

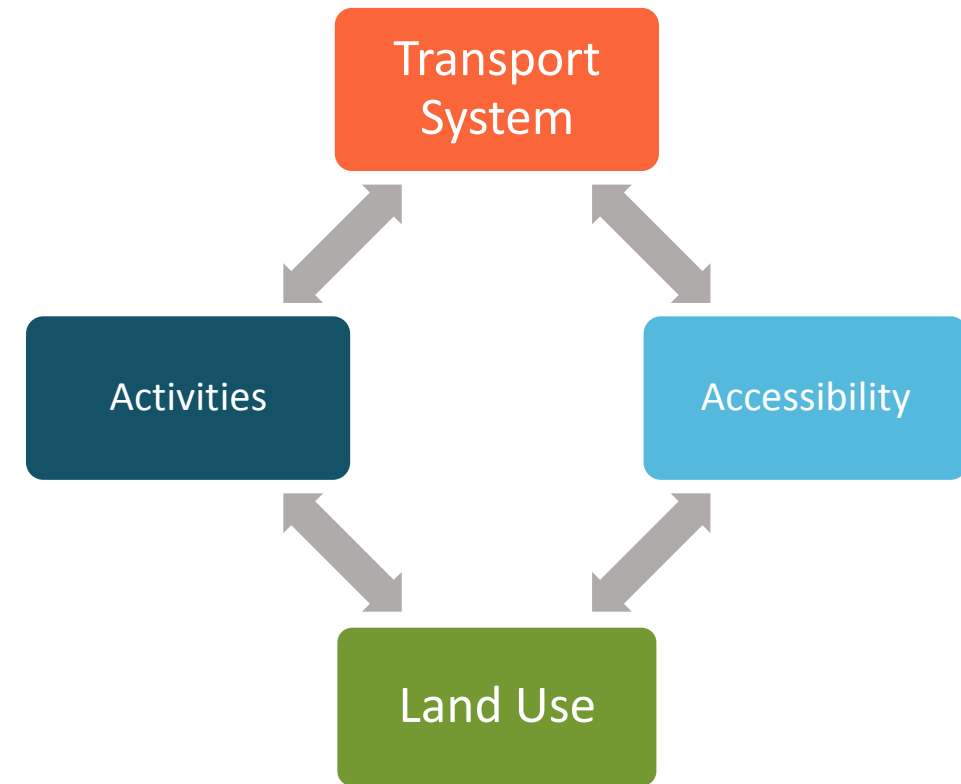


# Transportation Alternate Networks

March 21, 2016

# Encompass 2040

- Metropolitan Transportation Plan
- Link between land use and transportation
- Travel Demand Model (TDM)
  - Population and employment data (Scenarios)
  - Current and future projects
- Impacts of development
- Fiscally constrained plan



## 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

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

## Alternate 3

- Illustrative Alternate
- Regional transit
- No dedicated funding source

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- Current conditions as of 2010
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## Alternate 1

