

Pioneer Crossing Arterial Study

MAG TAC Meeting – July 31, 2023
MAG Board Meeting – August 3, 2023

Study Overview

Key objectives:

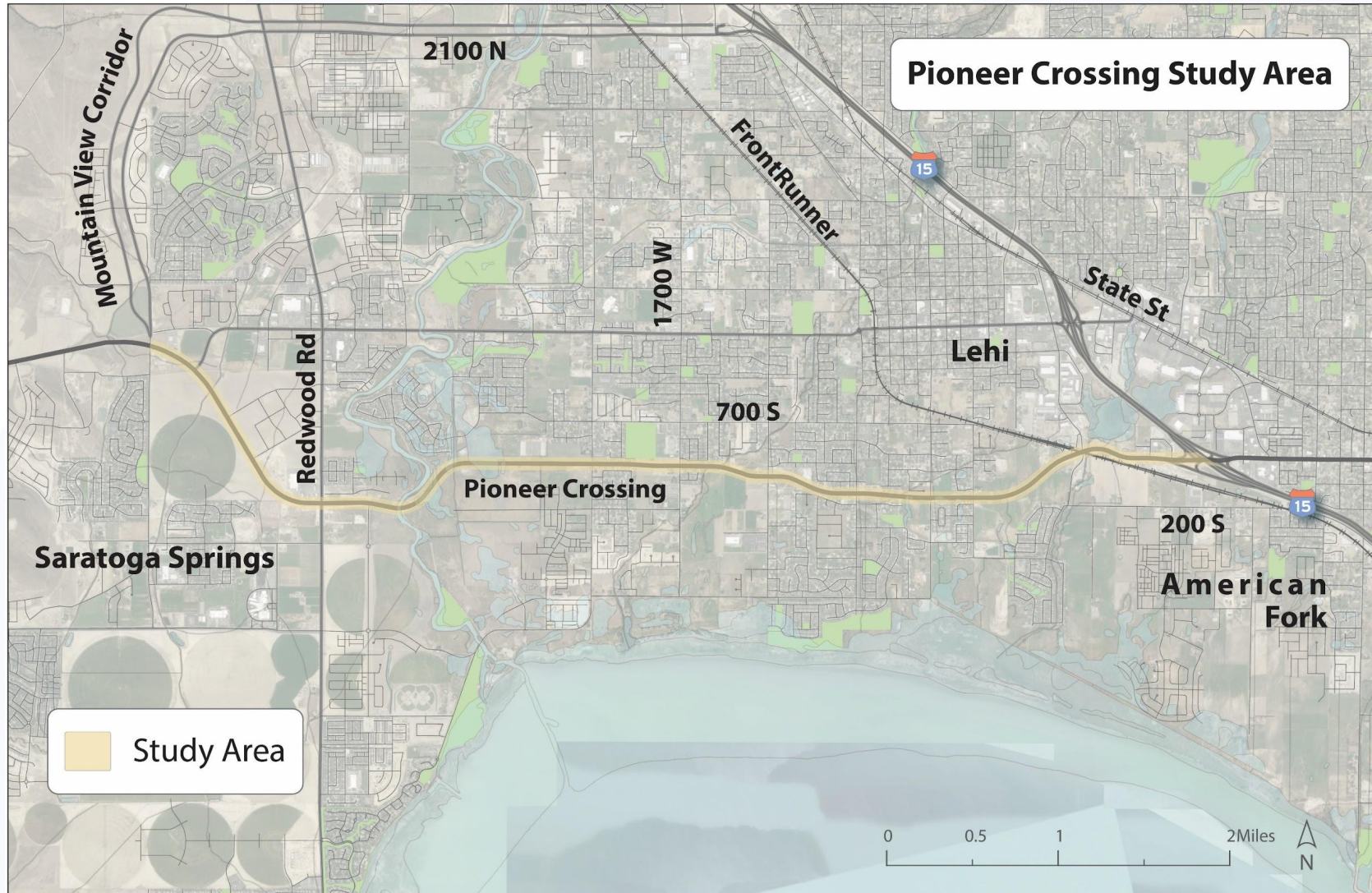
- **Pioneer Crossing** – develop and evaluate scenarios for expansion
- **Meadows Crossing** – develop and evaluate scenarios for crossing I-15 in proximity to Pioneer Crossing



Pioneer Crossing Study is a planning study intended to understand high-level tradeoffs between concepts.

