

The City of Orem Transportation Master Plan

City Council Work Session

October 13, 2015

Transportation Master Plan Process

High Level

- MAG's Travel Demand Model: High Level Regional Analysis
Roadway Level of Service or Capacity Level

Detailed Level

- Micro-simulation Model (VISSIM/Synchro):
Corridors and Intersections

Transportation Master Plan Process

Public Involvement

- Public Comments Received
- Public Open House
- Comment Categorization



Picture from Public Open House

Transportation Master Plan Elements

- Traffic Calming Guidelines
- Traffic Study Guidelines
- Access Management Program
- Speed Limit Review
- Orem Pass-Through Traffic
- Capital Improvement Plan

Level of Service



Road Segment Level of Service

LOS C or Better

400 North

400 East

LOS D

North State Street

LOS E or Worse

University Parkway

South State Street

1600 North

LEVEL OF SERVICE REPRESENTATION	
A	
B	
C	
D	
E	
F	



Excellent

Good

Average

Acceptable

Congested

Severely Congested

Road Segment and Intersection Level of Service

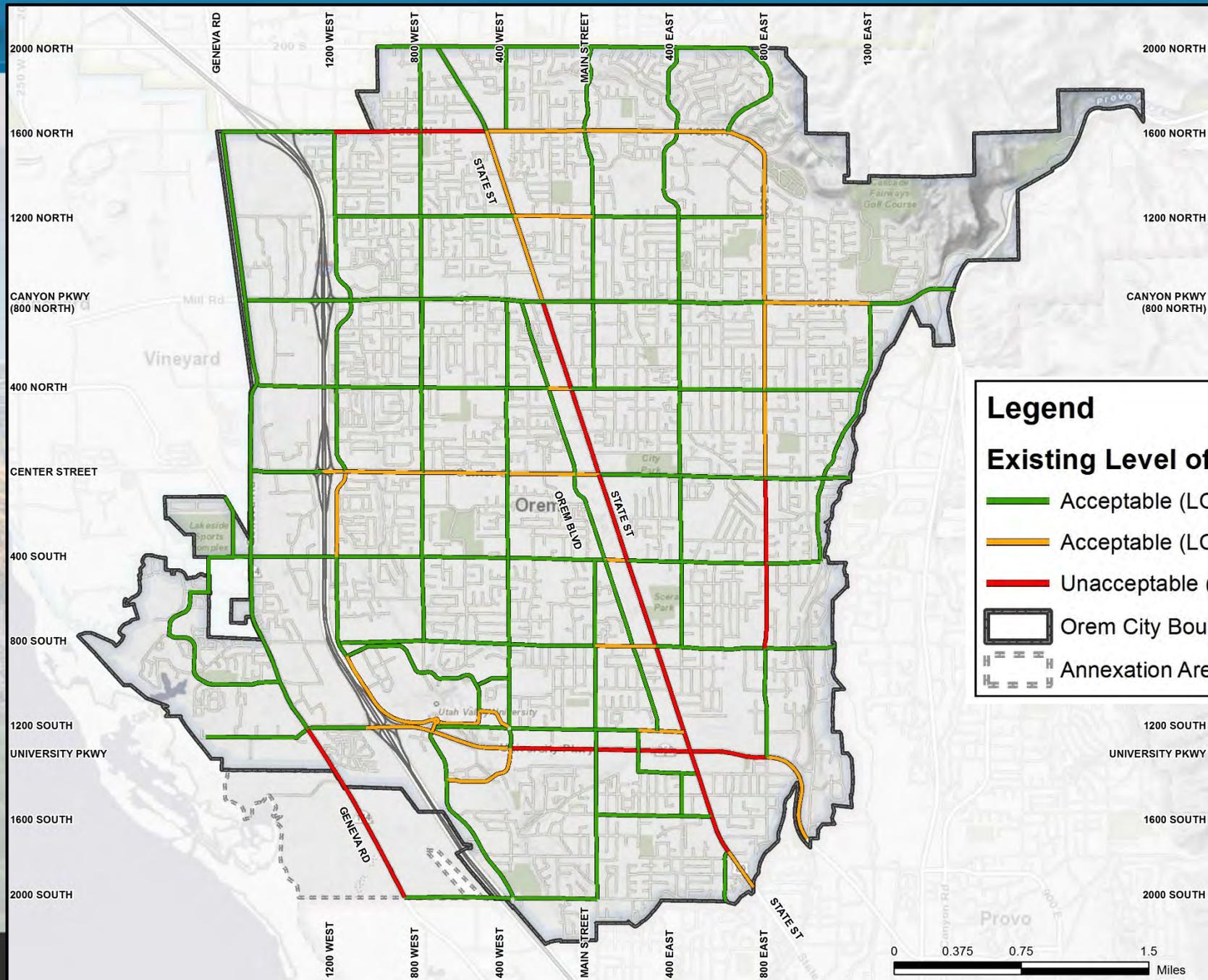
Road Segment LOS

Level of Service	Collector (ADT)	Arterial (ADT)
<u>5 Lanes</u>		
A	12,000	14,500
B	16,500	20,500
C	21,500	26,500
D	25,000	30,500
E	31,500	39,000
F	> 31,500	> 39,000

Intersection LOS

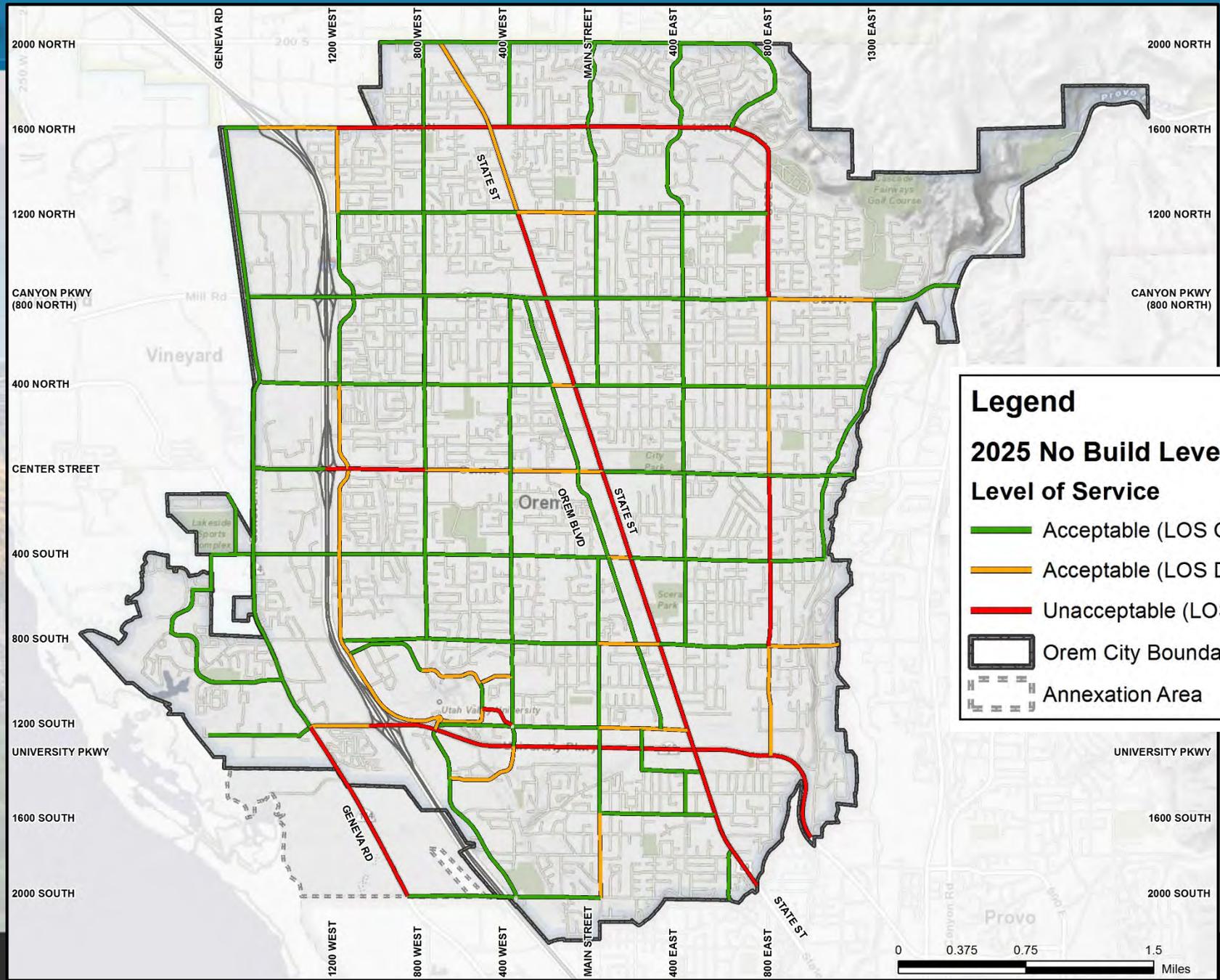
Level of Service	Signalized (sec)	Unsignalized (sec)
A	≤ 10	≤ 10
B	> 10-20	> 10-15
C	> 20-35	> 15-25
D	> 35-55	> 25-35
E	> 55-80	> 35-50
F	> 80	> 50