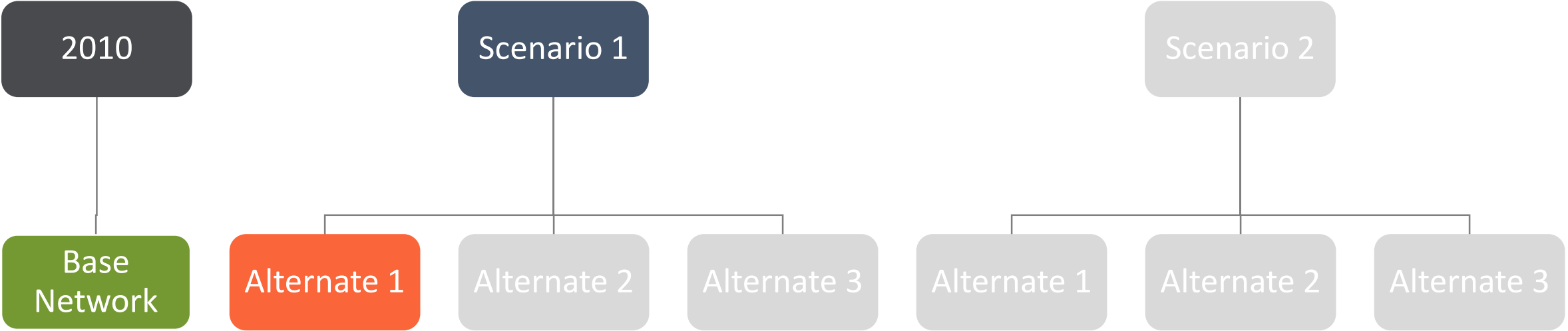
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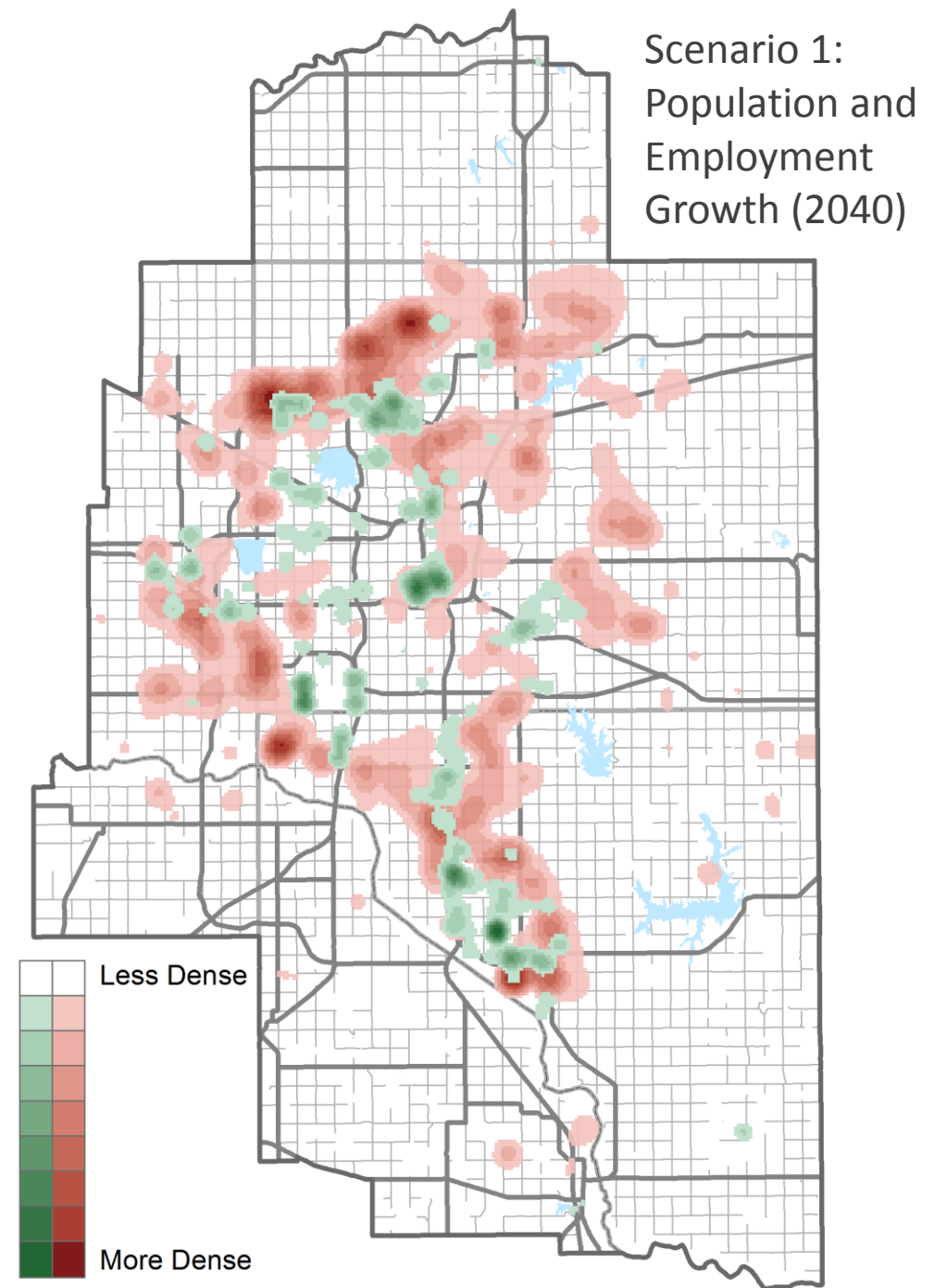
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- Illustrative Alternate
- Regional transit
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# Travel Demand Model

- Inputs
  - Constant
    - 1.6 million people (2040)
    - 875,000 jobs (2040)
  - Variable
    - Scenario 1 (Trend): Continues current development patterns
    - Scenario 2 (Nodal): Encourages infill and downtown development
- Outputs
  - Level of Service (LOS)
  - Trip data
  - Congested lane miles
  - Others

