MAGIC VALLEY

ORIGIN-DESTINATION STUDY

Presentation to Stakeholders

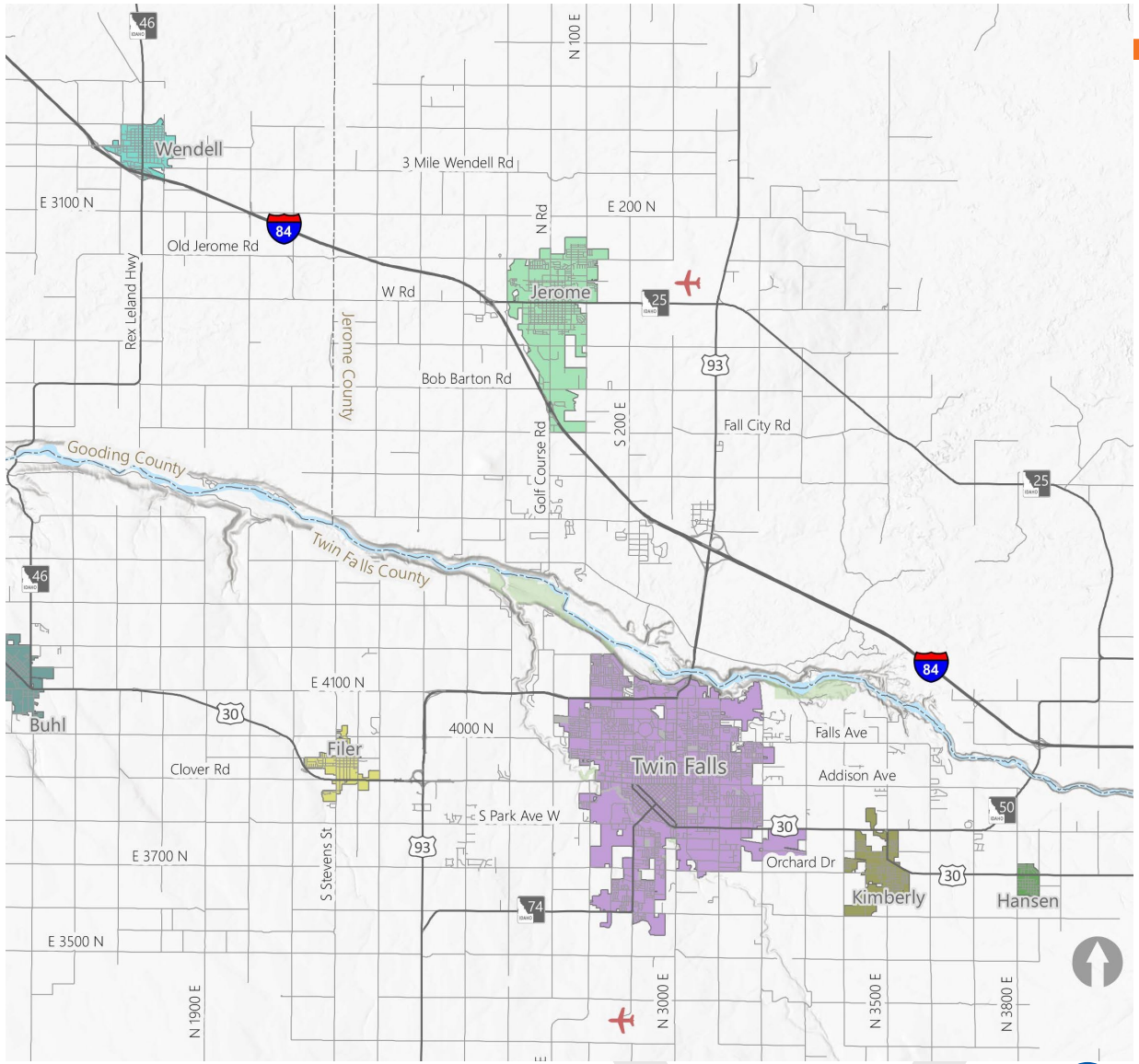
November 10, 2020

AGENDA

- Introductions
- Study Background
- Existing Conditions (Year 2020)
- Future Conditions (Year 2040)
- Origin-Destination Analysis & Findings
- River Crossing Options, Analysis & Findings
- Next Steps

STUDY PURPOSE AND STUDY AREA

- Understand trip generation and origin-destination (OD) characteristics within the study area
- Identify possible river crossing locations and opportunities to expand existing crossings
- Assess the effects that a new river crossing or an expanded existing crossing would have on regional traffic and freight patterns
- Work with Idaho Transportation Department (ITD) and partnering agencies to collaborate on river crossing strategies
- This study focuses on the traffic components of a new river crossing – *a potential next step could be an environmental study.*



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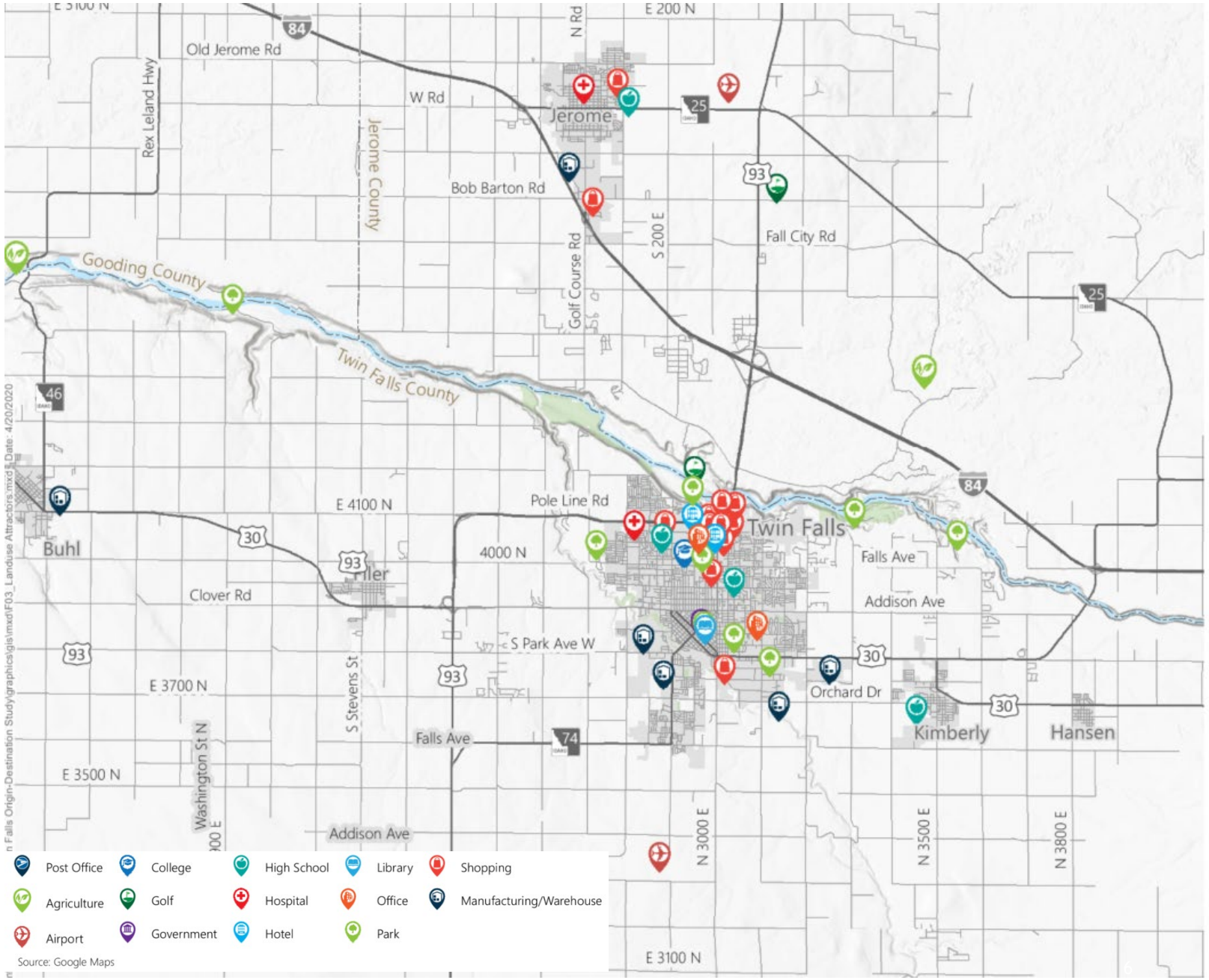
STUDY SCHEDULE

EXISTING CONDITIONS (YEAR 2020)

LAND USE

- High concentration of commercial uses
  - At Pole Line Rd/Blue Lakes Blvd intersection
  - Along Blue Lakes Blvd
- Industrial and food processing facilities on southern edge between Twin Falls and Kimberly



