

# WELCOME

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**to the US-89/91 Logan to North Logan  
Corridor Study Public Open House**

# STUDY PURPOSE

The Utah Department of Transportation (UDOT), in cooperation with local municipalities in Cache County, conducted a study of transportation needs along US-89 and US-91 and in the surrounding area with the intent to improve mobility on Main Street.

After reviewing numerous studies from the past 20 years, UDOT determined that a single solution on Main Street is not sufficient to meet future needs. Multiple projects on and off the corridor are needed to address transportation demand into the future and improve mobility for local and regional transportation users.

This approach provides resiliency to the transportation system throughout the county by adding redundancy into the network and identifying new local and regional connections.



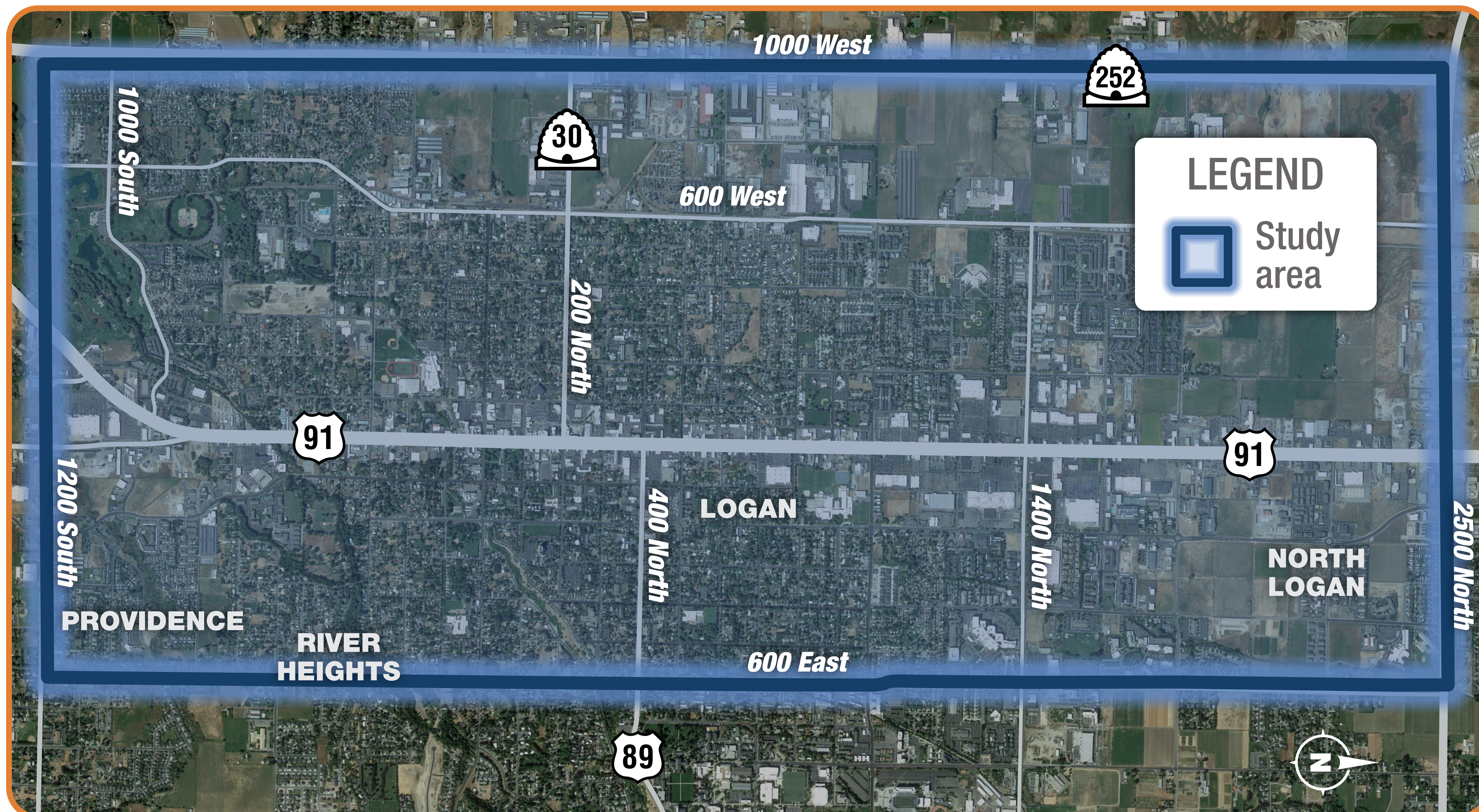
# HISTORY

## Previous studies and plans reviewed include:

- Cache Metropolitan Planning Organization (CMPO) 2050 Plan, Highway & Active Transportation Projects (Ongoing)
- South Cache Corridor Study (2023)
- Logan Main Street Corridor Study (2022)
- Cache County Trails & Active Transportation Master Plan (2018)
- US Hwy 89/91 Brigham to Logan Study (2018)
- Cache Valley Short Range Transit Plan (2017)
- S.R. 30 Corridor Study (2016)
- Cache County, Utah Regional Transportation Plan 2040 (2015)
- Logan City Bicycle and Pedestrian Master Plan (2015)
- CMPO Highway 91 Logan to Smithfield Corridor Access Management Study (2014)
- Logan City One-Way Couplets Feasibility Study (2013)
- Downtown Logan Plan (2012)
- Logan City Surface Transportation Master Plan (2011)
- Envision Cache Valley (2009)
- Logan City Main Street Raised Median Study (2007)
- Logan General Plan (2005)



# STUDY AREA





# STUDY GOALS

## **Improve mobility for all people using Main Street.**

- Improve network functionality and resiliency for people traveling to and through the corridor from communities north and south.
- Identify alternate north-south corridors to serve regional travel.
- Improve safety for all people.
- Encourage freight traffic to use alternate corridors instead of Main Street.

## **Make downtown Logan (between 100 South and 400 North) safer and more comfortable for people walking, biking, and supporting local businesses or engaging in community activities.**

- Increase physical space available for people to walk, bike, or participate in civic life.
- Reduce vehicle speeds in downtown Logan.
- Increase green space, street trees, or other measures to improve comfort and placemaking in downtown Logan.

# SOLUTION DEVELOPMENT





# NORTH/SOUTH ALTERNATIVE CORRIDORS – MINOR

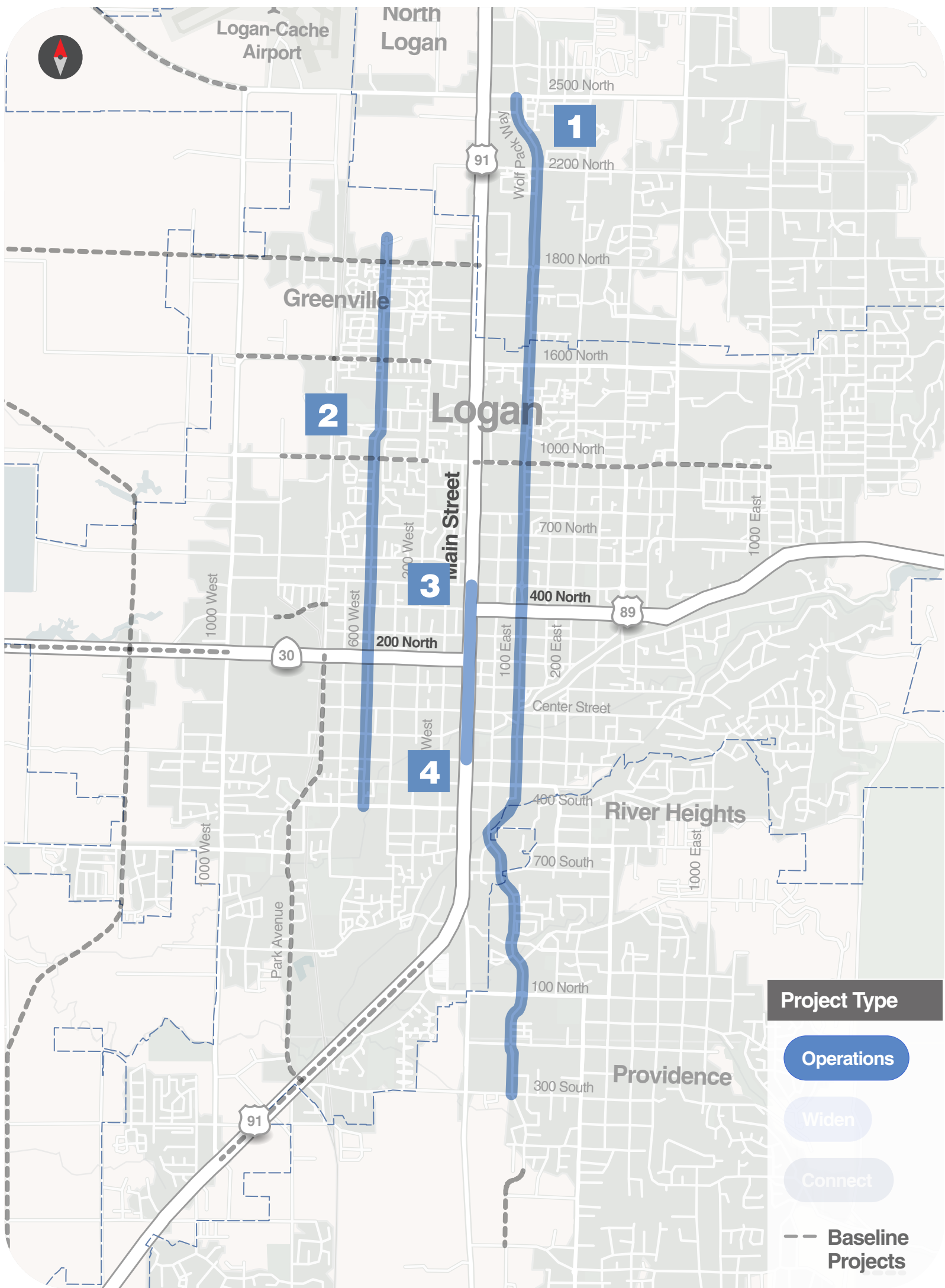
US-89/91

Logan to North Logan

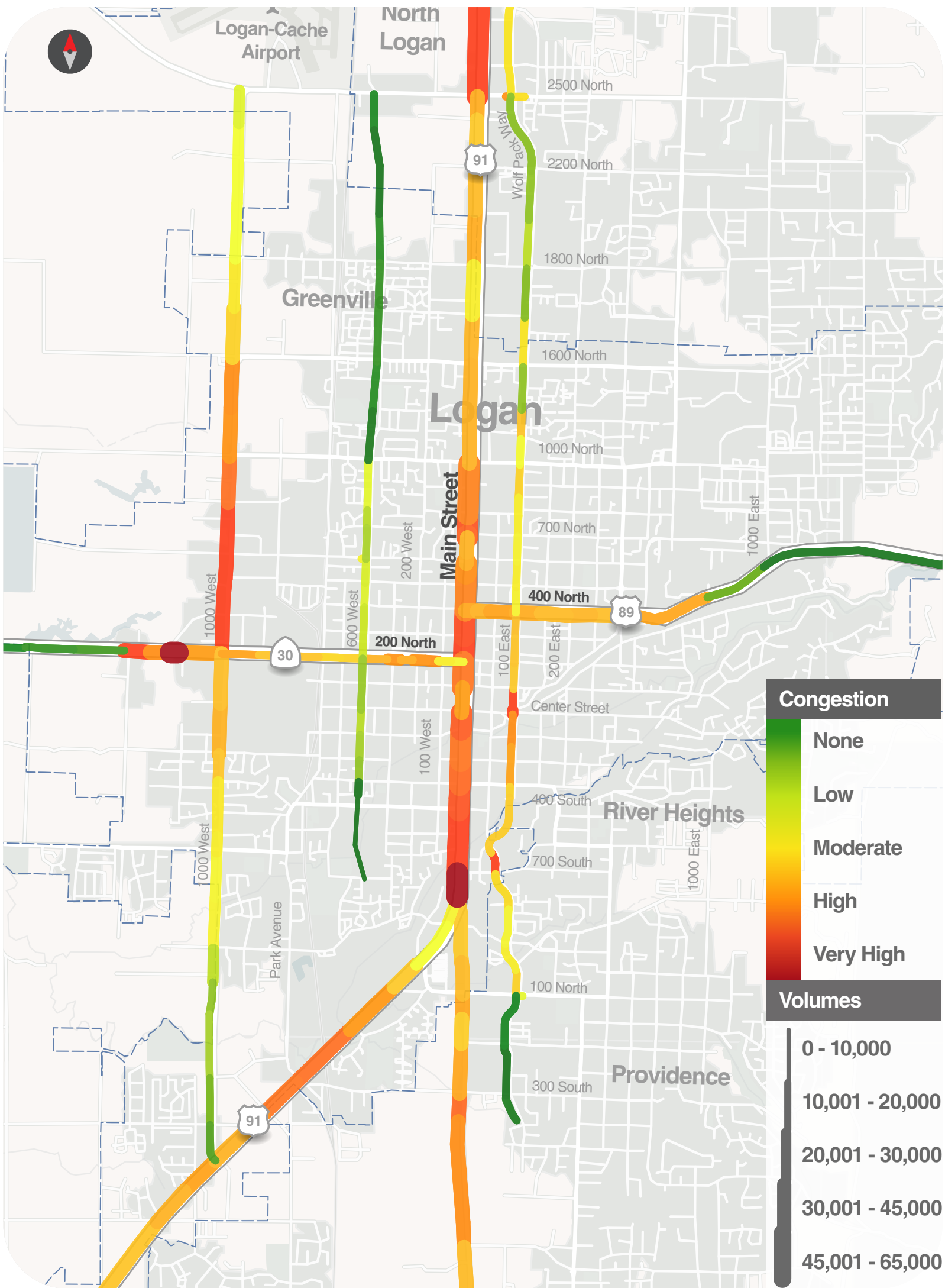
STUDY

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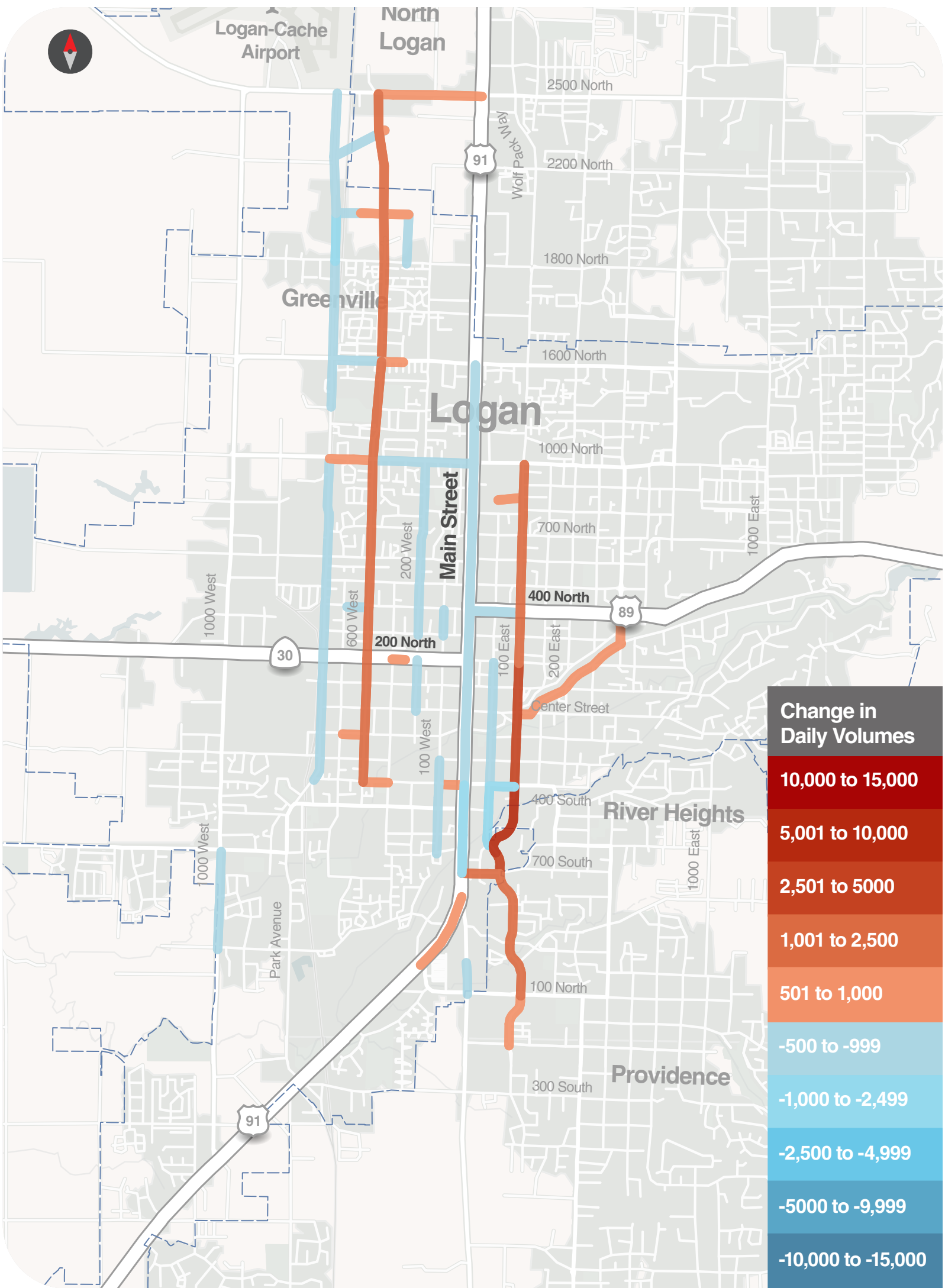
Scenario Projects



Projected 2050 Volumes & Congestion



Projected Change in Volumes (vs. Baseline)

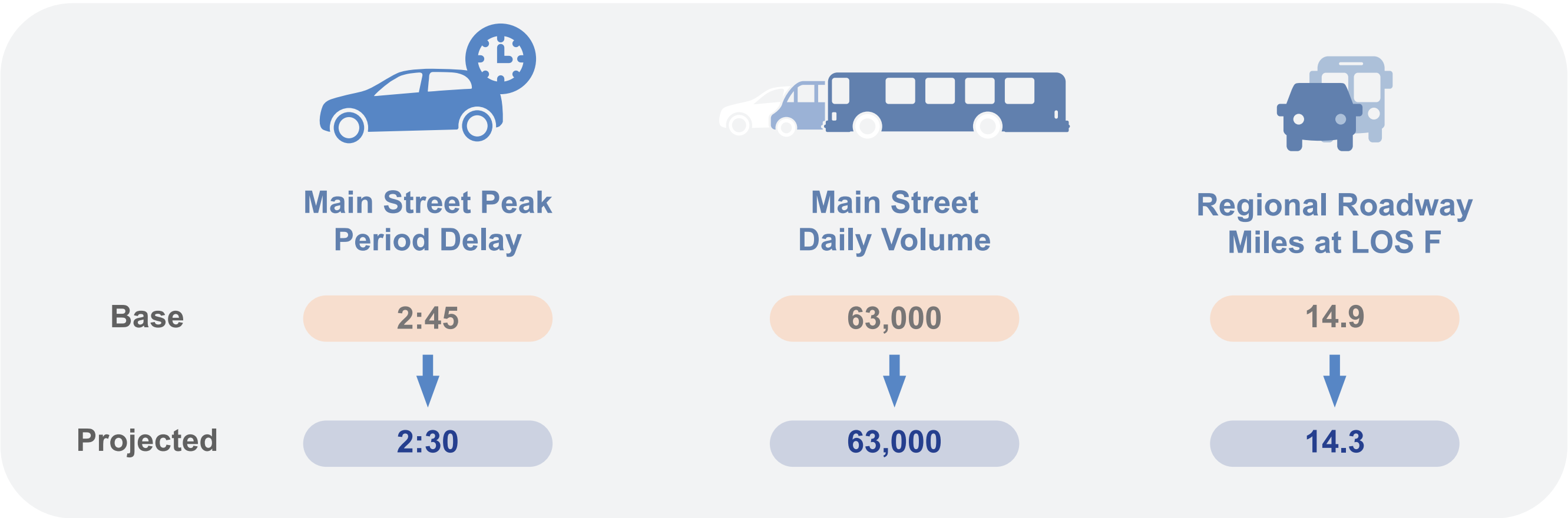


Project Lists

Operations

- 1 200 East: Operational improvement
- 2 400 West: Operational improvement
- 3 Main Street: Raised medians on Main Street through downtown Logan
- 4 Main Street: Limited on-street parking and improved pedestrian environment

