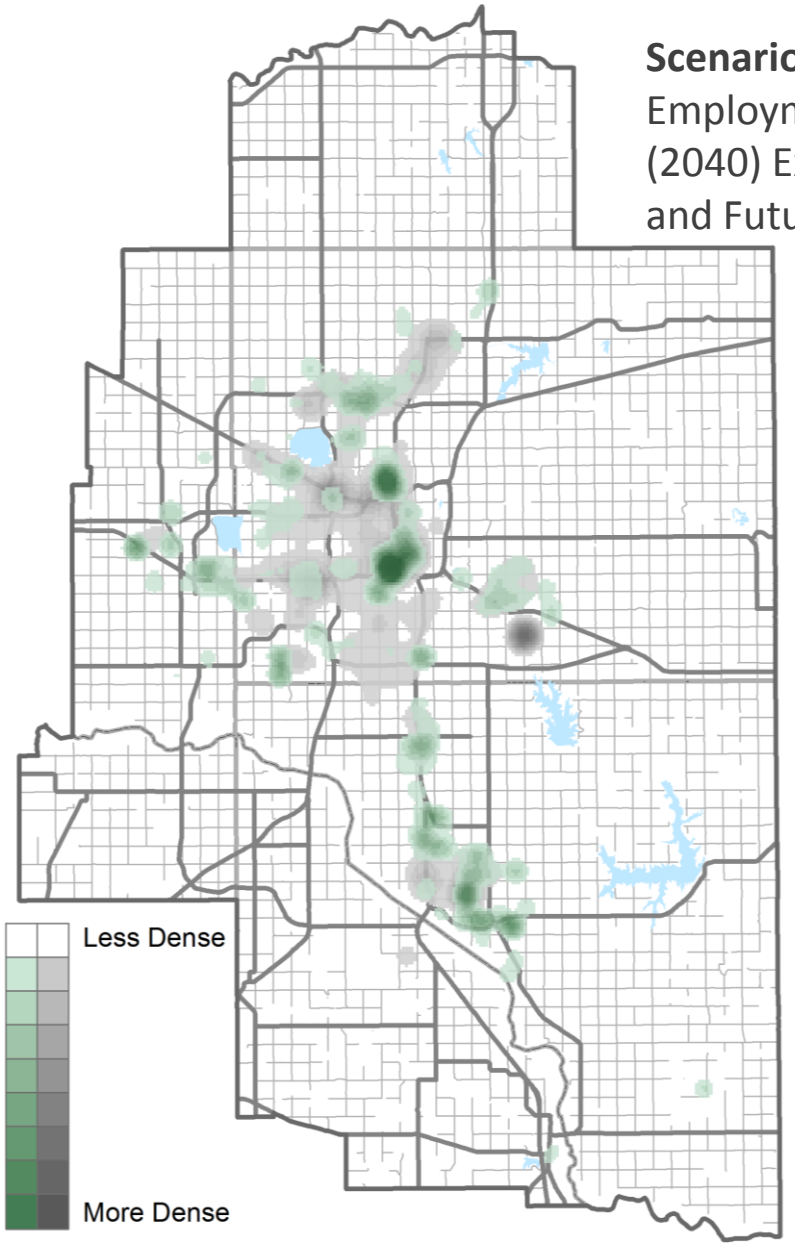


Scenario 2

Scenario 2: Nodal
Population Density (2040) Existing (gray) and Future (red)



Scenario 2: Nodal
Employment Density (2040) Existing (gray) and Future (green)