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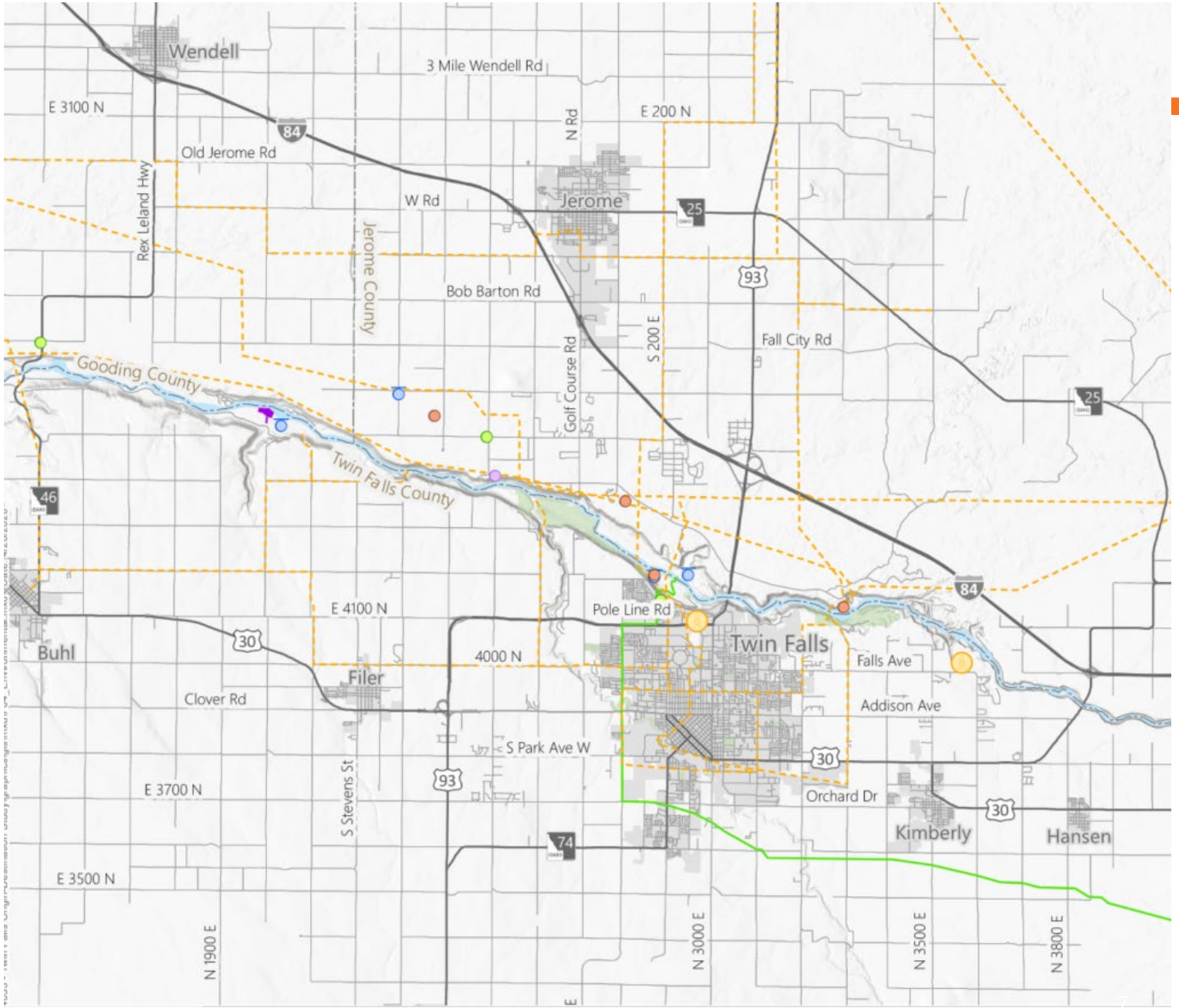
ENVIRONMENTAL CONSIDERATIONS

- Transmission Tower
- General Remediation
- Hazardous Site
- Solid Waste
- Underground Storage Tanks
- Power Line
- Gas Line
- Managed Land



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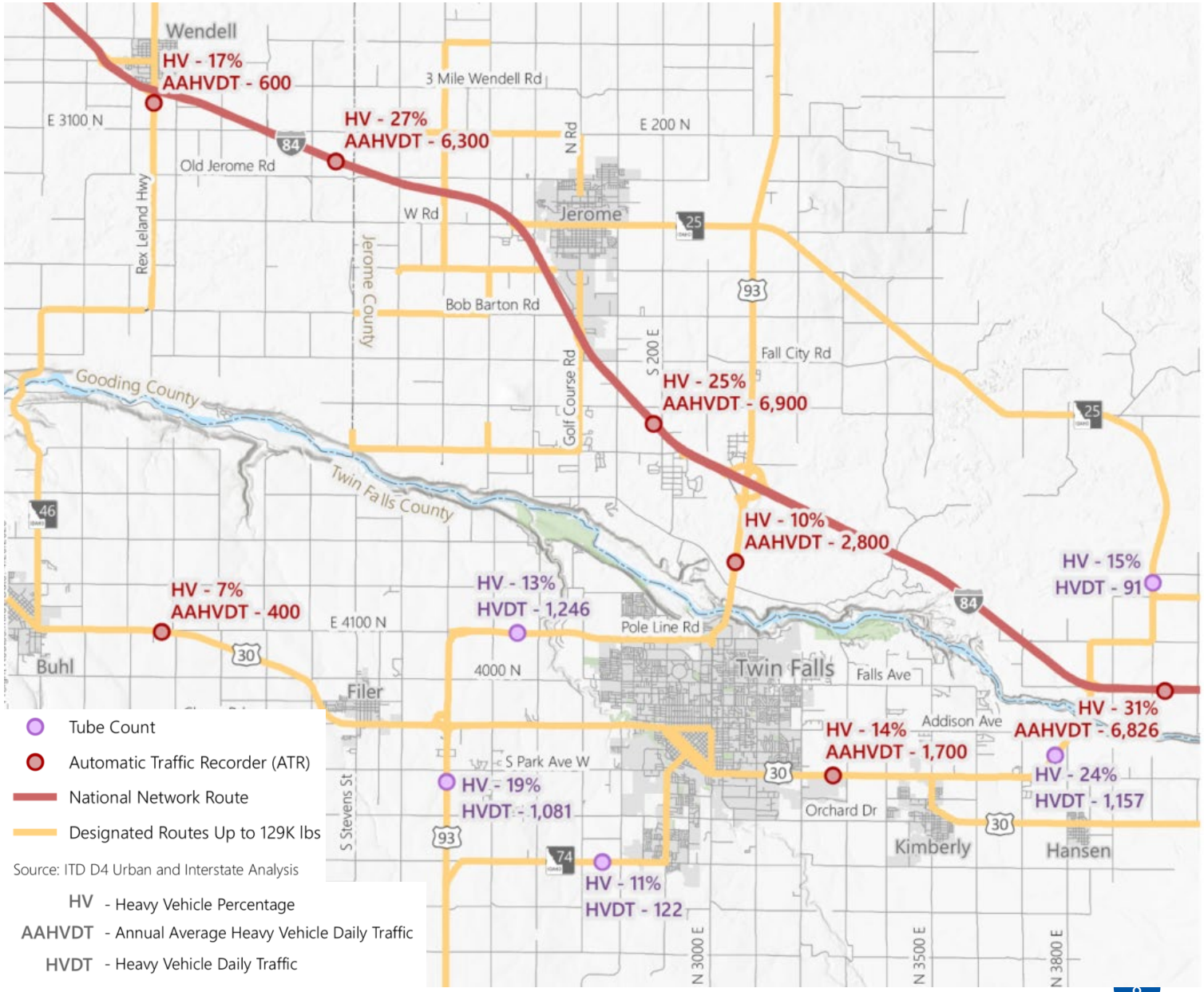
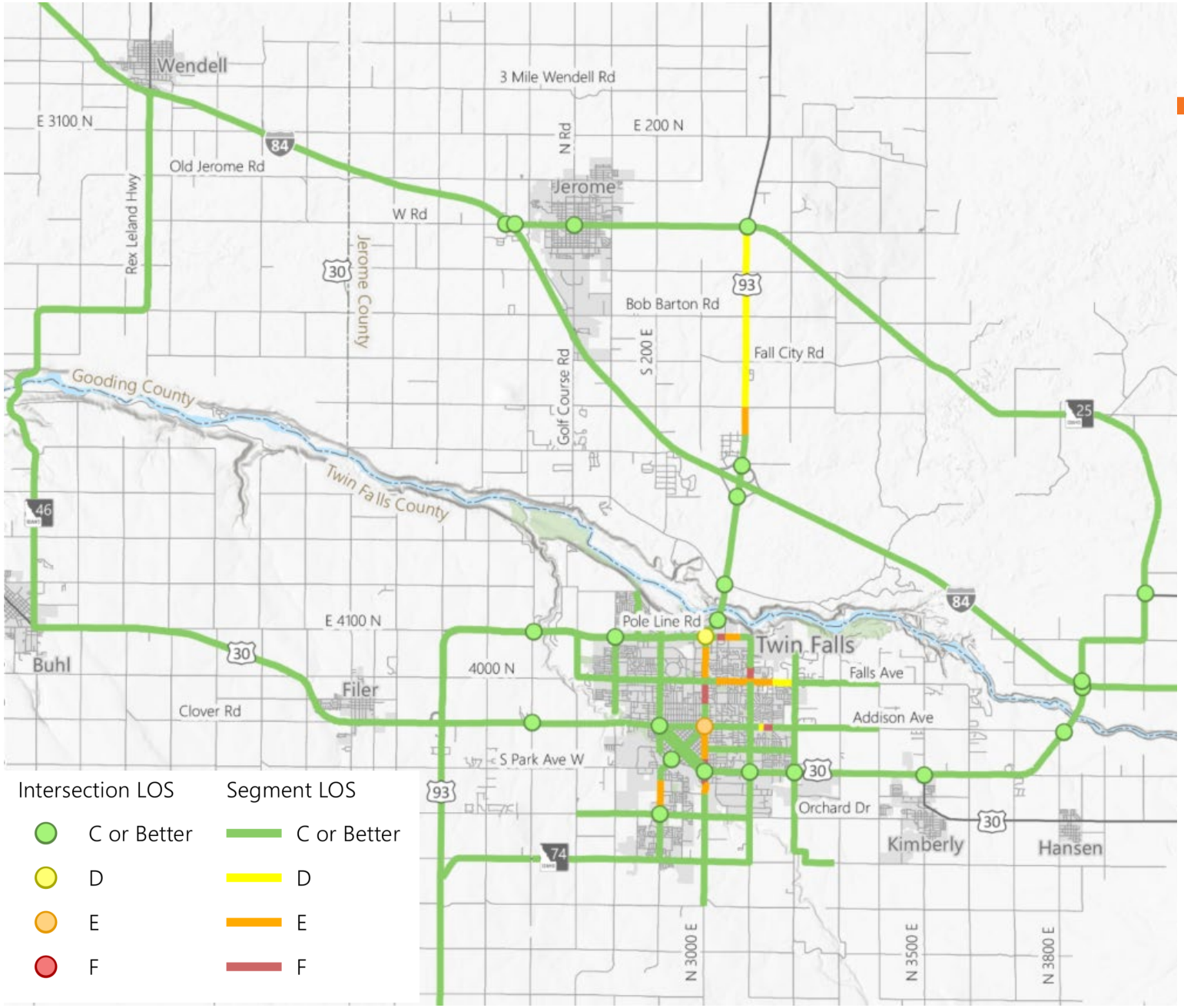
FREIGHT CONSIDERATIONS

- Heavy vehicles comprise at least 10% of total traffic on most major roadways.
- River crossings have 4,600 heavy vehicle trips per day.
  - US 93 – 2,800 (61%)
  - SH 50 – 1,200 (26%)
  - SR 46 – 600 (13%)



EXISTING TRAFFIC OPERATIONS (2020)

- Majority of roadways and intersections operate at level-of-service (LOS) C or better during the PM peak hour.
- Intersections that operate at LOS D or worse include:
  - Blue Lakes Blvd/Pole Line Rd
  - Blue Lakes Blvd/Addison Ave