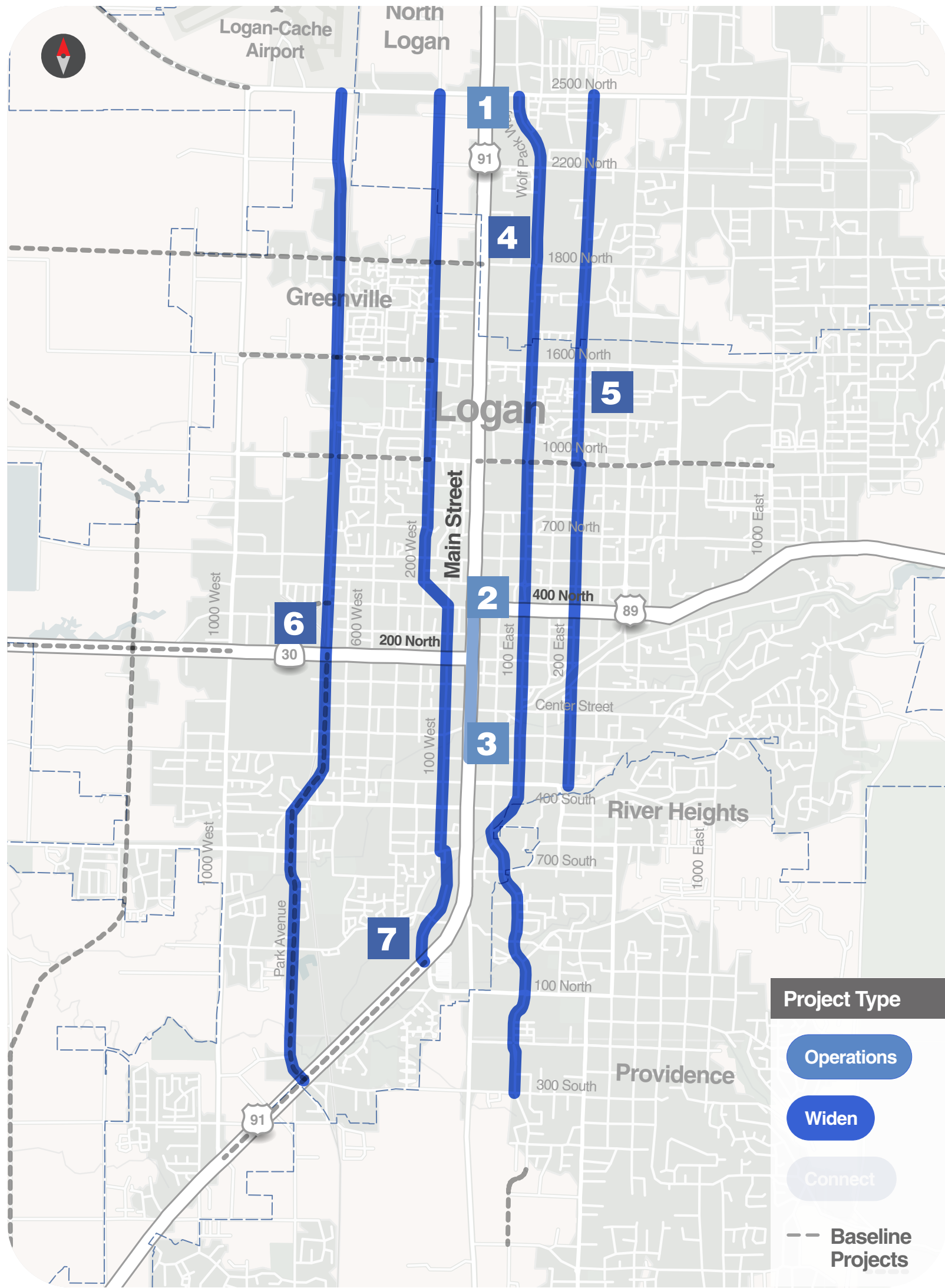
Scenario Summary



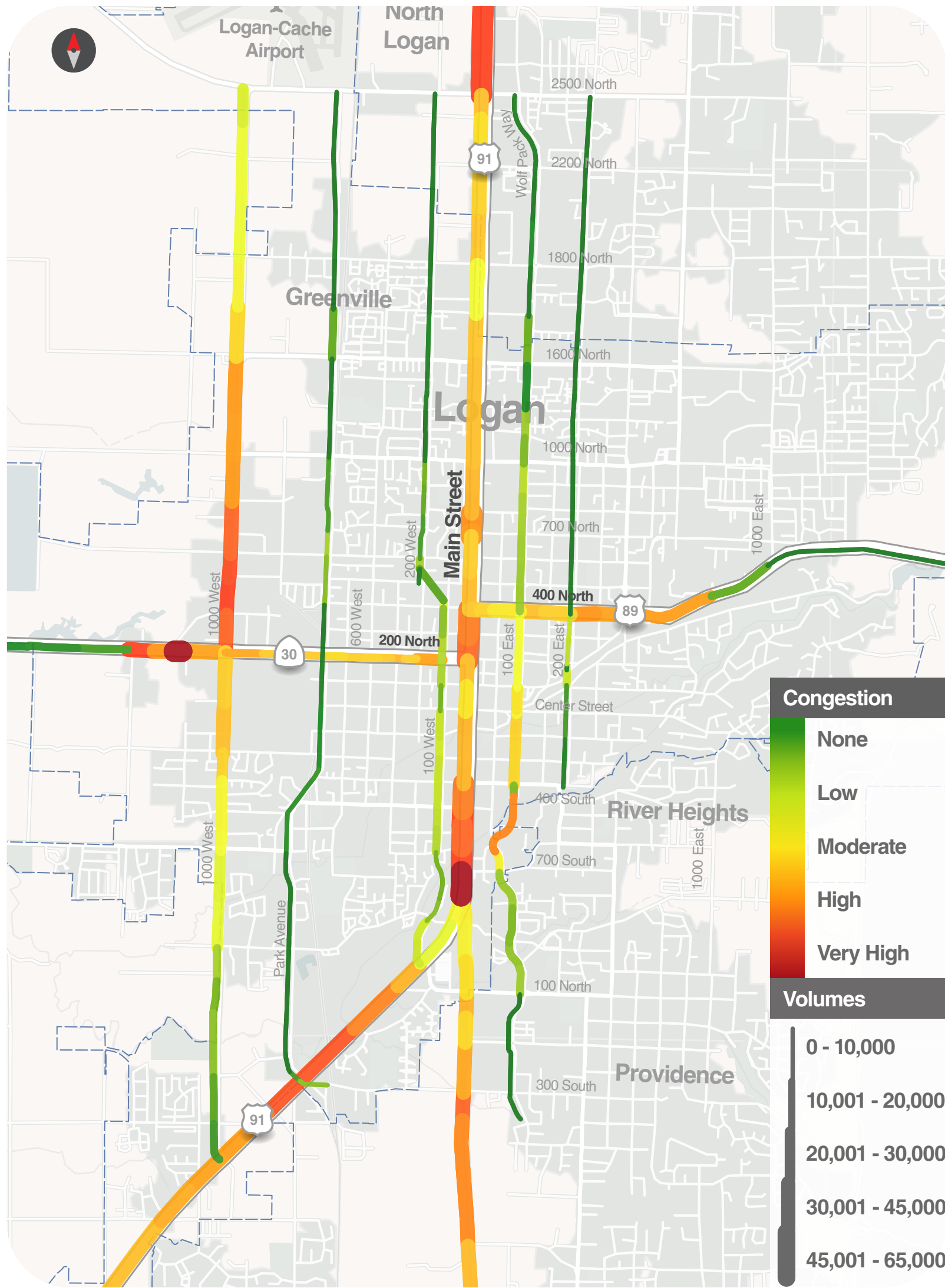


# NORTH/SOUTH ALTERNATIVE CORRIDORS – MAJOR

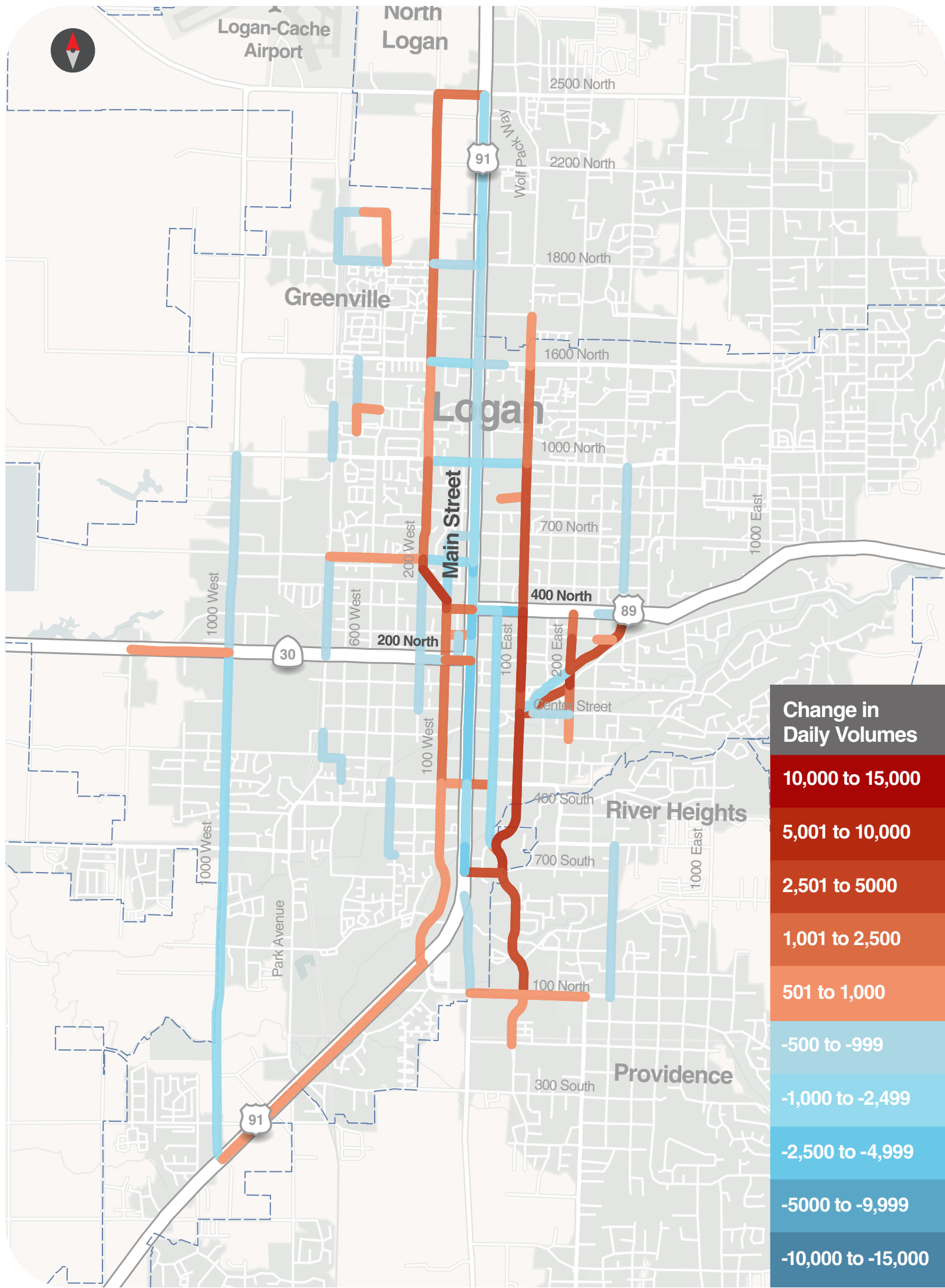
Scenario Projects



Projected 2050 Volumes & Congestion



Projected Change in Volumes (vs. Baseline)



## Project Lists

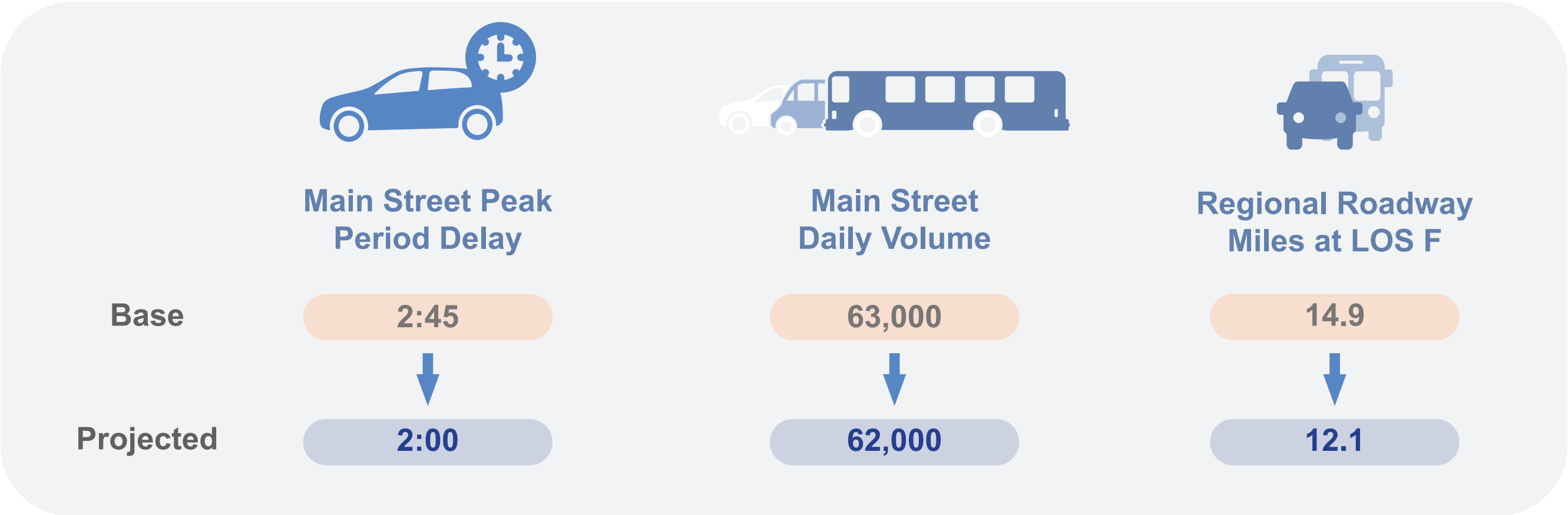
### Operations

- 1** 200 East: Operational improvement
- 2** Main Street: Raised medians on Main Street through downtown Logan
- 3** Main Street: Limited on-street parking and improved pedestrian environment

### Widen

- 4** 200 East: Widen to five lanes
- 5** 400 East/600 East: Widen to five lanes; improve dugways
- 6** 600 West: Widen to five lanes
- 7** 100 West: Widen to five lanes; connect 100 West to 200 West north of 400 North