Additional detailed work will continue to occur in future phases of work (environmental study and future phases of design).

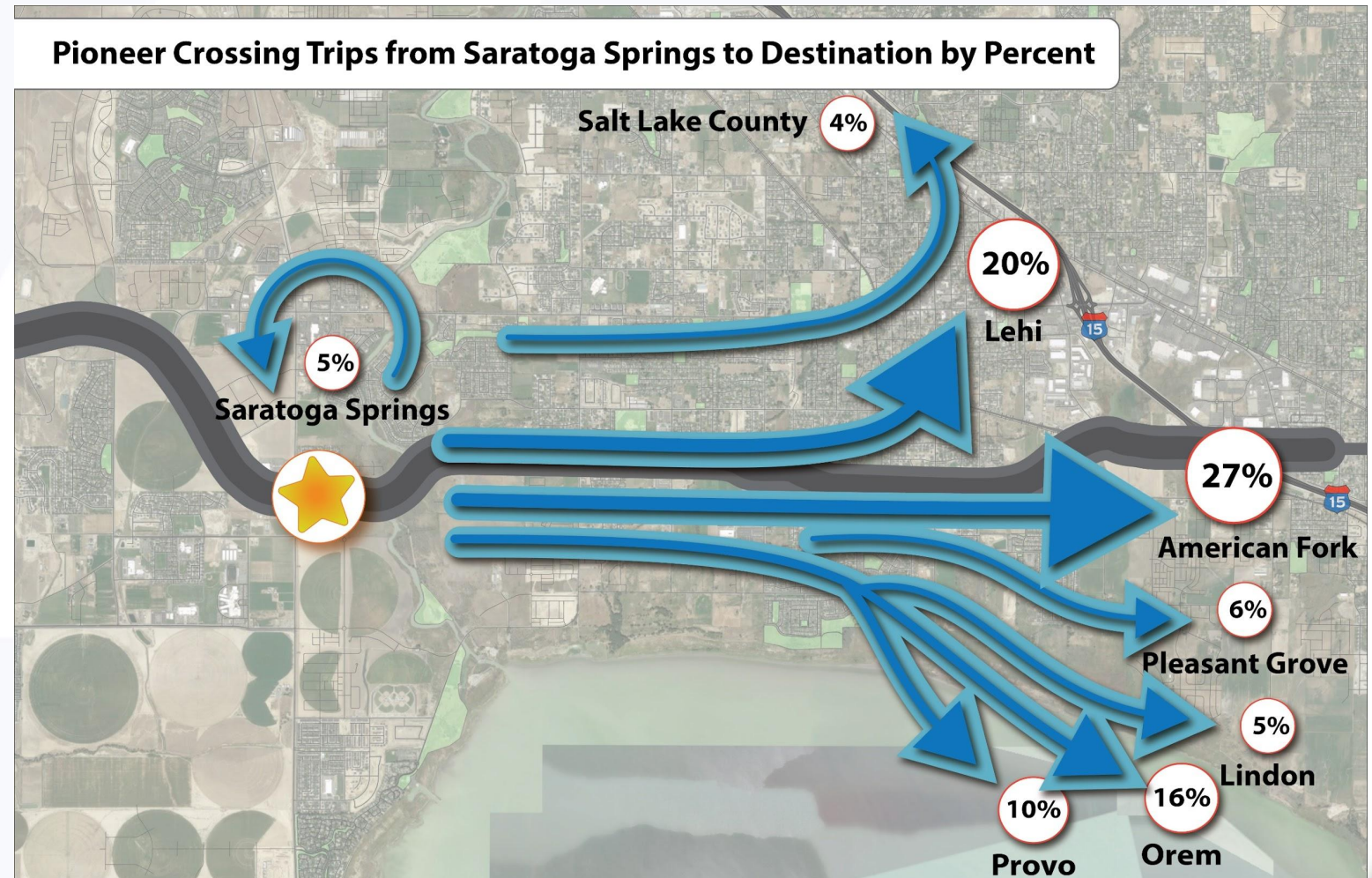
Study Overview



Eastbound Origins/Destinations

Eastbound trips are primarily going to:

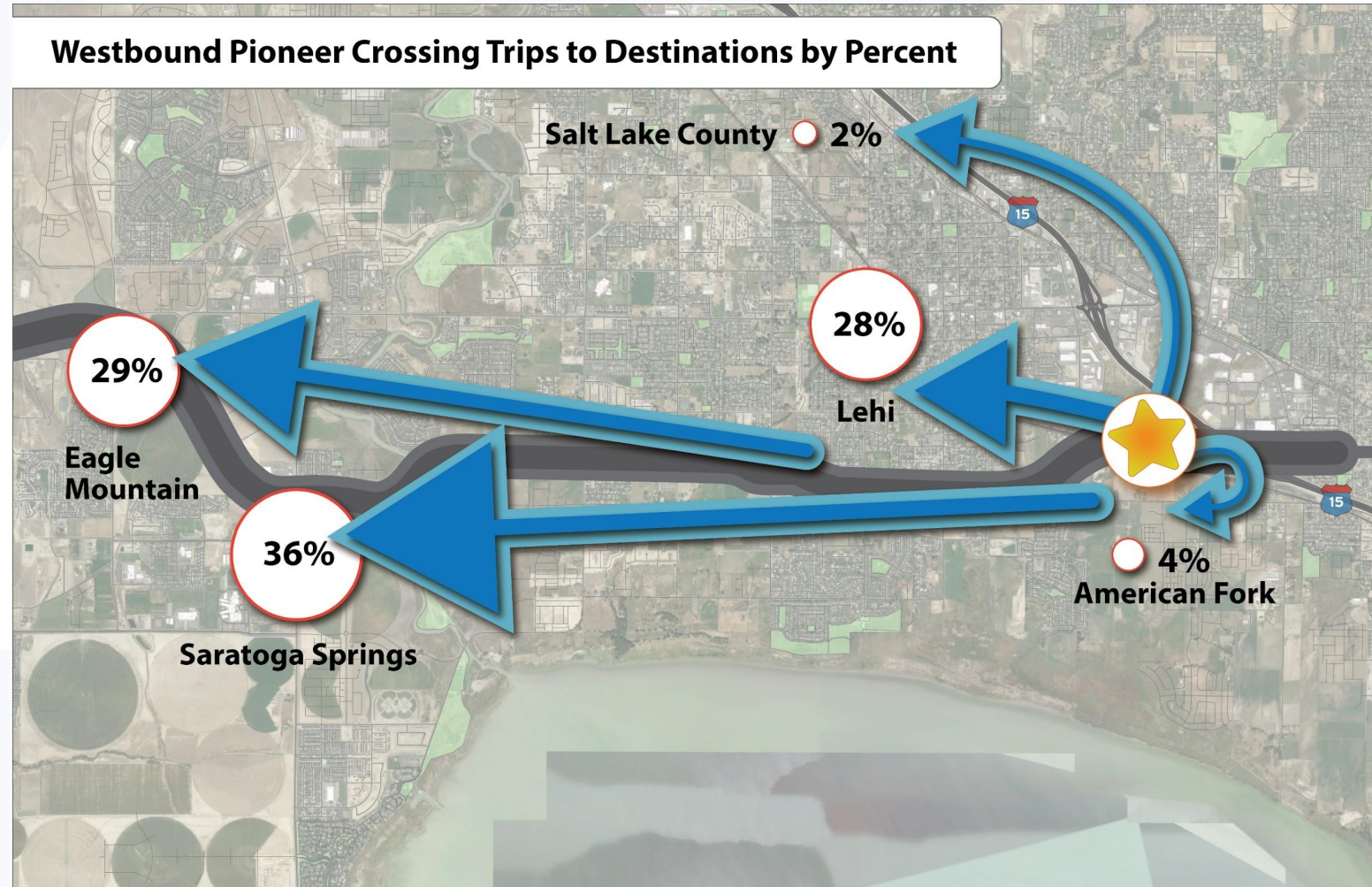
- American Fork (27%)
- Lehi (20%)
- Provo/Orem (26%)