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FUTURE CONDITIONS (YEAR 2040)

YEAR 2040 GROWTH

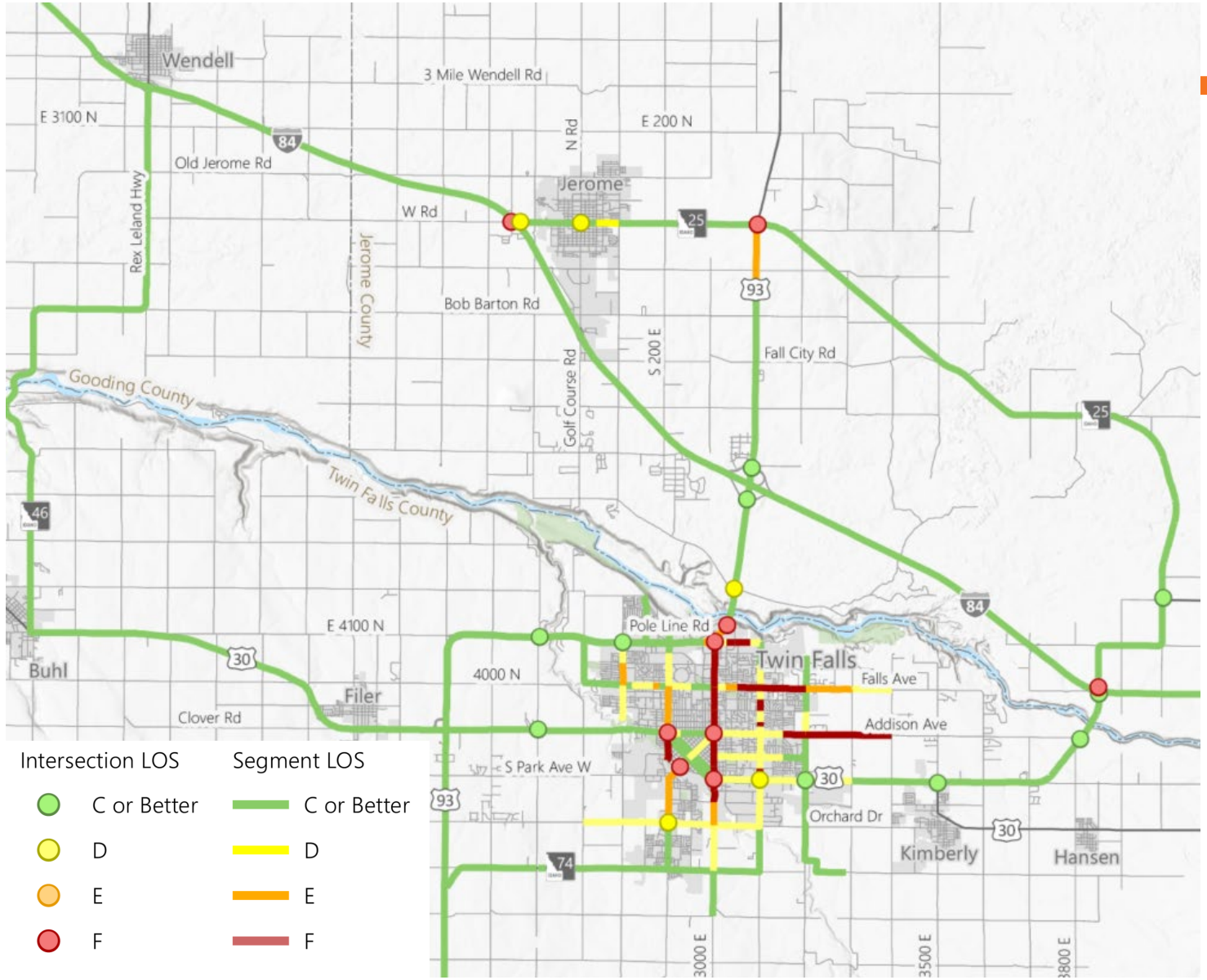
- Future year 2040 conditions were established using growth rates ranging from 1.4% to 3.3% per year and information from the statewide travel demand model.

Table 2 Operations Analysis Methodology and Source List

Facility Type	How Were Year 2040 Volumes Developed?	Growth Rate	Source
Interstate Segments	Growth Rate	2.5%	*ITD District 4 Interstate Operational Analysis*
Highway Segments	Growth Rate	1.4% - 3.3%	*ITD District 4 Urban Highways Analysis*
Roadway Segments in Twin Falls (Non-Highway)	Travel Demand Model Volumes	*Not Applicable*	City of Twin Falls Travel Demand Model
Roadway Segments Outside of Twin Falls (Non-Highway)	Growth Rate	1.9%	ITD ATR Data

YEAR 2040 TRAFFIC OPERATIONS

- Several roadways and intersections in Twin Falls are expected to operate at LOS F during the PM peak hour in year 2040 traffic conditions.
  - Blue Lakes Blvd/Pole Line Rd
  - Blue Lakes Blvd/Addison Ave
  - Washington St/Addison Ave
  - Shoshone St/Minidoka Ave
  - Blue Lakes Blvd/Kimberly Rd
  - Blue Lakes Blvd (Snake River to Kimberly Rd)
  - Falls Ave (Blue Lakes Blvd to Hankins Rd)
  - Washington St (South of Addison Ave)
  - Addison Ave (Hankins Rd to N 3400 E
  - Pole Line Rd (East of US 93)
- Most roadway segments outside of Twin Falls are expected to operate at LOS C or better in year 2040.



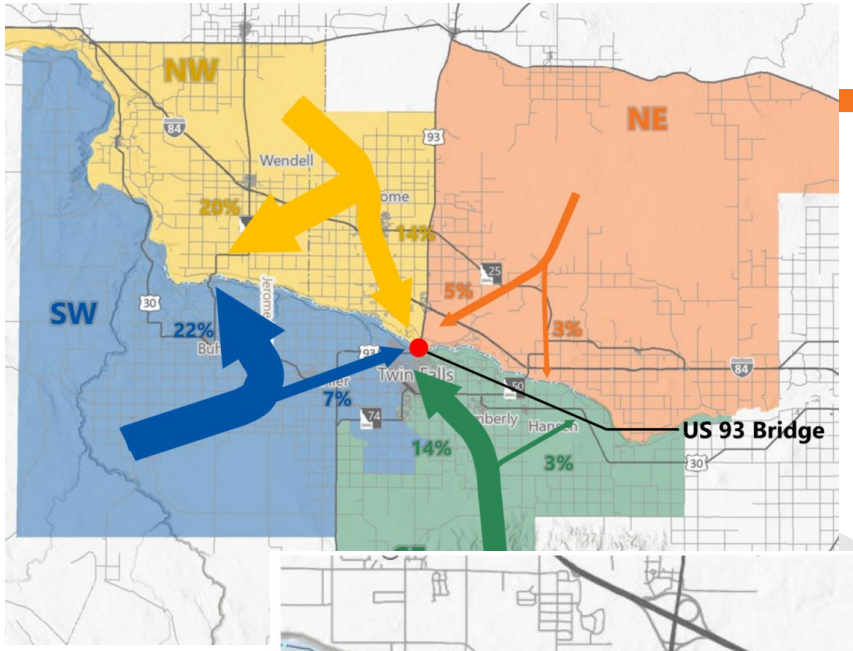
RIVER CROSSING CHARACTERISTICS

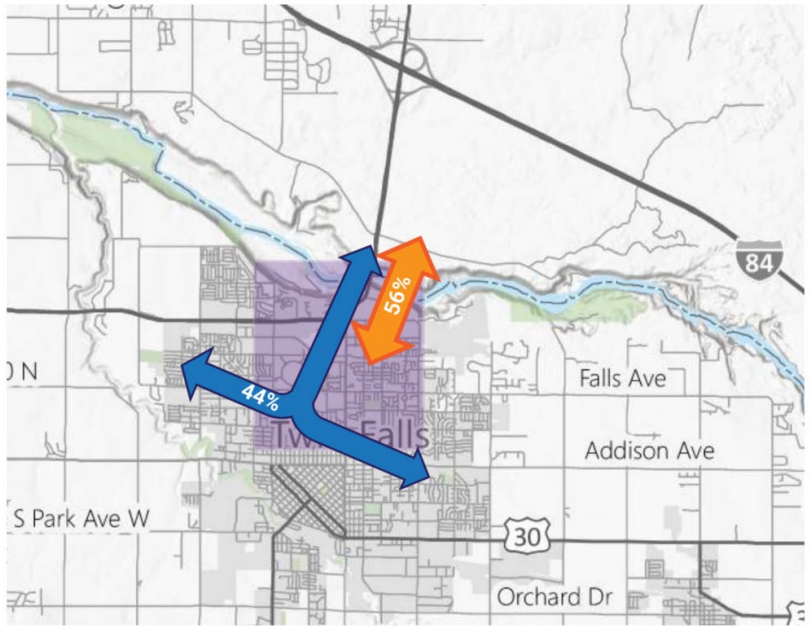
	All Crossings	SR 46 Crossing	US 93 Crossing	SH 50 Crossing
# of Travel Lanes		2	4	2
Posted Speed (mph)		50	50	65
Year 2020 Daily Vehicle Trips	44,700	3,400 (8%)	32,800 (73%)	8,500 (19%)
Year 2020 Roadway Segment LOS		LOS C or better	LOS C or better	LOS C or better
Year 2020 Adjacent Intersection LOS (North of/South of)		C or better/C or better	C or Better/ D	C or better / C or better
Year 2020 Daily Heavy Vehicle Trips	4,600	600 (13%)	2,800 (61%)	1,200 (26%)
Year 2040 Adjacent Intersection LOS (North of/South of)		C or better / C or better	D / F	C or better / C or better
Year 2040 Daily Vehicle Trips	61,900	4,900 (8%)	44,100 (71%)	12,900 (21%)
Year 2040 Roadway Segment LOS		LOS C or better	LOS C or better	LOS C or better