2040

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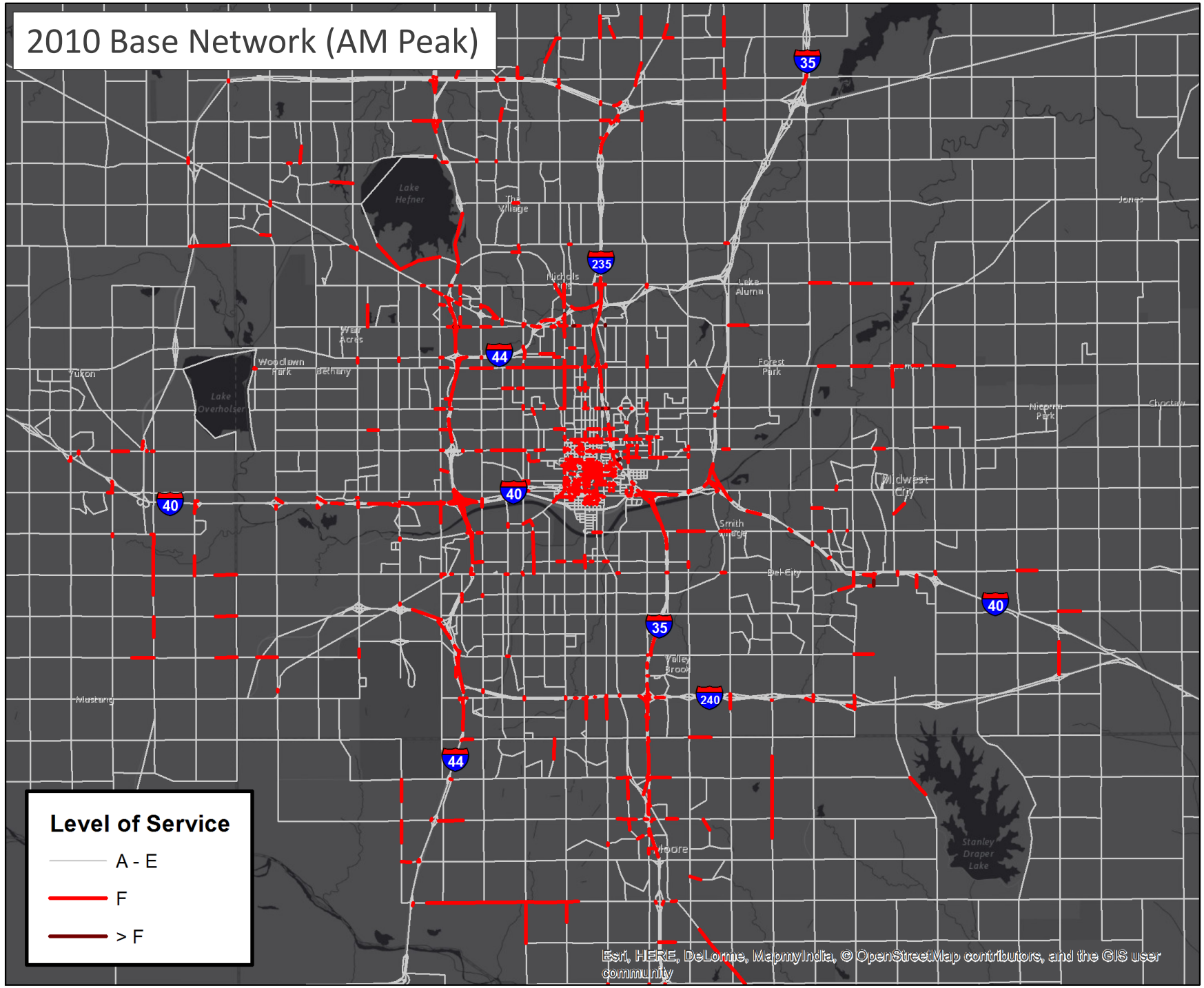
2010 Base Network (AM Peak)



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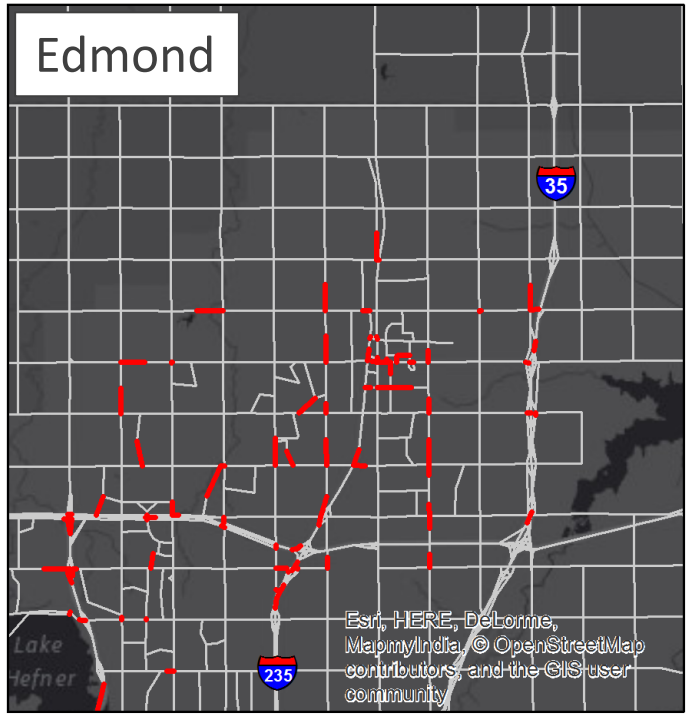