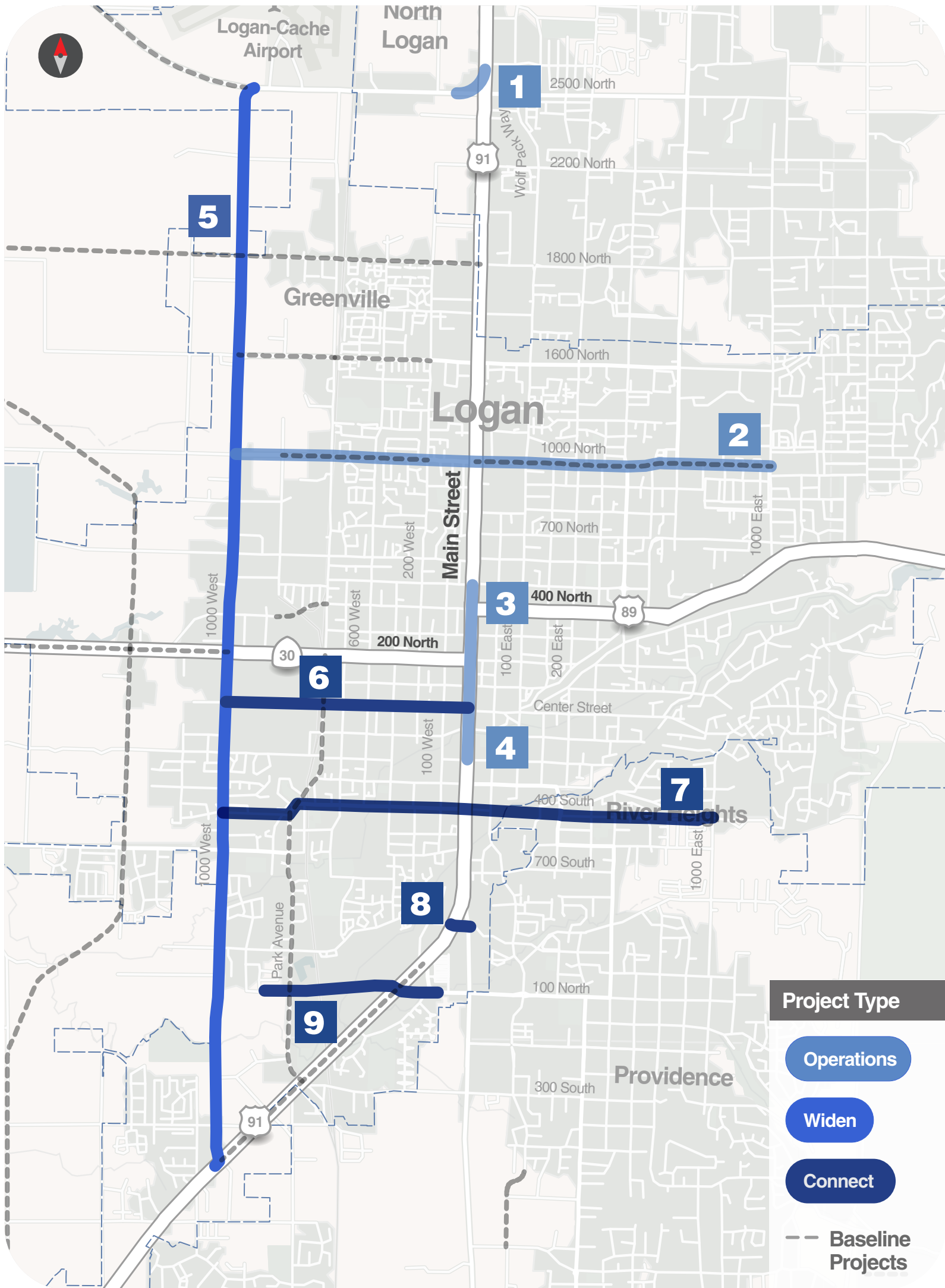
## Scenario Summary



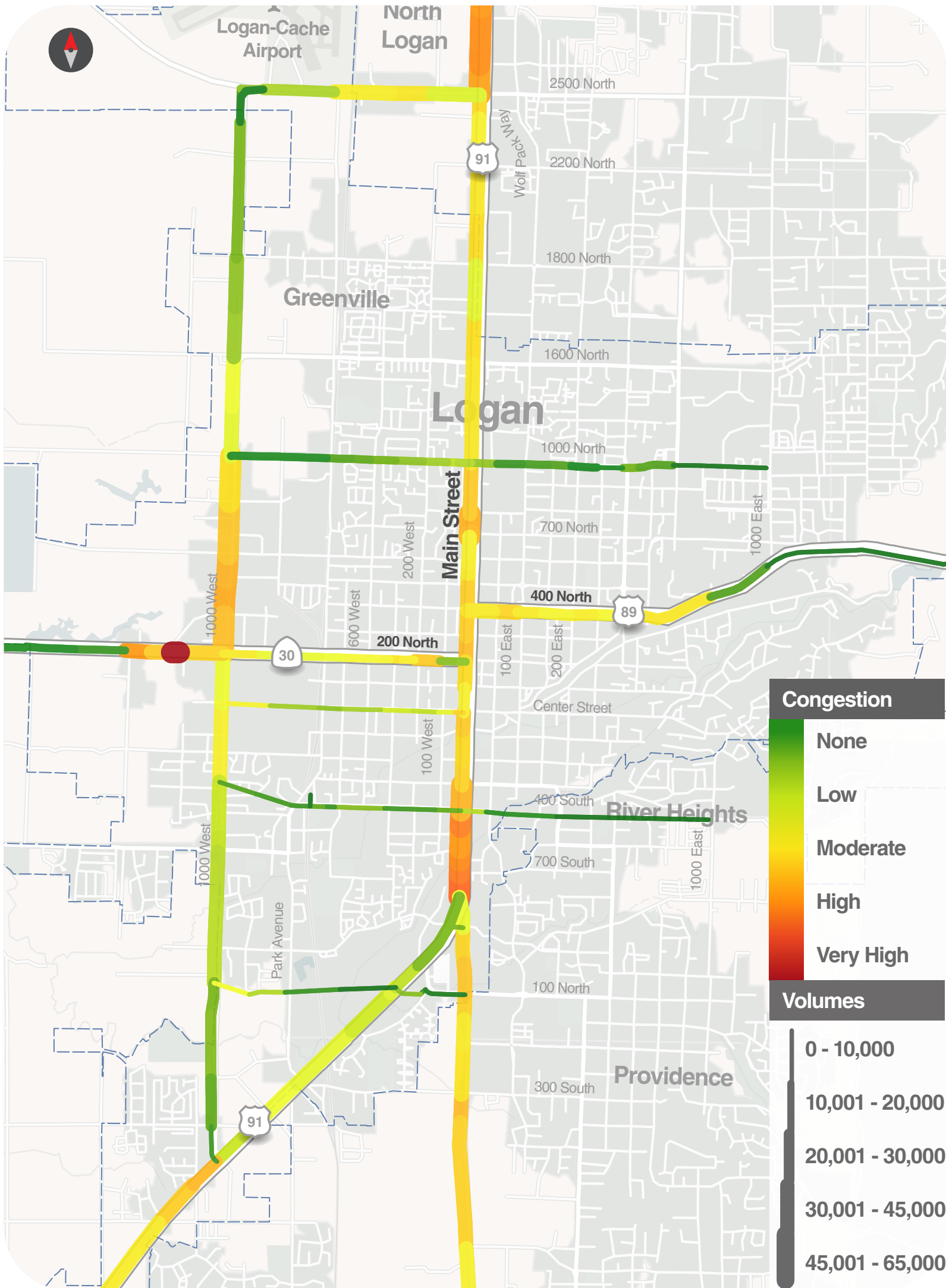


# WIDEN AND REROUTE US-89 TO 1000 WEST

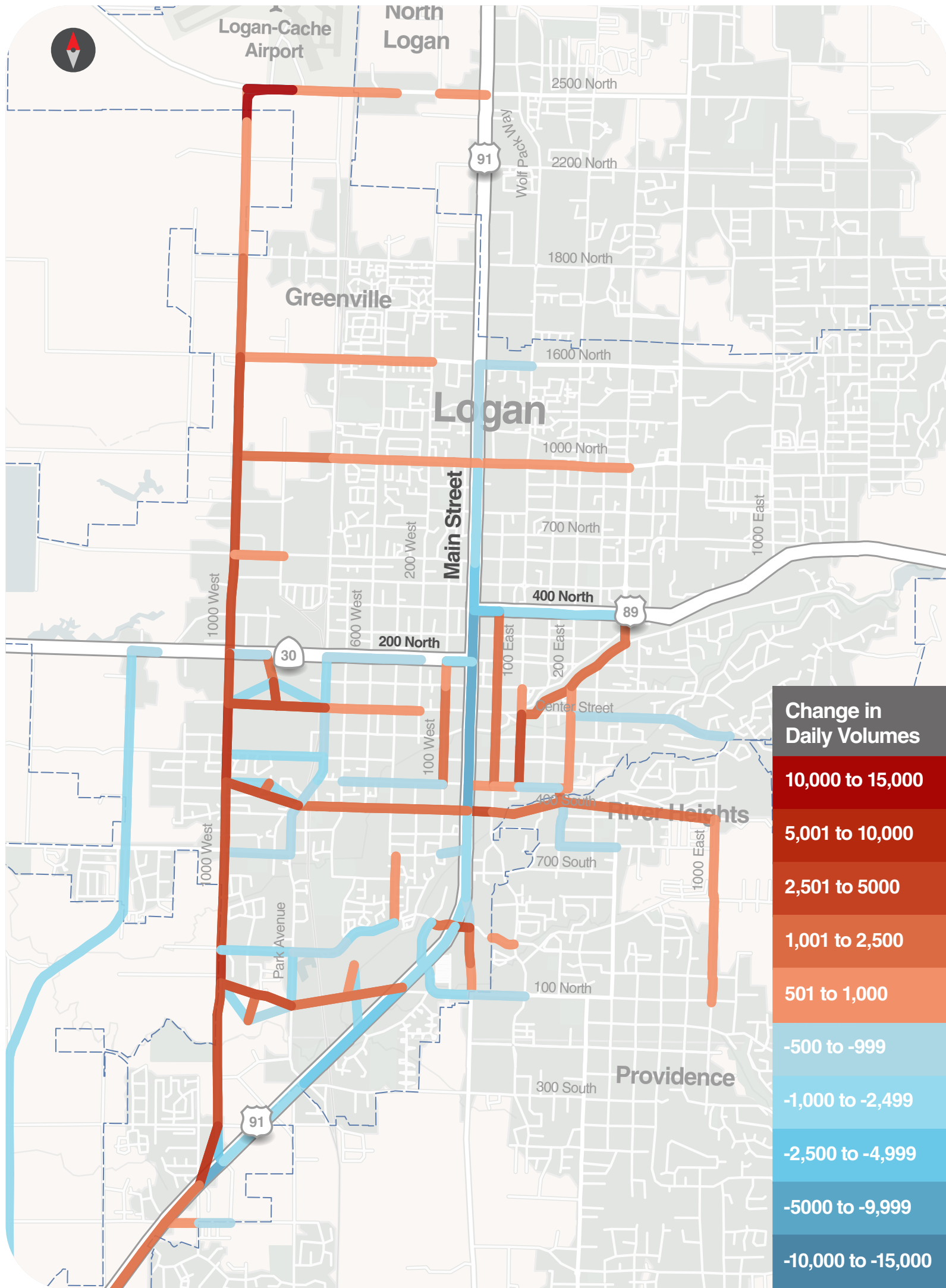
## Scenario Projects



## Projected 2050 Volumes & Congestion



## Projected Change in Volumes (vs. Baseline)



## Project Lists

### Operations

- 1** 200 East: Operational improvement
- 2** 1000 North: Operational improvement
- 3** Main Street: Raised medians on Main Street through downtown Logan
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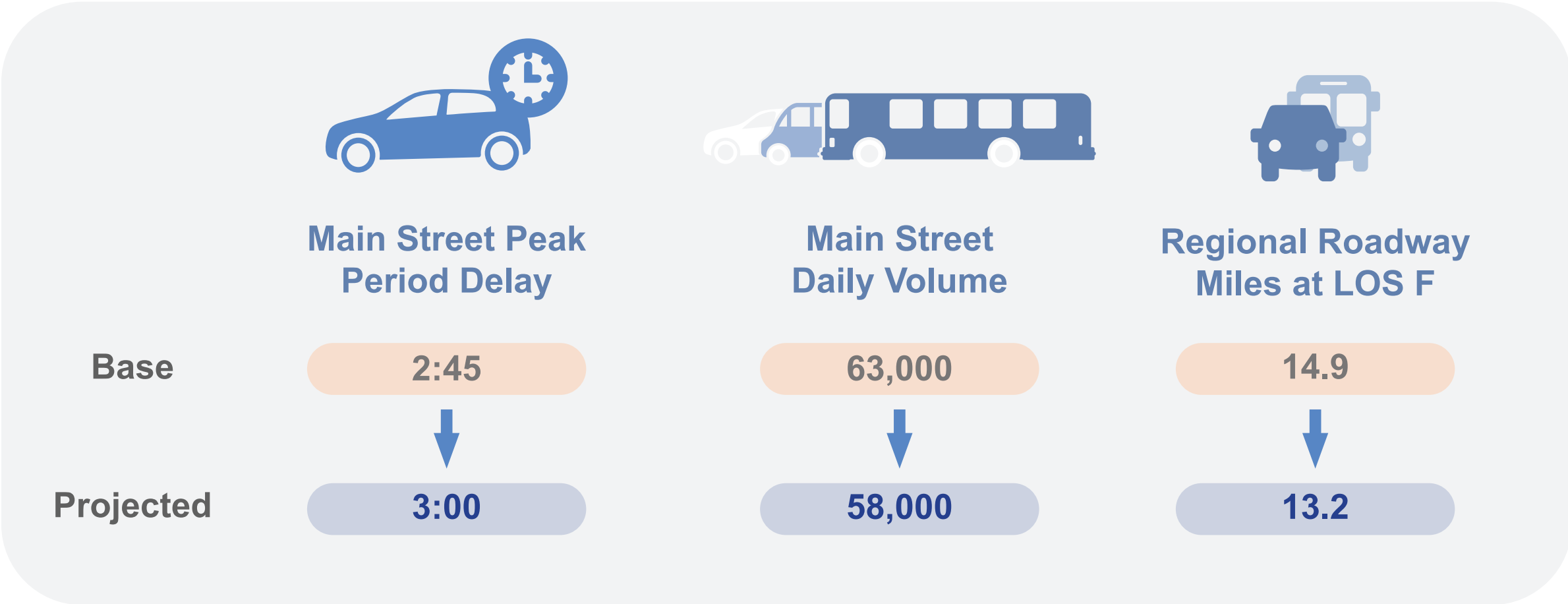
### Widen

- 5** 1000 East: Reroute US-89/91 to 1000 West and widen to seven lanes

### Connect

- 6** Center Street: Connect Center Street from 100 South or 200 South to 1000 West
- 7** 400 South: Connect 400 South from 1000 West to 1000 East
- 8** Golf Course Road: Connect Golf Course Road from US-89/91 to SR-165
- 9** 1200 South: Connect 1200 South through to 1000 West

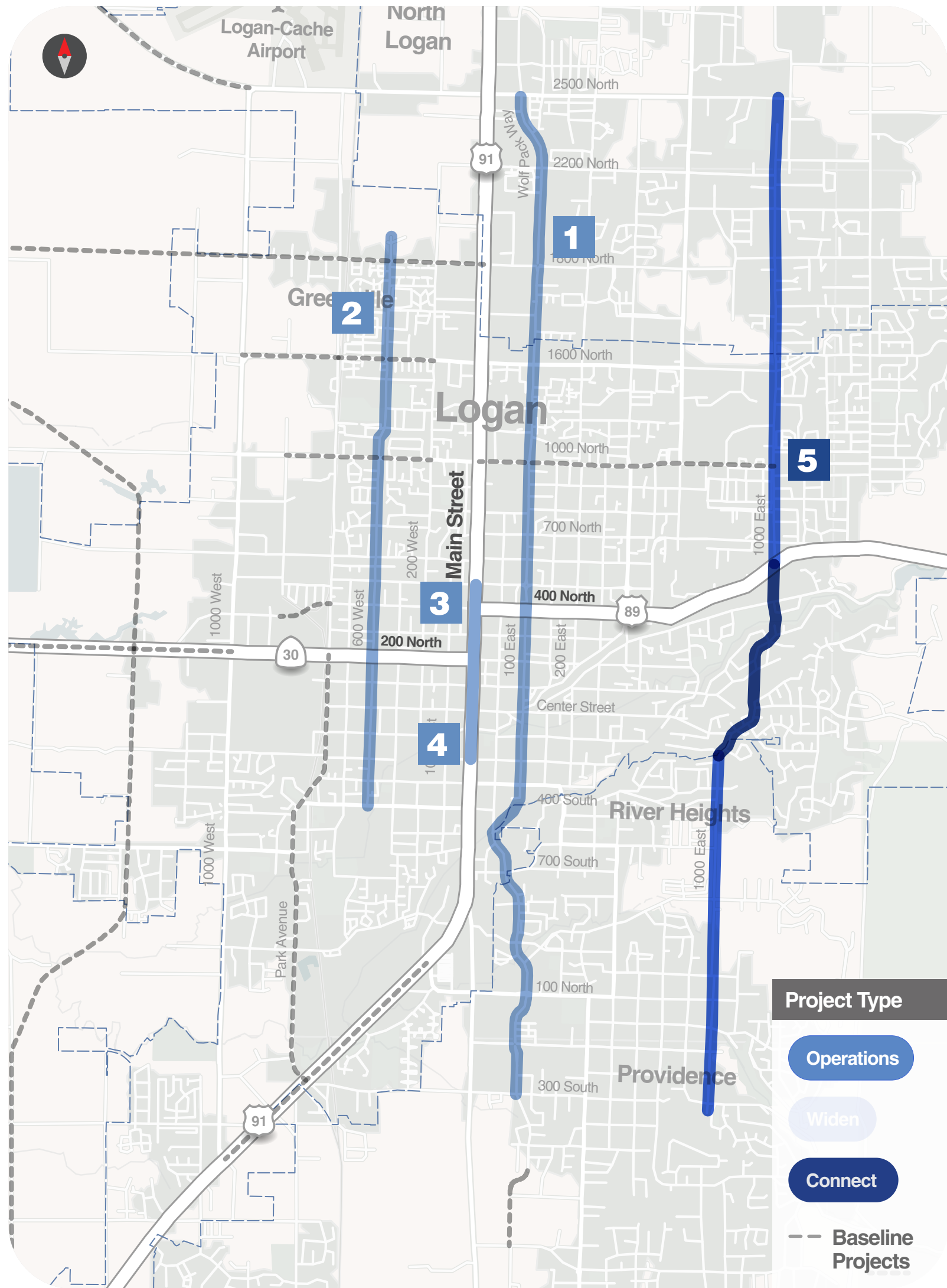
## Scenario Summary



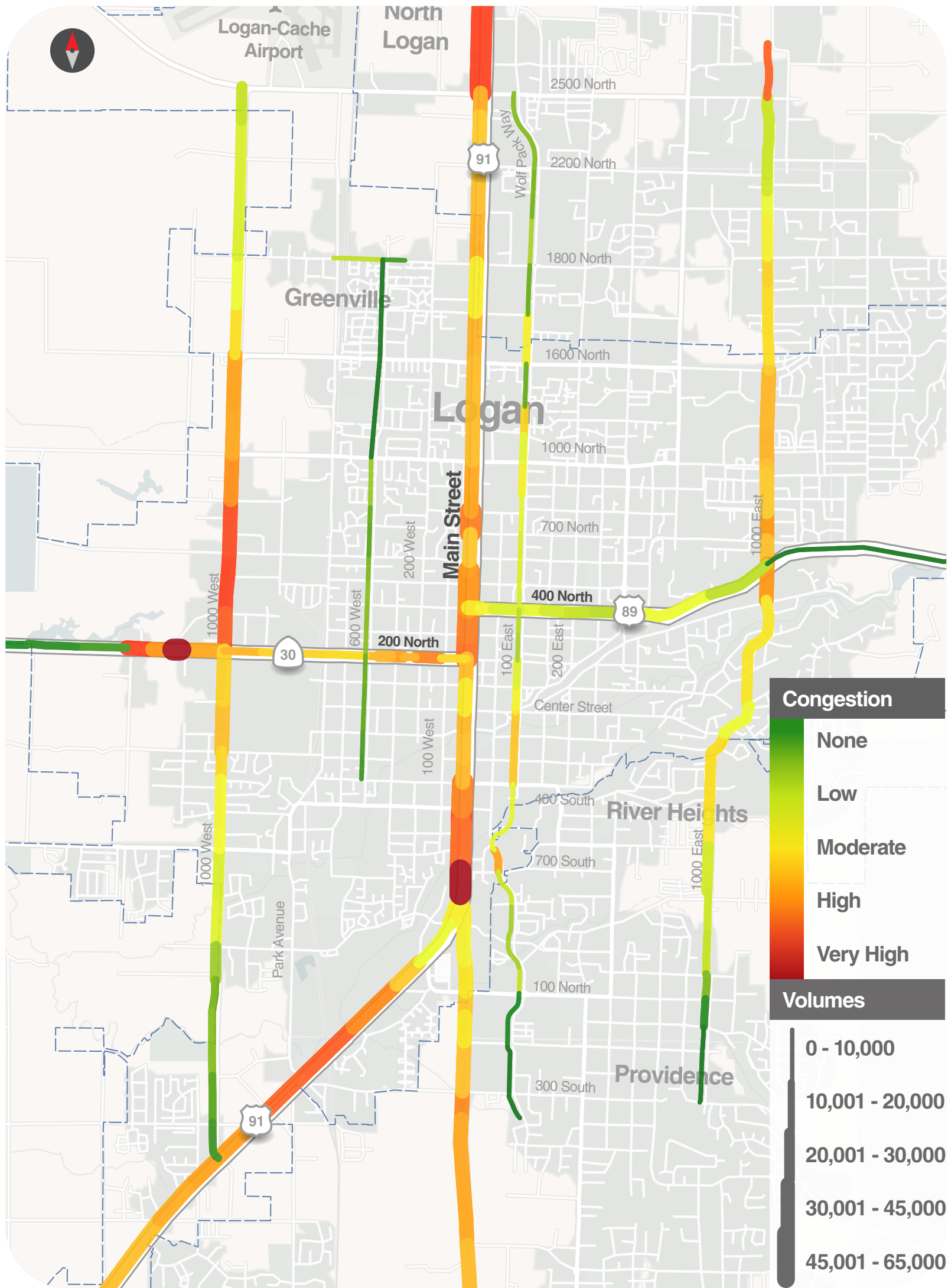


# EASTERN ARTERIAL

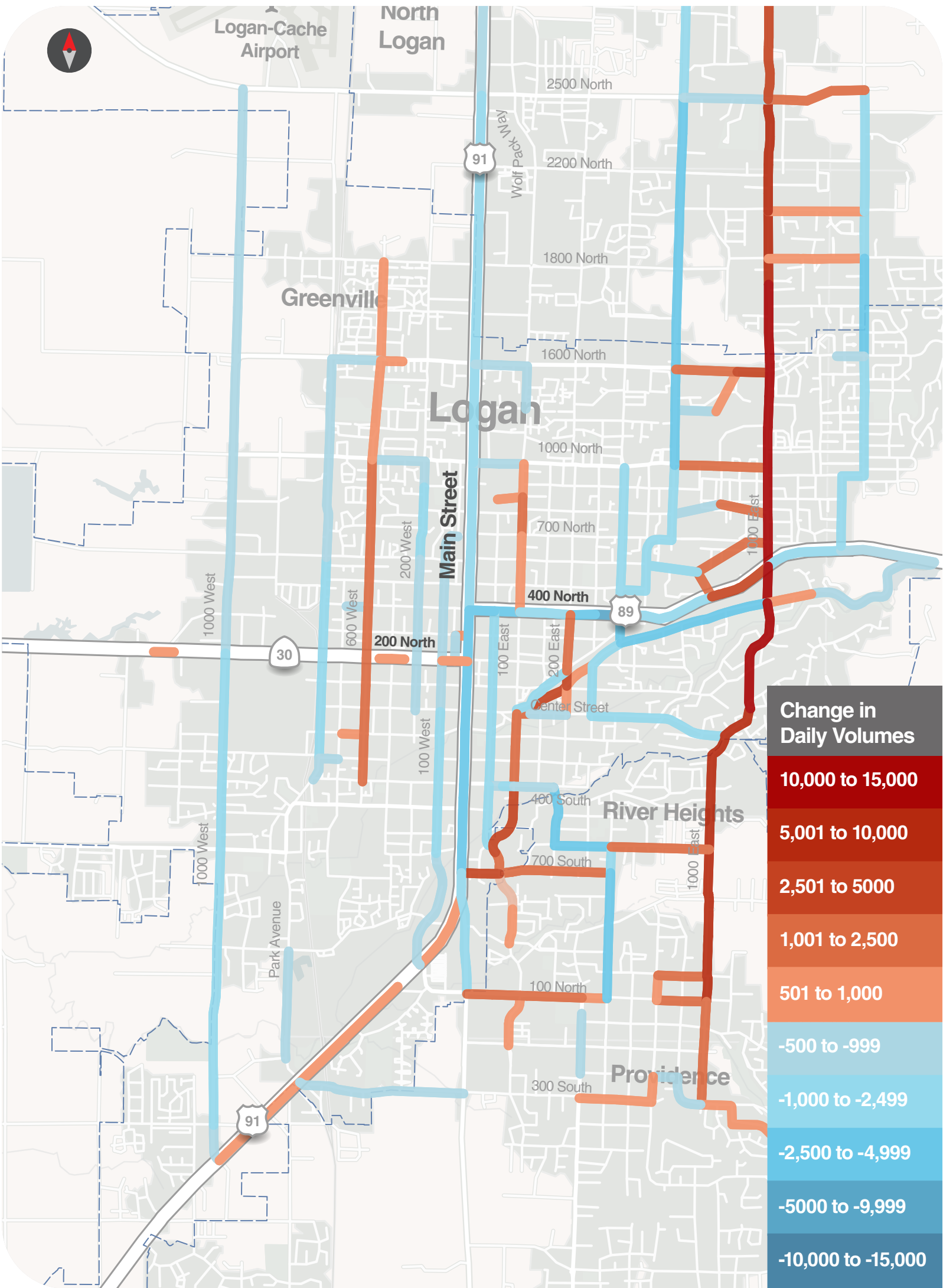
## Scenario Projects



## Projected 2050 Volumes & Congestion



## Projected Change in Volumes (vs. Baseline)



## Project Lists

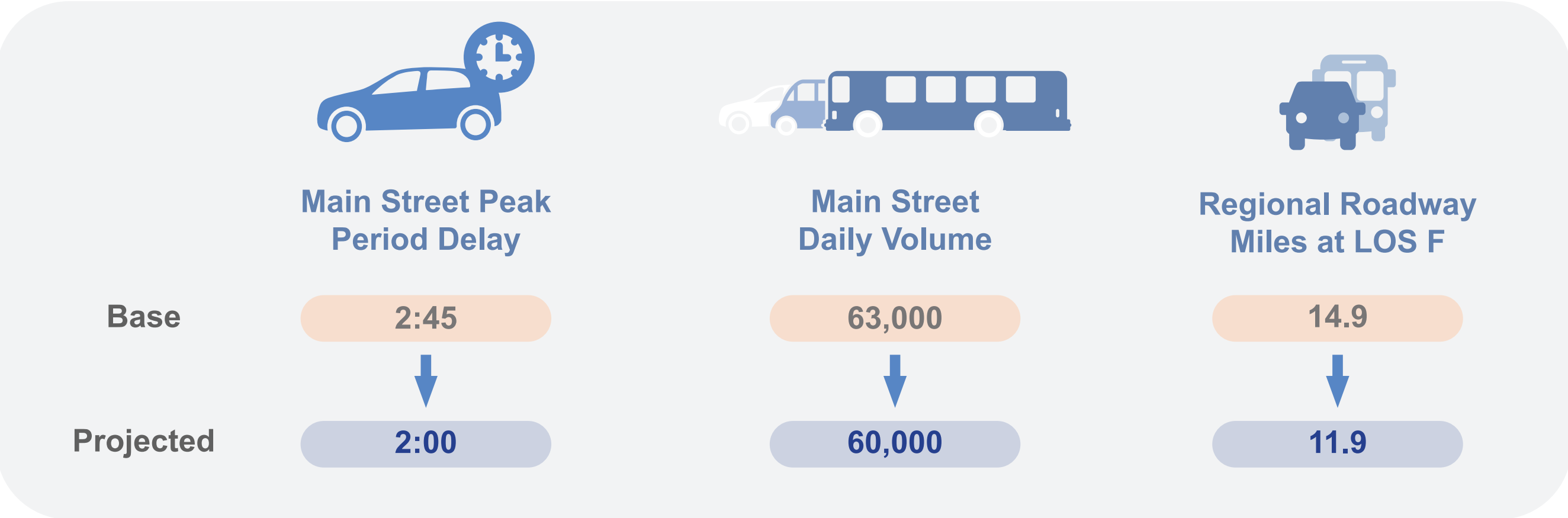
### Operations

- 1** 200 East: Operational improvement
- 2** 400 West: Operational improvement
- 3** Main Street: Raised medians on Main Street through downtown Logan
- 4** Main Street: Limited on-street parking and improved pedestrian environment