ORIGIN-DESTINATION ANALYSIS & FINDINGS

ORIGIN-DESTINATION ANALYSIS

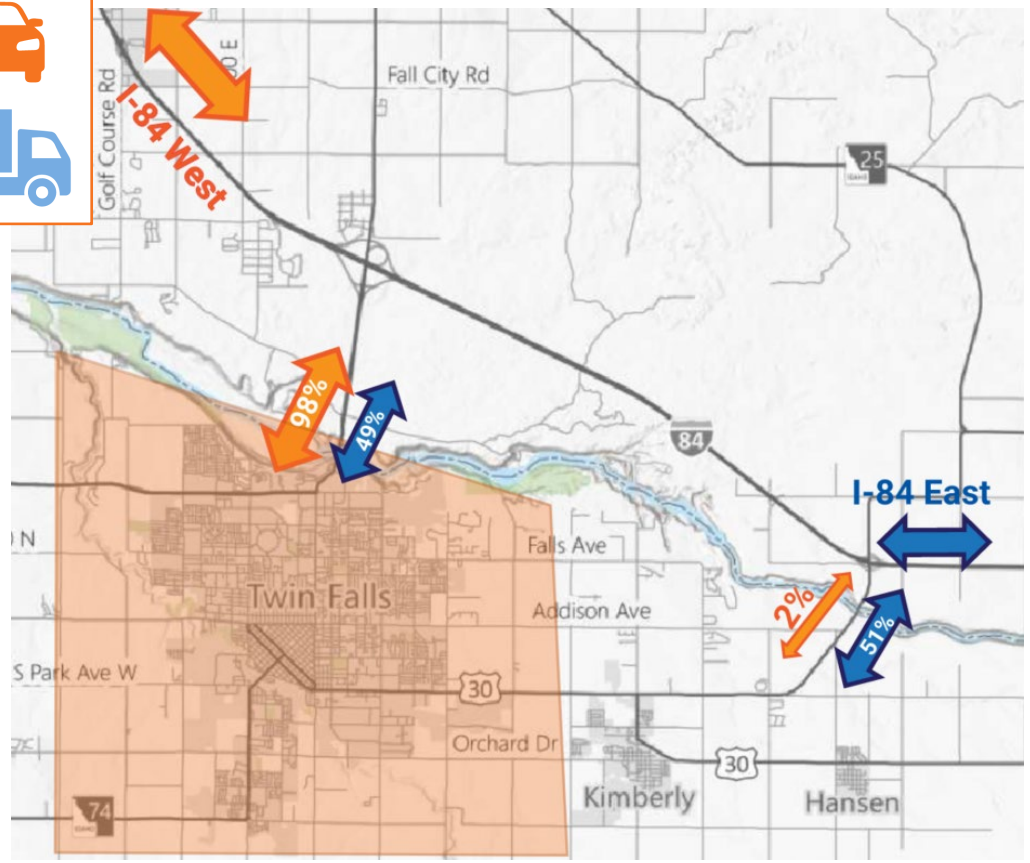
- StreetLight Data was used to understand trip characteristics and travel patterns.
- StreetLight Data sources OD data from Location-Based Services (LBS) and Global Positioning Systems (GPS)



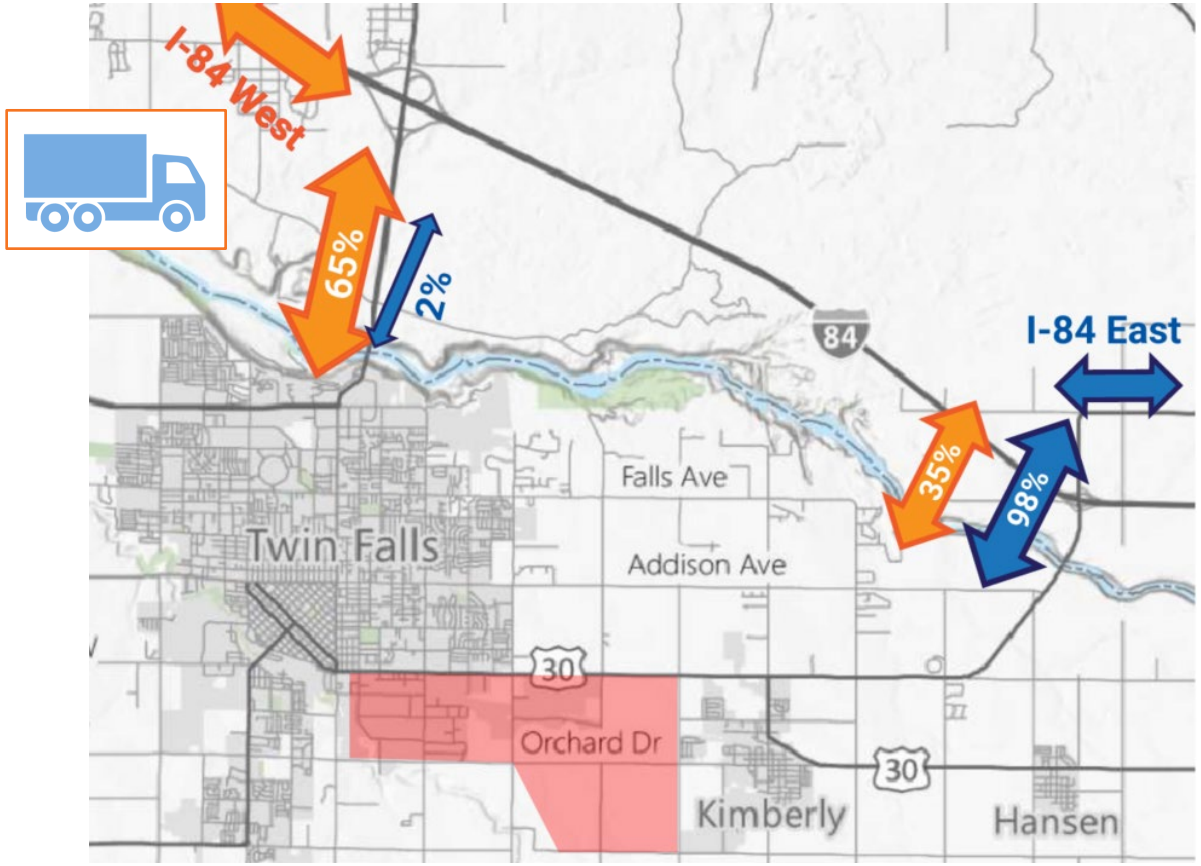


ORIGIN-DESTINATION SNAPSHOT

Which crossings are utilized by all vehicle trips between Twin Falls and I-84?



Which crossings are utilized by heavy vehicles going to/coming from industrial areas south of Twin Falls?



ORIGIN-DESTINATION SUMMARY

- US 93 River Crossing
  - Approximately 56% of all vehicles and 23% of heavy vehicles are trips to or from North-Central Twin Falls
    - These trips are unlikely to shift to another crossing location from US 93.
  - Trips between Twin Falls and eastern Idaho are split evenly between the US 93 and SH 50 river crossings.

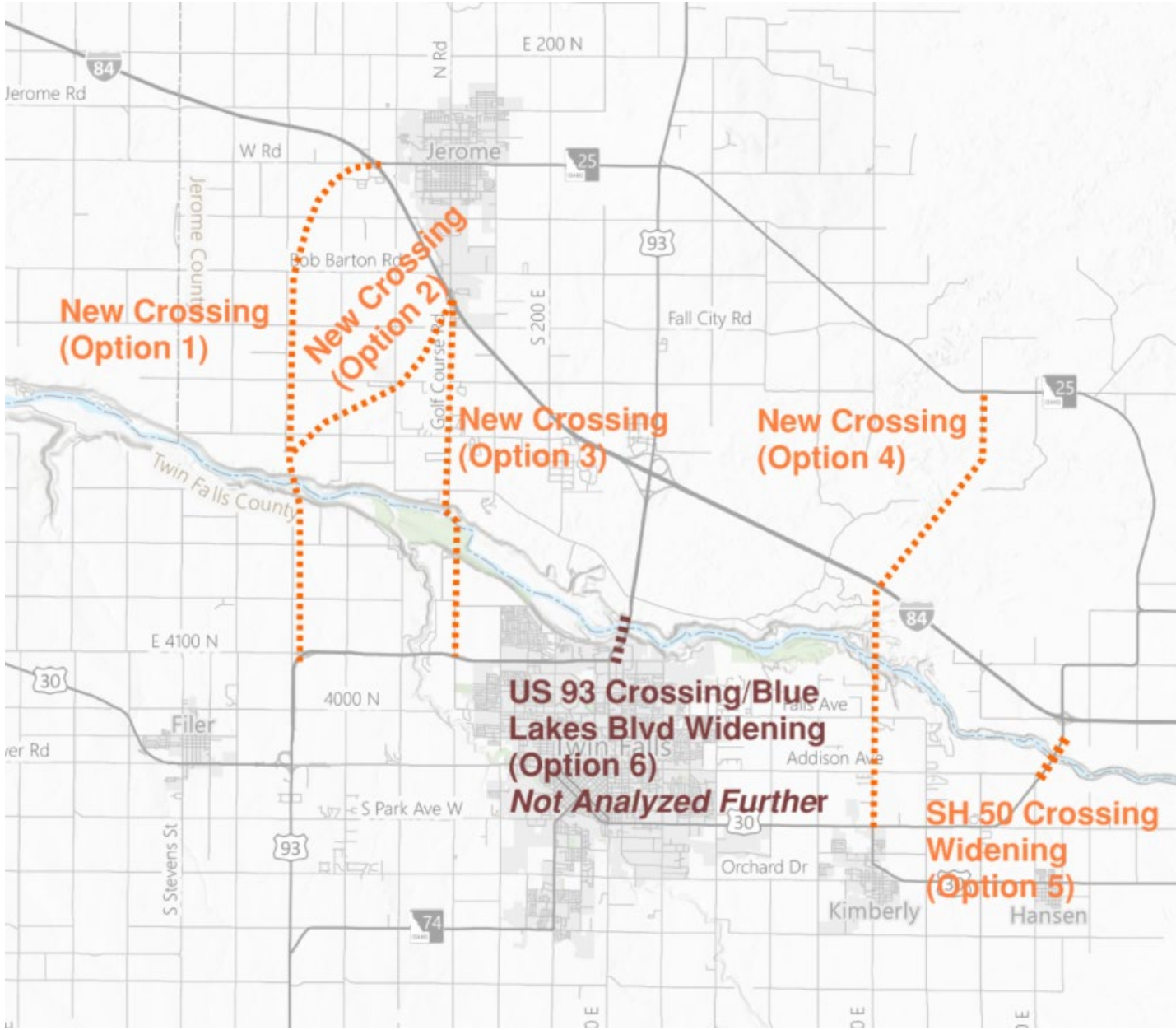
- SH 50 River Crossing
  - Primarily used by vehicle trips between the Twin Falls area (south of the river) and I-84 east
  - Utilized by heavy vehicle trips between the Twin Falls Industrial Area (on US 30) and I-84 west