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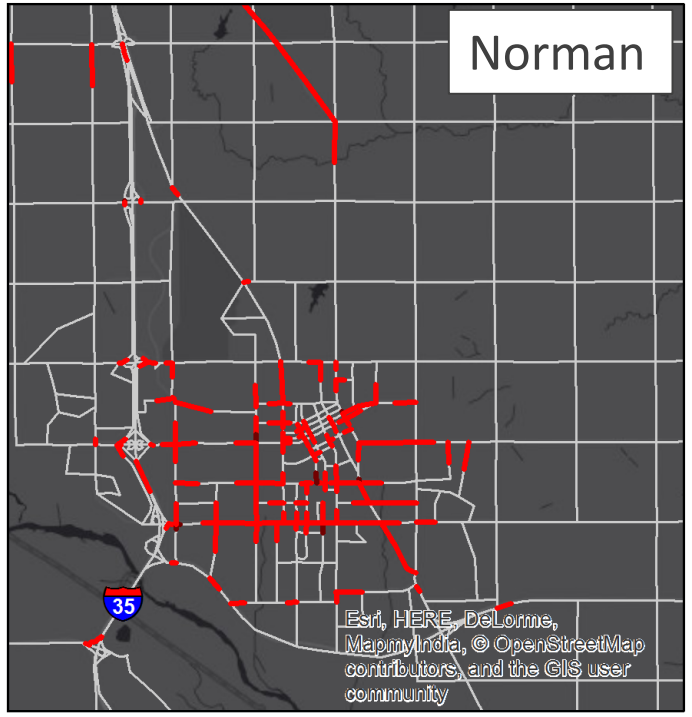

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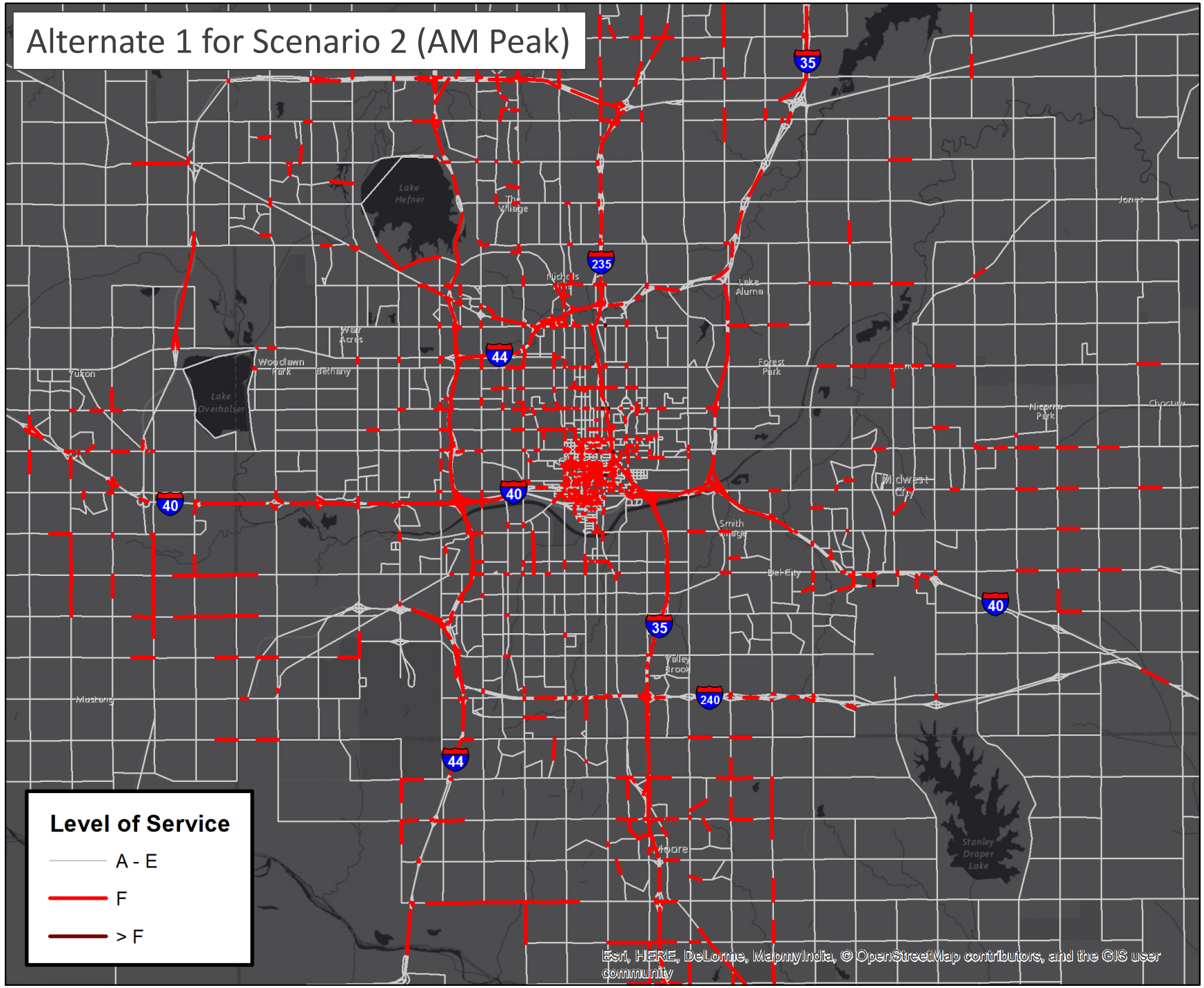
Alternate 1 for Scenario 2 (AM Peak)