Existing Level of Service

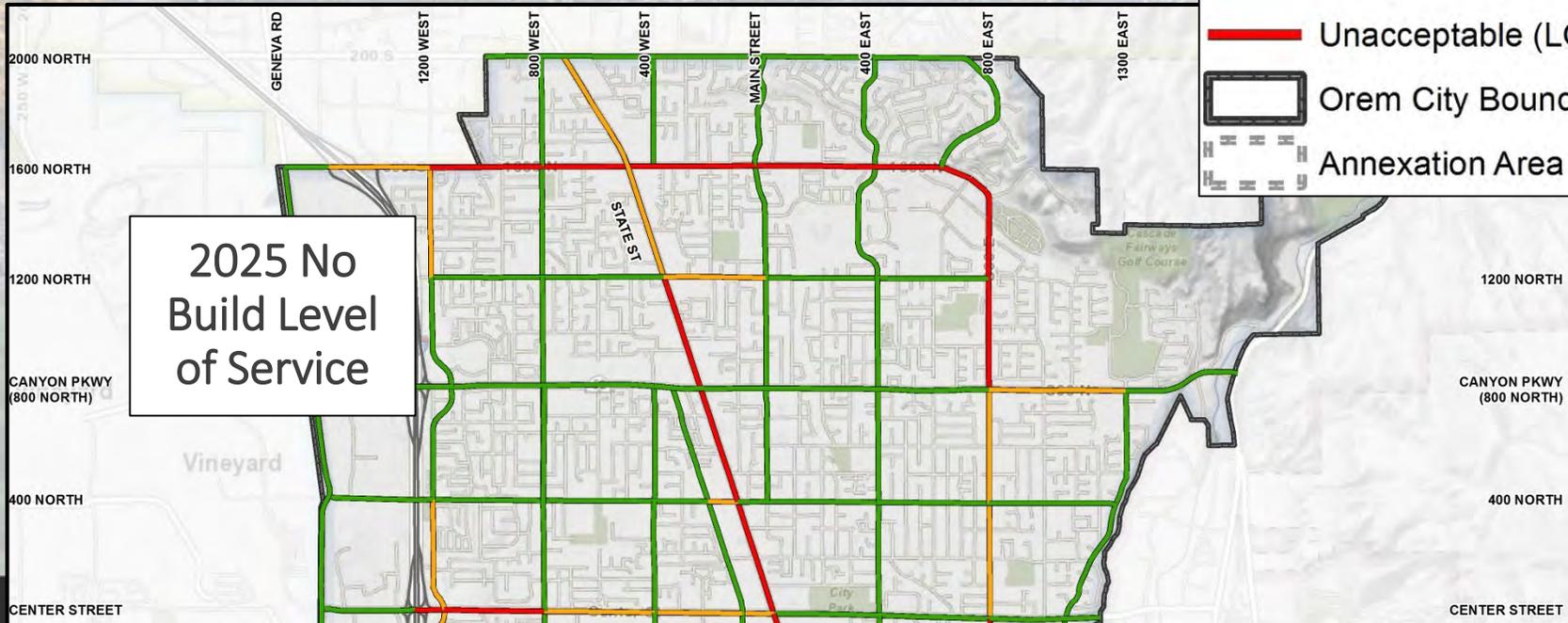
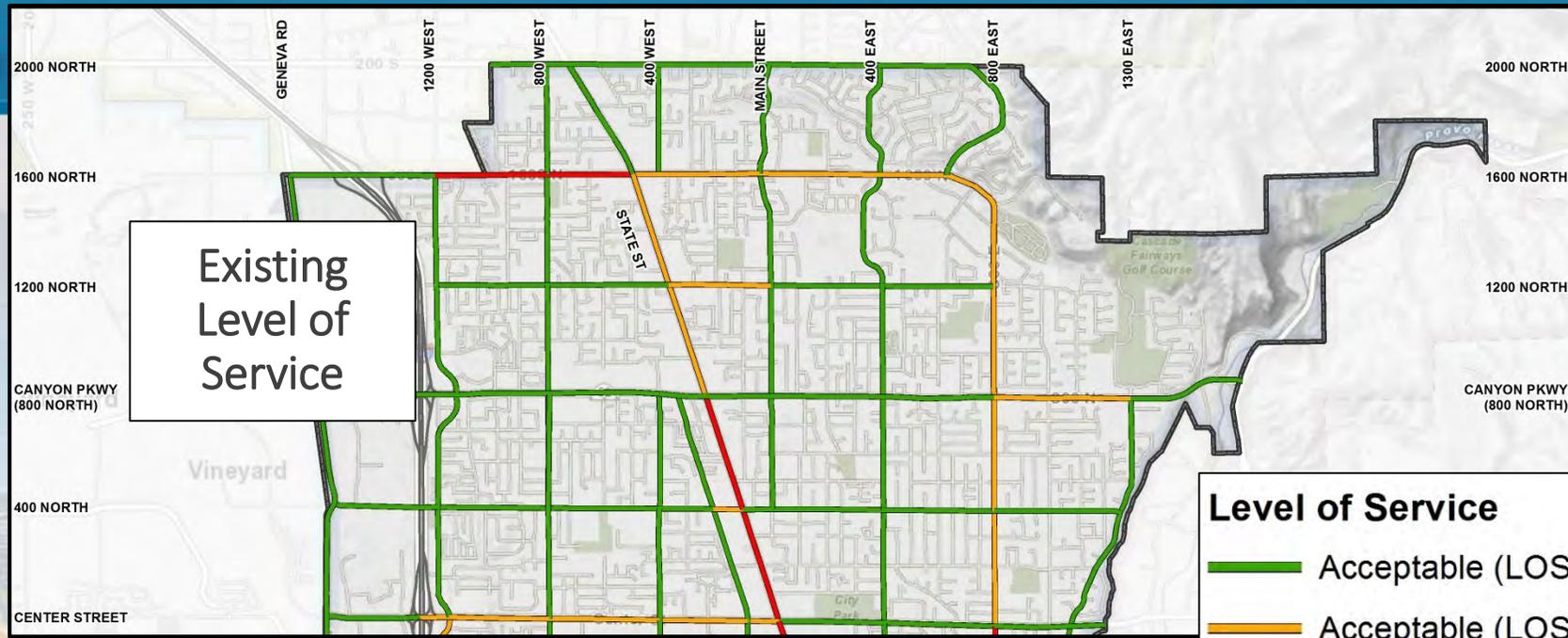


2025 No-Build Level of Service

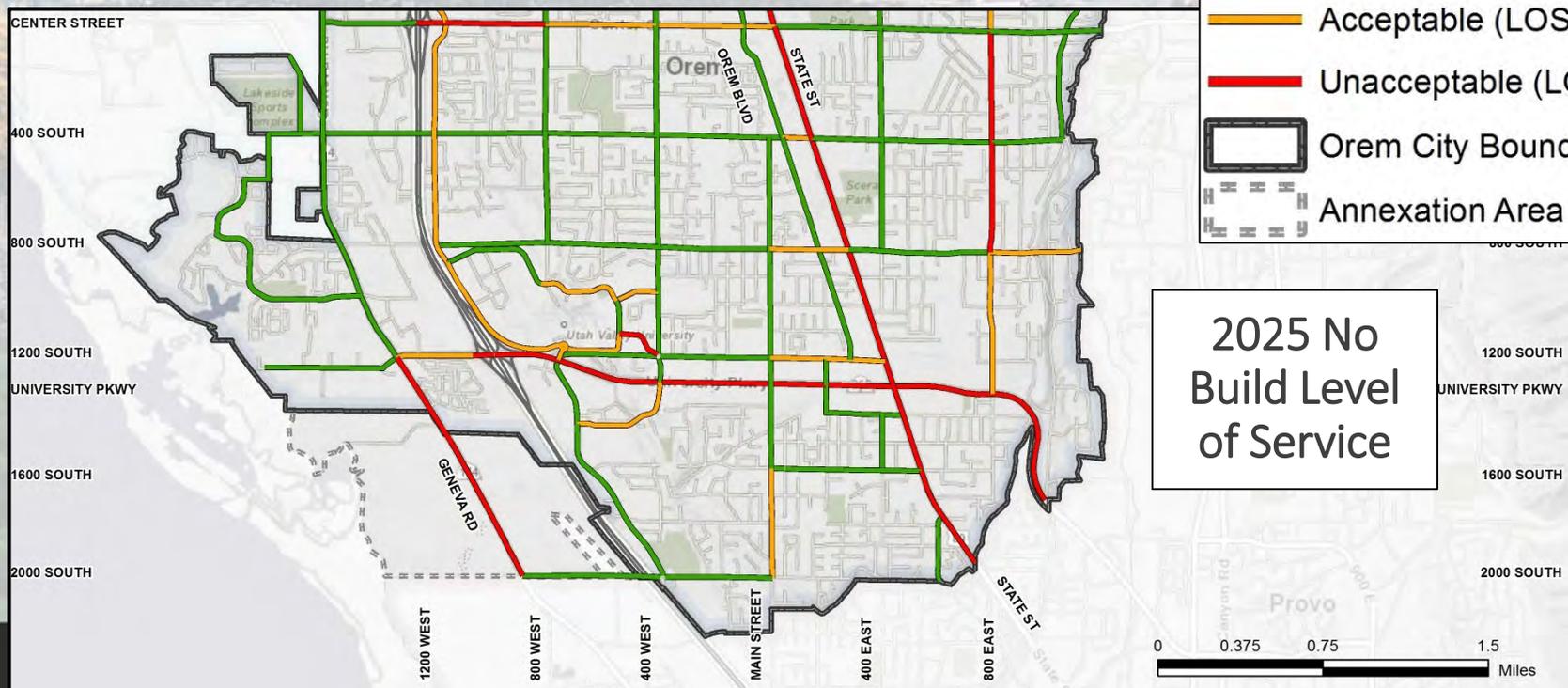
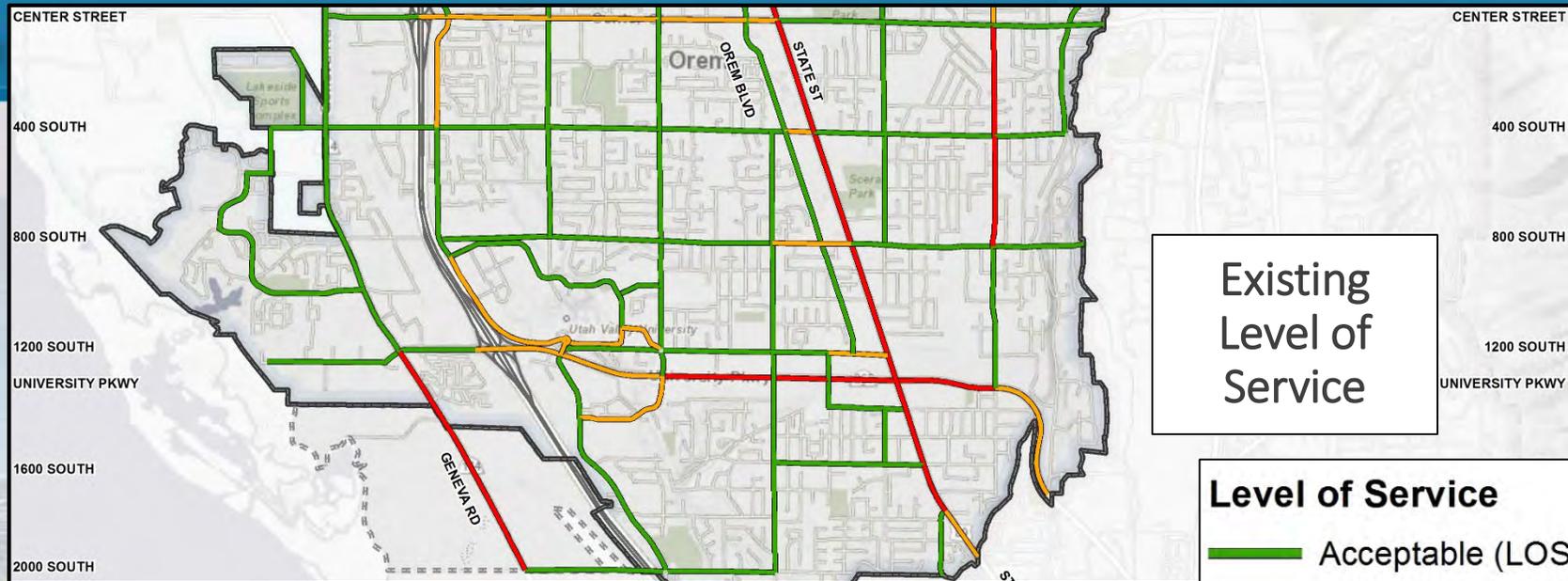
(Existing Roadway Network with 2025 Traffic Volumes)