### Connect

- 5** 1200 East/1000 East: Create a new east-side arterial road on 1200 East/1000 East

## Scenario Summary

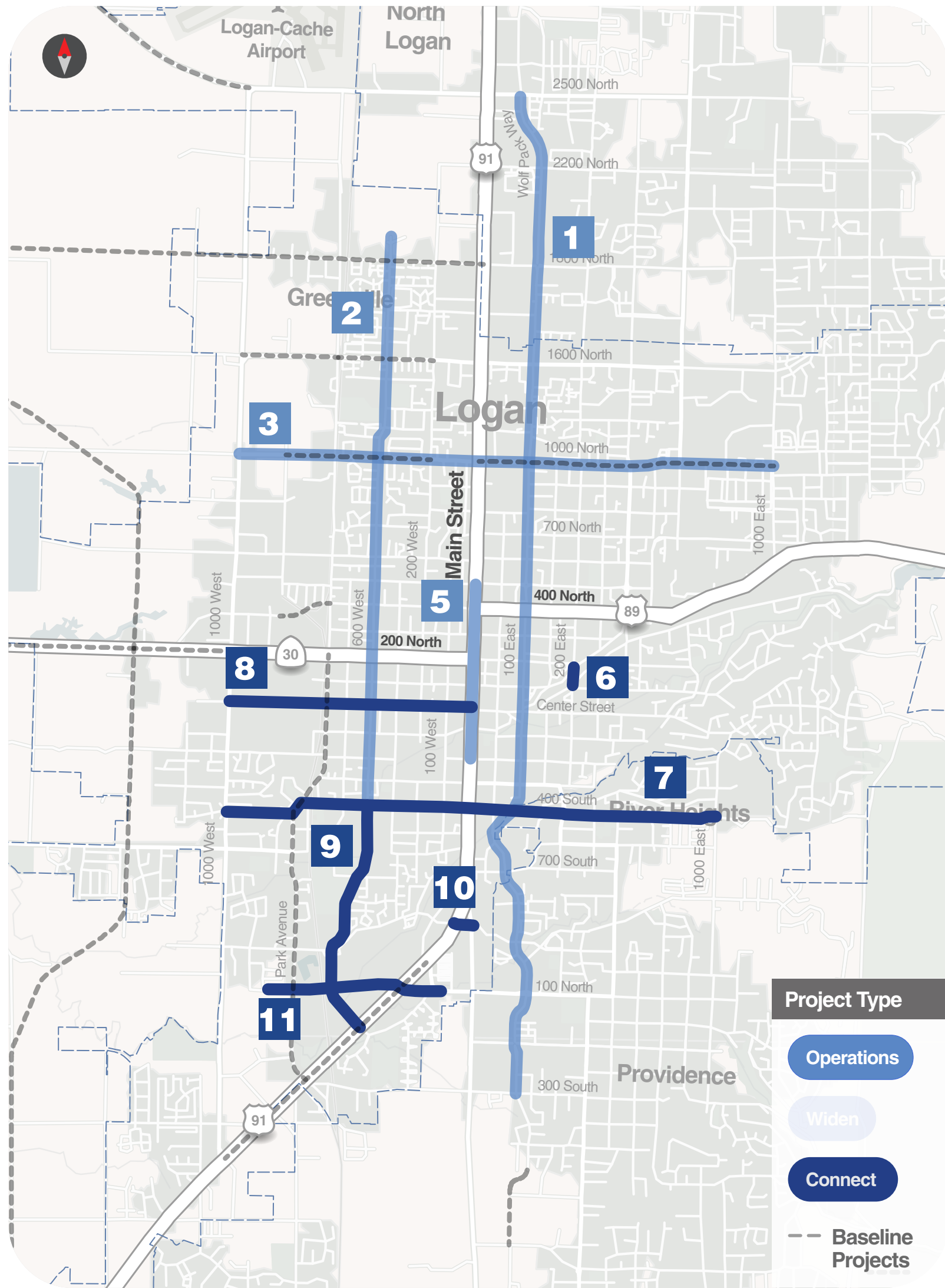




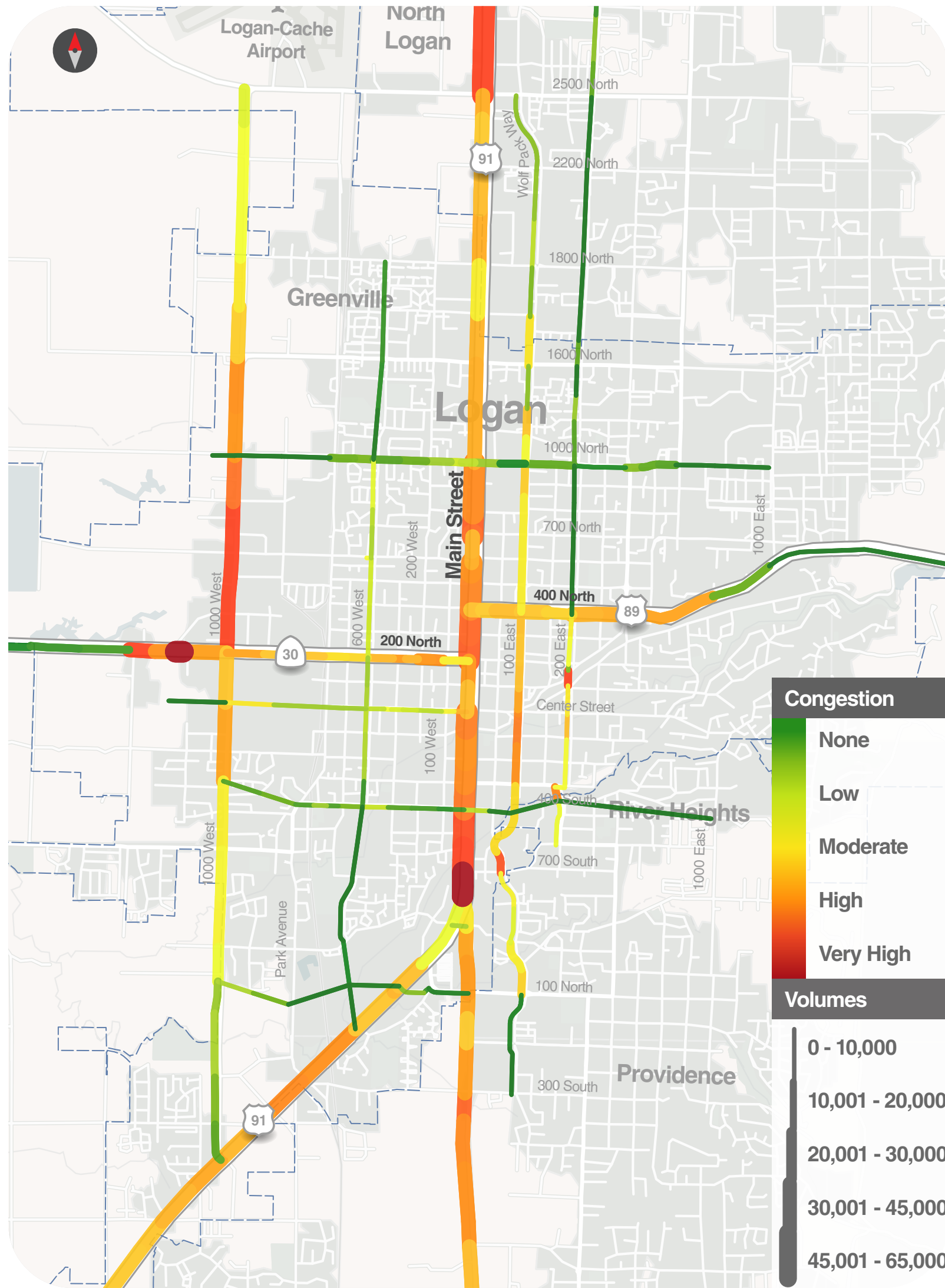
US-89/91  
Logan to North Logan  
STUDY  
by UDOT

IMPROVE NETWORK CONNECTIONS

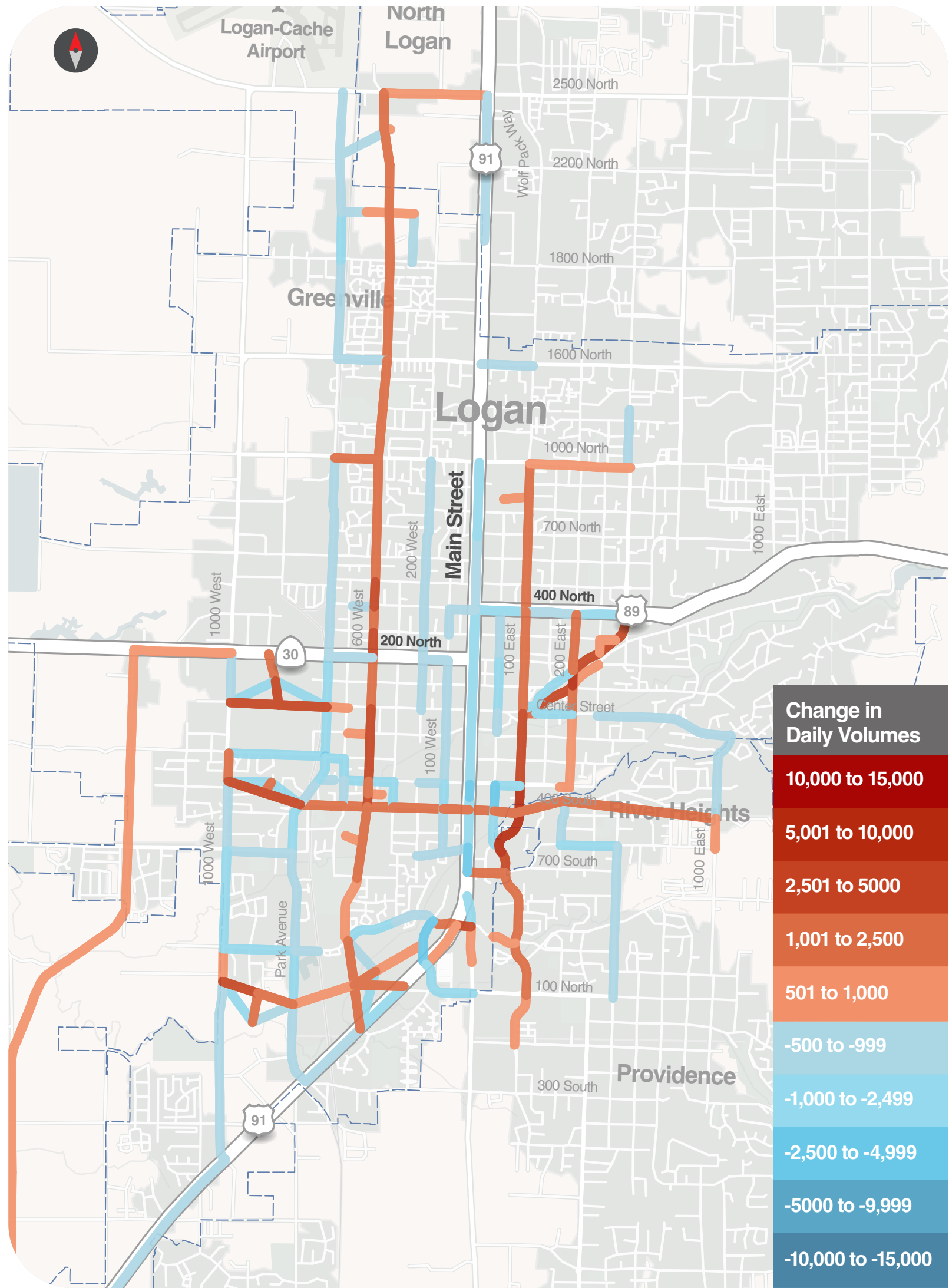
Scenario Projects



Projected 2050 Volumes & Congestion



Projected Change in Volumes (vs. Baseline)



Project Lists

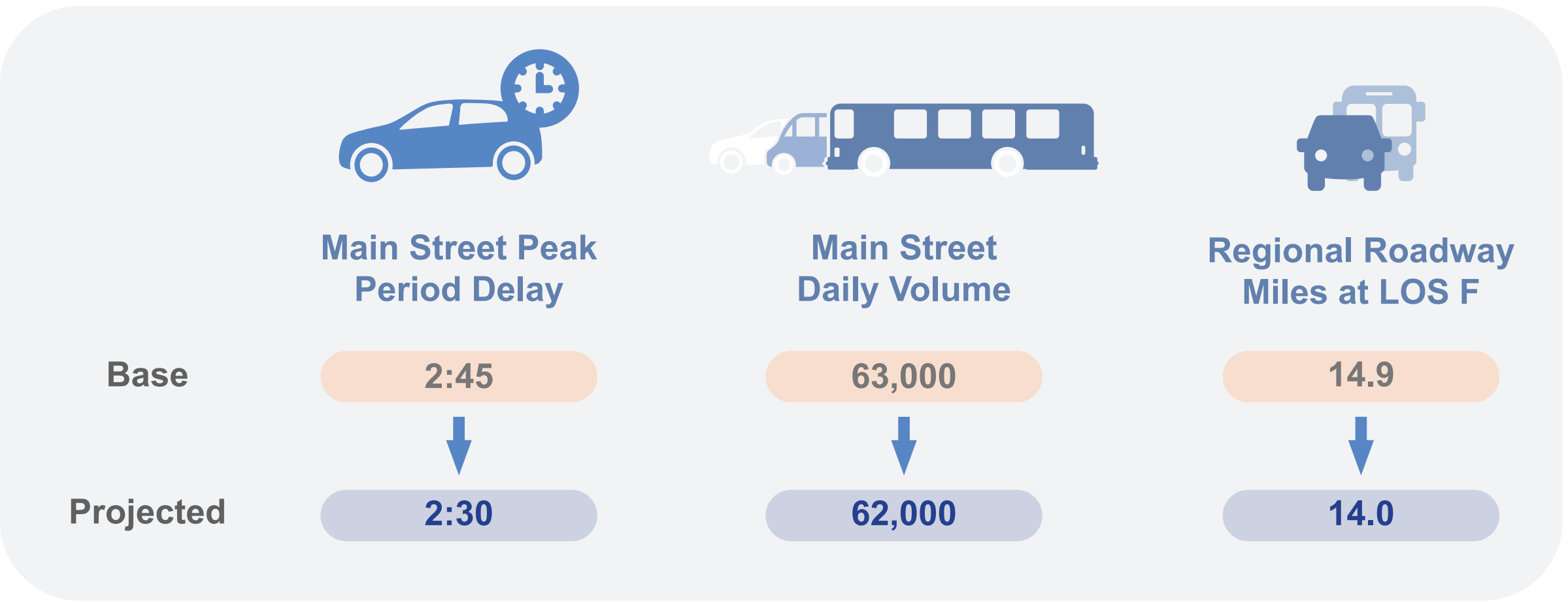
Operations

- 1 200 East: Operational improvement
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- 4 Main Street: Raised medians on Main Street through downtown Logan
- 5 Main Street: Limited on-street parking and improved pedestrian environment

Connect

- 6 Dugway: Dugway connection improvement
- 7 400 South: Connect 400 South from 1000 West to 1000 East
- 8 Center Street: Connect Center Street from 100 South or 200 South to 1000 West
- 9 400 West: Connect 400 West from 400 South to US-89
- 10 Golf Course Road: Connect Golf Course Road from US-89/91 to SR-165
- 11 1200 South: Connect 1200 South through to 1000 West