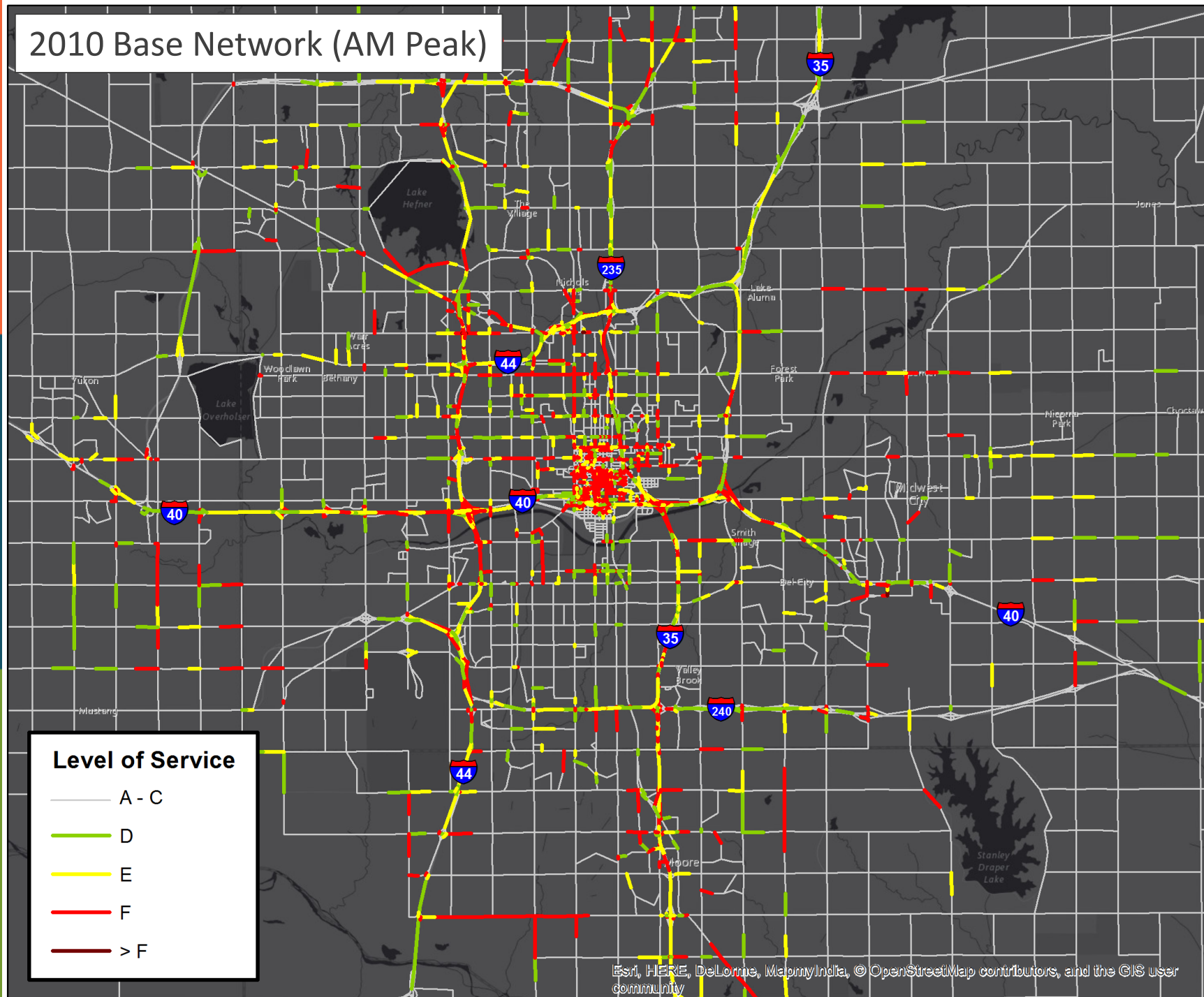


# Level of Service

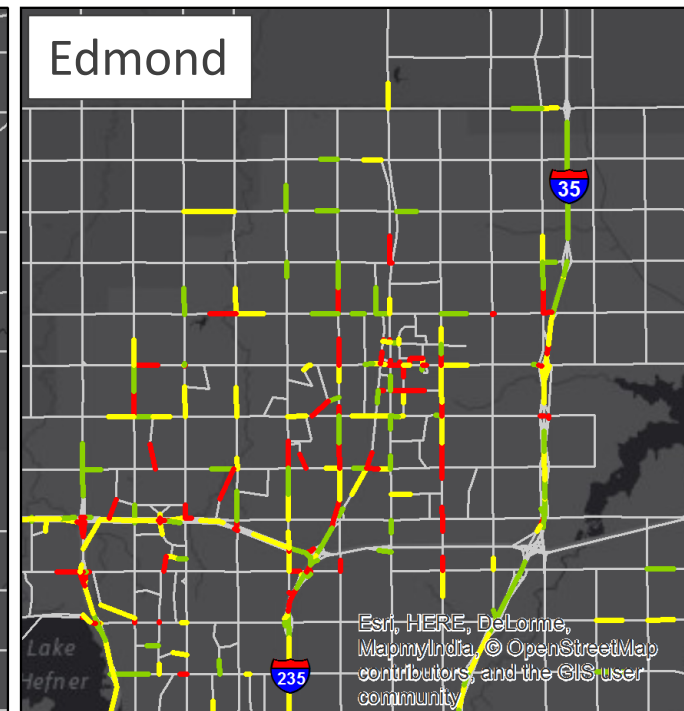
Level of Service	Traffic Characteristics	Interpretation	Delay (seconds/vehicle)	Map Color Key
A	Free flow	No congestion	0 – 10	
B	Reasonably free flow	Light congestion	11 – 20	
C	Stable flow	Mild congestion	21 – 35	
D	Approaching unstable flow	Moderate congestion	36 – 55	
E	Unstable flow	Severe congestion	56 – 80	
F	Forced or breakdown flow	Extreme congestion	>80	
>F	Demand significantly exceeds roadway capacity			