- SR 46 River Crossing
  - Generally not utilized for inter-regional trips between Twin Falls and I-84

RIVER CROSSING OPTIONS, ANALYSIS & FINDINGS

RIVER CROSSING OPTIONS

- Six options considered for further evaluation.
- Option 6 not analyzed further.
  - Expansion of US 93 constrained by ROW and adjacent businesses
  - Does not address other regional capacity deficiencies
- Options 1-5 selected for further analysis.
  - ITD's Statewide Travel Demand Model (+40K people, +25K jobs in 2040)



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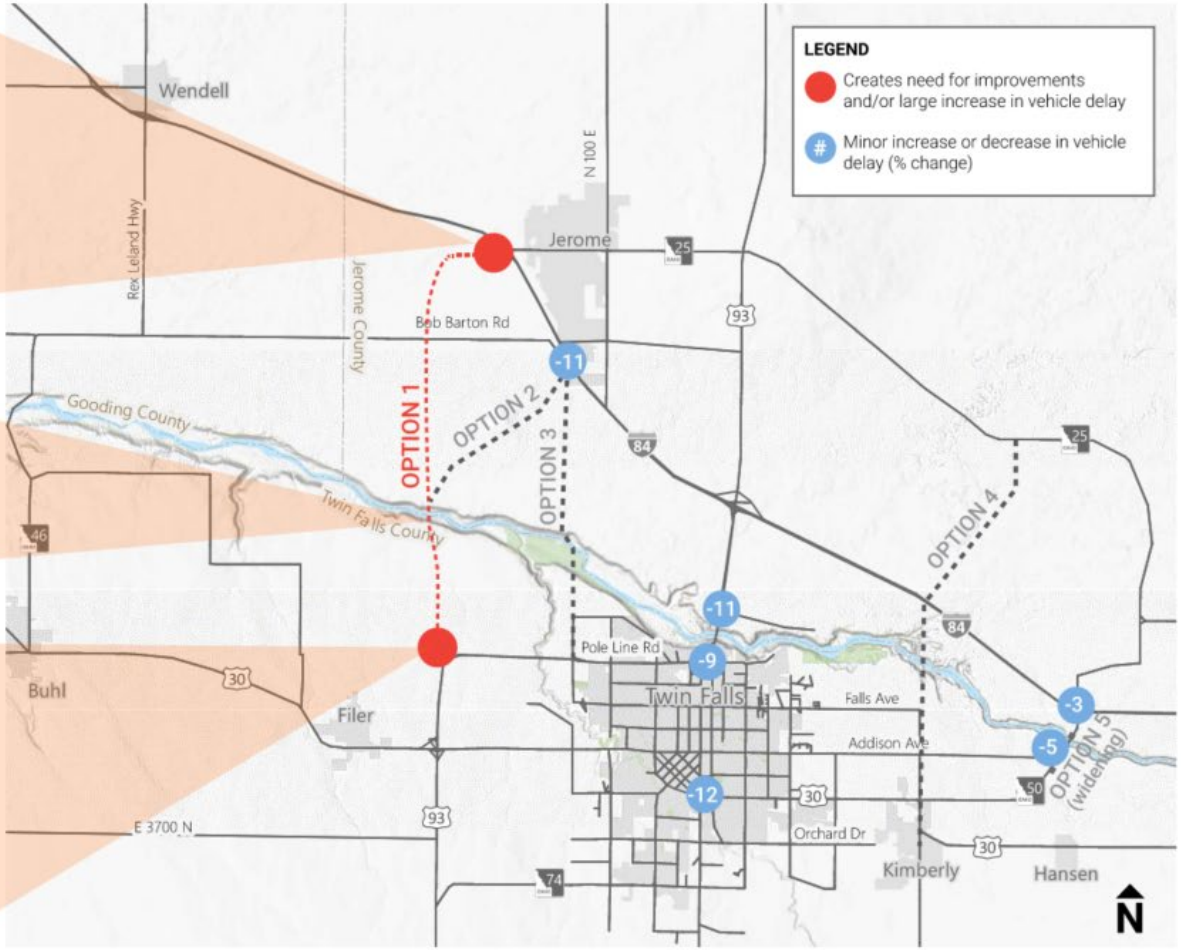
OPTION 1 - CONNECT W OF US 93 (CONNECT TO SH 25 IC)

- 2-3 lane limited-access roadway that crosses 6 miles west of the US 93 crossing
  - 10 miles of new or modified roadway
  - 5 new or modified intersections
  - 2 new or modified interchanges
  - 1,700-2,000 feet bridge span
  - 5,300 Daily Trips

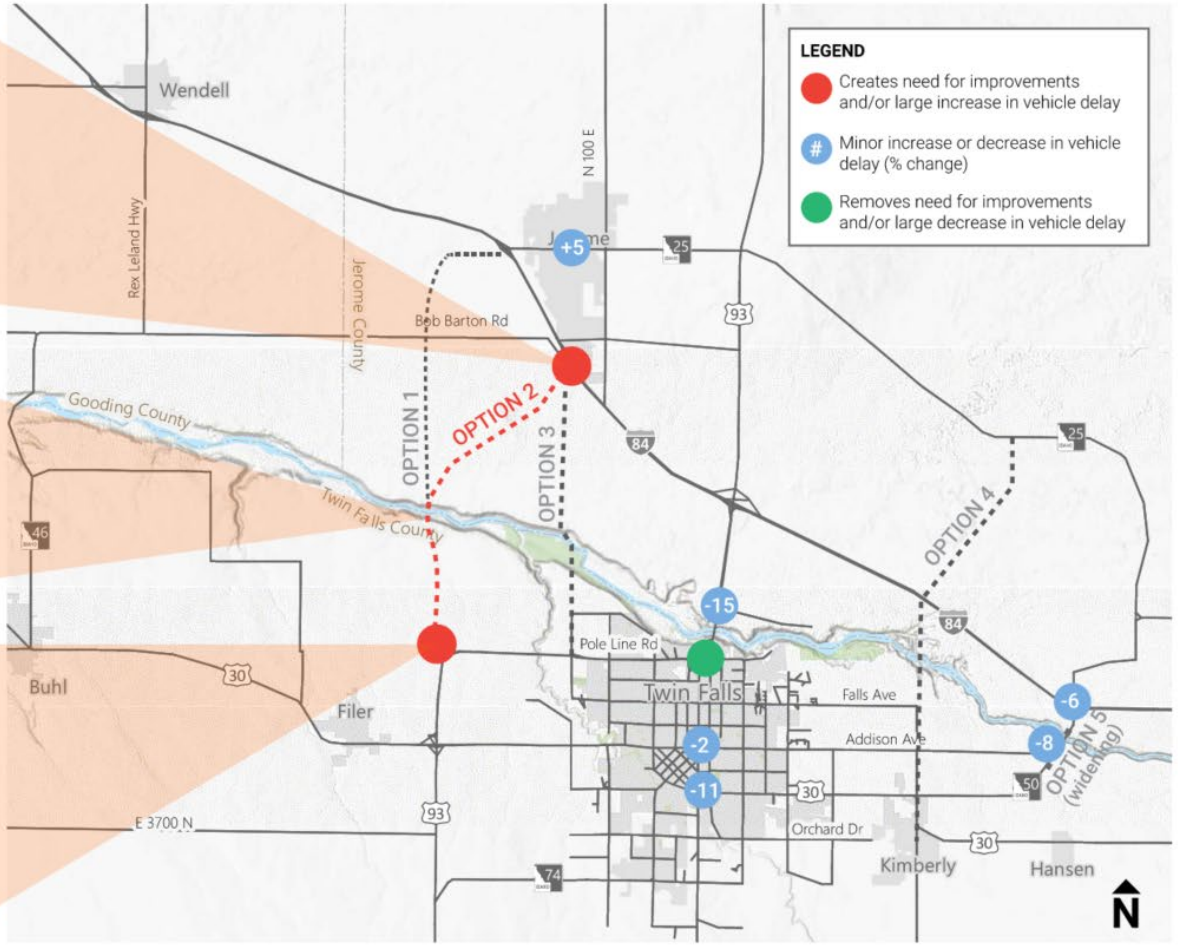
OPERATION IMPACTS



OPTION 2 - CONNECT W OF US 93 (CONNECT TO S JEROME IC)

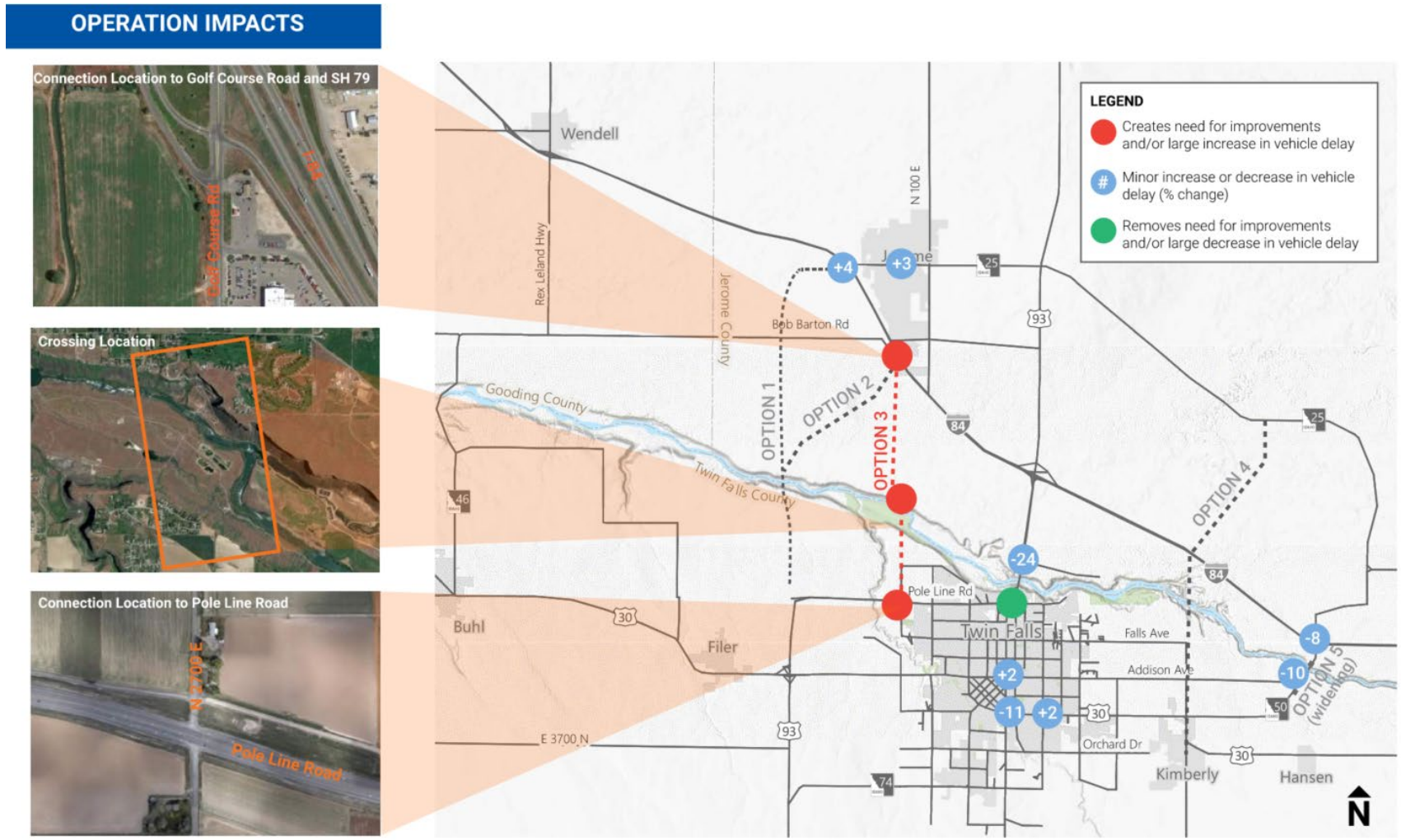
- 2-3 lane limited-access roadway that crosses 6 miles west of the US 93 crossing
  - 8 miles of new or modified roadway
  - 5 new or modified intersections
  - 2 new or modified interchanges
  - 1,700-2,000 feet bridge span
  - 7,300 Daily Trips