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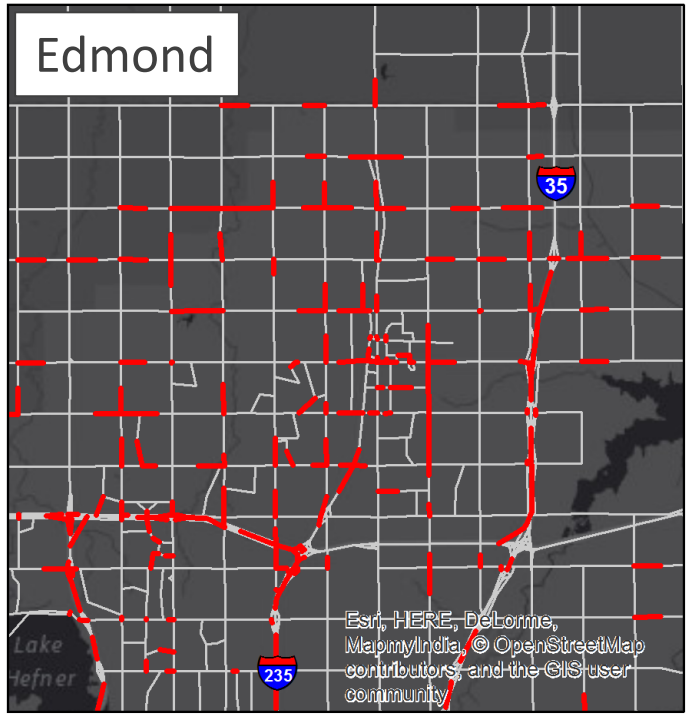

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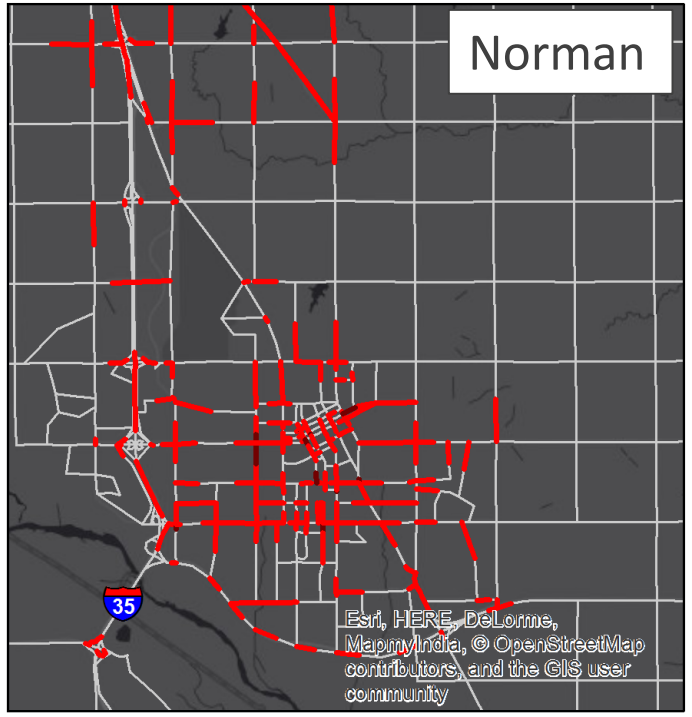