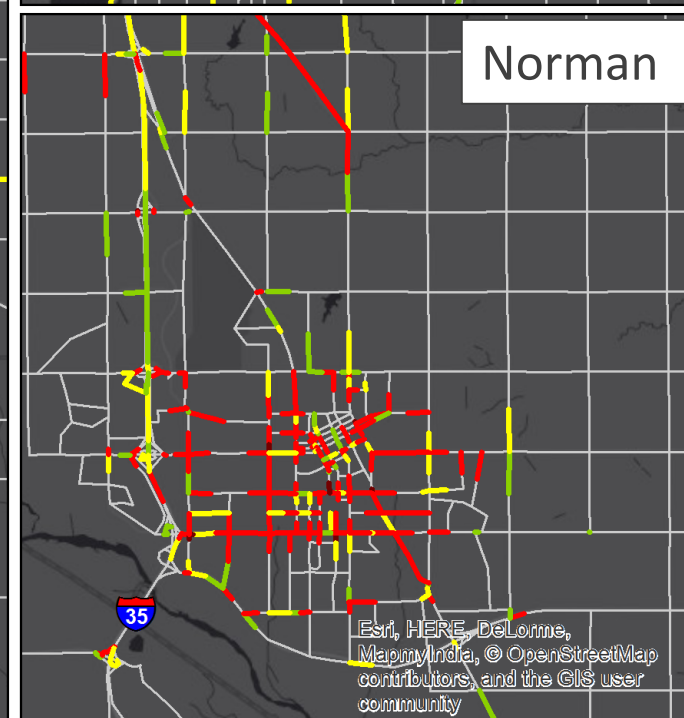
## 2010 Base Network (AM Peak)