Level of Service Comparison (North of Center Street)



Level of Service Comparison (South of Center Street)



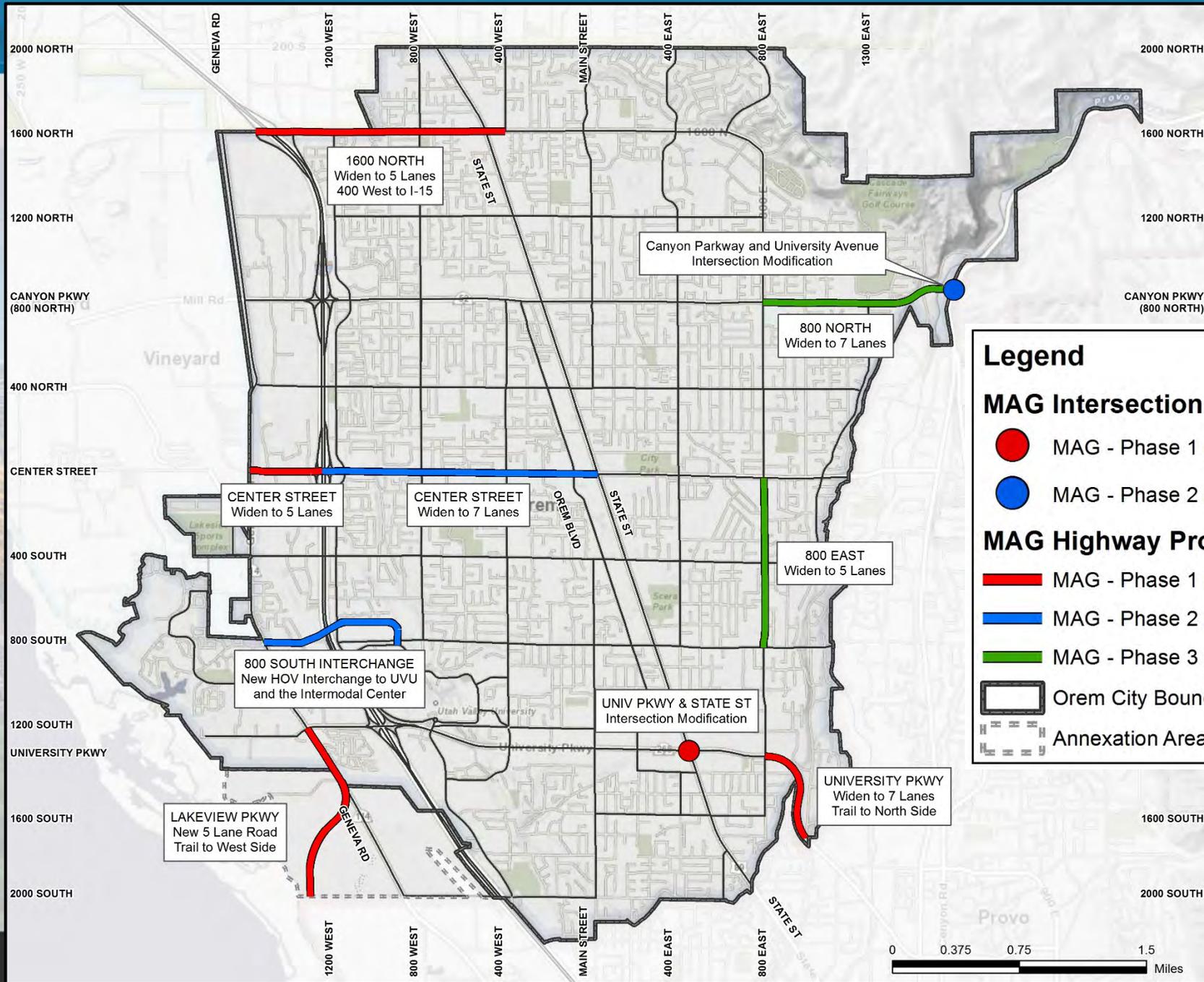
Existing Level of Service

- Level of Service**
- Acceptable (LOS C or Better)
 - Acceptable (LOS D)
 - Unacceptable (LOS E or Worse)
 - Orem City Boundary
 - Annexation Area

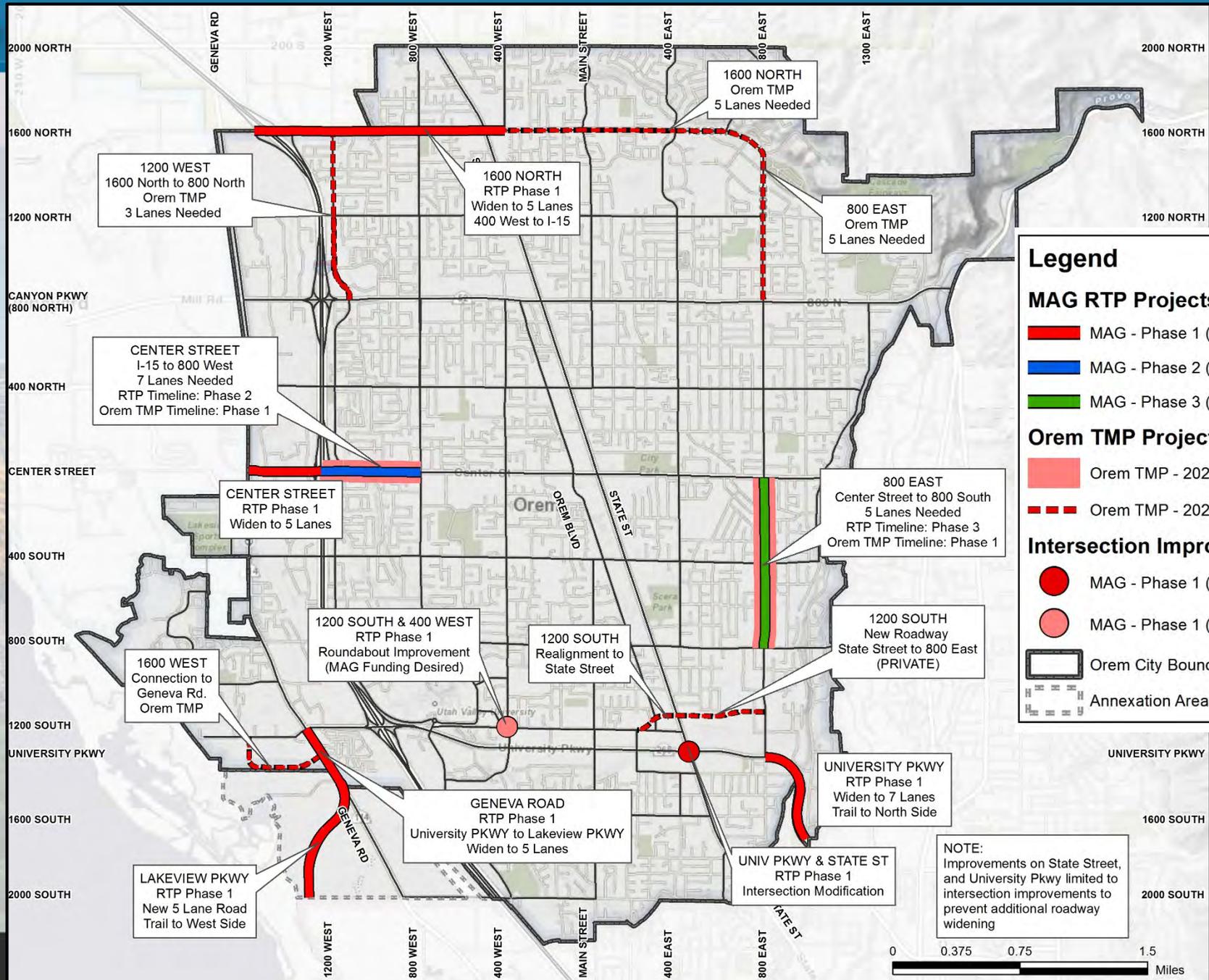
2025 No Build Level of Service



MAG Regional Transportation Plan and UDOT Projects



10 Year CIP Roadway Projects



Legend

MAG RTP Projects

- █ MAG - Phase 1 (2015-2024)
- █ MAG - Phase 2 (2025-2034)
- █ MAG - Phase 3 (2035-2040)