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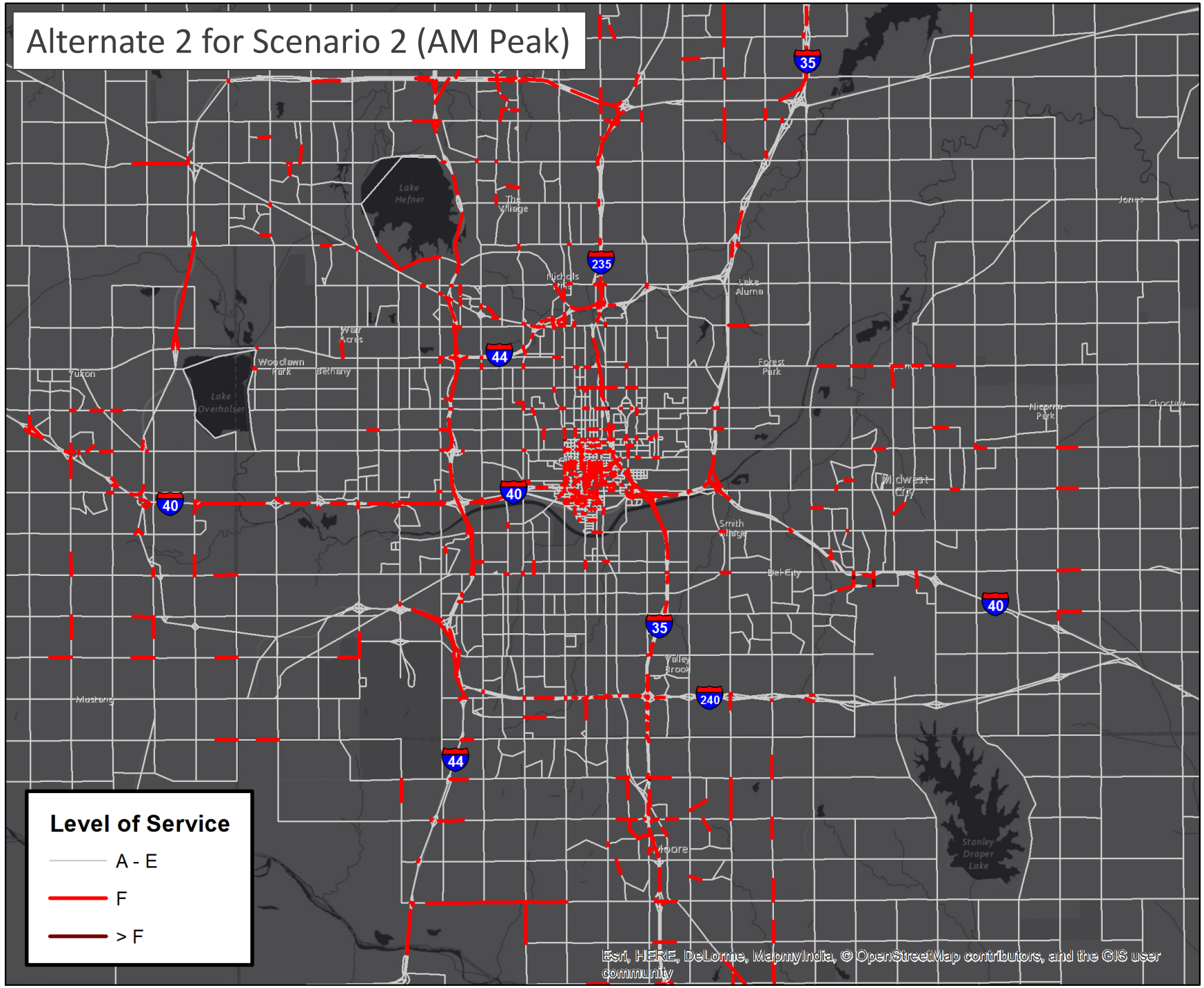
Alternate 2 for Scenario 2 (AM Peak)



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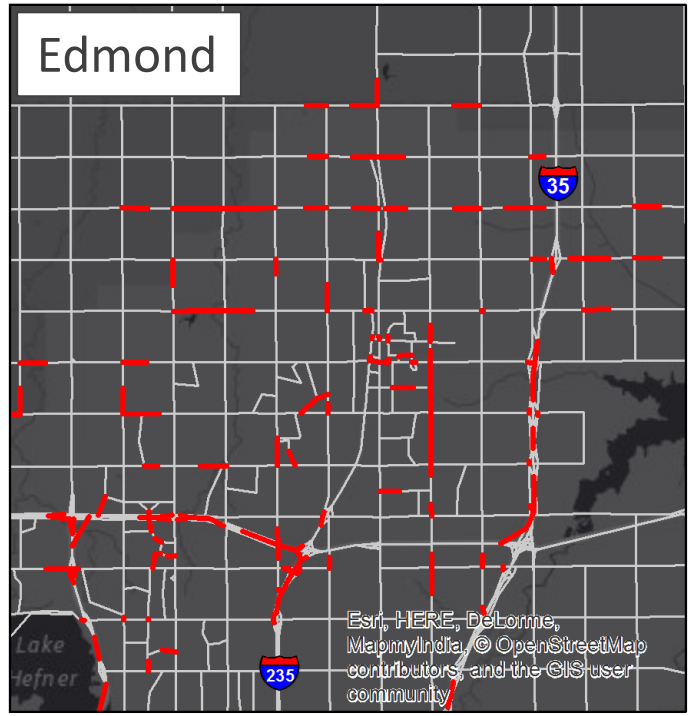