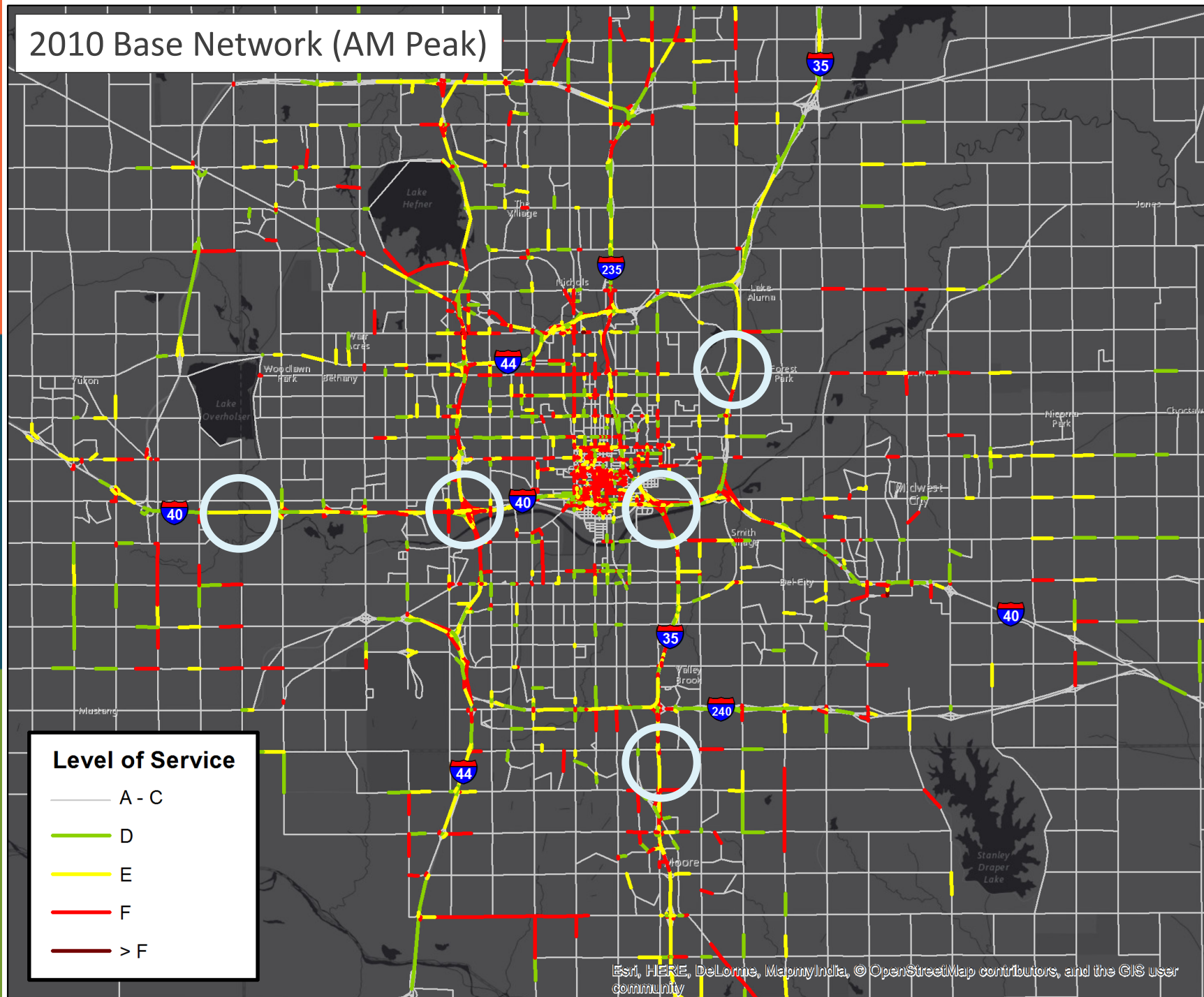
## Edmond



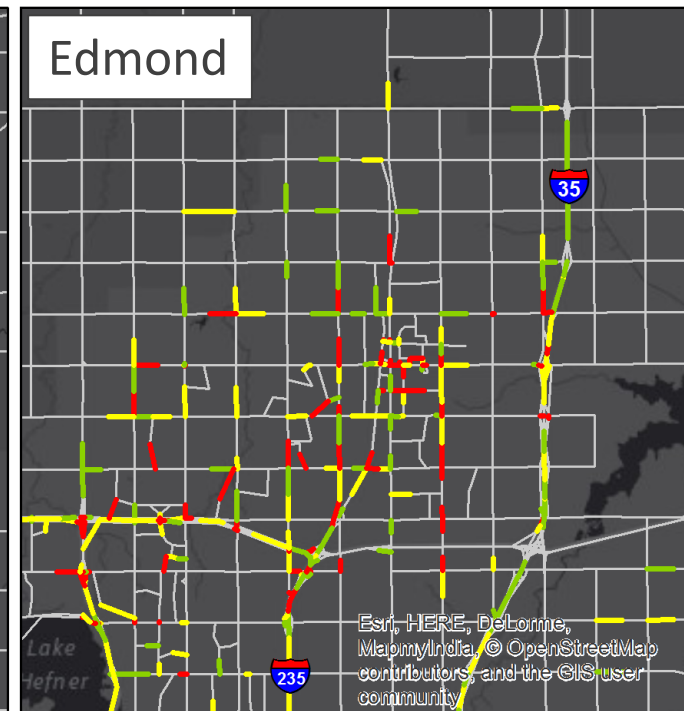
## Norman



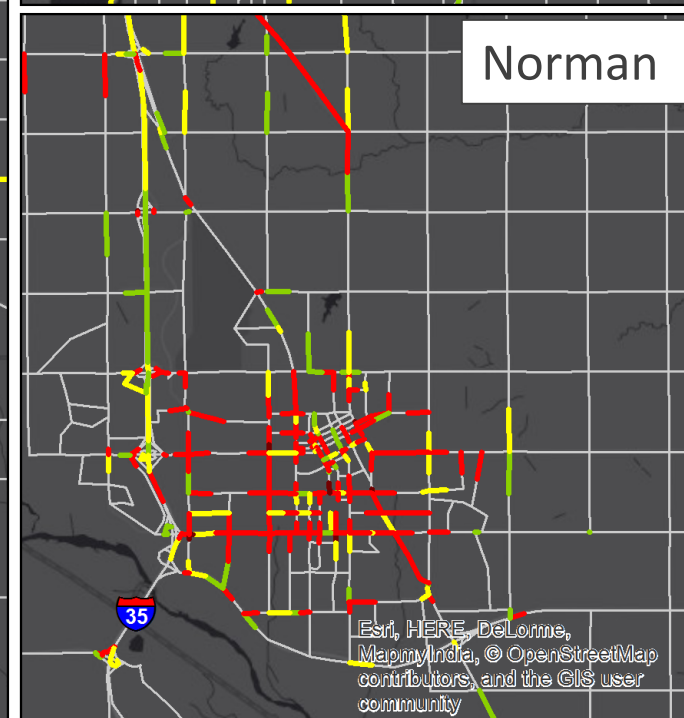