OPERATION IMPACTS



OPTION 3 - CONNECT W OF US 93 (CONNECT TO S JEROME IC)

- 2-3 lane roadway that crosses 3 miles west of the US 93 crossing
  - 6 miles of new or modified roadway
    - Requires access management along Golf Course Road
  - 7 new or modified intersections
  - 1 modified interchange
  - 5,200-5,500 feet bridge span
    - Could be single-span structure or descend into Canyon
  - 12,800 Daily Trips



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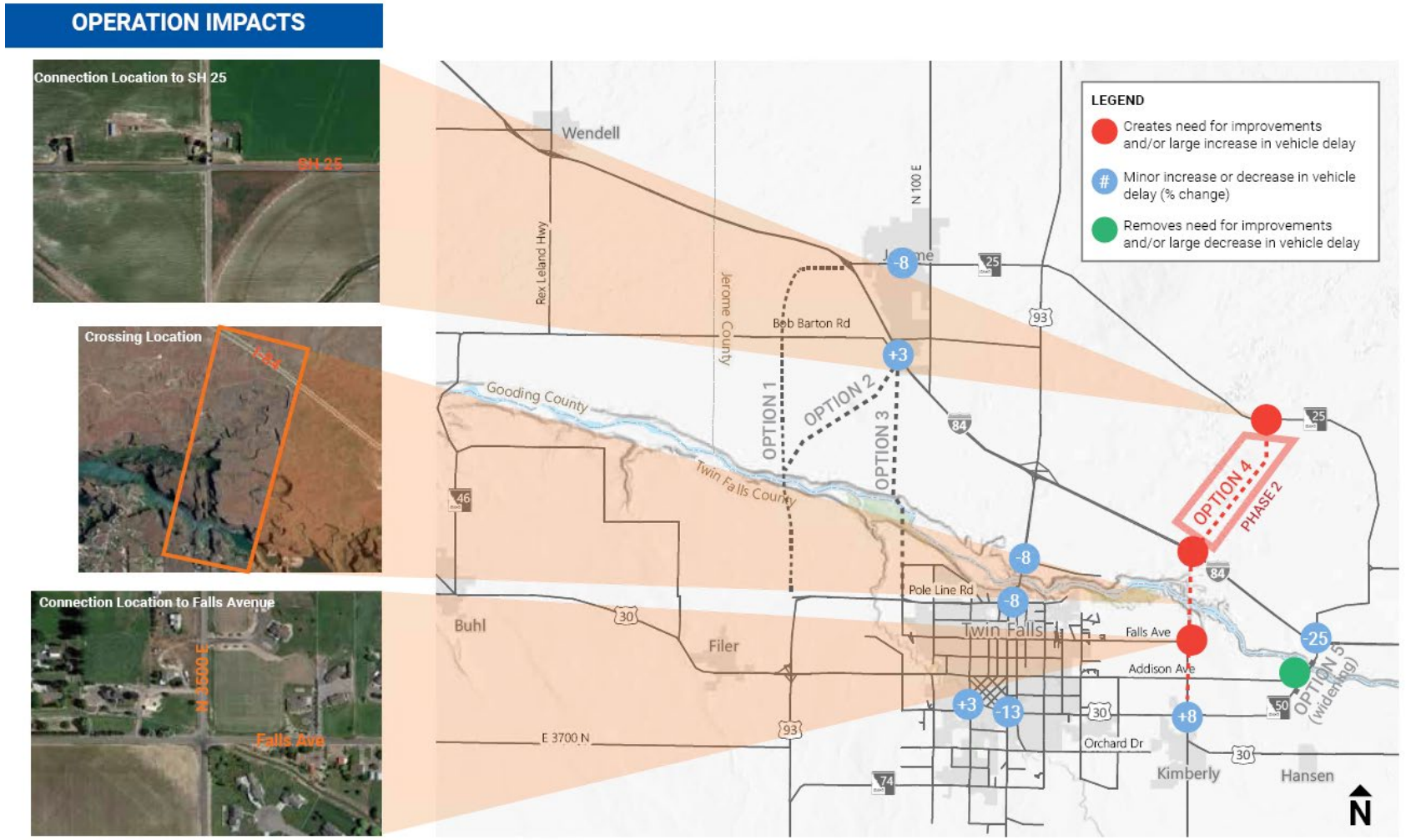
OPTION 4 - CONNECT E OF US 93 WITH NEW IC ON I-84

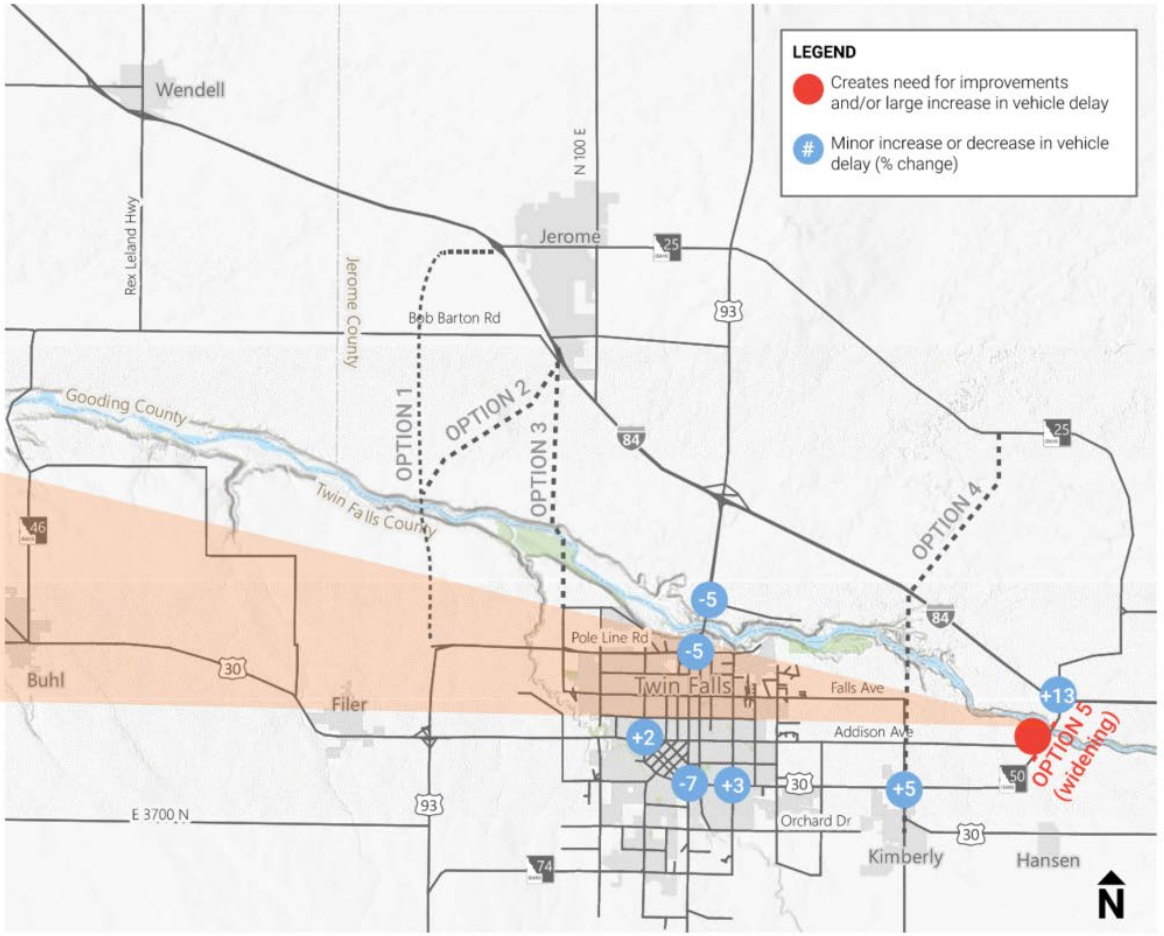
- 2-3 lane roadway that crosses 3.5 miles east of the US 93 crossing
  - 8 miles of new or modified roadway
  - 6 new or modified intersections
  - 1 new interchange
  - 3,600-3,900 feet bridge span
  - 8,300 Daily Trips



OPTION 5 – WIDEN HANSEN BRIDGE (SH 50 CROSSING)