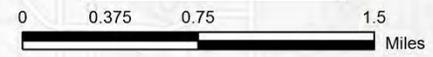
Orem TMP Projects

- █ Orem TMP - 2025 (Modified RTP Timeline)
- █ Orem TMP - 2025

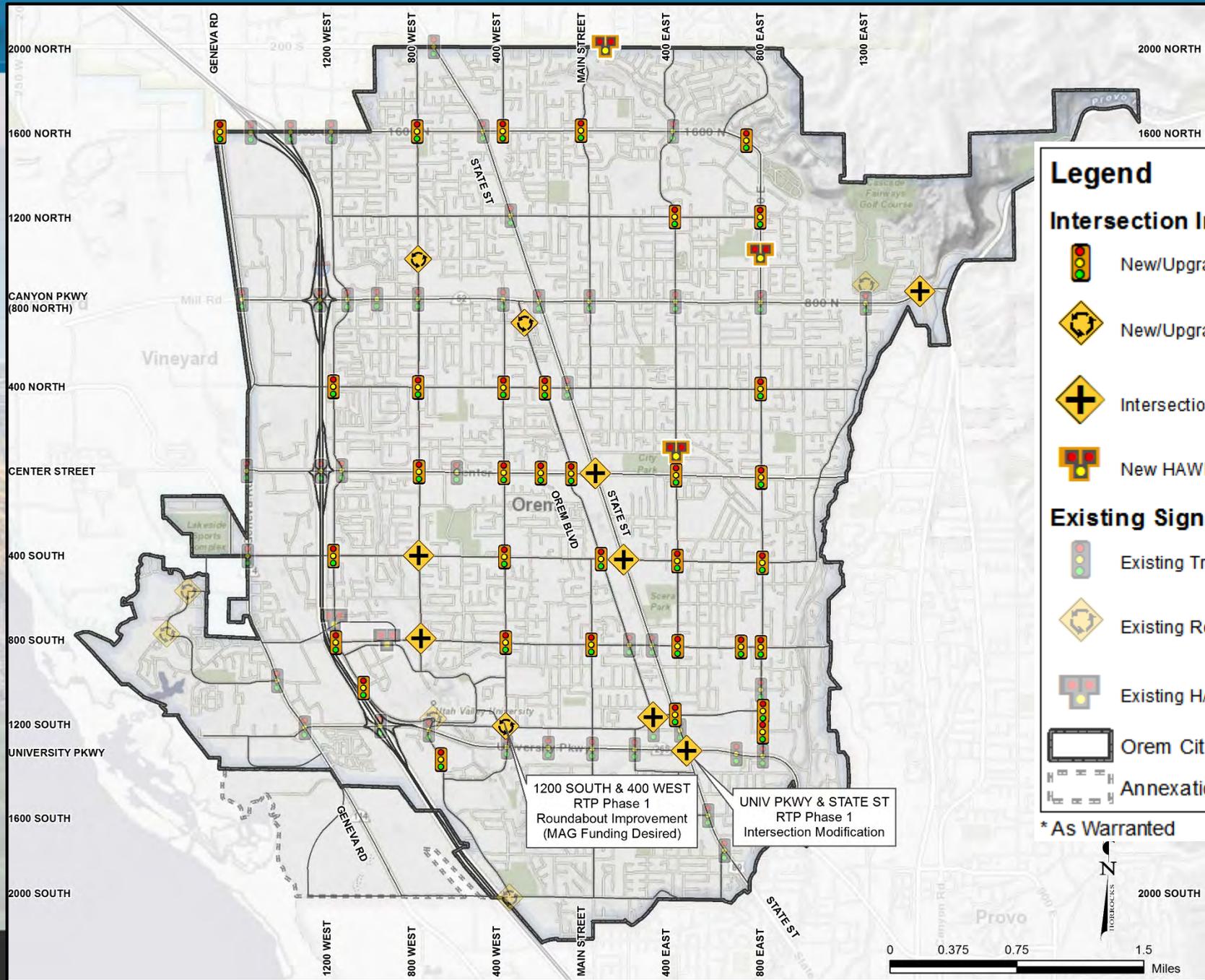
Intersection Improvements

- MAG - Phase 1 (2014-2025)
- MAG - Phase 1 (RTP Modification)
- Orem City Boundary
- Annexation Area

NOTE:
Improvements on State Street, and University Pkwy limited to intersection improvements to prevent additional roadway widening



10 Year CIP Intersection Projects



Legend

Intersection Improvements

- New/Upgraded Signal*
- New/Upgraded Roundabout
- Intersection Improvement
- New HAWK (PED) Signal

Existing Signals

- Existing Traffic Signal
- Existing Roundabout
- Existing HAWK (PED) Signal

- Orem City Boundary
- Annexation Area

* As Warranted

10 Year CIP Phase 1 (2016-2020)

Notable Projects

Needed
Capacity
Improvements

- 1600 North
- 1200 West
- University Parkway

Needed Traffic
System
Improvements
(i.e., Safety,
Circulation,
Economic
Development,
etc)

- 1600 West
- 1200 South and 400 West Intersection
- 700 North and Orem Blvd. Intersection

10 Year CIP
Phase 1
(2016-2020)

Costs

<u>Total Cost</u>	<u>Total Cost with Inflation</u>	<u>Orem Cost with Inflation</u>
\$78.2 Million	\$91.8 Million	\$7.7 Million

10 Year CIP Phase 2 (2011-2025)

Notable Projects

Needed
Capacity
Improvements

- Center Street
- 800 East
- 1600 North

Needed Traffic
System
Improvements
(i.e., Safety,
Circulation,
Economic
Development,
etc)

- Lakeview Parkway
- 1200 South
- State Street and Center Street Intersection

10 Year CIP
Phase 2
(2011-2025)

Costs

<u>Total Cost</u>	<u>Total Cost with Inflation</u>	<u>Orem Cost with Inflation</u>
\$87.2 Million	\$91.6 Million	\$19.1 Million

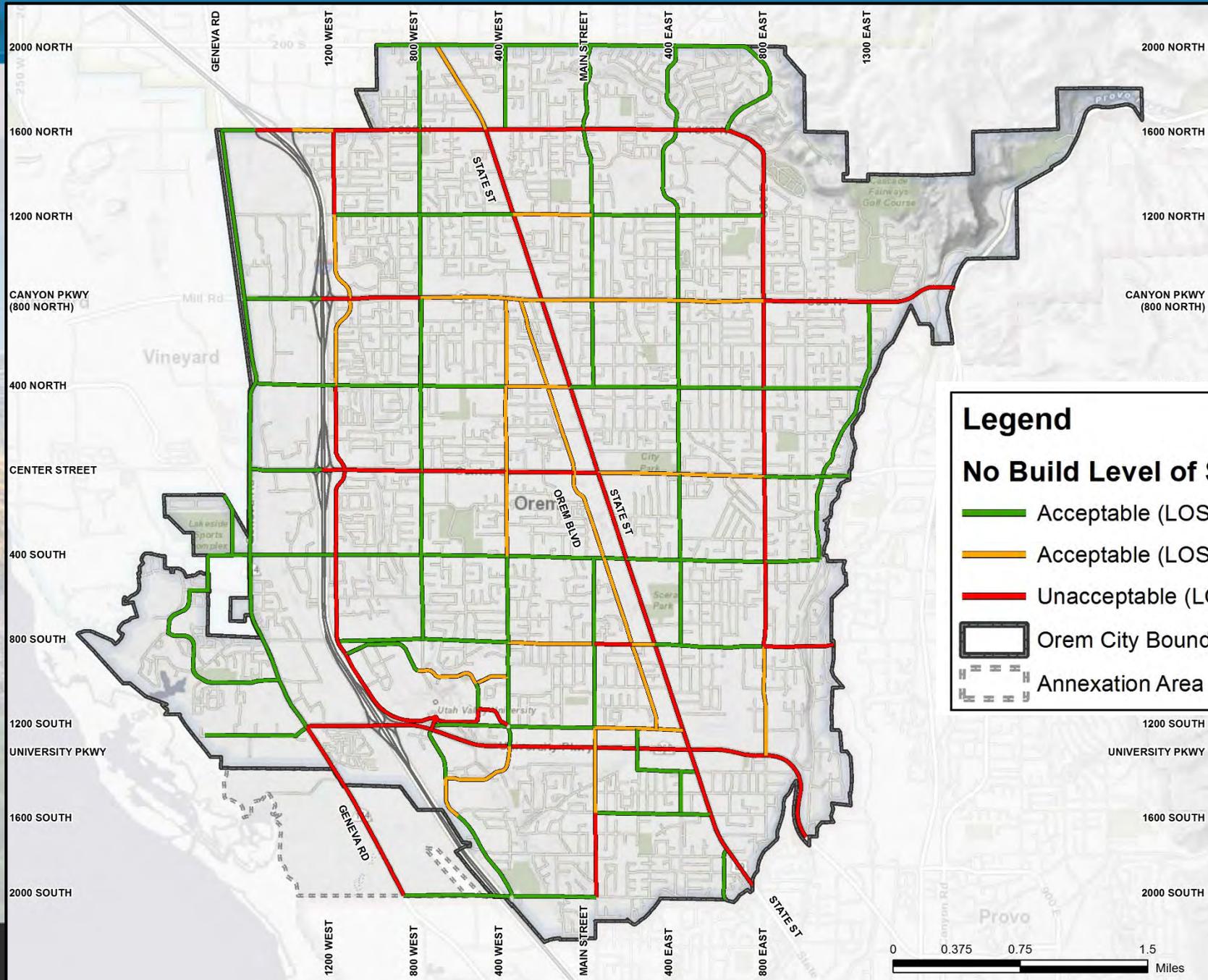
10 Year CIP
(2016-2025)