Scenario Summary





US-89/91

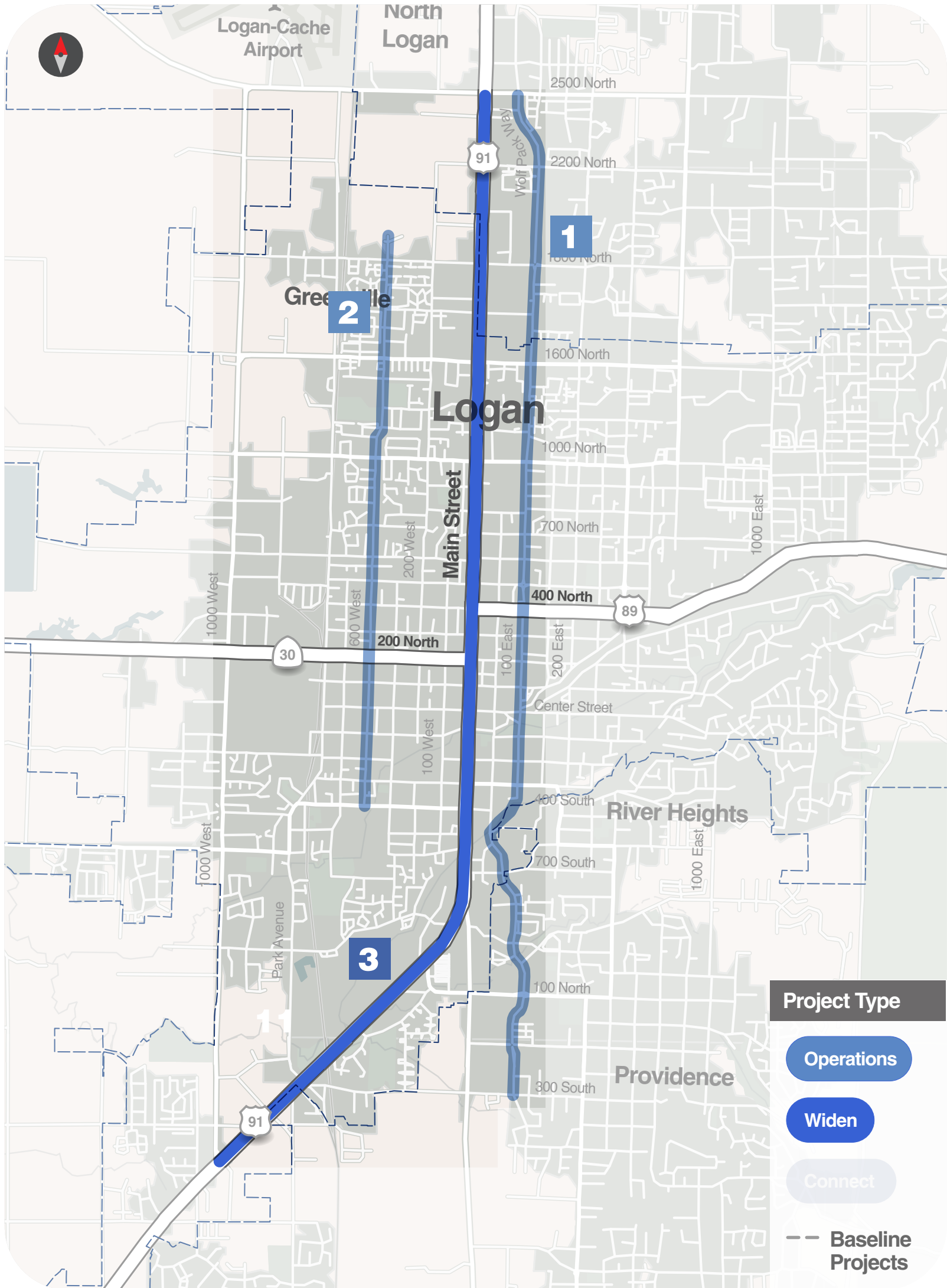
Logan to North Logan

STUDY

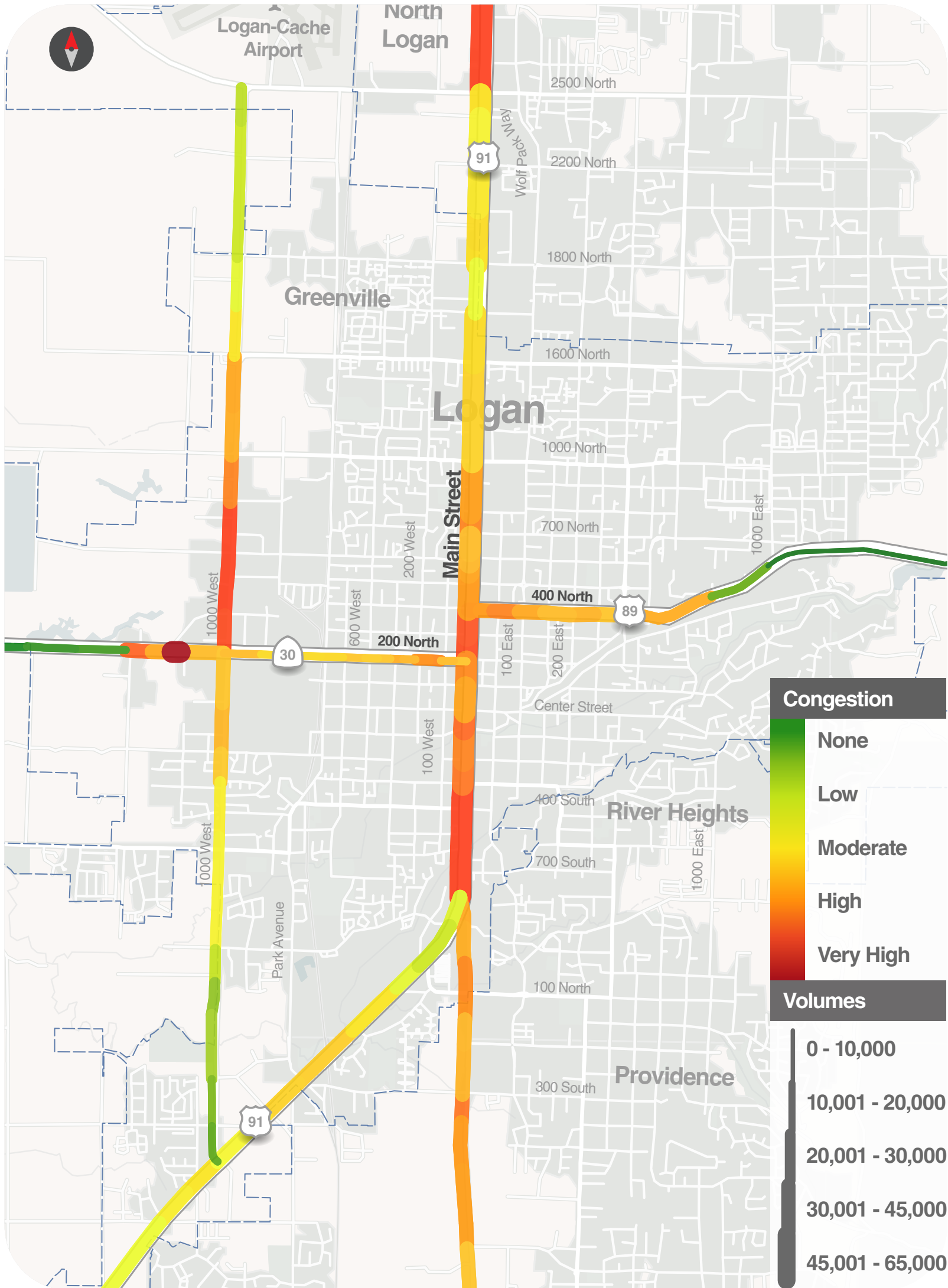
by UDOT

WIDEN MAIN STREET

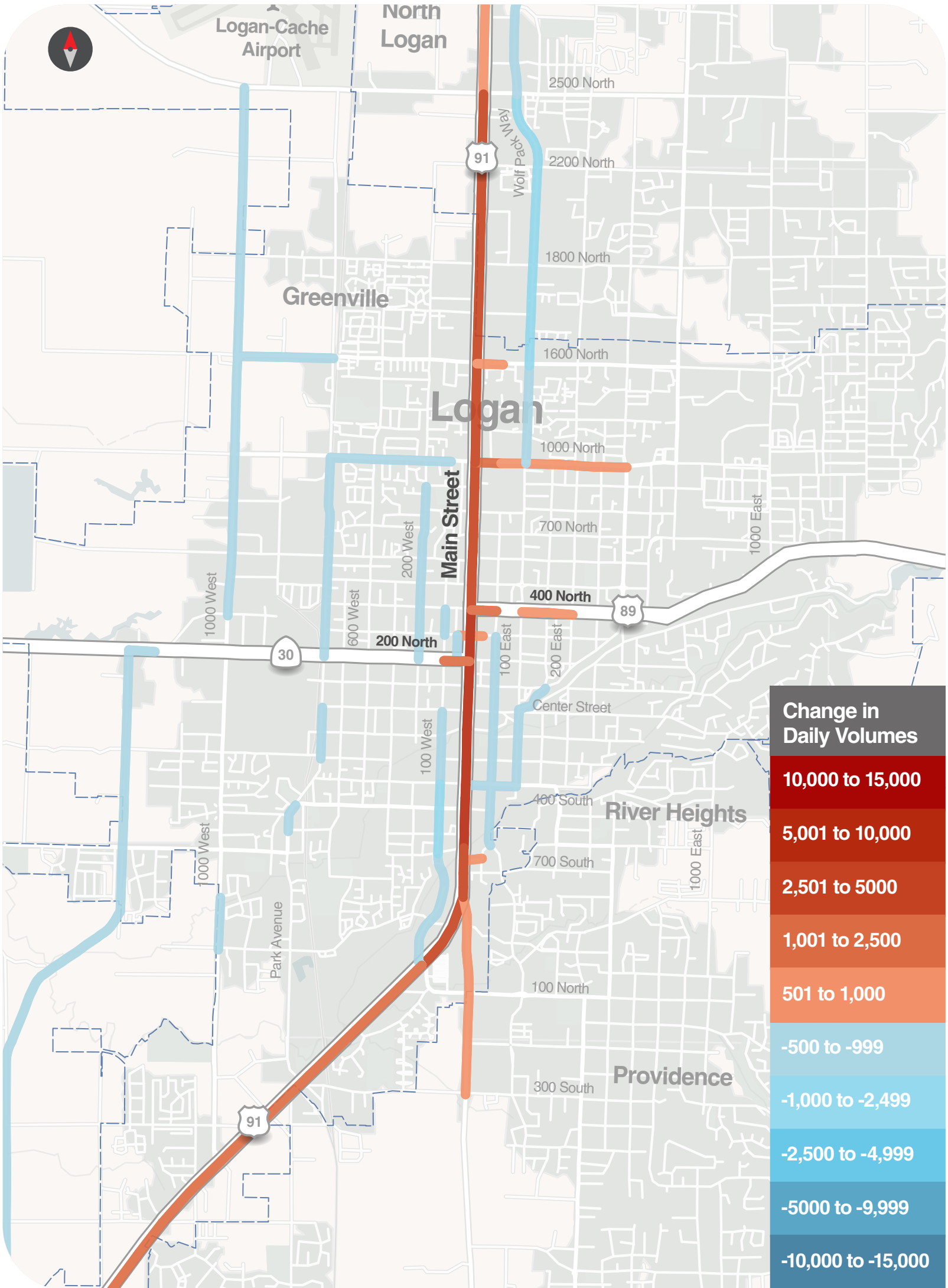
Scenario Projects



Projected 2050 Volumes & Congestion



Projected Change in Volumes (vs. Baseline)



Project Lists

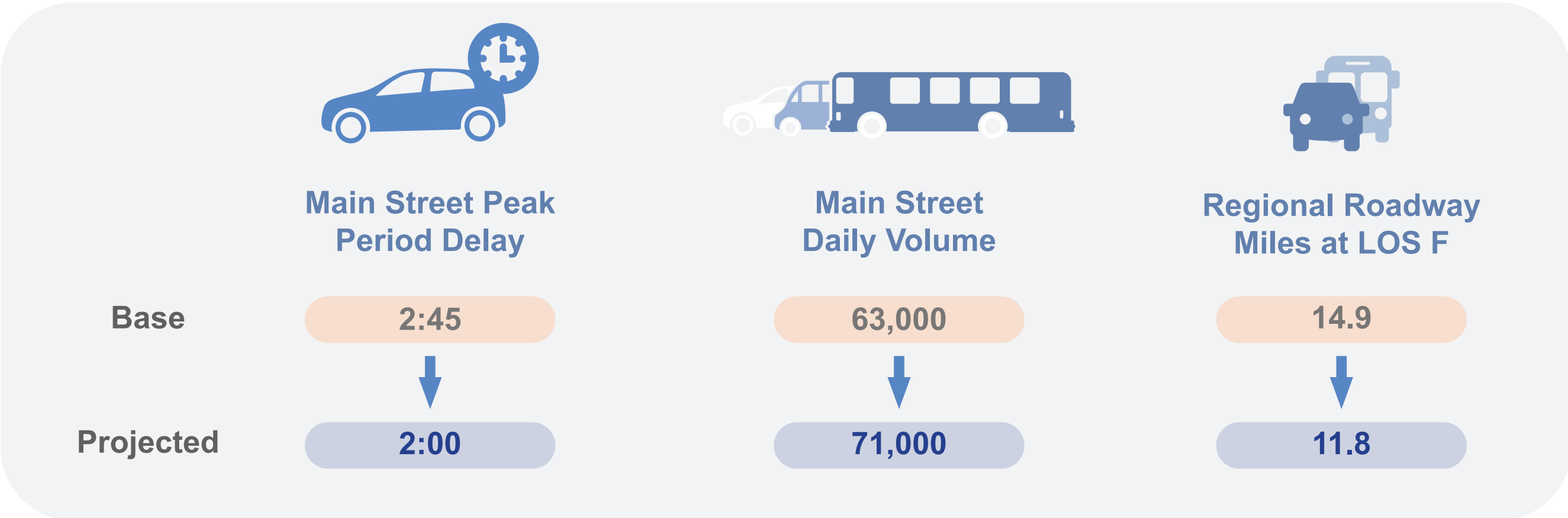
Operations

- 1 200 East: Operational improvement
- 2 400 West: Operational improvement

Widen

- 3 Main Street: Widen to seven lanes

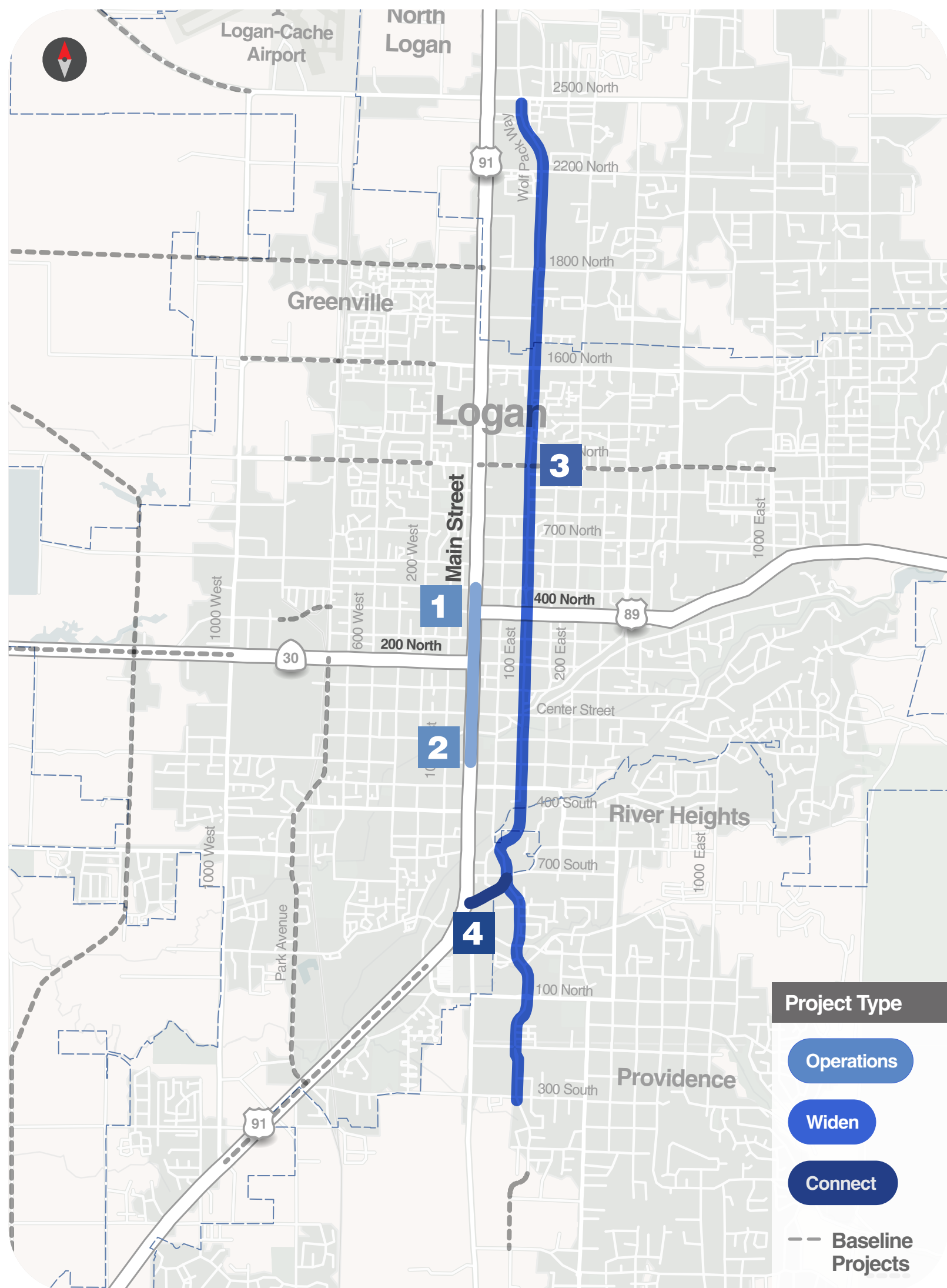
Scenario Summary



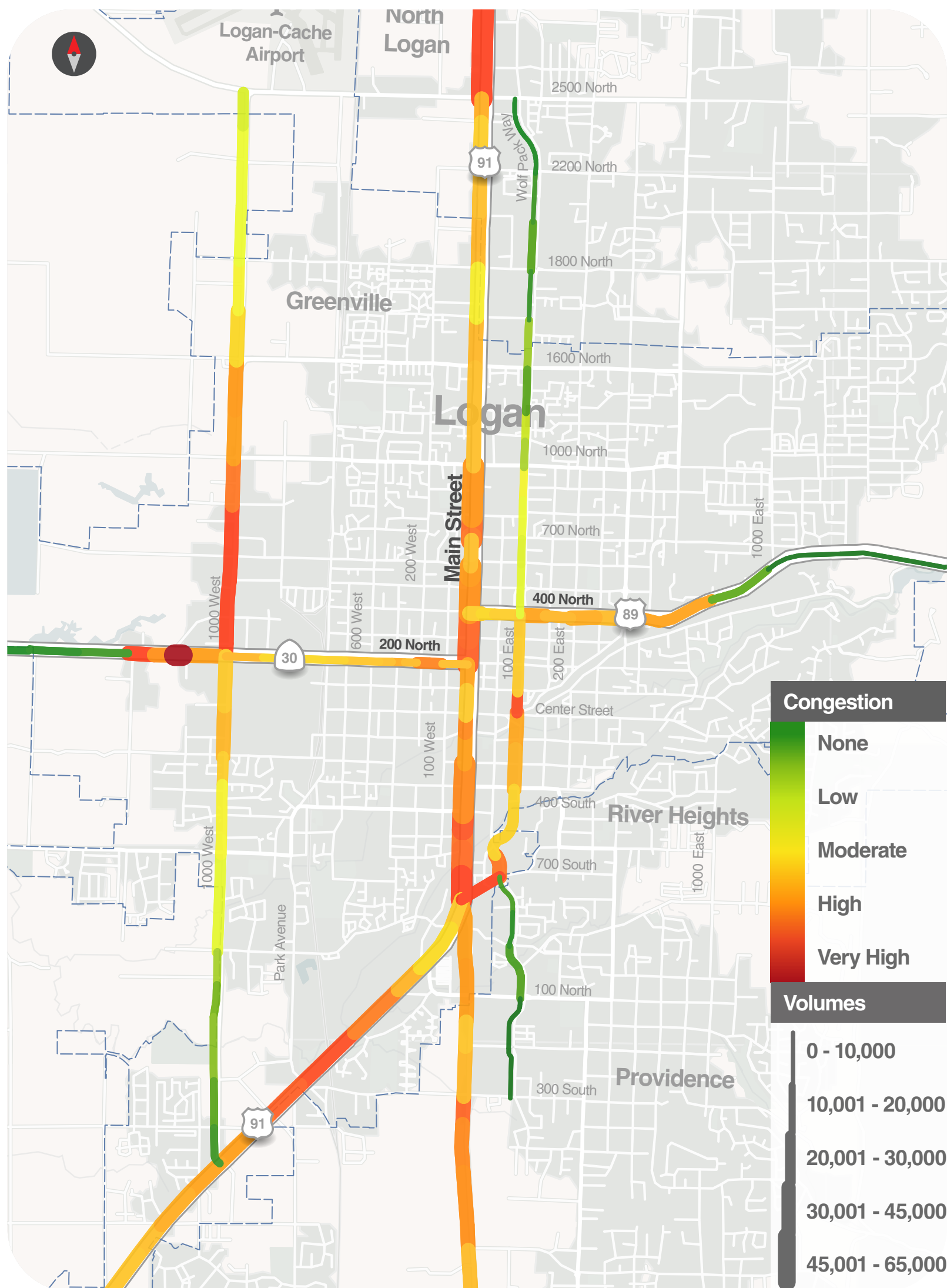


# Y TO X CONNECTION TO 100/200 EAST

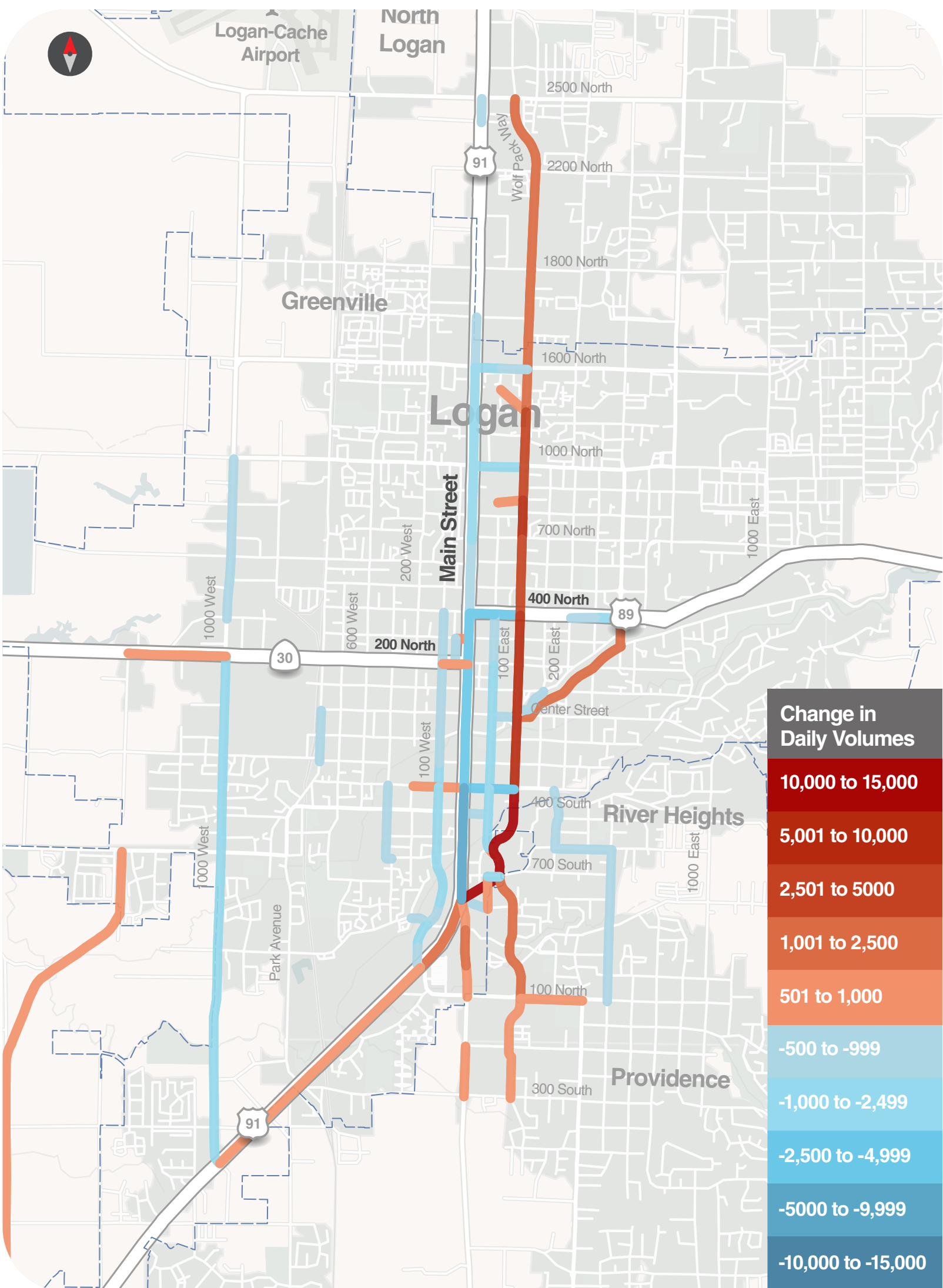
## Scenario Projects



## Projected 2050 Volumes & Congestion



## Projected Change in Volumes (vs. Baseline)



## Project Lists

### Operations

- 1 Main Street:** Raised medians on Main Street through downtown Logan
- 2 Main Street:** Limited on-street parking and improved pedestrian environment




### Widen

- 3 200 East:** Widen to five lanes

### Connect

- 4 100 East:** New road connects Main Street and 100 East

## Scenario Summary

	 Main Street Peak Period Delay	 Main Street Daily Volume	 Regional Roadway Miles at LOS F
Base	2:45	63,000	14.9
Projected	2:00	50,000	12.9






# EVALUATION PROCESS













Metrics were developed to measure how effective the preliminary scenario projects were in meeting the study goals. The following table summarizes these metrics.