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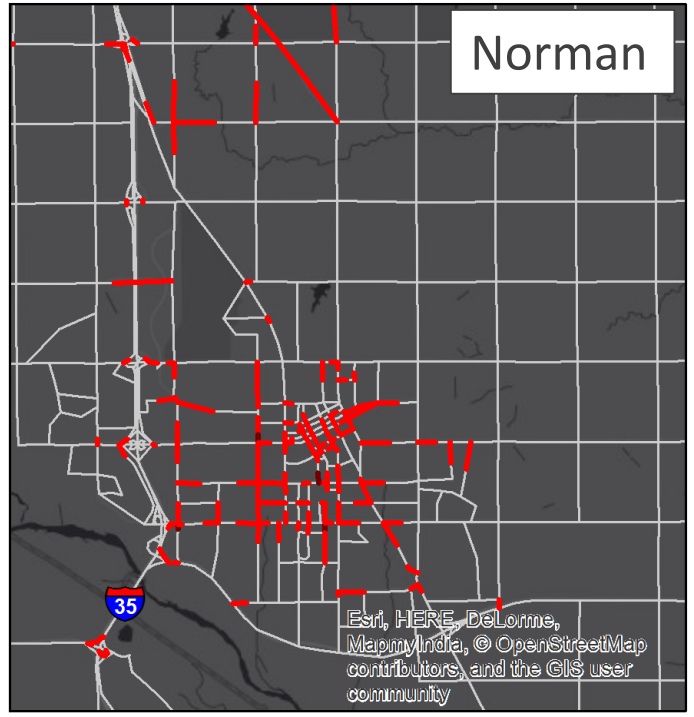

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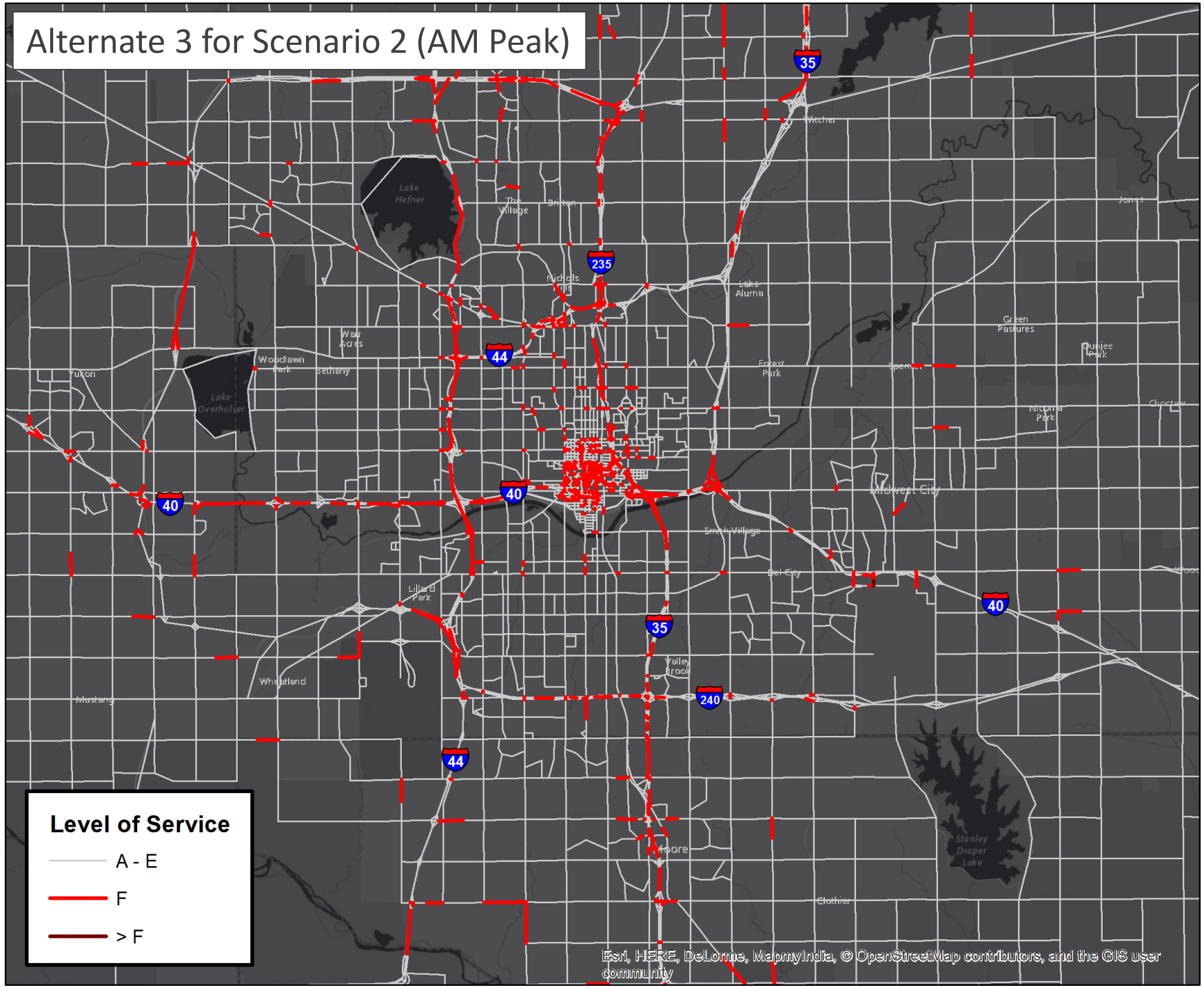
Alternate 3 for Scenario 2 (AM Peak)