Total Cost

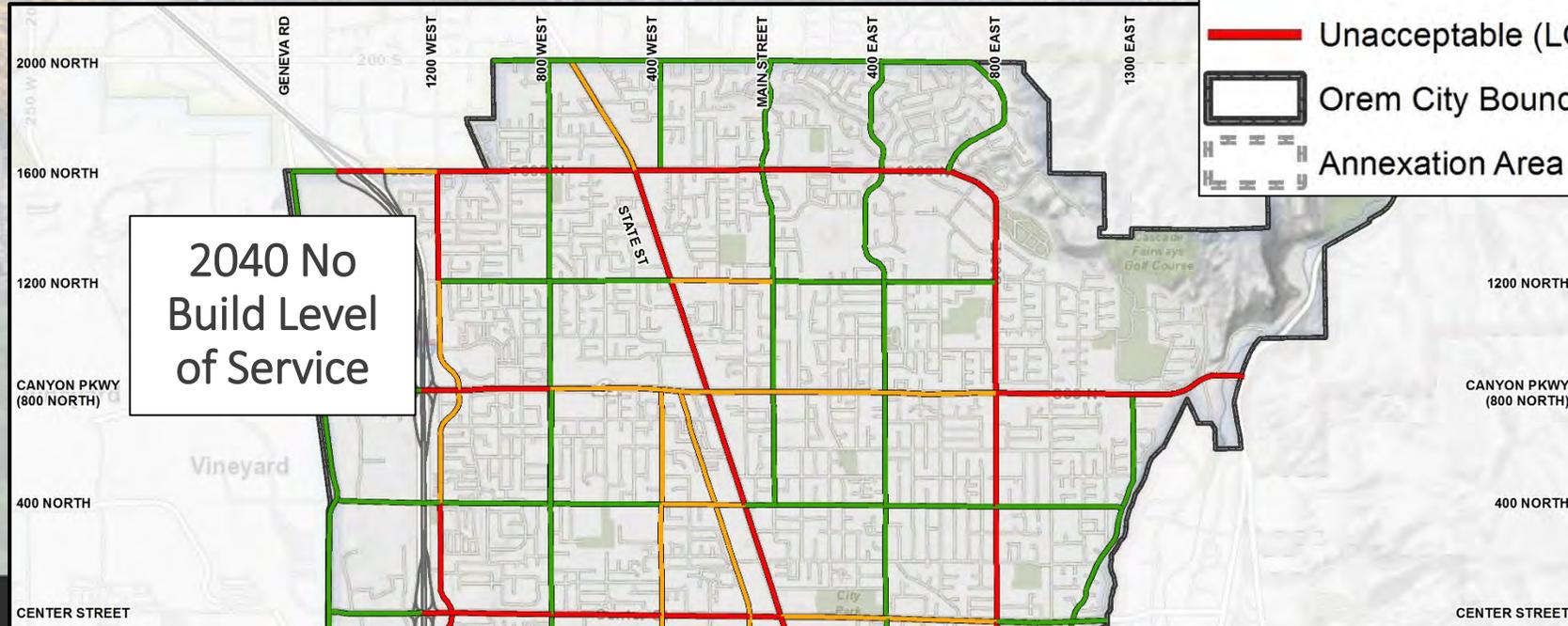
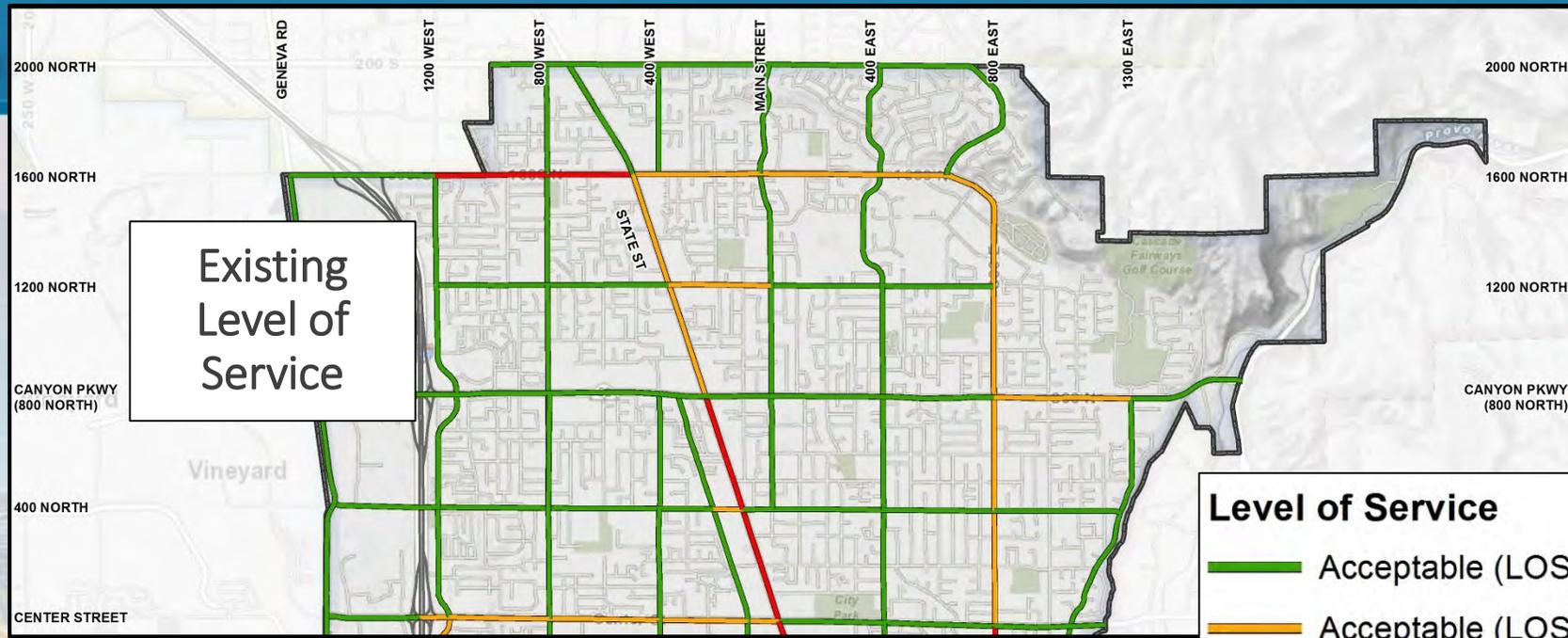
<u>Total Cost</u>	<u>Total Cost with Inflation</u>	<u>Orem Cost with Inflation</u>
\$165.4 Million	\$183.4 Million	\$26.8 Million

2040 No-Build Level of Service

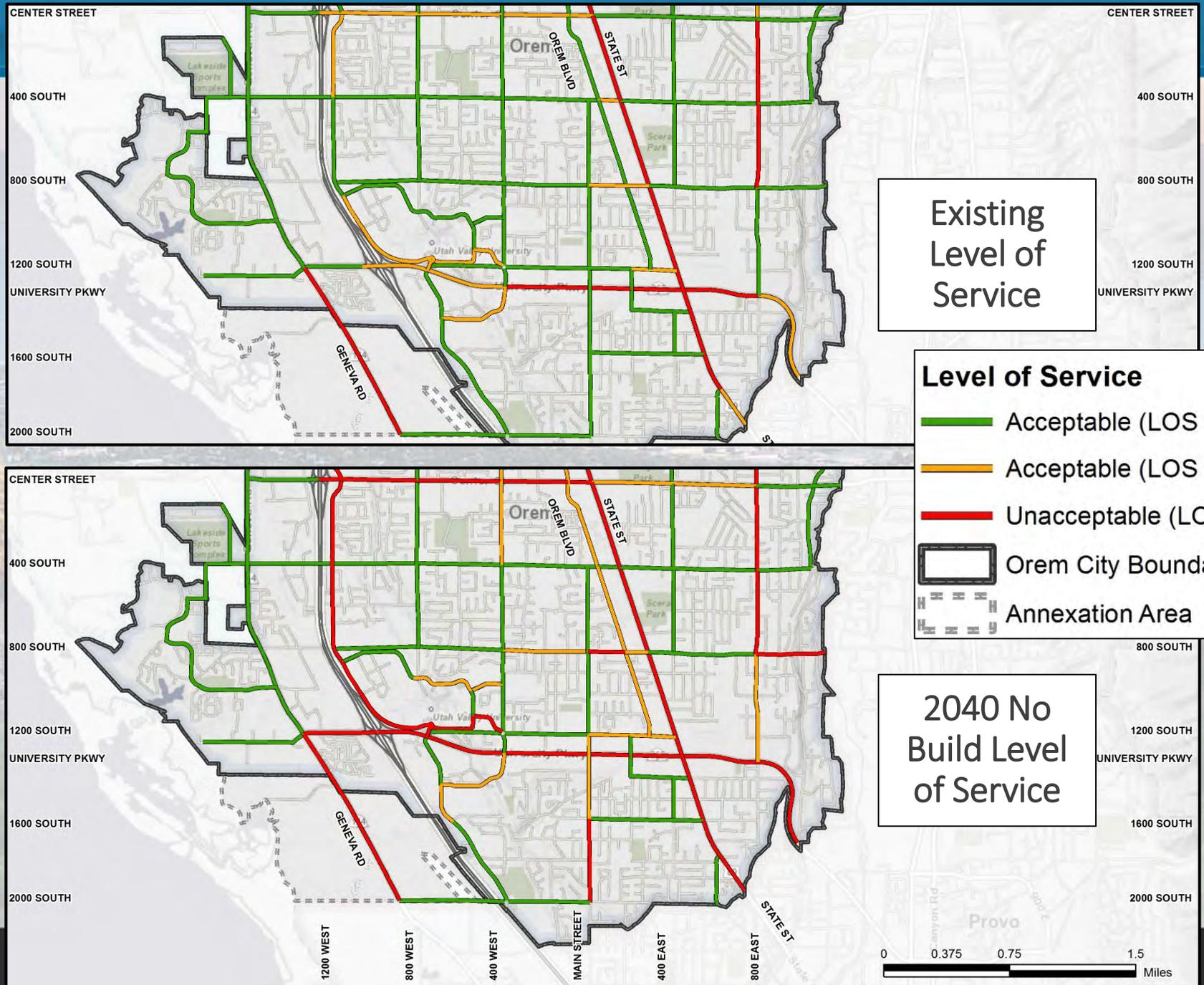
(Existing Roadway Network with 2040 Traffic Volumes)



Level of Service Comparison (North of Center Street)



Level of Service Comparison (South of Center Street)