METRIC	METRIC EXPLANATION	STUDY GOAL
Number of east-west routes with improved access to and across Main Street within the study area	Excessive east-west delays at major intersections were a common concern expressed to the study team during outreach and stakeholder interviews. By prioritizing a limited number of east-west routes, Main Street becomes less of a barrier, and access to alternate north-south facilities is increased.	Improve mobility for all people using Main Street
Number of north-south continuous routes within the study area	Providing designated north-south alternatives to Main Street can reduce congestion and mitigate impacts from current use of neighborhood back routes by directing north-south traffic to appropriate alternate routes.	Improve mobility for all people using Main Street
Change in travel time and volumes (including freight volumes) on Main Street and parallel routes	Direct measure of whether Main Street operations are improved by scenarios solutions. Target is meeting north-south travel demand while keeping Main Street and other priority facilities functioning at acceptable levels. Measured using travel demand model.	Improve mobility for all people using Main Street Make downtown Logan safer and more comfortable for people walking, biking, and supporting local businesses or engaging in community activities
Planning-level feasibility	High-level evaluation of obstacles to scenario implementation (community impacts, contractibility, concerns, etc.).	Improve mobility for all people using Main Street Make downtown Logan safer and more comfortable for people walking, biking, and supporting local businesses or engaging in community activities



# PHASE 1 CONCEPT SCREENING MATRIX

GOAL DEFINITIONS					
	Improve mobility for all users		Improve activity centers and corridor-side safety		Overall feasibility

		Scenario Number	1	2	3	4	5	6	7
		Scenario Name	North/South Alternative Corridors – Minor	North/South Alternative Corridors – Major	Widen and Reroute US-89 to 1000 W	Eastern Arterial	Improve Network Connections	Widen Main Street	Y to X Connection to 100 E/200 E
GOAL	METRIC	METRIC EXPLANATION	PHASE 1 EVALUATION						
  	Number of east-west routes with improved access to and across Main Street within the study area	Excessive east-west delay at major intersections have been a theme in outreach and stakeholder interviews. By prioritizing a limited number of east-west routes, Main Street becomes less of a barrier, and access to alternate north-south facilities is increased.	No change	No change	5 additional	No change	5 additional	No change	1 additional
  	Number of north-south continuous routes within the study area	Providing designated north-south alternatives to Main Street can reduce congestion and mitigate impacts from current use of neighborhood back routes by directing north-south traffic to appropriate alternate routes.	2 additional/ improved	4 additional/ improved	1 additional/ improved	3 additional/ improved	3 additional/ improved	3 additional/ improved	1 additional/ improved
  	Change in travel time and volumes (including freight volumes) on Main Street and parallel routes	Direct measure of whether Main Street operations are improved by packages of solutions. Target is meeting north-south travel demand while keeping Main Street and other priority facilities at LOS D or better (based on V/C ratio). Measured by travel demand model.	-15s travel time;  No change in Main Street ADT	-45s travel time;  -1,000 Main Street ADT	+15s travel time;  -5,000 Main Street ADT	-45s travel time;  -3,000 Main Street ADT	-15s travel time;  -1,000 Main Street ADT	-45s travel time;  +8,000 Main Street ADT	-45s travel time;  -13,000 Main Street ADT
  	Planning-level feasibility	High-level evaluation of obstacles to scenario implementation (community impacts, constructability concerns, etc).	High	Moderate	Moderate	Low	Moderate	Moderate	High

# ADVANCED SCENARIOS

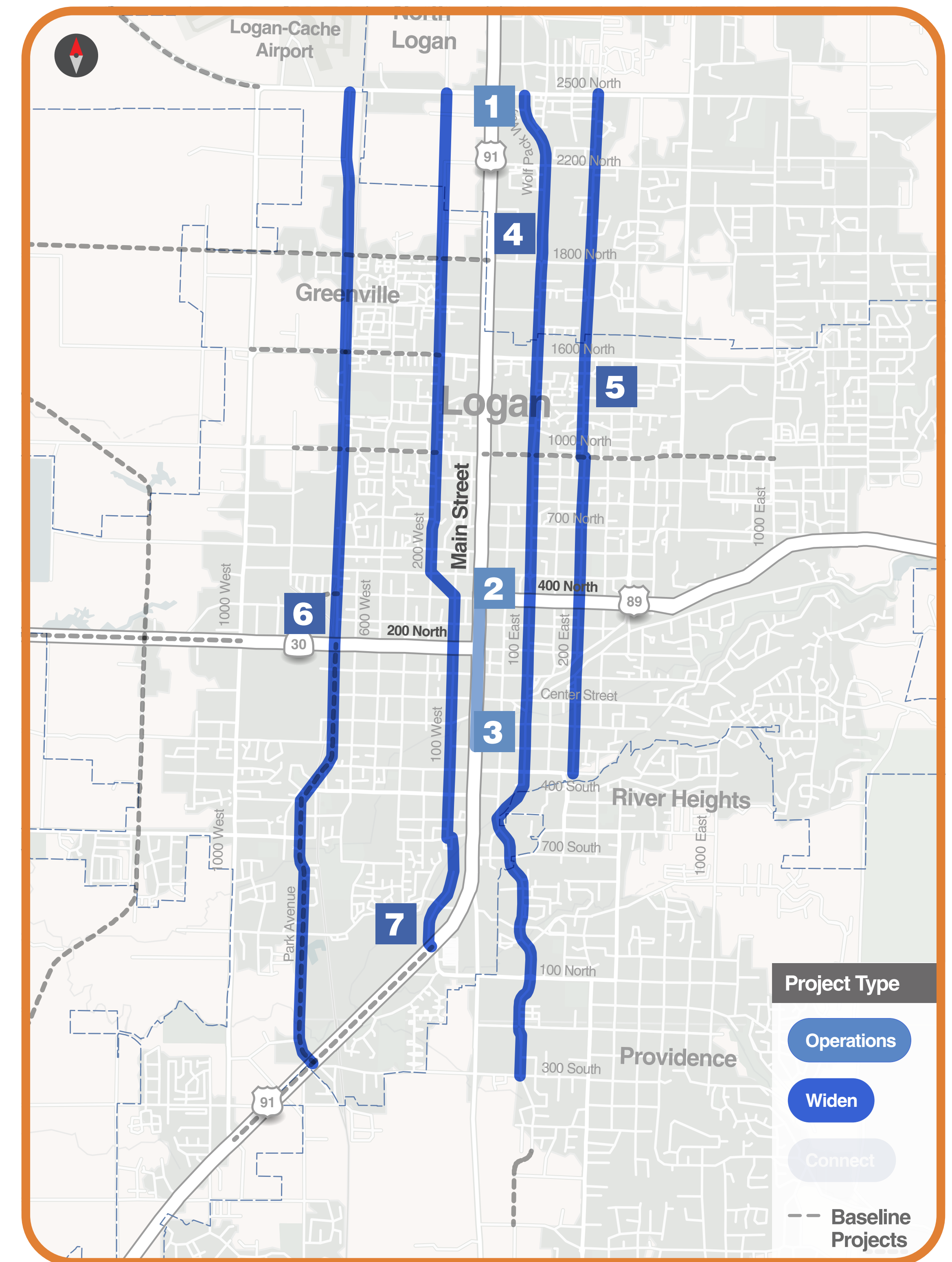
<b>Scenario 1:</b> North/South Alternative Corridors – Minor	—————→	Not Advanced
<b>Scenario 2:</b> North/South Alternative Corridors – Major	—————→	<b>Parallel Corridors</b>
<b>Scenario 3:</b> Widen and Reroute US-89 to 1000 West	—————→	<b>1000 West Focus</b>
<b>Scenario 4:</b> Eastern Arterial	—————→	Not Advanced
<b>Scenario 5:</b> Improve Network Connections	—————→	Not Advanced
<b>Scenario 6:</b> Widen Main Street	—————→	<b>Main Street Focus</b>
<b>Scenario 7:</b> Y to X Connections to 100/200 East	—————→ ↑	Incorporated into Parallel Corridors and 1000 West Focus



# PARALLEL CORRIDORS SCENARIO

The Parallel Corridors Scenario focused on operational improvements and widening projects along north-south corridors within the study area.

- 1** 200 East: Operational improvements
- 2** Main Street: Raised medians on Main Street through downtown Logan
- 3** Main Street: Limited on-street parking and improved pedestrian environment
- 4** 200 East: Widen to five lanes
- 5** 400 East/600 East: Widen to five lanes; improve dugways
- 6** 600 West: Widen to five lanes
- 7** 100 West: Widen to five lanes; connect 100 West to 200 West north of 400 North

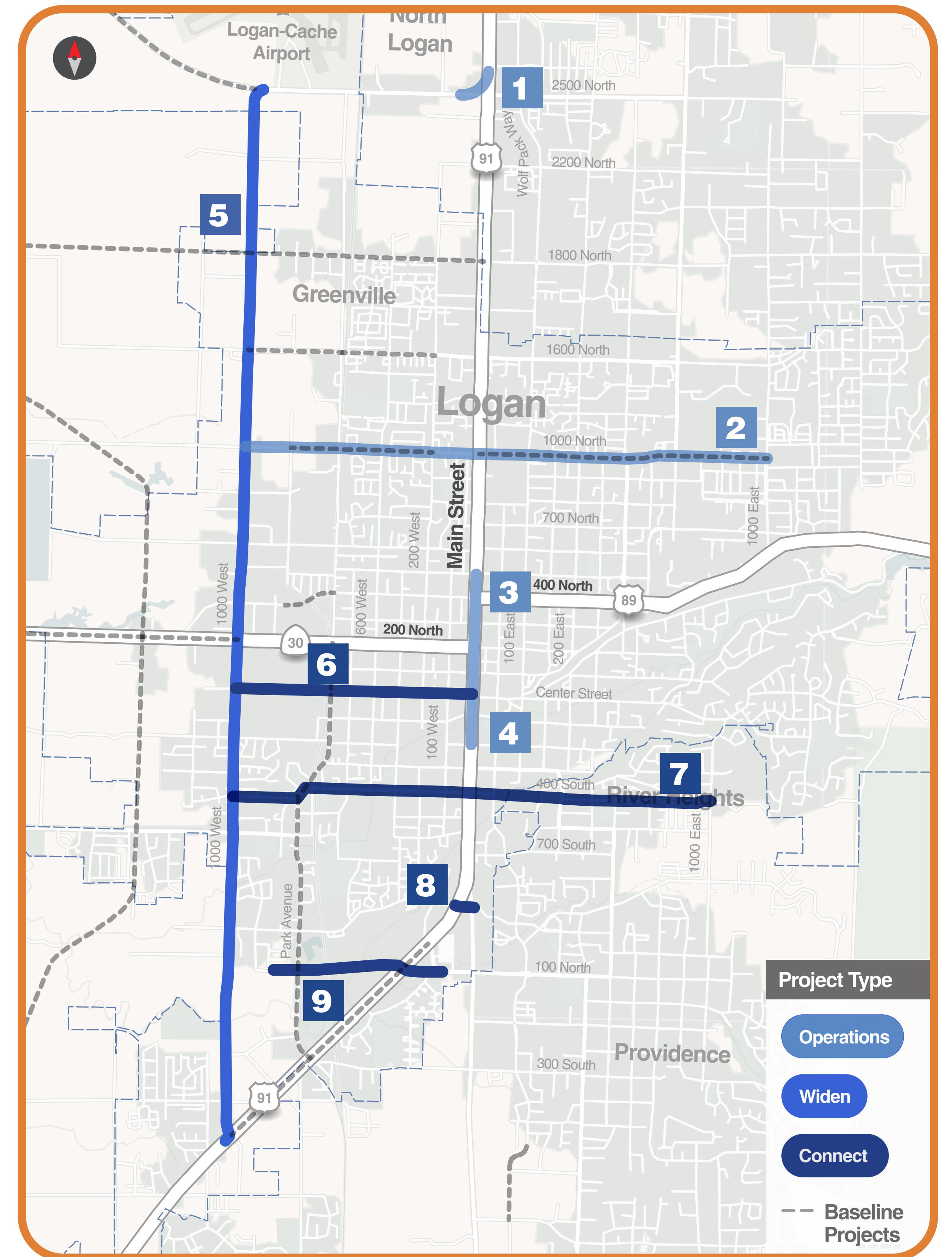




# 1000 WEST FOCUS SCENARIO

The 1000 West Focus Scenario focused on operational improvements and connection and widening projects throughout the study area, prioritizing east-west corridors.

- 1** 200 East: Operational improvements
- 2** 1000 North: Operational improvements
- 3** Main Street: Raised medians on Main Street through downtown Logan
- 4** Main Street: Limited on-street parking and improved pedestrian environment
- 5** 1000 West: Reroute US-89/US-91 to 1000 West and widen to seven lanes
- 6** Center Street: Connect Center Street from 100 South or 200 South to 1000 West
- 7** 400 South: Connect 400 South from 1000 West to 1000 East
- 8** Golf Course Road: Connect Golf Course Road from US-89/US-91 to SR-165
- 9** 1200 South: Connect 1200 South through to 1000 West
















The three new scenarios that came out of the first phase of evaluation were then analyzed based on these secondary metrics.

The three new scenarios that came out of the first phase of evaluation were then analyzed based on these secondary metrics.



# PHASE 2 SCENARIO EVALUATION MATRIX

GOAL DEFINITIONS	
	Improve mobility for all users
	Improve activity centers and corridor-side safety

		Scenario Name	Parallel Corridors	1000 West Focus	Main Street Focus
GOAL	METRIC	METRIC EXPLANATION	PHASE 2 EVALUATION		
	Compatibility with regional multimodal plans	Potential conflict between parallel route designations for bike, pedestrian, or transit priorities vs. vehicular traffic.	Aligned with RTP and prior studies; interaction with 100 W buffered bike lanes, 600 E bike lanes	Partial alignment with RTP; no conflicts	Not aligned with RTP; impacts on Main Street walkability
	Quality of east-west pedestrian and bike crossings	Responding to complaints and observations of Main Street being uncomfortable to cross.	Potential benefit to Main Street crossings	Potential benefit to Main Street crossings	Likely to further reduce Main Street crossing comfort
	Limiting and balancing neighborhood impacts	Measured in terms of total traffic volumes and balance of volumes on local/minor collector roads east and west of Main Street.	Traffic and property impacts on two east- and west-side corridors	Traffic and property impacts on one east-side corridor	Concentrated traffic and parking/ROW impacts on Main Street
	Systemwide travel time reduction	Measure of overall system functionality and additional mobility provided by new/enhanced facilities. Measured by VISUM model results.	300 hours of PM peak hour VHT reduced vs. future baseline	250 hours of PM peak hour VHT reduced vs. future baseline	225 hours of PM peak hour VHT reduced vs. future baseline
	Change in PM peak travel time (mm:ss) on Main Street and parallel facilities	Direct measure of whether Main Street and parallel corridor operations are improved by packages of solutions. Measured by VISUM model results.	<b>Main Street:</b> • -3:00 (NB) • -5:15 (SB) <b>Average Off-Main:</b> • -5:00 (NB) • -2:30 (SB)	<b>Main Street:</b> • -1:30 (NB) • -3:00 (SB) <b>Average Off-Main:</b> • -3:00 (NB) • -2:45 (SB)	<b>Main Street:</b> • -4:30 (NB) • -2:15 (SB) <b>Average Off-Main:</b> • -1:45 (NB) • -1:45 (SB)



# SCENARIO PERFORMANCE

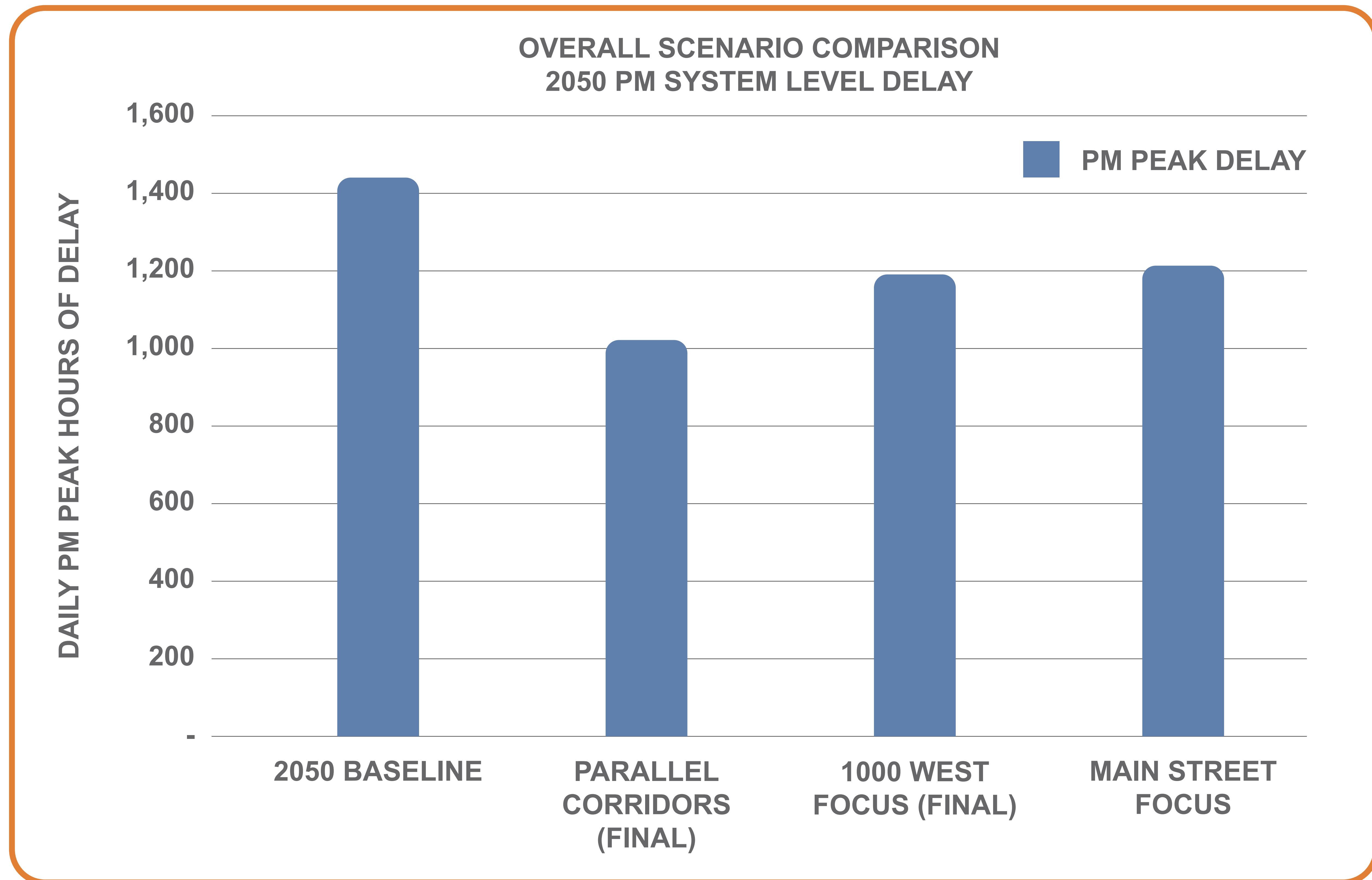
The following table and graph further explain how well the scenarios do (or do not) perform against forecasted 2032 and 2050 conditions (based on anticipated regional growth and other planned near-term projects). Performance is evaluated in terms of reduced travel delay (minutes and seconds) for all trips in central Cache Valley.