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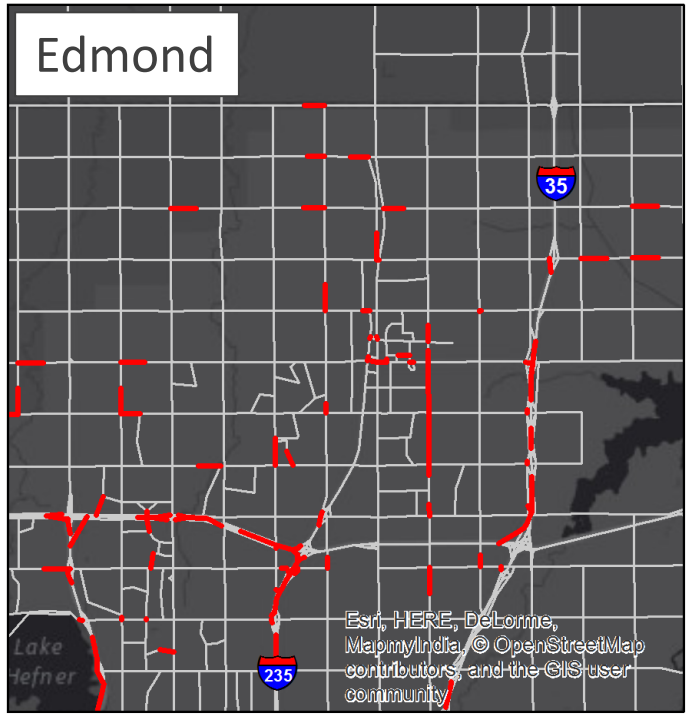

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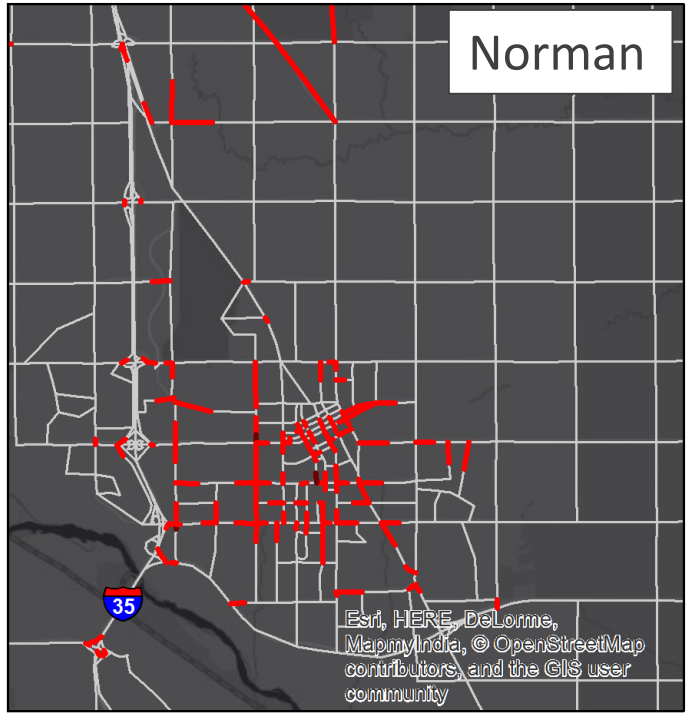