Westbound Origins/Destinations

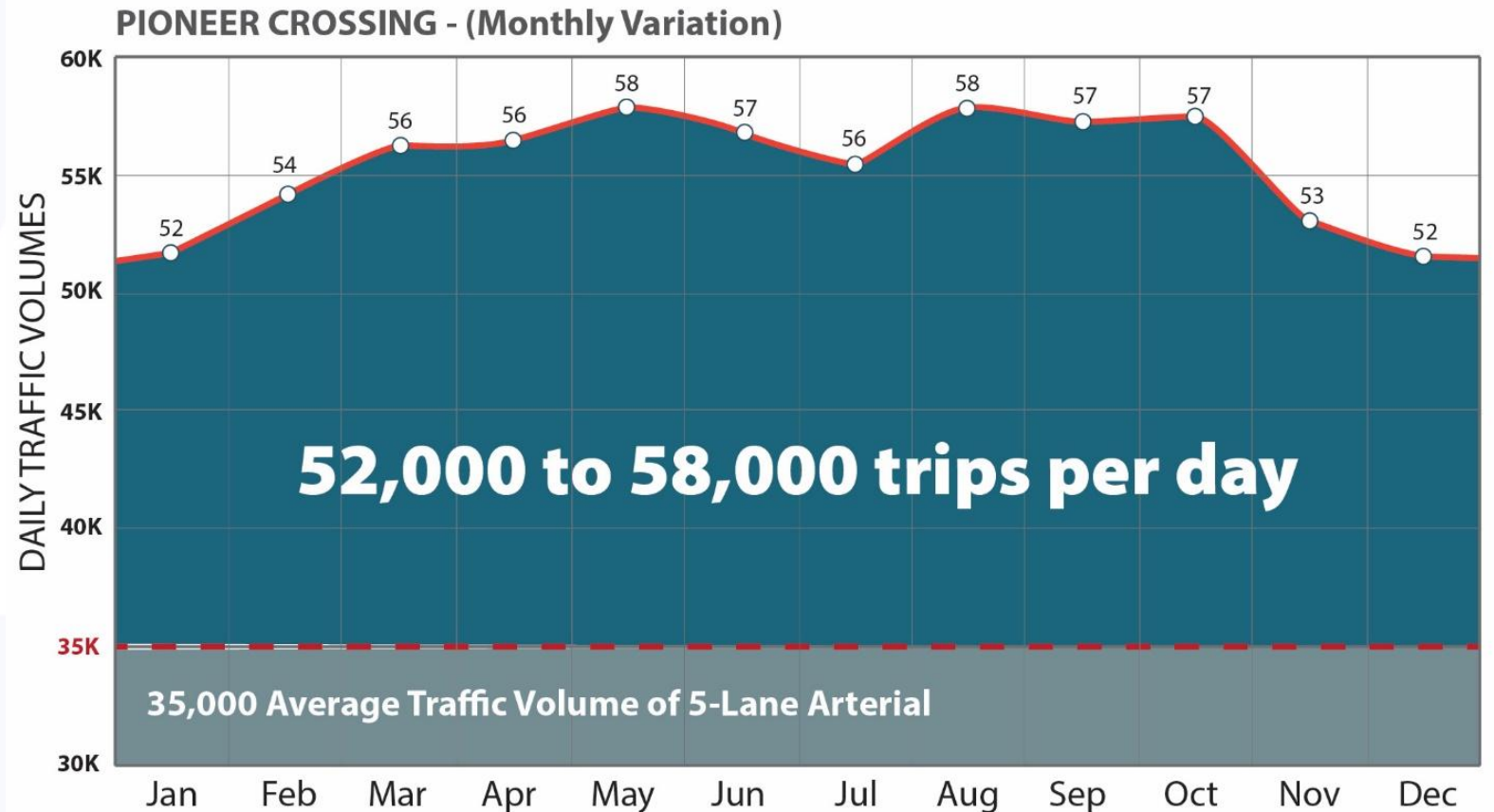
Westbound trips are primarily going to:

- Saratoga Springs (36%)
- Eagle Mountain (29%)
- Lehi (28%)



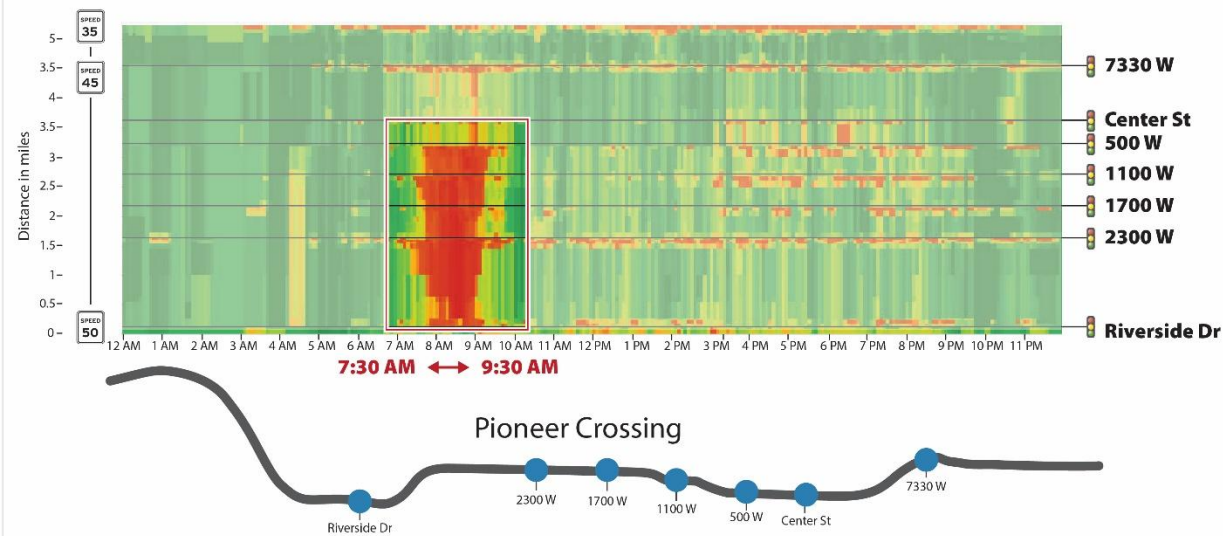
Current Traffic Volumes

Pioneer Crossing is over capacity and experiences high traffic volumes and delay for a 5-lane arterial