SCENARIO COMPARISON: SYSTEM-LEVEL DELAY METRICS

	AM				PM			
Concept	System Delay (Hours)	Delay Reduction (Hours)	Per-Vehicle Delay (mm:ss)	Per-Vehicle Delay Reduction (mm:ss)	System Delay (Hours)	Delay Reduction (Hours)	Per-Vehicle Delay (mm:ss)	Per-Vehicle Delay Reduction (mm:ss)
Future Baseline	825		01:05		1,450		01:30	
Parallel Corridors	675	150	00:55	00:10	1,025	425	01:05	00:25
1000 West Focus	700	125	00:55	00:10	1,200	250	01:15	00:15
Main Street Focus	725	100	01:00	00:05	1,225	225	01:15	00:15



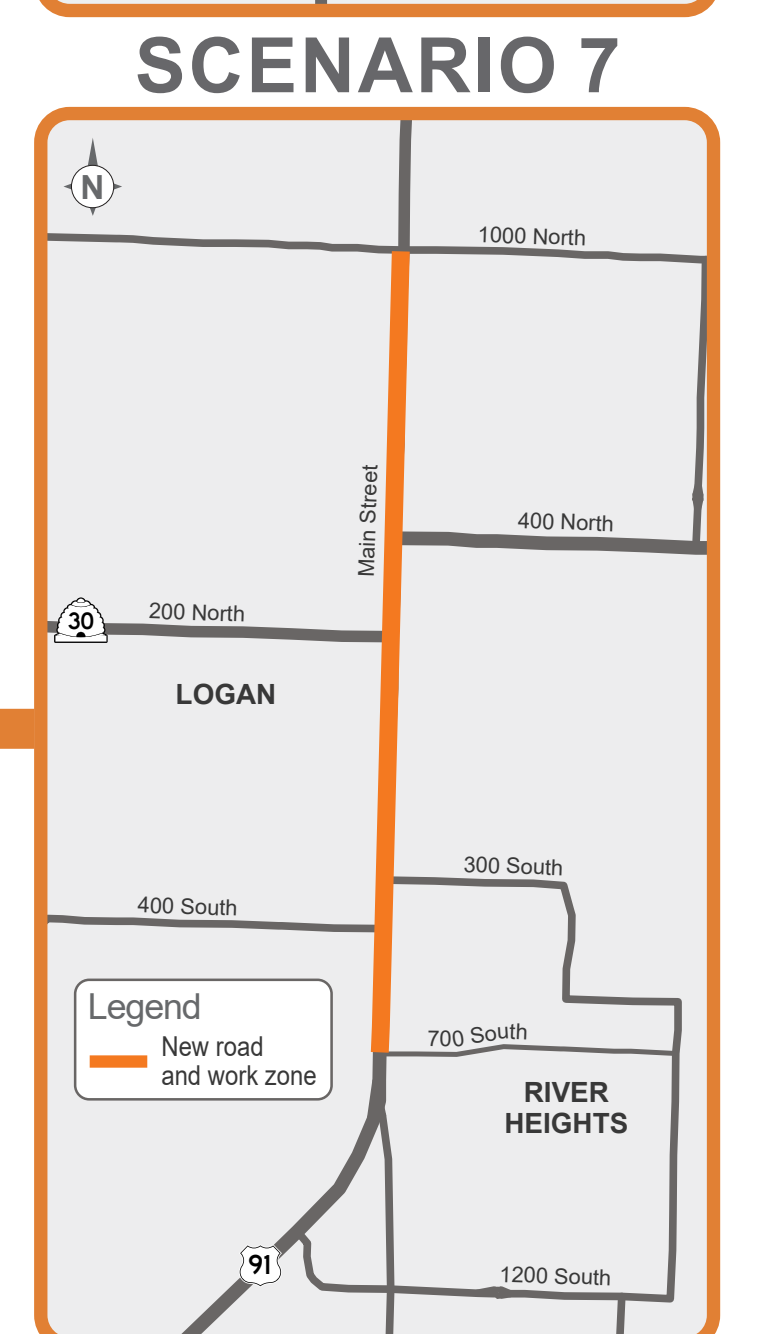
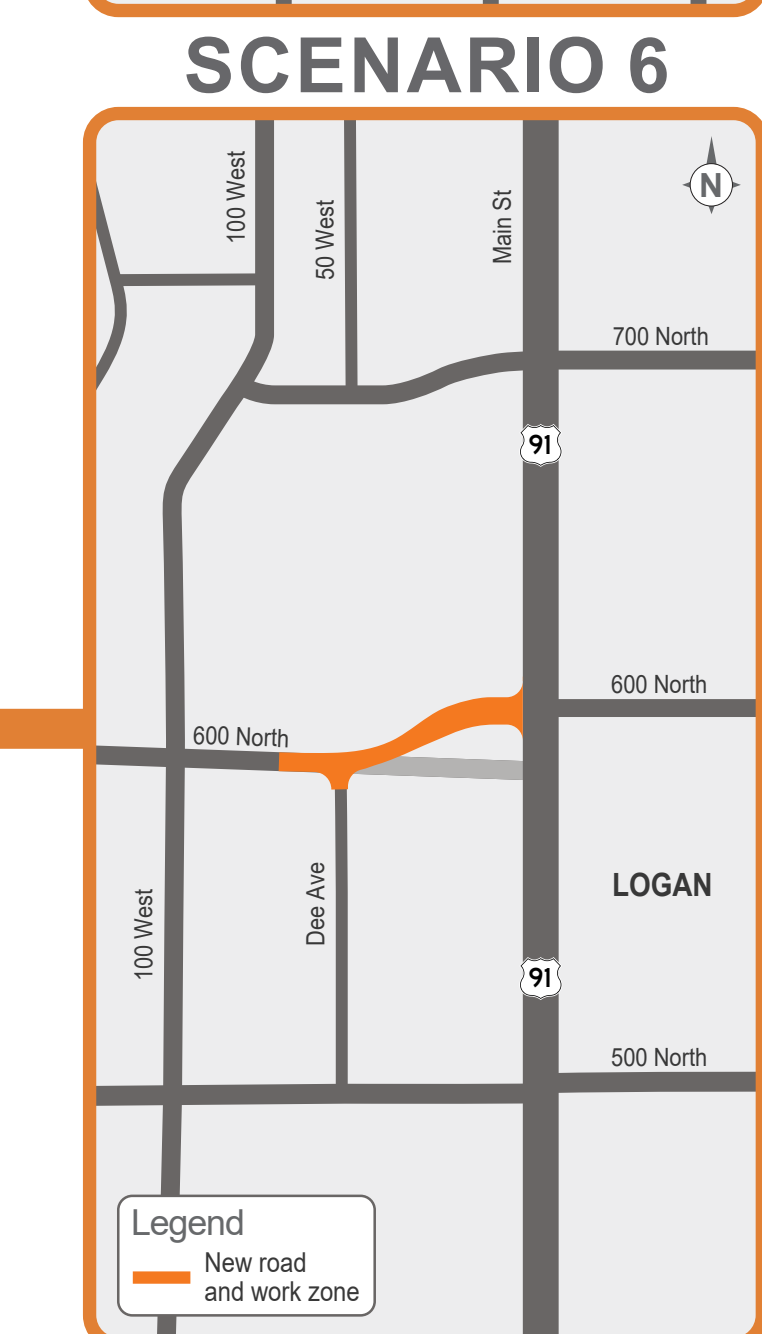
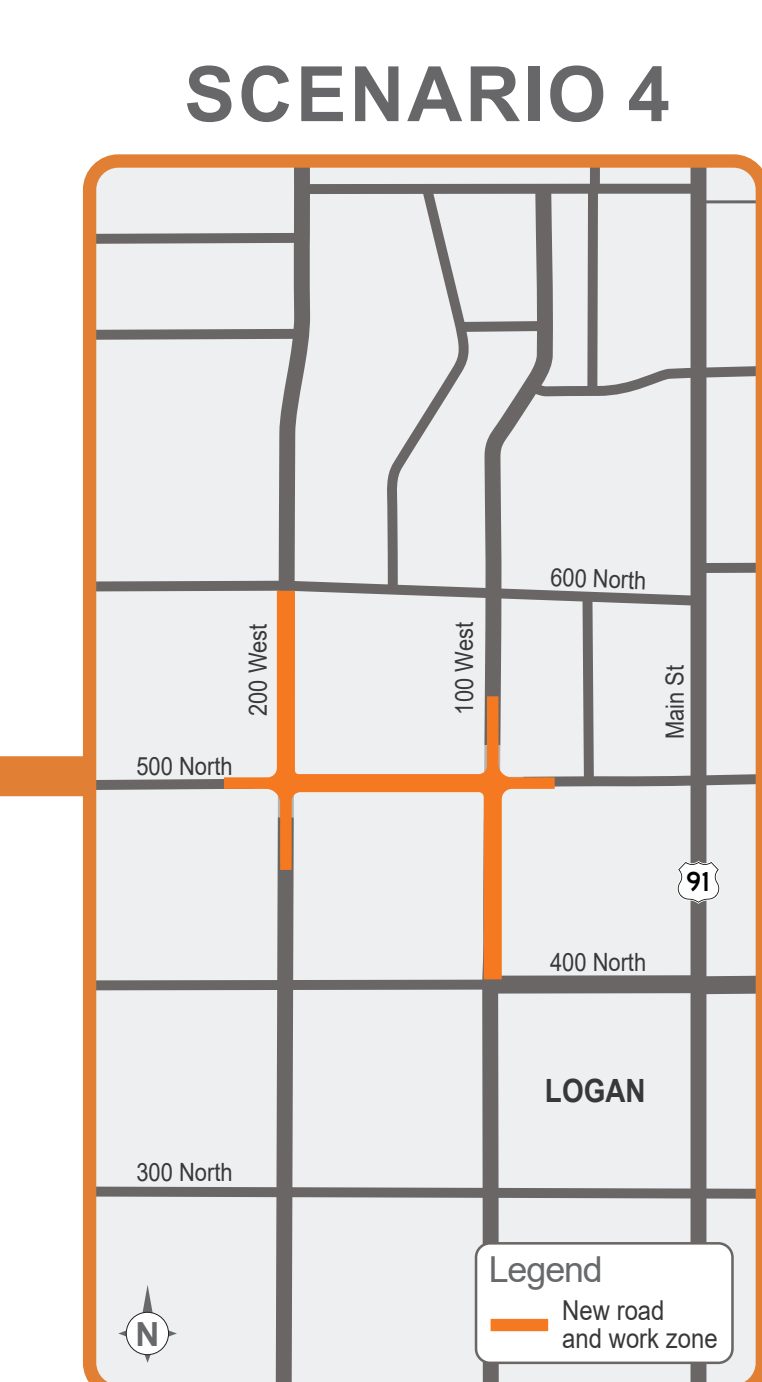
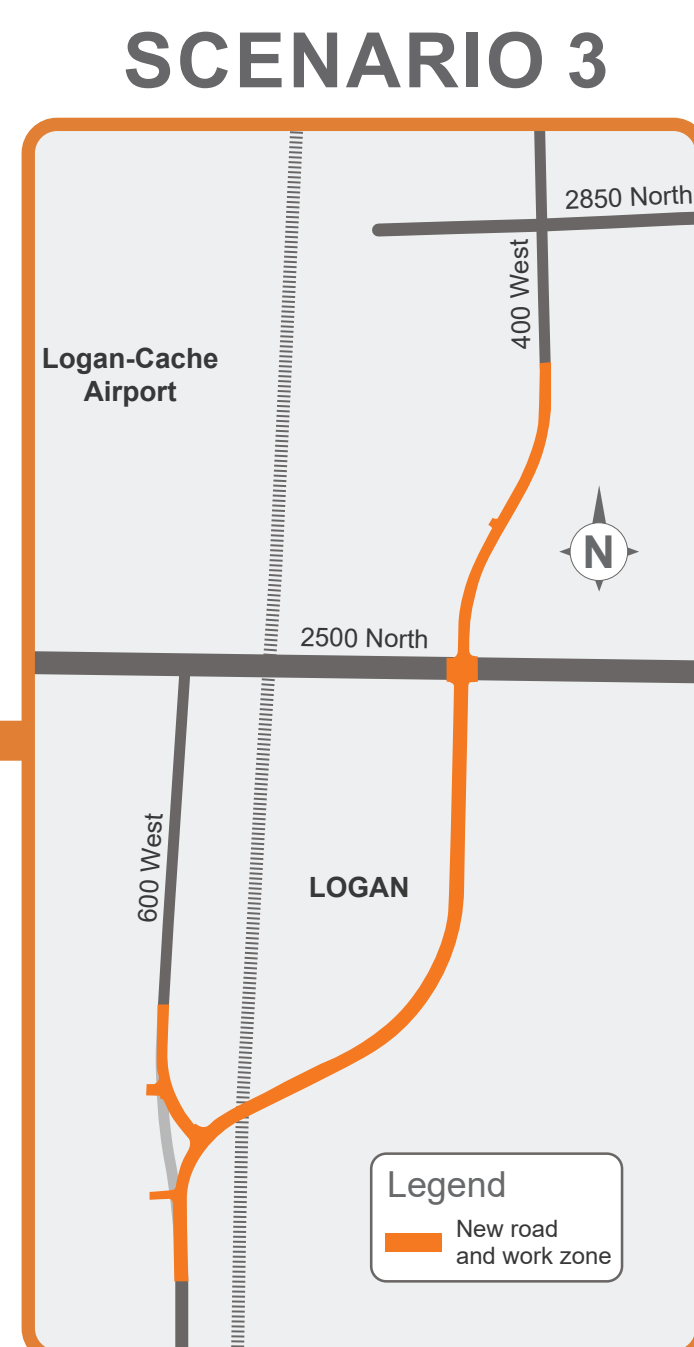
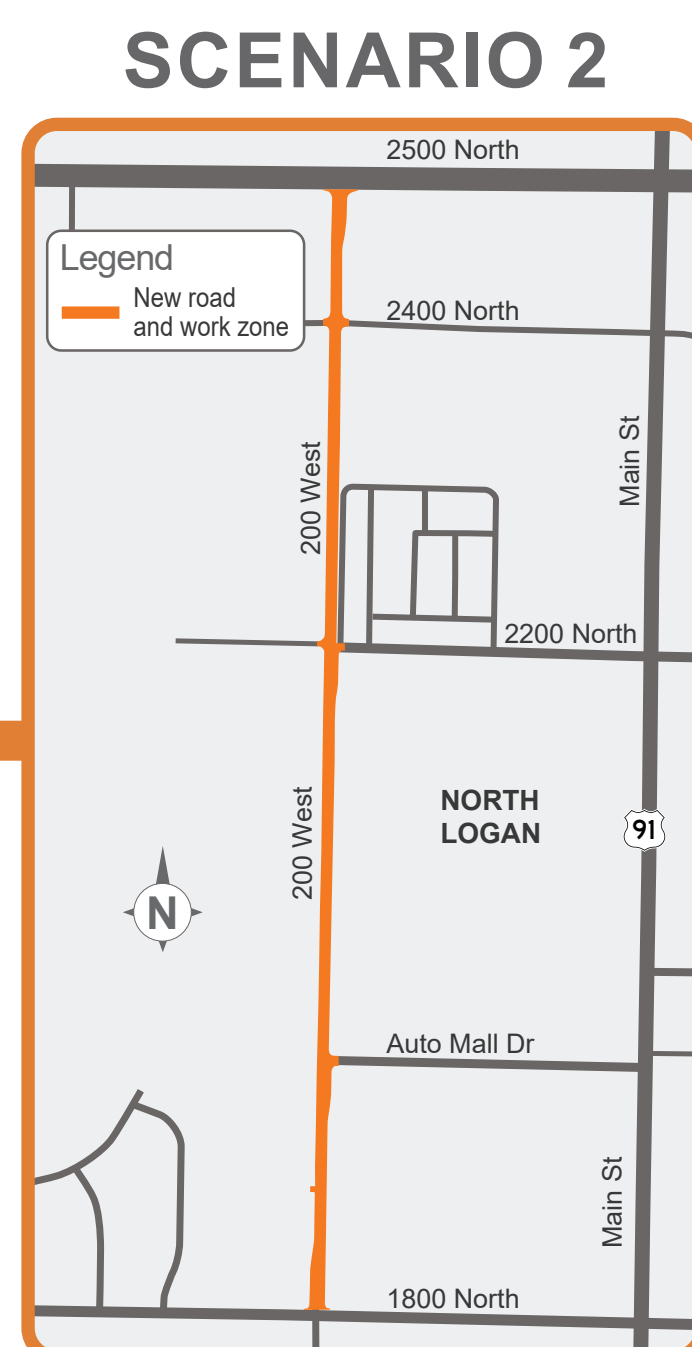
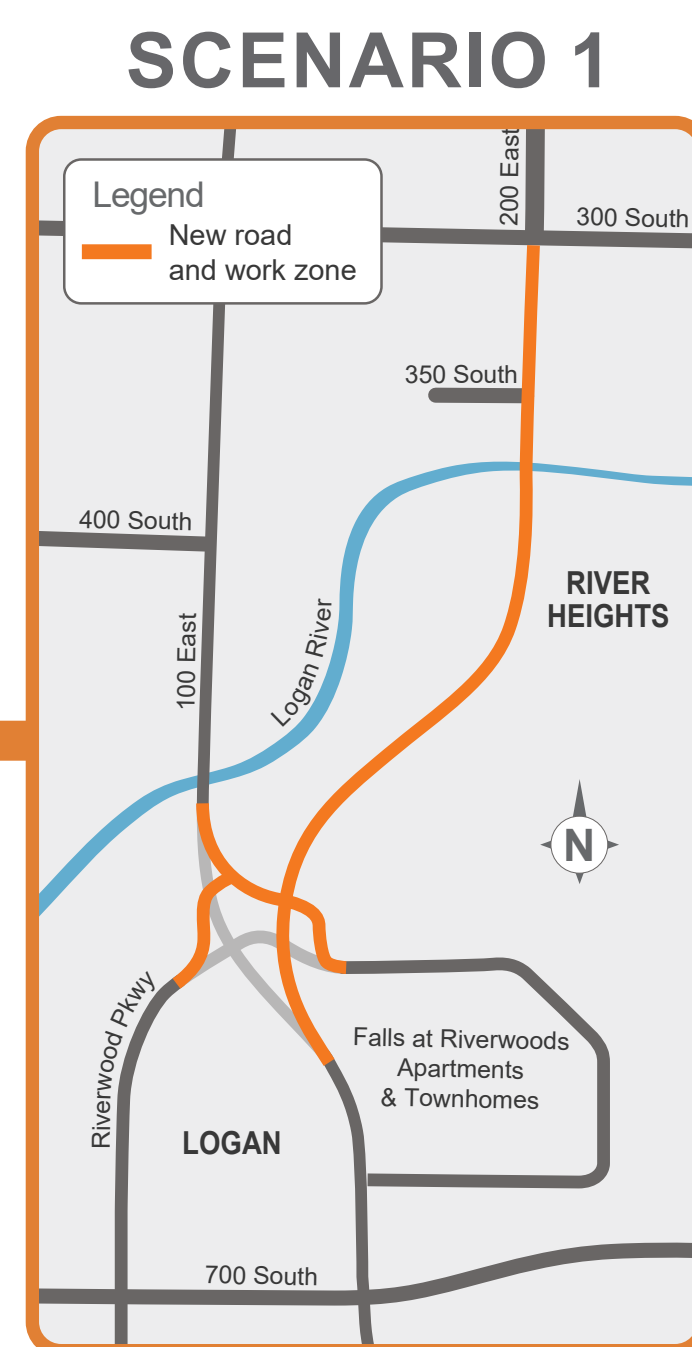
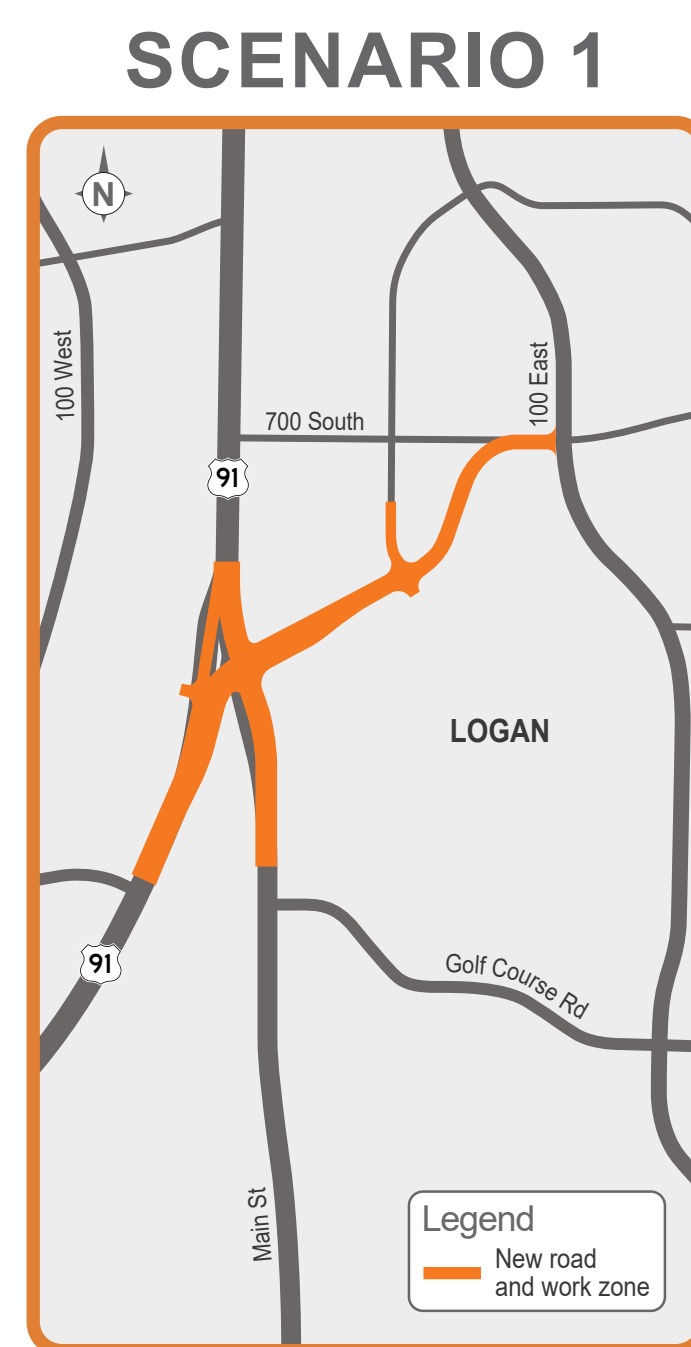
# SCENARIO PERFORMANCE





# RECOMMENDED SCENARIO DEVELOPMENT

The Recommended Scenario combined the best performing projects from all scenarios studied over the past year to develop a group of key projects that prioritize mobility on and connections between north-south corridors, increase network redundancy, and enhance system resiliency.