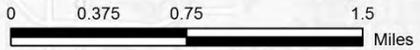


Existing Level of Service

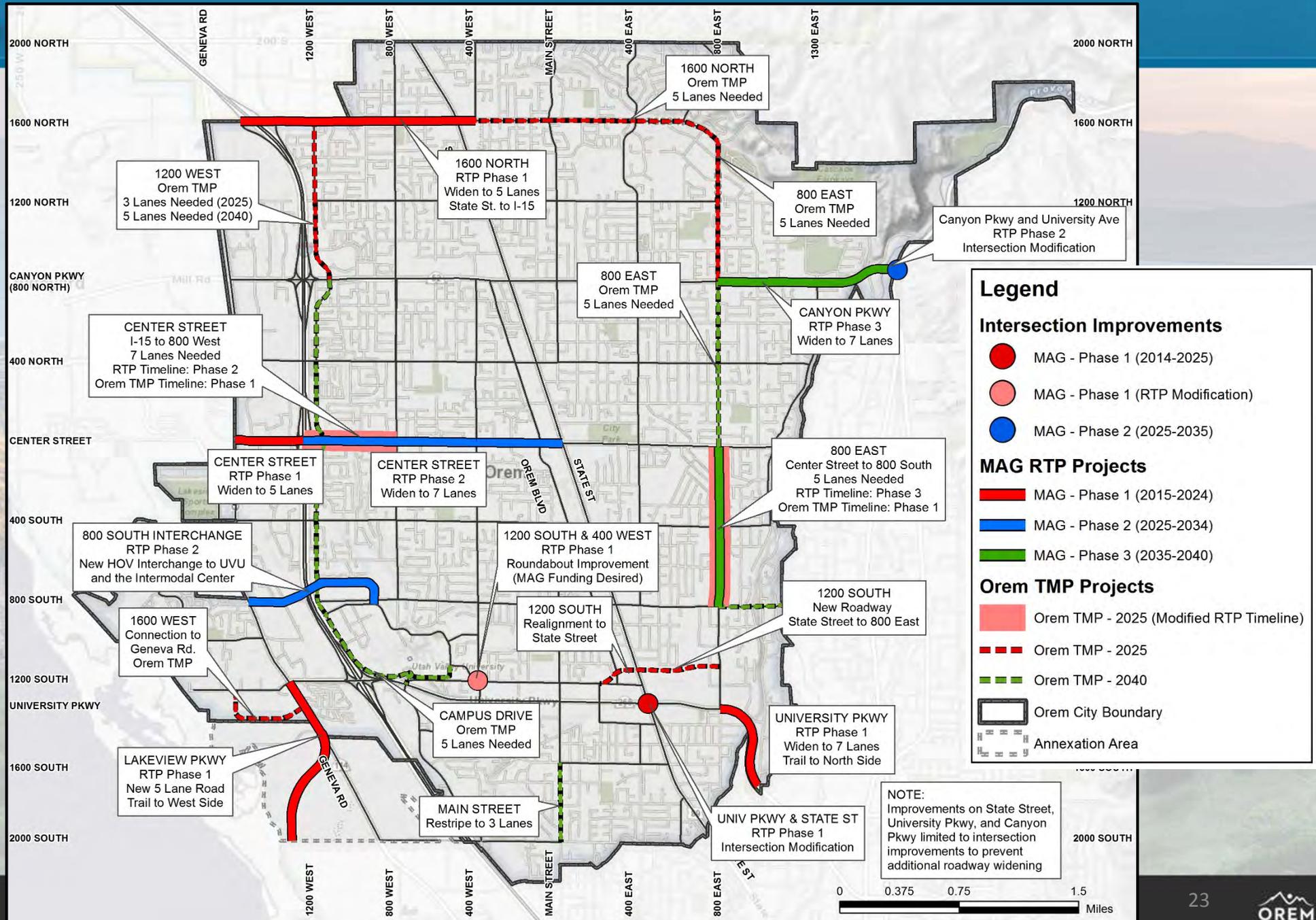
Level of Service

- Acceptable (LOS C or Better)
- Acceptable (LOS D)
- Unacceptable (LOS E or Worse)
- Orem City Boundary
- Annexation Area

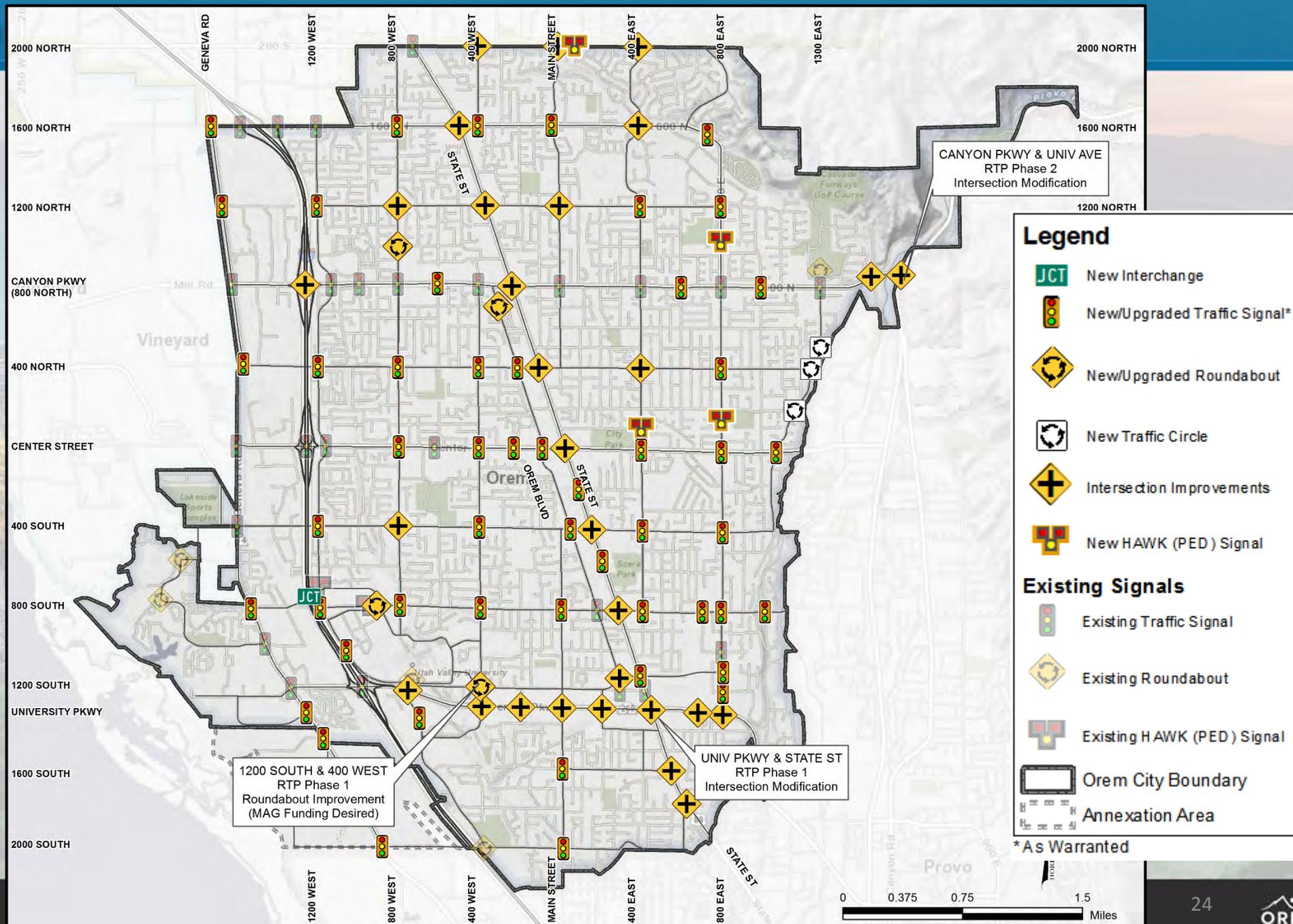
2040 No Build Level of Service



2040 Roadway Projects



2040 Intersection Projects



Legend

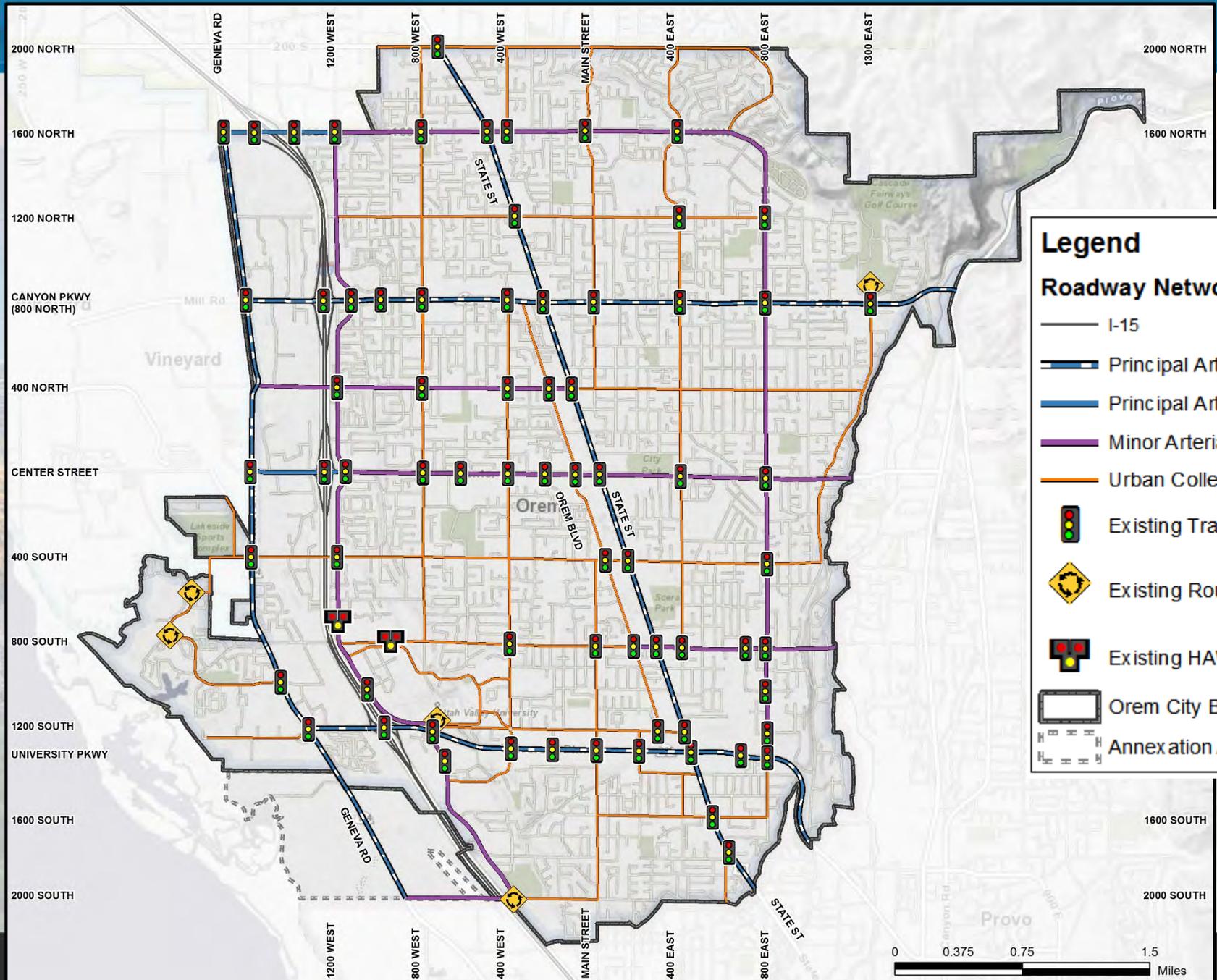
- New Interchange
- New/Upgraded Traffic Signal*
- New/Upgraded Roundabout
- New Traffic Circle
- Intersection Improvements
- New HAWK (PED) Signal