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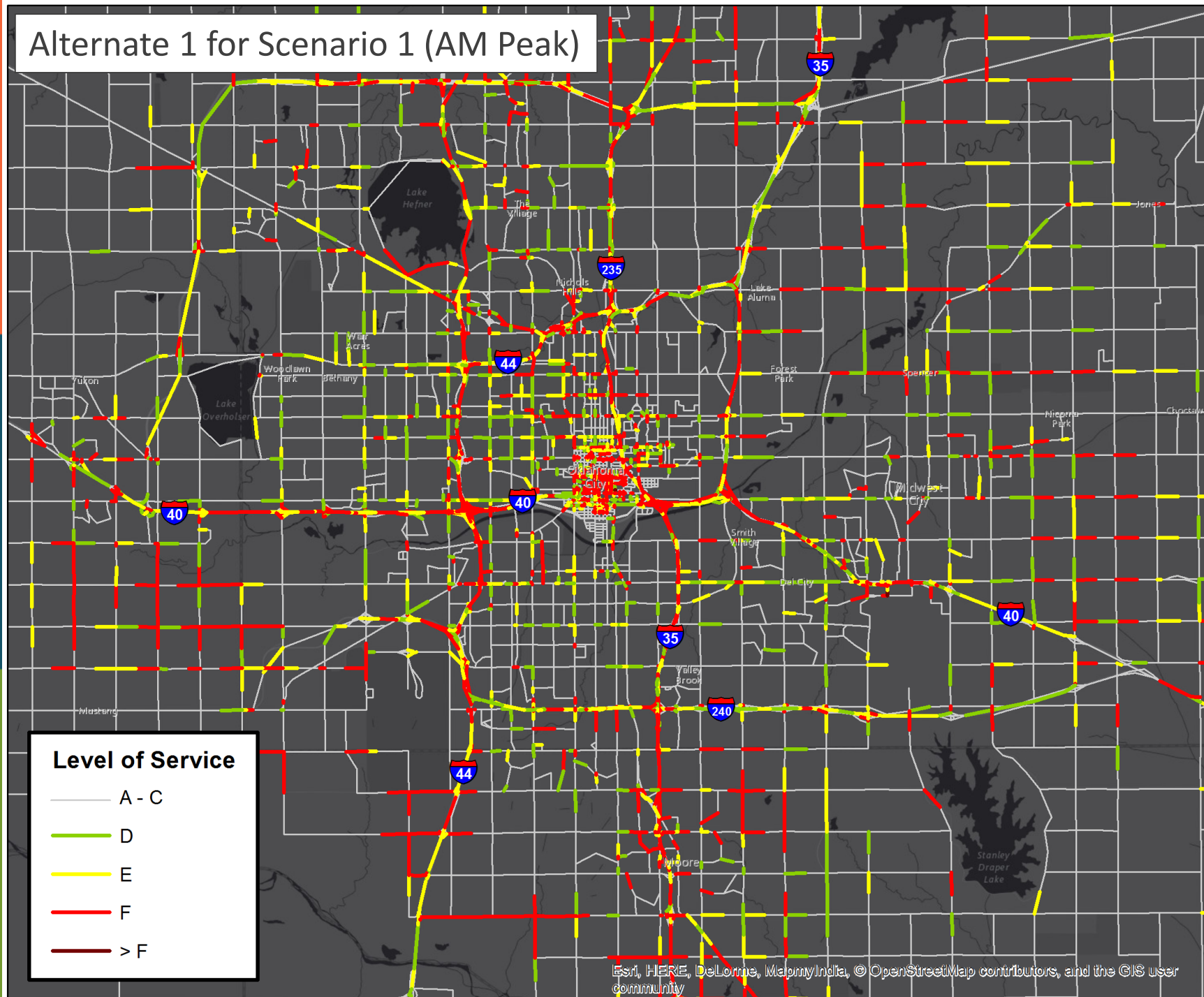
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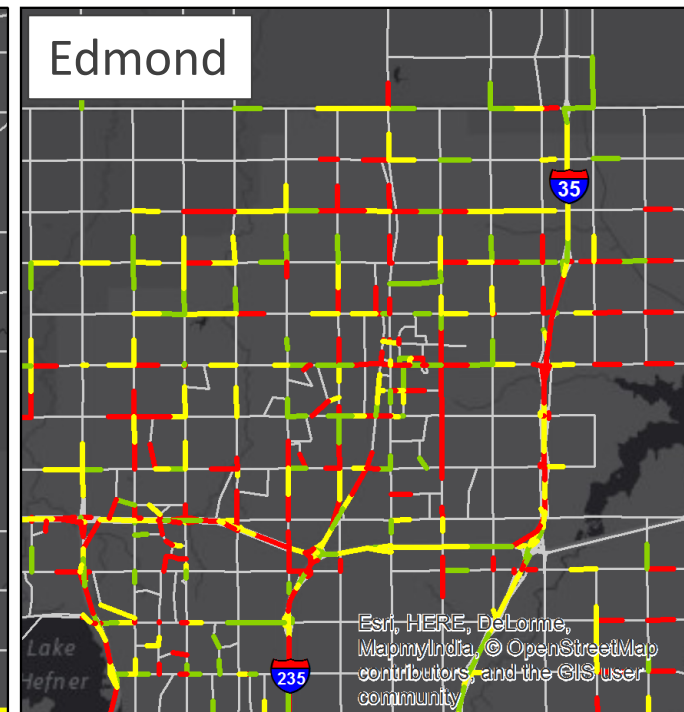