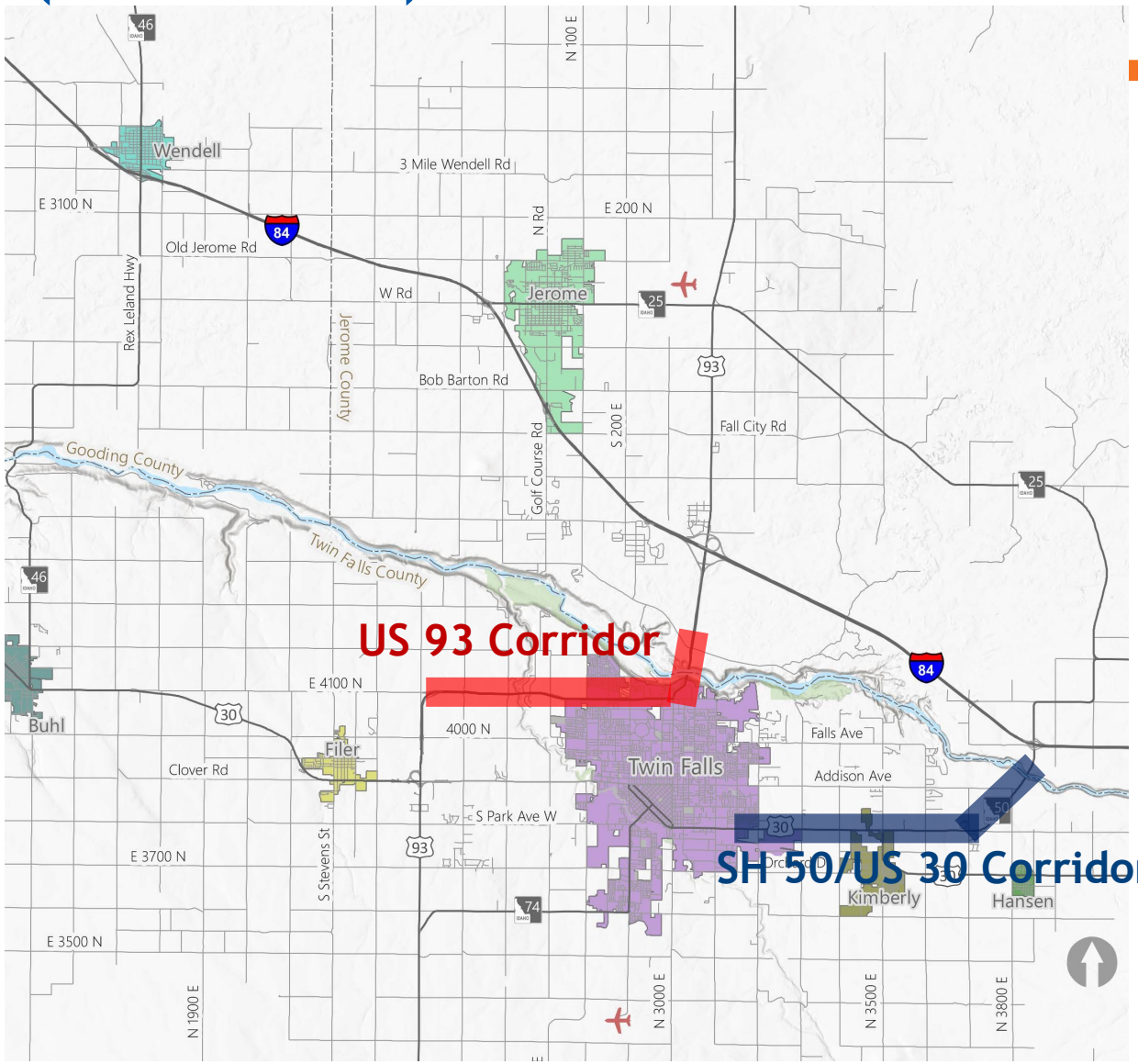
- Widens SH 50 to 4/5 lanes from the SH 50 interchange to Addison Ave
  - 1 miles of modified roadway
  - 1 modified intersection
  - 1,200 feet bridge span
  - 18,000 Daily Trips (+2,400 from no-build conditions)

OPERATION IMPACTS



OPTIONS 1-5 SAFETY COMPARISON (YEAR 2040)

- Evaluated expected change in crashes on US 93 and SH 50/US 30 corridors
  - Small expected reduction of crashes on US 93 (Options 1-4)
  - Small expected reduction of crashes on SH 50/US 30 (Option 4)
  - Small expected increase in crashes on SH 50/US 30 (Option 5)
- Evaluated predicted crashes for the new roadway alignments.
  - All options predicted to have crashes on the new alignment.
  - Highest predicted crash rate (Option 3)



OPTIONS 1-5 COMPARISON SUMMARY (YEAR 2040)
TRAFFIC VOLUMES, TRAVEL TIME, SAFETY

Option	New Crossing Volumes		Total Decrease in PM Peak Hour Volume from Existing Crossings (% Change)			Total Decrease in PM Peak Hour Travel Time (% Change)		Expected Change in Crashes on US 93 and SH 50/US 30
	Daily	PM Peak Hour	SR 46	US 93	SH 50	Jerome to Twin Falls	SH 50 IC to Twin Falls	
Option 1 (W of US 93 @ SH 25)	5,300	407	-16%	-11%	-5%	-8% (2 min)	-3% (<1 min)	
Option 2 (W of US 93 @ Jerome IC)	7,300	598	-21%	-15%	-8%	-10% (3 min)	-4% (1 min)	
Option 3 (W of US 93 @ Jerome IC)	12,800	944	-17%	-24%	-10%	-13% (4 min)	-4% (1 min)	
Option 4 (E of US 93 with new IC)	8,300	663	-6%	-8%	-28%	-5% (2 min)	-13% (2 min)	
Option 5 (SH 50 Widening)	2,400* *additional volume on SH 50	190* *additional volume on SH 50	+6%	-5%	+16%	-3% (1 min)	-17% (3 min)	

OPTIONS 1-5 COMPARISON SUMMARY (YEAR 2040) INFRASTRUCTURE IMPACTS AND FREIGHT BENEFITS

Option	Length of Bridge Span	Length of Impacted Roadway		# of Impacted Intersections		# of Impacted Interchanges		Freight Benefits	
		New	Modified	New	Modified	New	Modified	Daily Heavy Vehicles	Travel Time Savings
Option 1 (W of US 93 @ SH 25)	1,700-2,000 ft	4 miles	6 miles	3	2	1	1	800	Minor travel time savings on US 30/SH 50 (-3%) and US 93 (-8%) corridors
Option 2 (W of US 93 @ Jerome IC)	1,700-2,000 ft	6 miles	2 miles	4	1	1	1	1,200	Minor travel time savings on US 30/SH 50 (-4%) and US 93 (-10%) corridors
Option 3 (W of US 93 @ Jerome IC)	5,200-5,500 ft	2 miles	4 miles	2	5	0	1	1,100	Minor travel time savings on US 30/SH 50 (-4%) and US 93 (-13%) corridors
Option 4 (E of US 93 with new IC)	3,600 – 3,900 ft	5 miles	3 miles	2	4	1	0	1,200	Minor travel time savings on US 30/SH 50 (-13%) and US 93 (-5%) corridors
Option 5 (SH 50 Widening)	1,200 ft	0 miles	1 mile	0	1	0	0	600* *additional volume on SH 50	Travel time savings on US 30/SH 50 (-17%) and US 93 (-3%) corridors

OPTIONS 1-5 ESTIMATED COST COMPARISON

- Assumptions
  - 50’ roadway cross-section
  - 70’ bridge cross-section
  - 120’ Right-of-Way width
  - Roundabouts at major intersections
  - 40% Contingency
  - Unit costs
    - Bridge Cost = $430/sf
    - AC = $74/ton
    - Base/Subbase = $35/CY

Option	Total Estimated Cost
Option 1 (W of US 93 @ SH 25)	$245 million
Option 2 (W of US 93 @ Jerome IC)	$235 million
Option 3 (W of US 93 @ Jerome IC)	$405 million
Option 4 (E of US 93 with new IC)	$390 million
Option 5 (SH 50 Widening)	$75 million

NEXT STEPS

NEXT STEPS

December 2019 – June 2020

EXISTING AND FUTURE NO-BUILD CONDITIONS

- Environmental considerations
- Freight considerations
- Traffic operations
- Origin-destination analysis

June 2020 – November 2020

RIVER CROSSING OPTIONS ANALYSIS

- Identification of river crossing options
- Analysis of effects on regional traffic

WE ARE HERE

November 2020 - December 2020

RIVER CROSSING OPTIONS ANALYSIS REFINEMENT

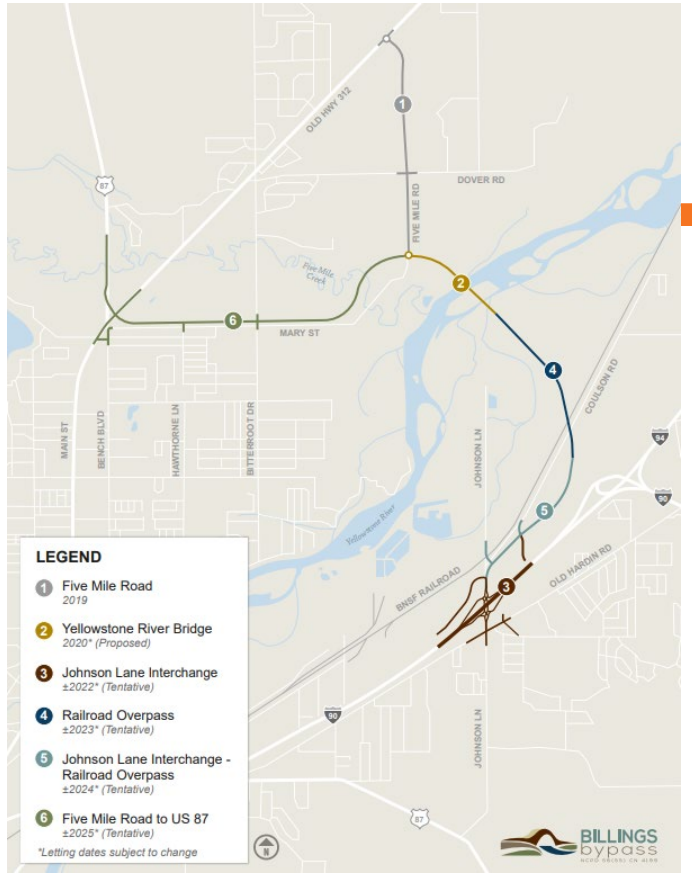
- Refine analysis based on feedback from ITD
- Develop final documentation
- Present to Stakeholders