Existing Signals

- Existing Traffic Signal
- Existing Roundabout
- Existing HAWK (PED) Signal
- Orem City Boundary
- Annexation Area

*As Warranted

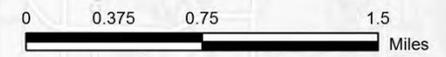
Existing Functional Classification



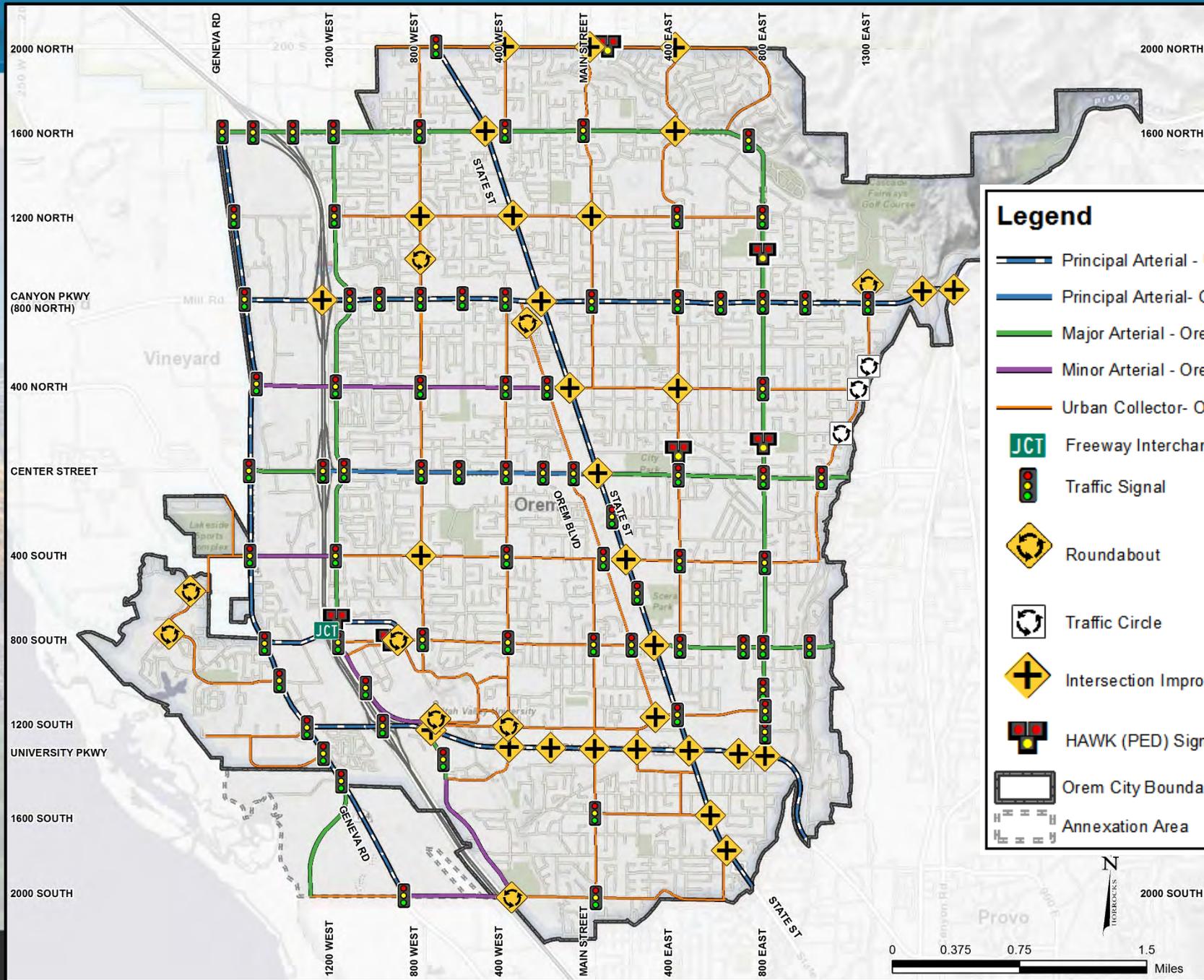
Legend

Roadway Network

- I-15
- Principal Arterial - UDOT
- Principal Arterial- Orem
- Minor Arterial - Orem
- Urban Collector- Orem
- Existing Traffic Signal
- Existing Roundabout
- Existing HAWK (PED) Signal
- Orem City Boundary
- Annexation Area



2040
Roadway
Network
Functional Class
(If all Proposed Projects
Completed)



Legend

- Principal Arterial - UDOT (2-7 Lanes)
- Principal Arterial- Orem (6-7 Lanes)
- Major Arterial - Orem (4-5 Lanes)
- Minor Arterial - Orem (2-3 Lanes)
- Urban Collector- Orem (2-3 Lanes)
- Freeway Interchange
- Traffic Signal
- Roundabout
- Traffic Circle
- Intersection Improvement
- HAWK (PED) Signal
- Orem City Boundary
- Annexation Area

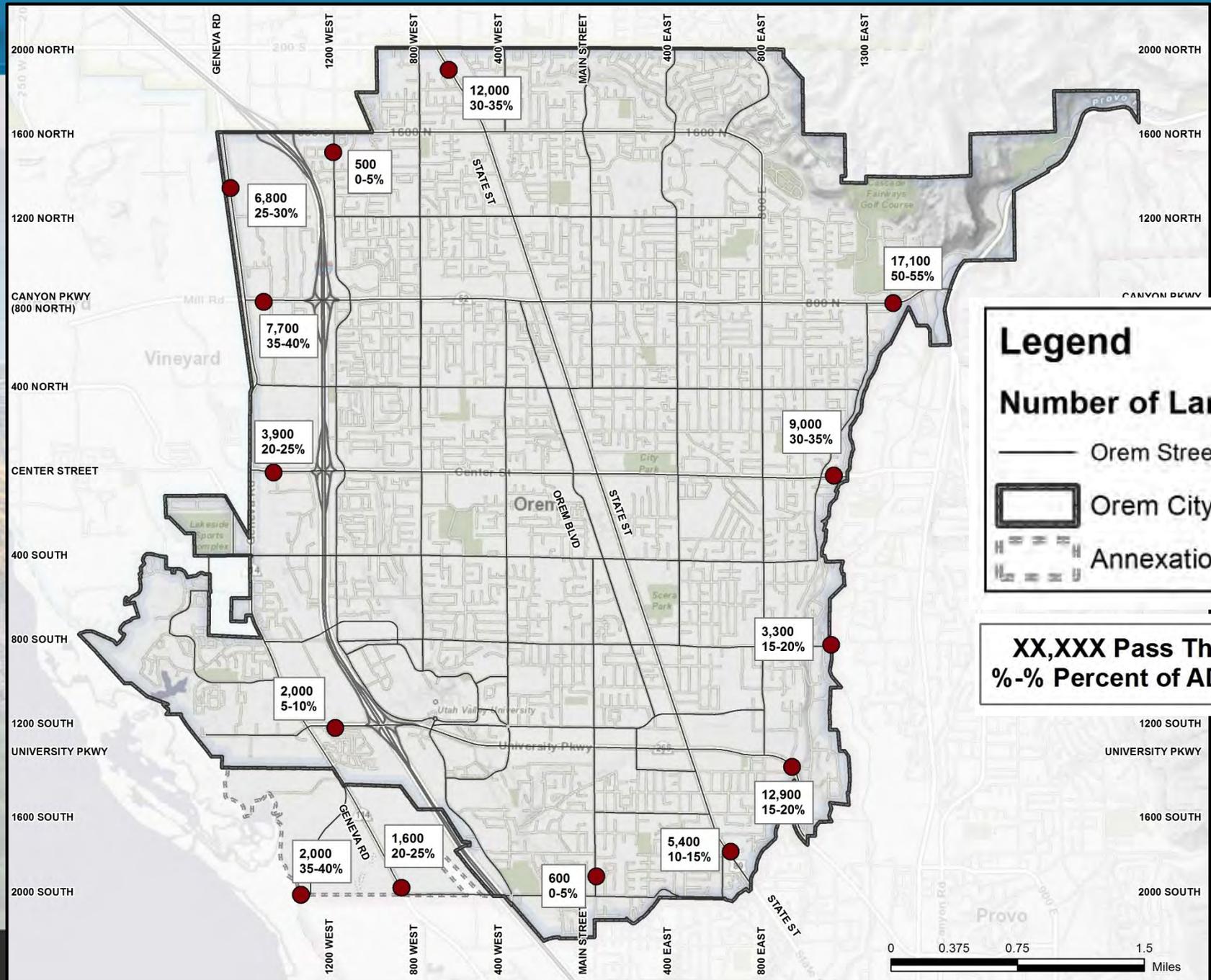


QUESTIONS?