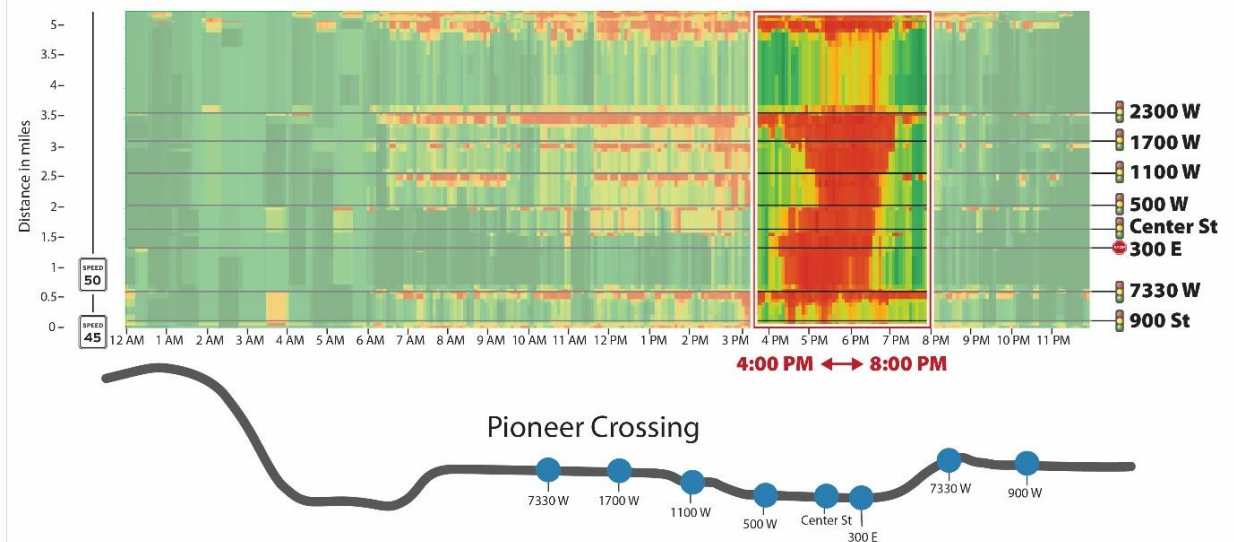
AM/PM Peak Congestion

Morning Eastbound Peak Congestion at Intersections



Heavy AM peak congestion for 2 hours (~7:30-9:30am)