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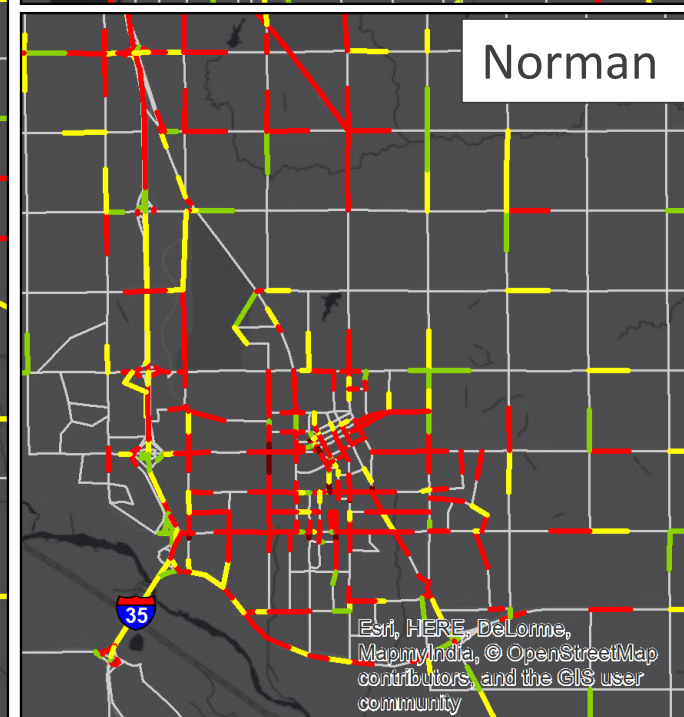
## Alternate 1 for Scenario 1 (AM Peak)