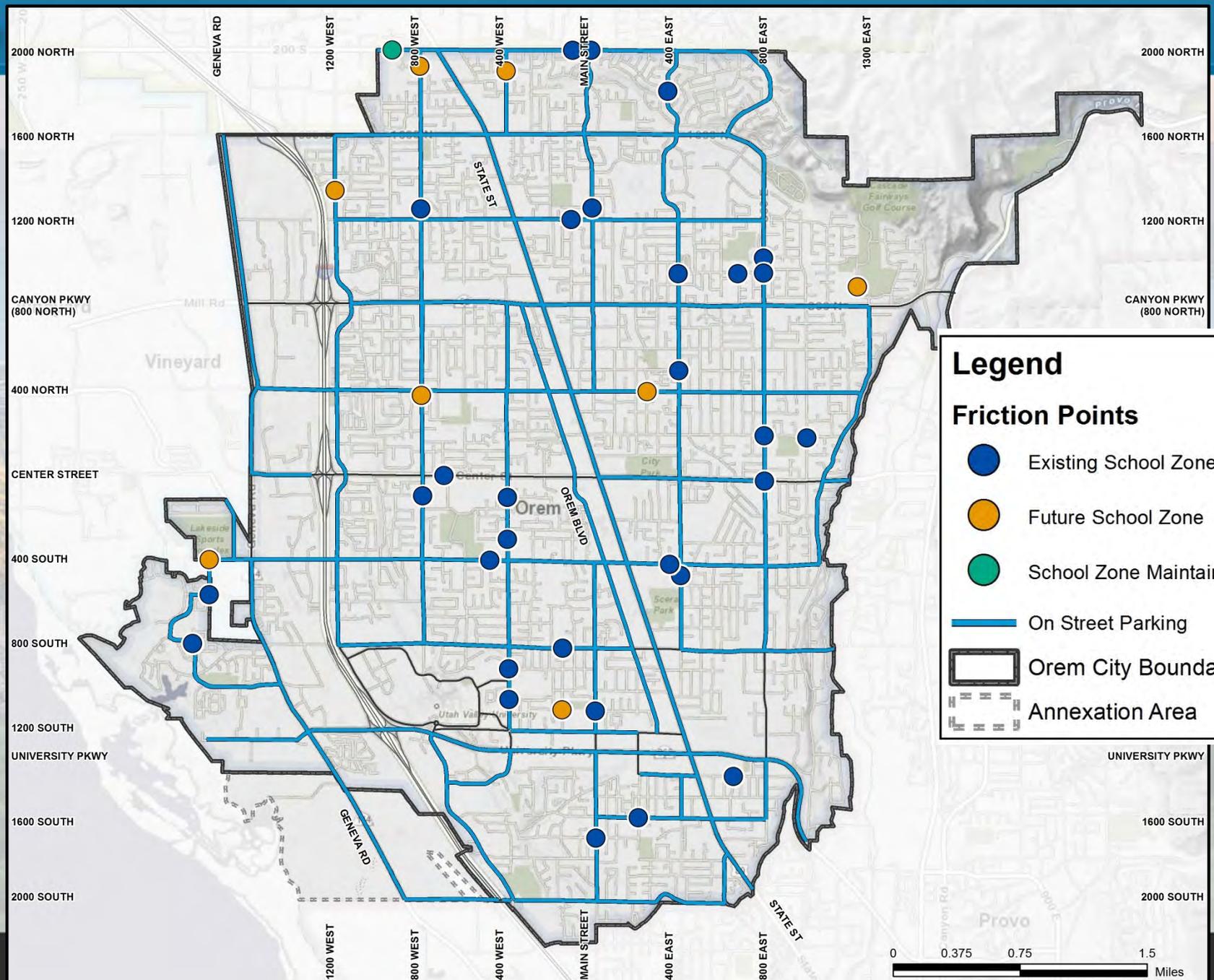
Funding and
Cost

	Statewide Gas Tax	Utah County .025% Sales Tax (Proposition 1)
Effective date	January 1, 2016	Placed on 2015 Ballot
Method of revenue	\$0.05/gallon of gas	Sales tax on all commercial/retail items
Estimated revenue to Orem	\$440,000 annually	\$1,600,000 annually

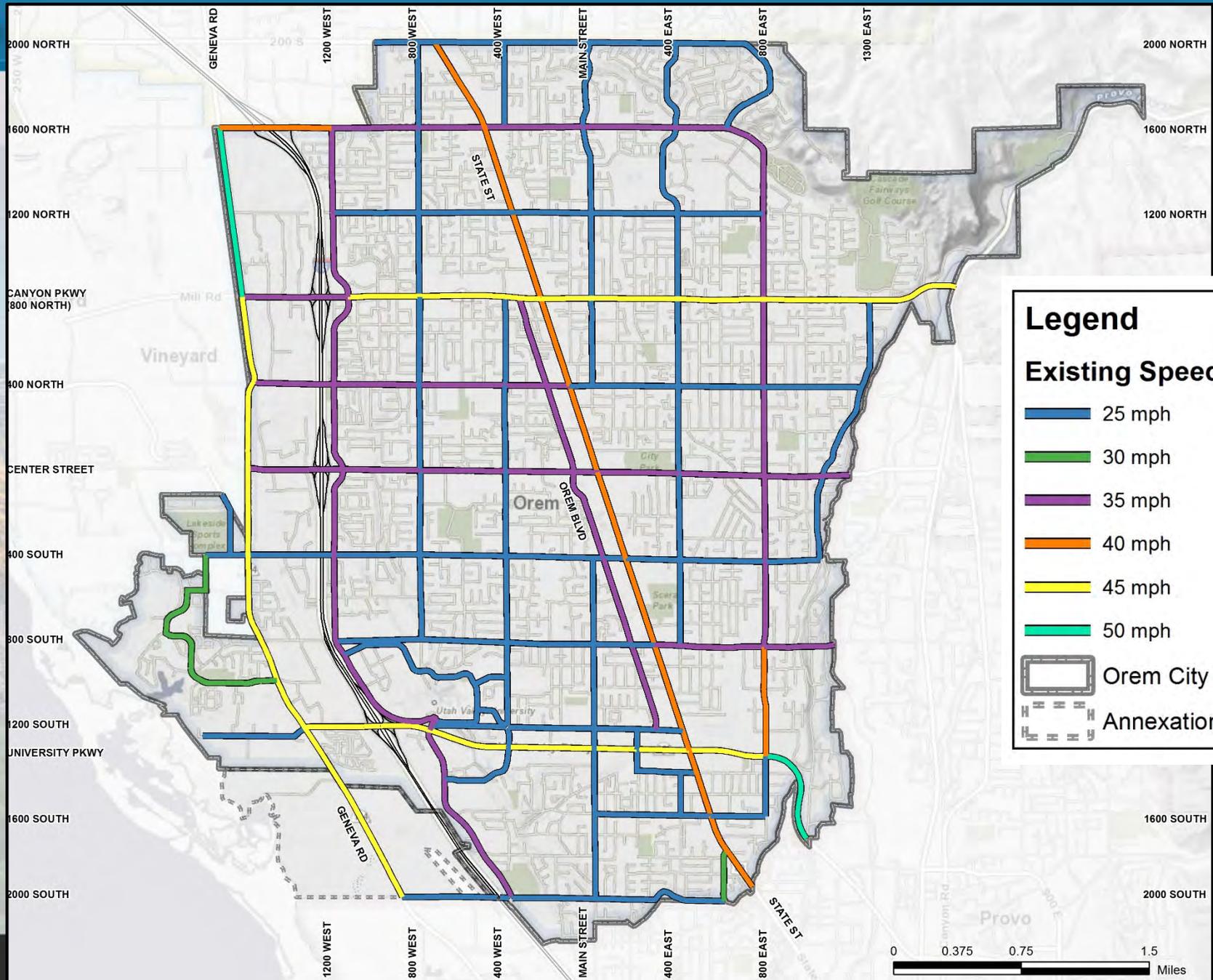
Percent Pass-Through Traffic



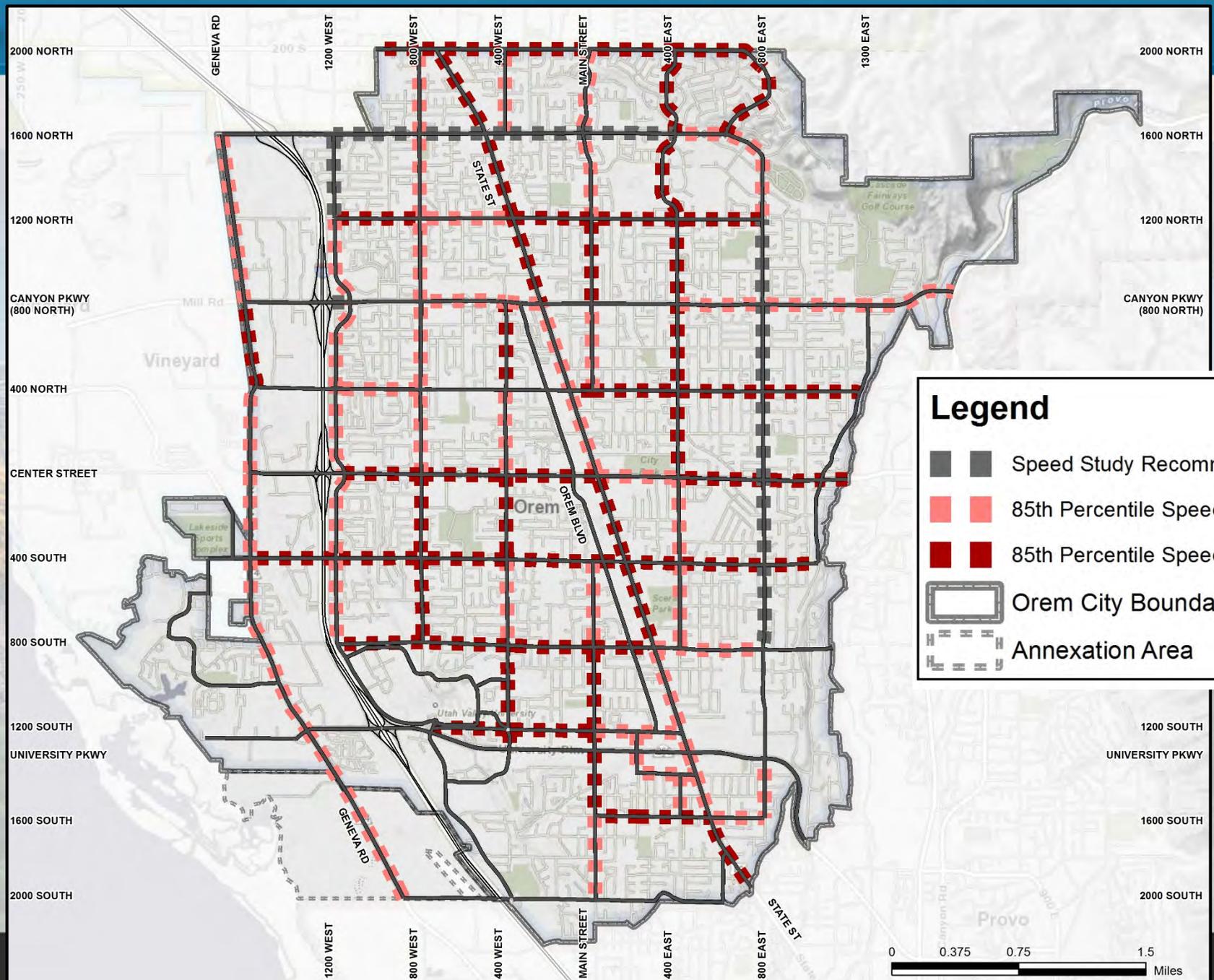
Orem Friction Points



Speed Limit Analysis



Speed Limit Analysis



Legend

- Speed Study Recommended by Public
- 85th Percentile Speed > 5mph
- 85th Percentile Speed > 10mph
- Orem City Boundary
- Annexation Area