Evening Westbound Peak Congestion at Intersections

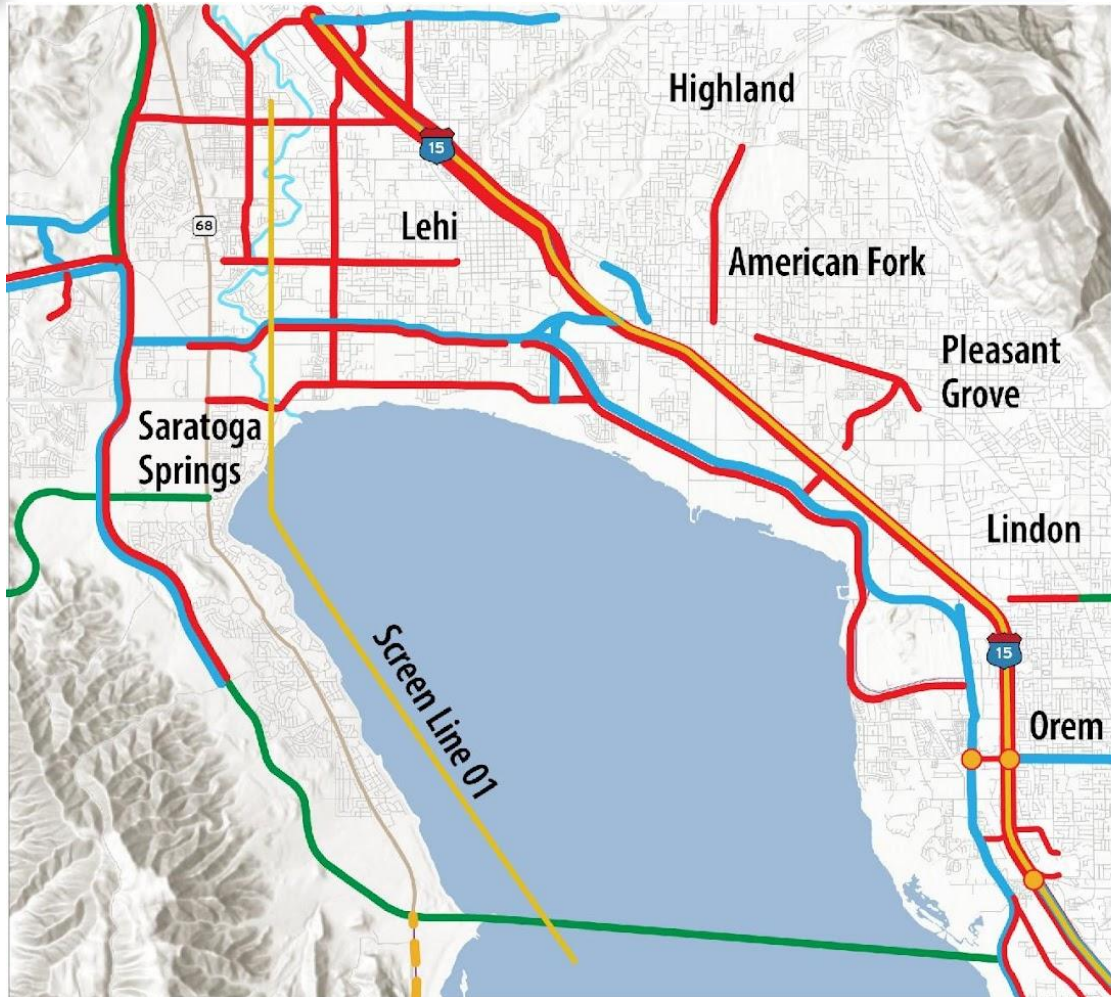


Heavy PM peak congestion for nearly 4 hours (~4:00-8:00pm)

Travel Demand Modeling Overview

- Ran model for a range of concepts to see how it meets travel demand needs
 - 7-lane arterial with traditional intersections – at capacity 2025/2026
 - 7-lane arterial with high-capacity intersections – at capacity 2032/2033
 - 6-lane expressway – at capacity 2043/2044
 - 8-lane expressway – under capacity through 2050
- Even with “best case” modeling, corridor is over capacity by 2050 with almost all concepts, except with the 8-lane expressway

Impacts to Adjacent Facilities



Screen Line 01					
Street	Lanes (Total Travel)	No Build 2050 Daily Volume	7-Lane 2050 Daily Volume	7-Lane High Capacity 2050 Daily Volume	Expressway 2050 Daily Volume
Utah Lake Crossing	6	80,600	79,200	78,600	62,000
Pony Express	4	39,000	34,300	33,600	23,000
Pioneer Crossing	4/6/8	59,500	72,100	74,900	122,000
Main Street	4	27,600	24,800	24,100	19,200
900 North	2	4,500	4,300	4,200	4,400
1500 North	2	8,400	8,000	7,900	7,500
2100 North	2	156,700	153,100	152,600	140,000
Total Volume	4	376,300	375,800	375,900	378,100

Even with best case scenario modeling, adjacent facilities are near, at, or over capacity even with arterial widening of Pioneer Crossing

Pioneer Crossing Goals

- **Increase vehicular capacity and improve traffic operations** to meet existing and future travel demand needs along Pioneer Crossing
- **Enhance north-south vehicular connectivity** across Pioneer Crossing
- **Facilitate north-south pedestrian/bicycle connections** across Pioneer Crossing and provide connections to regional facilities
- **Improve safety** along Pioneer Crossing
- **Consider future transit corridor preservation** needs and potential for operational enhancements
- **Minimize impacts** to properties, neighborhoods (cut-through traffic), and environmental resources

Pioneer Crossing Concept Evaluation

- Ability to meet existing and future travel demands
- Travel times
- North-south corridors traffic operations
- Impacts to property
- Impacts to resources
- Neighborhood connectivity
- Potential for facilitating active transportation connections
- Potential forward-compatibility with transit
- Cost

Concepts:

- No-Build
- 7-lane arterial with traditional intersections
- 7-lane arterial with high-capacity intersections
- 6-lane expressway
- 8-lane expressway