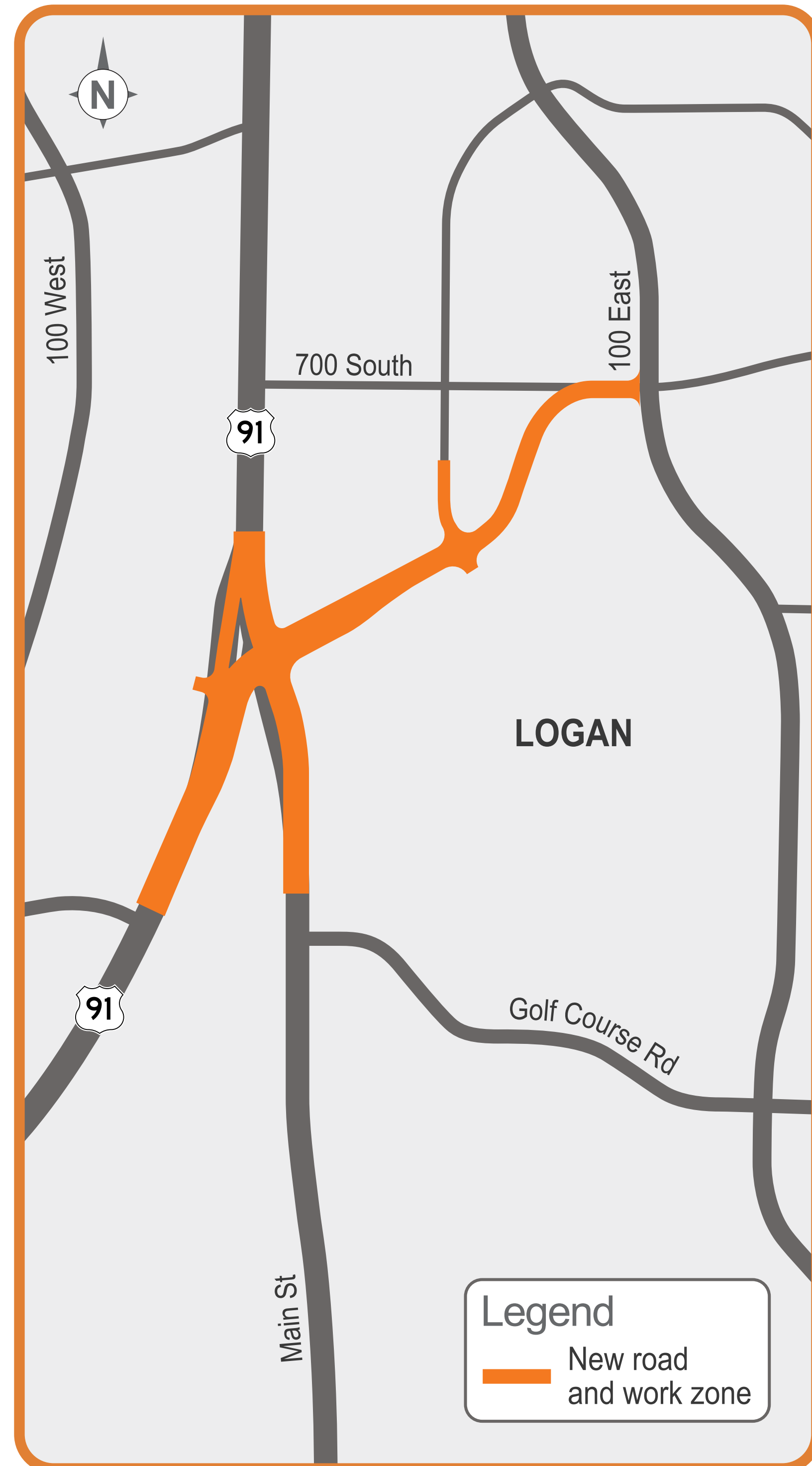
# RECOMMENDED SCENARIO SUMMARY

- 1** US-91 and Main Street: Y-X Concept/100 East to 200 East Connection
- 2** 200 West Extension to 2500 North
- 3** 600 West to 400 West Connection
- 4** 100 West to 200 West Connection
- 5** 600 East Connection: Center Street to 200 North
- 6** 600 North Realignment at Main Street
- 7** US-89/US-91; Logan Main Street 700 South to 1000 North





# US-91 AND MAIN STREET: Y-X CONCEPT/ 100 EAST TO 200 EAST CONNECTION



## SCENARIO 1

This proposed project would extend 200 East south and provide connections to 100 East between 700 South and 300 South. The extension of 200 East is proposed to have one lane in both directions, with a center turn lane.

This proposed project would construct an east-west connecting roadway between Main Street and 100 East in Logan. This connection would tie into the intersection of US-91 and Main Street on the west end and the intersection of 700 South and 100 East on the east end to create a more traditional X-intersection at this location. The new roadway is proposed to be two lanes in both directions, with turn lanes.



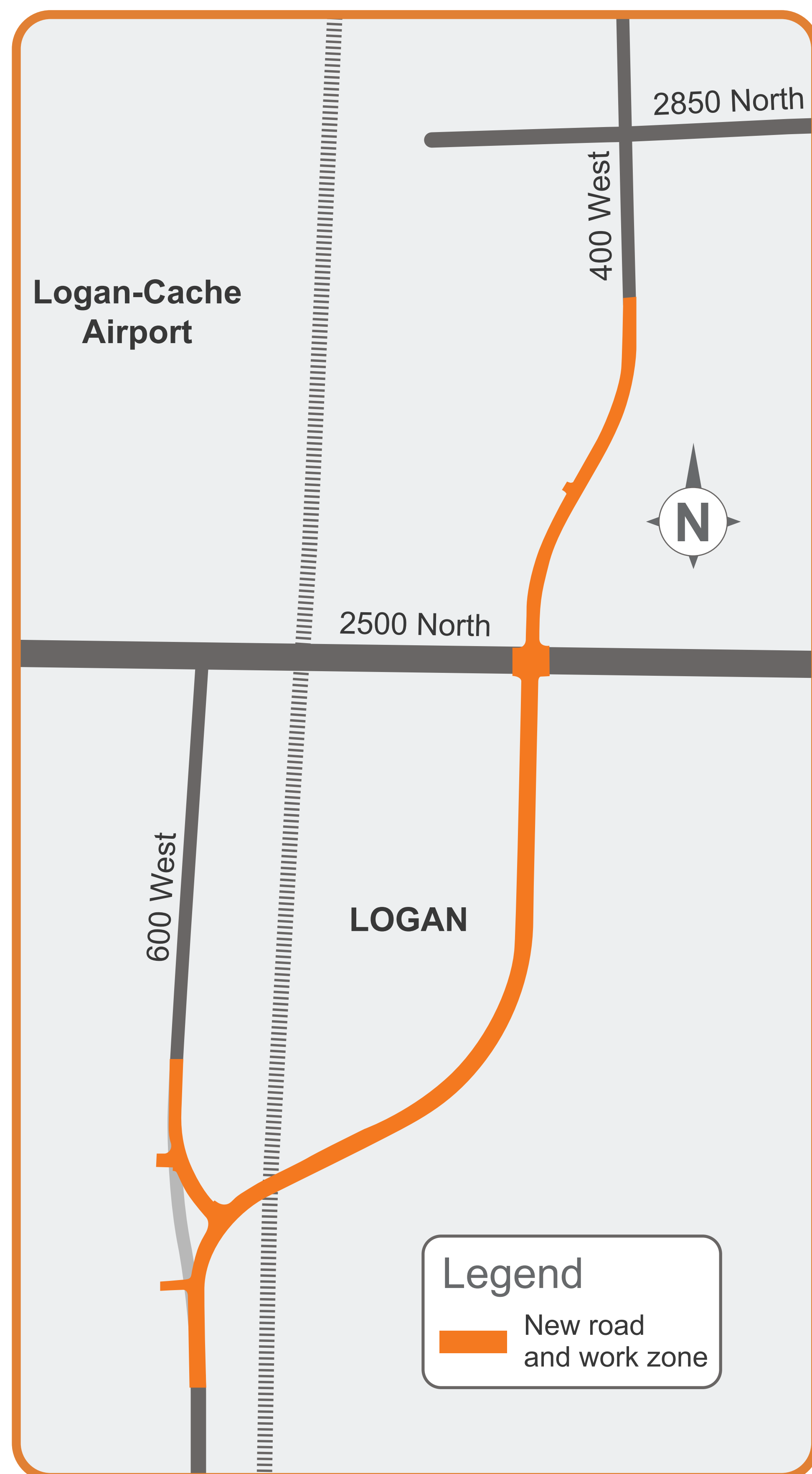


# 200 WEST EXTENSION TO 2500 NORTH

## SCENARIO 2

This proposed project would connect 200 West in Logan from 1800 North to 2200 North and expand the roadway from 2200 North to 2500 North to one lane in both directions, with a center turn lane. Sidewalks would be constructed in residential areas.





# 600 WEST TO 400 WEST CONNECTION

## SCENARIO 3

This proposed project would extend 600 West to 400 West in Logan between 2500 North and approximately 2850 North. This new connection would match the existing lane configuration with one lane in both direction.

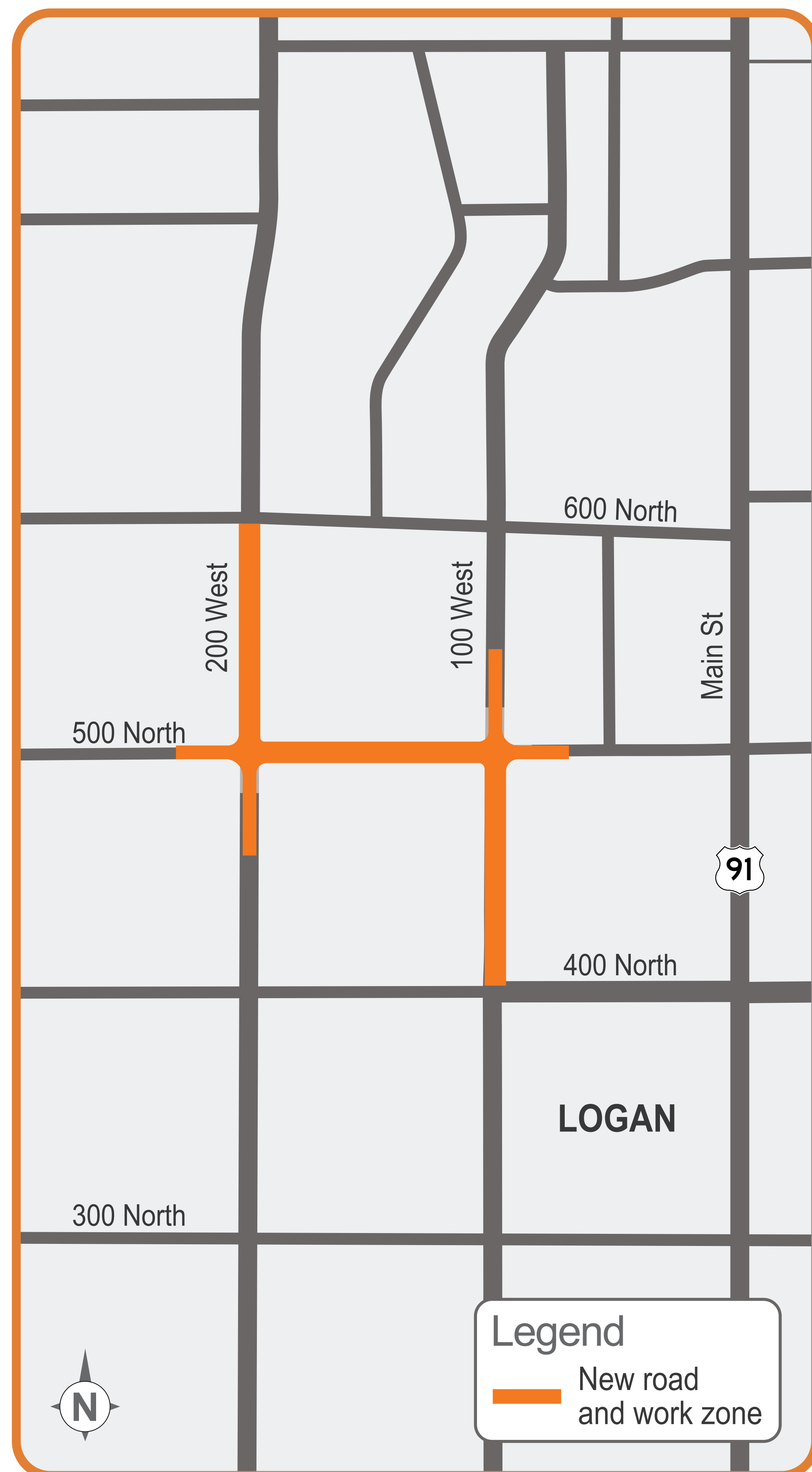


# 100 WEST TO 200 WEST CONNECTION

## SCENARIO 4

This proposed project would construct multi-lane roundabouts on 500 North in Logan at the intersections of 100 West and 200 West. The project would also add an additional lane in both directions on the following streets:

- 200 West between 500 North and 600 North
- 100 West between 400 North and 500 North
- 500 North between 200 West and 100 West





# 600 EAST CONNECTION: CENTER STREET TO 200 NORTH

## SCENARIO 5

This proposed project would construct a new segment of 600 East in Logan to connect Center Street to 200 North. The road would consist of one lane in both directions and would include curb, gutter, and sidewalk.





# 600 NORTH REALIGNMENT AT MAIN STREET

## SCENARIO 6

This proposed project would realign approximately 500 feet of 600 North located west of Main Street in Logan to eliminate the offset between the current intersections to improve traffic flow.







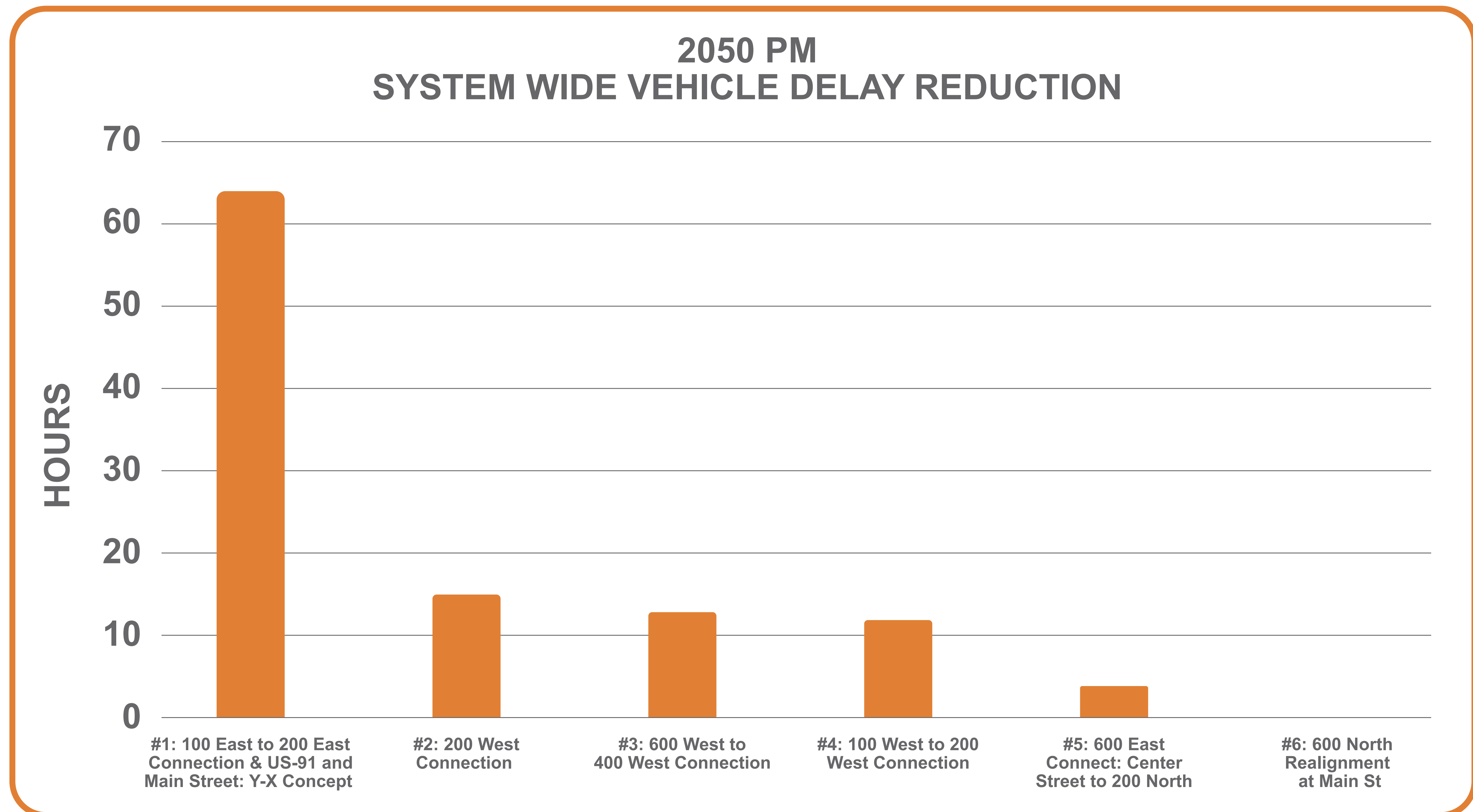
# US-89/US-91; LOGAN MAIN STREET 700 SOUTH TO 1000 NORTH

## SCENARIO 7

This project will reconstruct and upgrade the existing roadway between 700 South and 1000 North to improve mobility for multiple modes of travel, including the modification of several intersections. Specific characteristics of roadway upgrades are yet to be determined.



# RECOMMENDED SCENARIO PROJECT PERFORMANCE





# NEXT STEPS

UDOT will work closely with the Cache Valley Metropolitan Planning Organization and the local municipalities to update the long-range transportation plan for the area and determine ownership for each of the projects identified in the recommended scenario.



# CONTACT INFORMATION

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