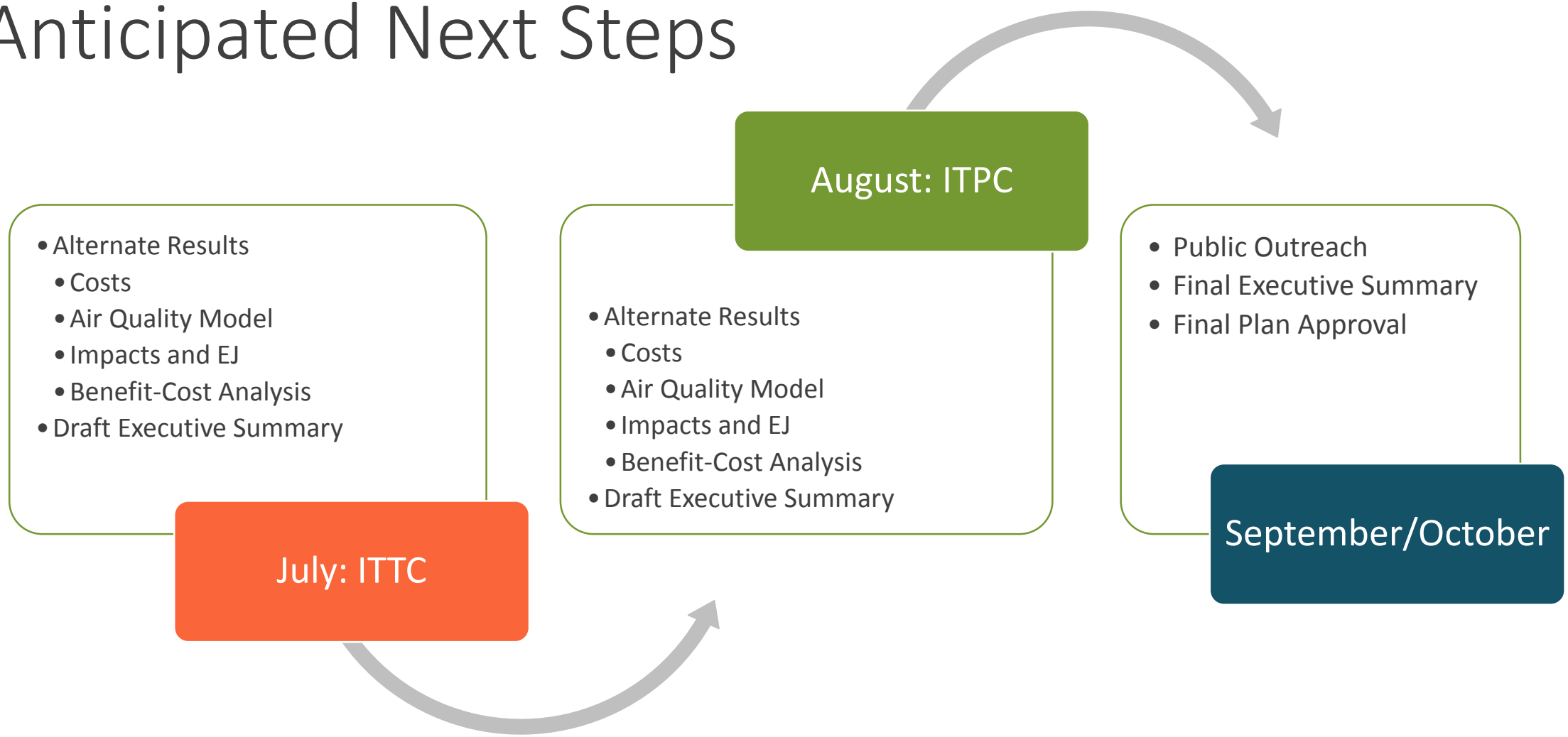
TDM Networks Evaluation*	2010 Base Network	Alternate 1		Alternate 2		Alternate 3	
		Scenario 1	Scenario 2	Scenario 1	Scenario 2	Scenario 1	Scenario 2
Demographic Data							
Population	1,142,338	1,595,168	1,595,168	1,595,168	1,595,168	1,595,168	1,595,168
Employment	601,839	875,402	875,402	875,402	875,402	875,402	875,402
Daily Transportation Demand							
Vehicle Miles of Travel	30,266,000	45,299,000	44,321,000	46,550,000	45,517,000	45,997,000	44,927,000
Vehicle Hours of Travel	853,000	1,503,000	1,474,000	1,415,000	1,389,000	1,398,000	1,371,000
Vehicle Trips	4,165,000	5,896,000	5,976,000	5,858,000	5,928,000	5,788,000	5,851,000
Transit Ridership	**15,700**	**22,800**	**26,200**	**22,900**	**26,600**	**91,100**	**108,900**
System Performance							
Congested Road Miles	**289**	**647**	**626**	**308**	**297**	**295**	**290**
Average Overall Speed (mph)	35	30	30	33	33	33	33
Average Freeway Speed (mph)	45	40	40	44	44	44	44
Average Arterial Speed (mph)	35	25	25	29	29	29	29
Average Trip Length (miles)	7.27	7.68	7.42	7.95	7.68	7.95	7.68
Average Trip Length (minutes)	12.29	15.30	14.80	14.49	14.06	14.49	14.06
Daily Hours of Delay	138,000	454,000	425,000	366,000	340,000	349,000	322,000
Delay per Trip (minutes)	**1.99**	**4.62**	**4.27**	**3.75**	**3.45**	**3.62**	**3.31**

* Please refer to handout for alternate network assumptions

Conclusions

- Alternate 3
  - Versus Alternate 1 (no build option):
    - Significant increase in transit trips
    - Significant decrease in congested lane miles
    - Less delay
    - Less speed reduction
- Scenario 2: Nodal (compact regional footprint)
  - Even more transit ridership
  - Fewer congested lane miles
  - Less delay

Anticipated Next Steps



QUESTIONS?

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