Pioneer Crossing Next Steps

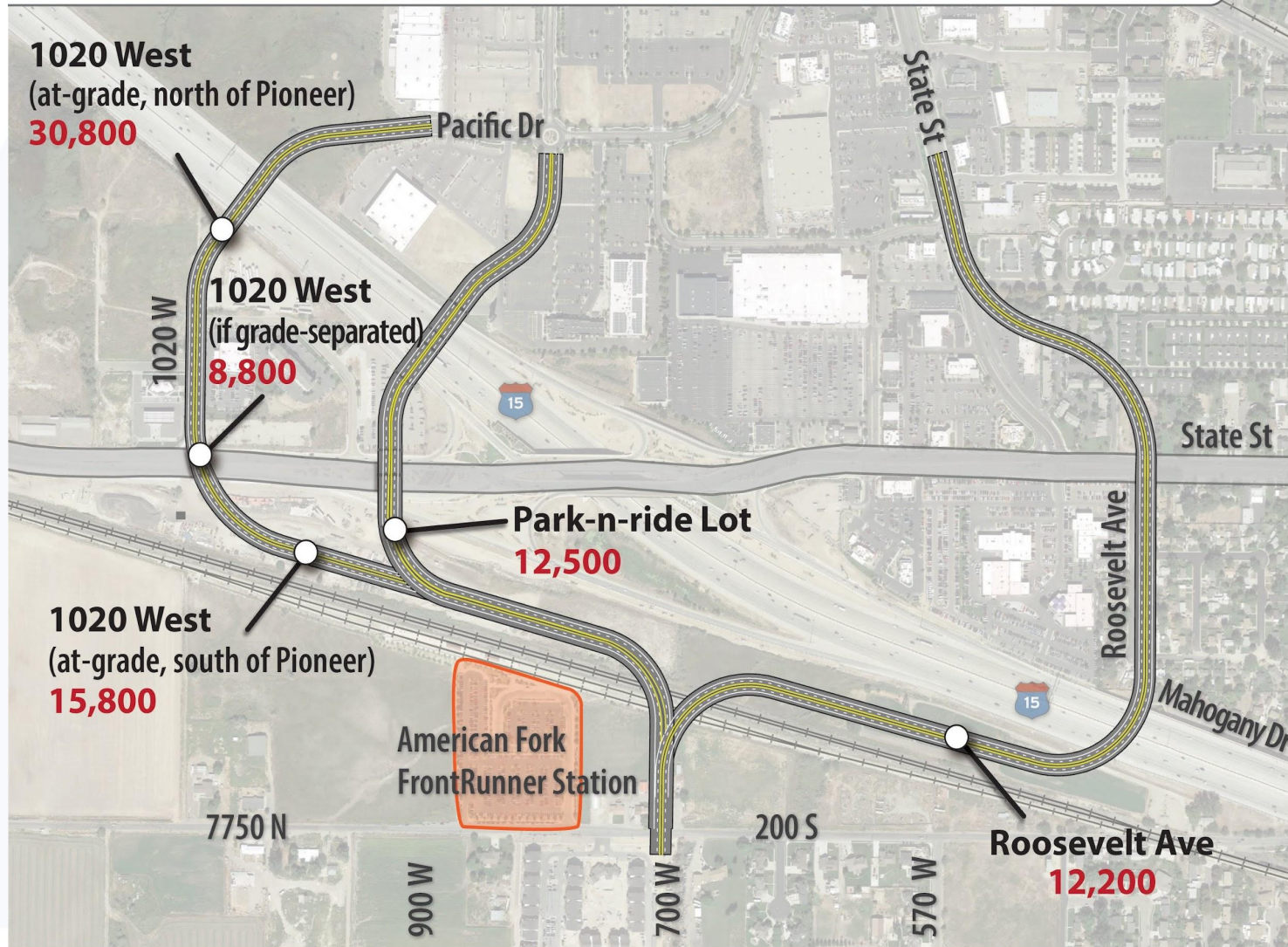
- Analysis of potential re-striping and/or signal timing options – ongoing
- Concept evaluation finalized/meet with cities – August
- Conclude study – September
- Advance concepts into environmental study (unfunded)

Meadows Crossing Goals

- **Improve mobility** between American Fork FrontRunner Station and transit-oriented development and core areas of commercial retail and denser housing on the east side of I-15
- **Improve safety** for non-motorized access to American Fork FrontRunner Station
- **Meet local and regional demands** by relieving traffic at I-15/ Pioneer Crossing interchange, I-15/Lehi Main Street interchange, and local demands in American Fork along State Street and Pacific Drive
- **Facilitate a connection** between American Fork FrontRunner Station with existing transit and future high-capacity transit facilities

Meadows Crossing Concepts - Volumes

Meadows Crossing Concepts Daily Traffic Volumes - 45 mph Design Speed



Meadows Crossing - Next Steps

- Advance concepts into environmental study (unfunded)