## Edmond

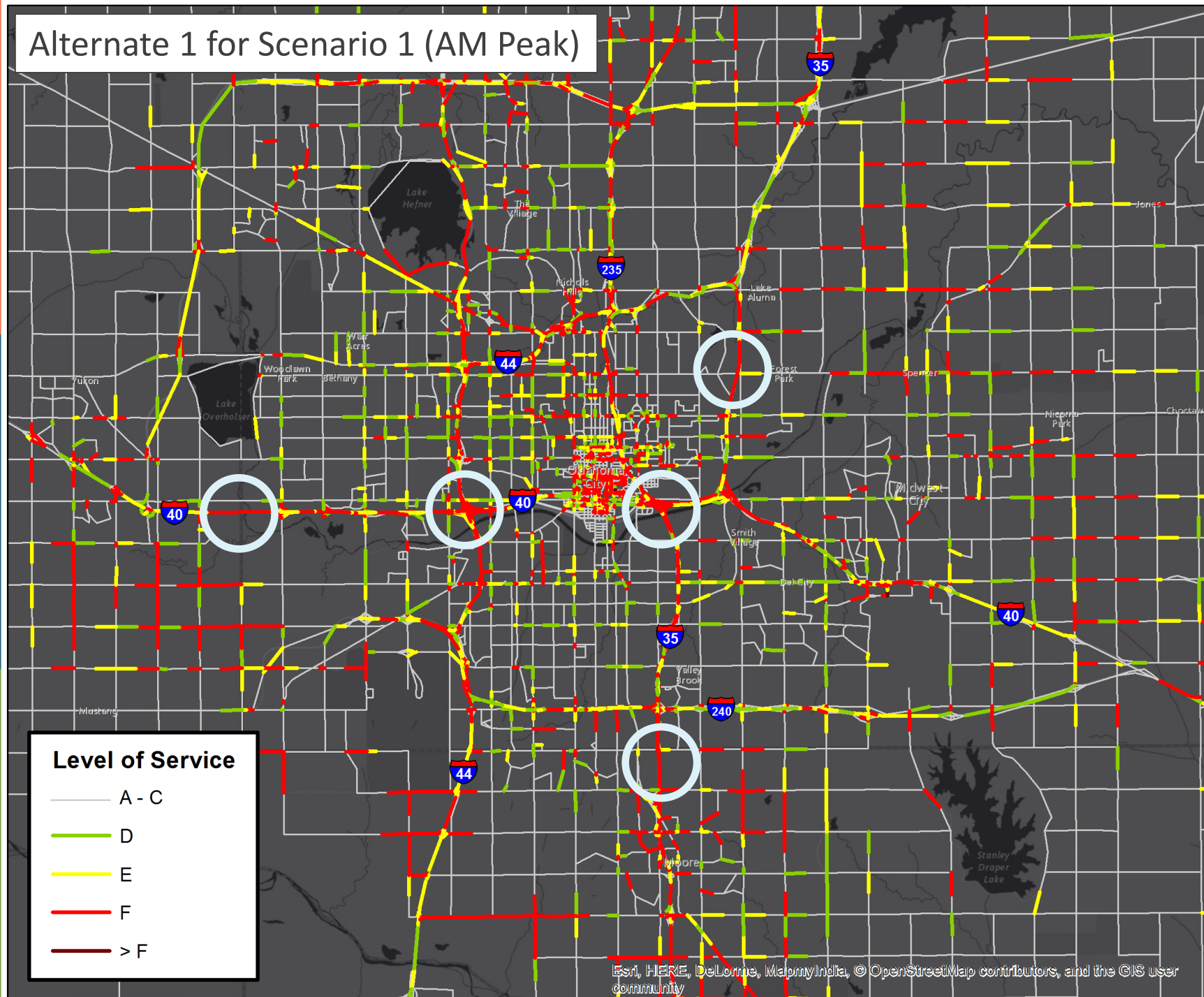


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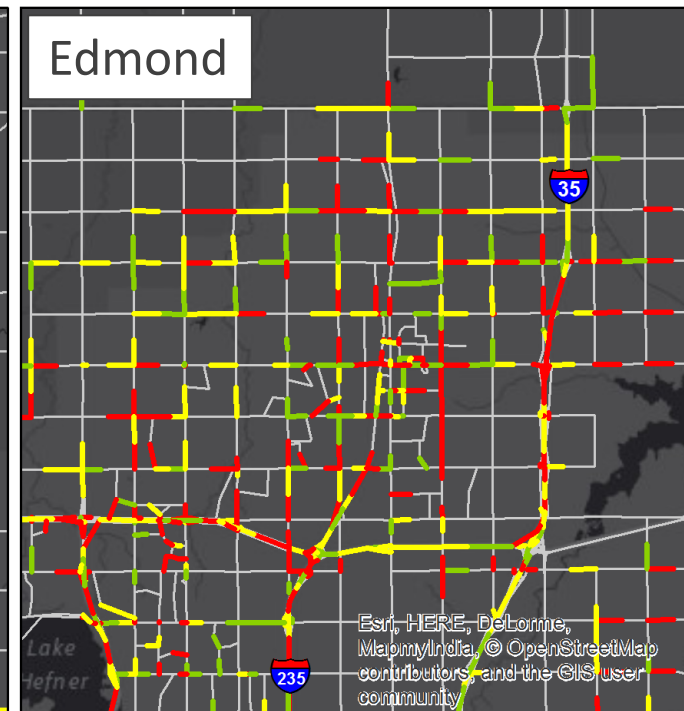




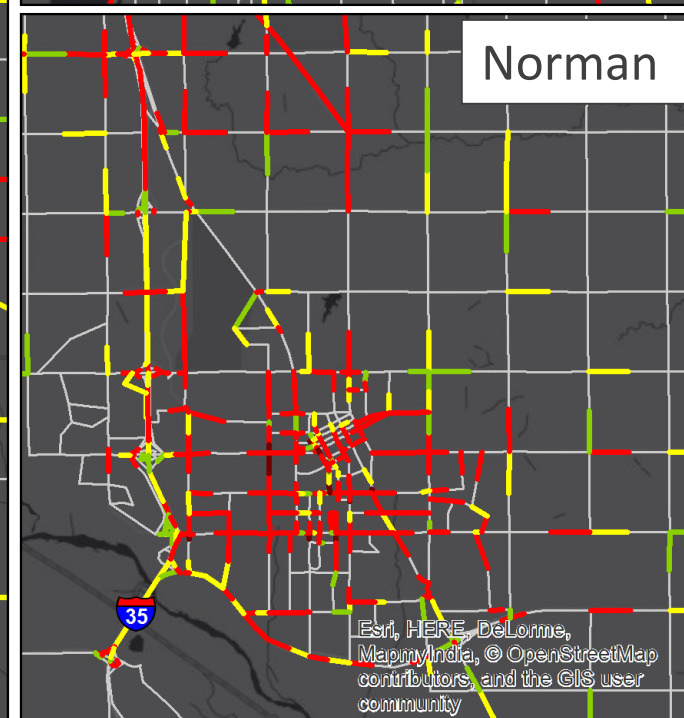
## Alternate 1 for Scenario 1 (AM Peak)



## Edmond



## Norman



	Base Network	Alternate 1	Percent Change
Demographic Data			
Population	1,142,338	1,595,168	40%
Employment	601,839	875,402	45%
Daily Transportation Demand			
Vehicle Miles of Travel	30,266,000	43,850,000	45%
Vehicle Hours of Travel	853,000	1,457,000	71%
Vehicle Trips	5,420,000	7,765,000	43%
Transit Ridership	15,700	22,800	45%
System Performance			
Congested Road Miles	275	619	125%
Average Overall Speed (mph)	35	30	-14%
Average Freeway Speed (mph)	45	40	-11%
Average Arterial Speed (mph)	35	32	-9%
Average Trip Length (miles)	5.58	5.65	1%
Average Trip Length (minutes)	9.44	11.26	19%
Daily Hours of Delay	138,000	408,000	196%
Delay per Trip (minutes)	1.53	3.15	106%

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# QUESTIONS?

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