QUESTIONS & DISCUSSION

OTHER SLIDES

PROJECT COMPARISON - BILLINGS BYPASS

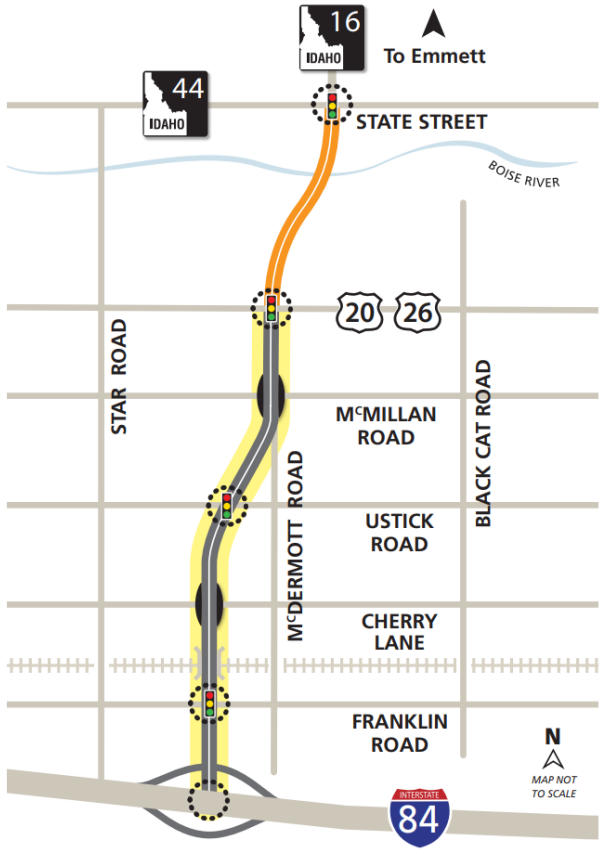
- 6 miles new/modified roadway
- Modified interchange at I-90
- New Crossing over Yellowstone River
- Cost = >$115 million
- Total time (planning -> construction)
  - 17 years (phase 1)
  - >25 years (all phases)



Feasibility Study	EIS Begins (Notice of Intent)	EIS Finished (Record of Decision)	Final Design Process Started	Construction on Phase 1 Begins	Construction on all Phases Complete
2001	*2003*	*2014*	*2015*	*2019*	*2026+*

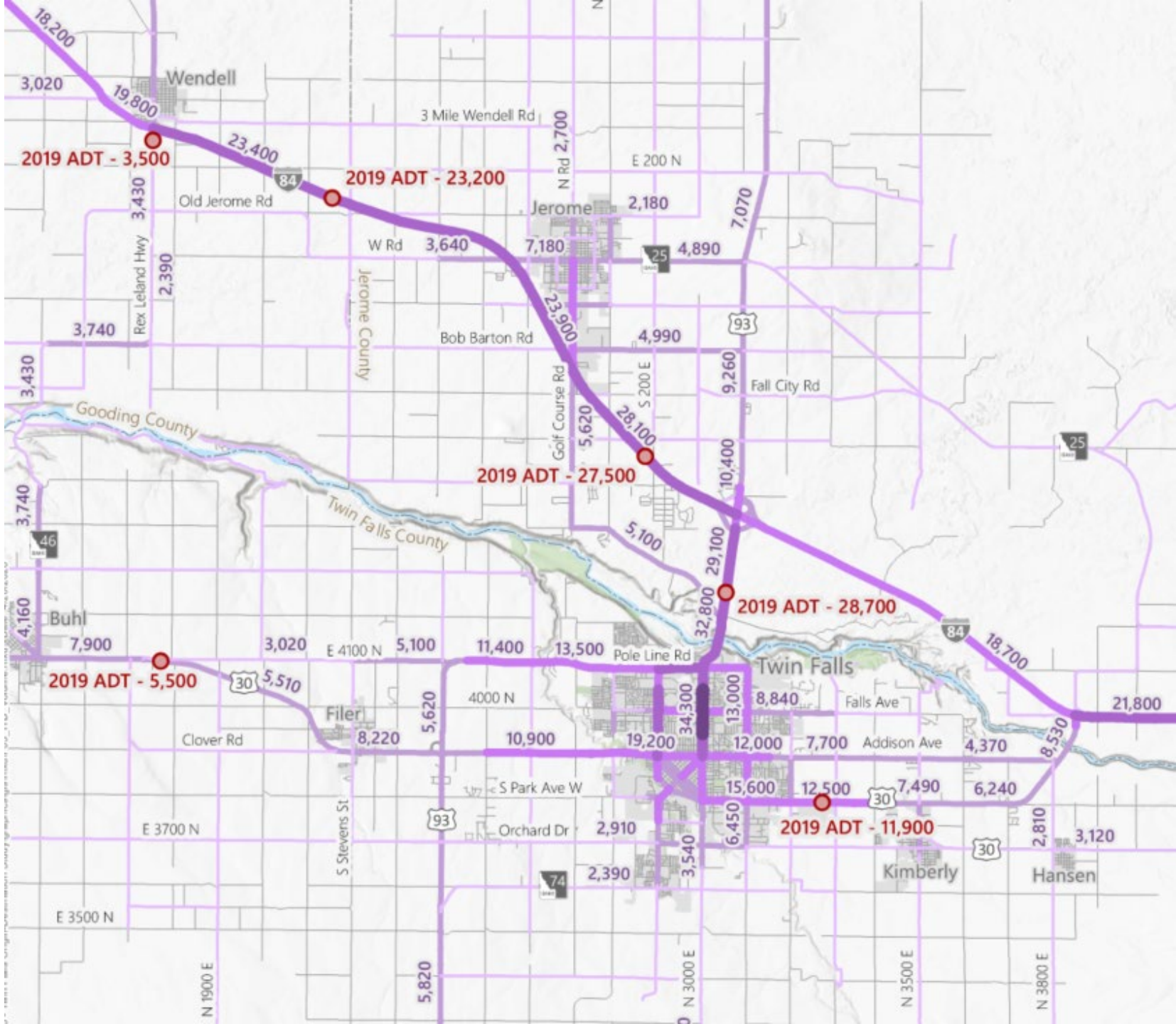
PROJECT COMPARISON - IDAHO 16

- 7 miles grade-separated roadway
- New interchange at I-80
- Crossing over Boise River
- Cost
  - $102 million (already completed)
  - $450 million (to complete next phases)
- Total time (planning -> construction)
  - >8 years (initial phase)
  - >15 years (all phases)



EIS Begins (Notice of Intent)	EIS Finished (Record of Decision)	Construction of Initial Phase Complete	Update to EIS	Design is Finalized	Project is Constructed
2006	*2011*	*2014*	*2018-2020*	*2021*	*2021+ (when funding is available)*

YEAR 2020 TRAFFIC VOLUMES



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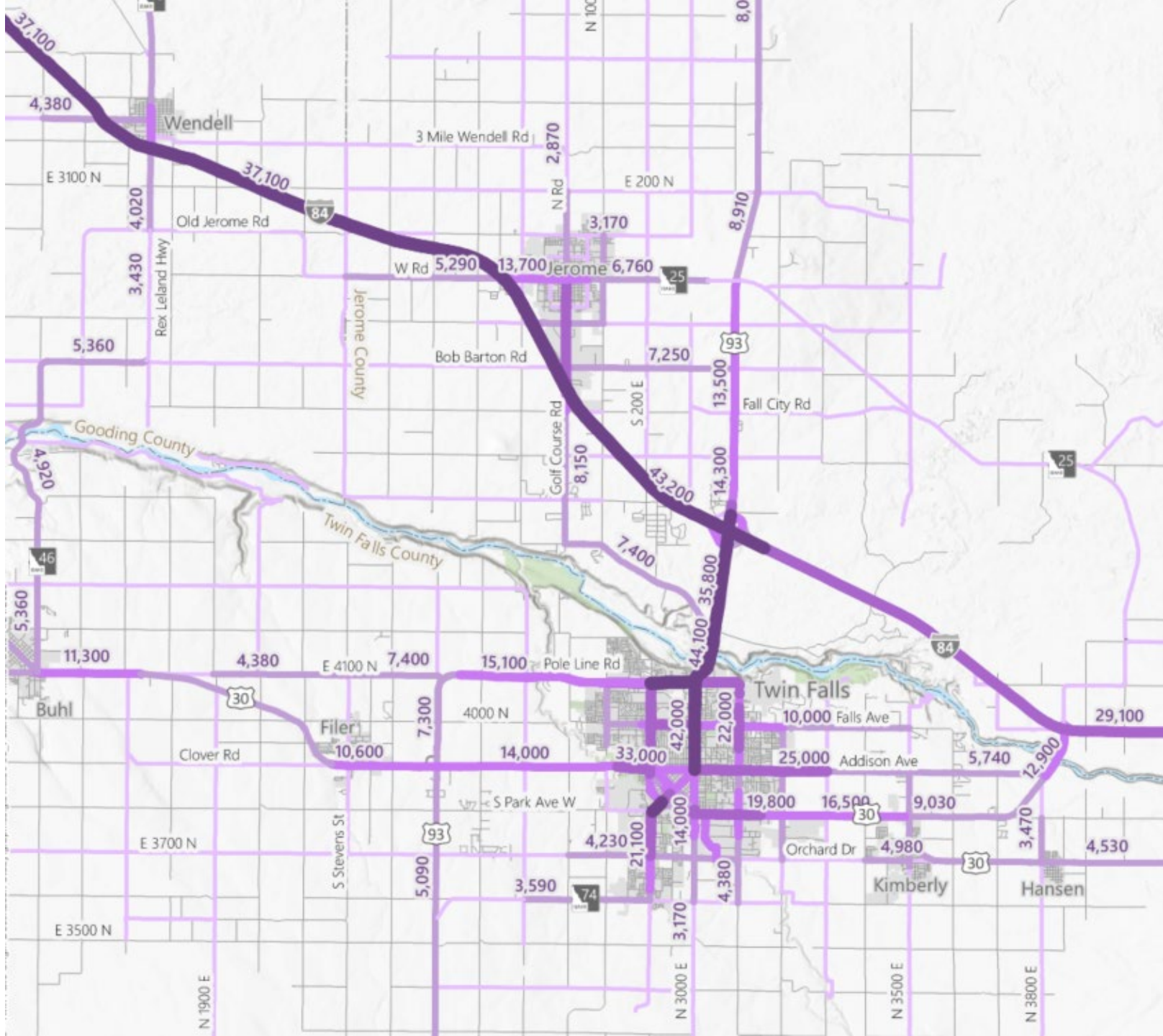
YEAR 2040 TRAFFIC VOLUMES



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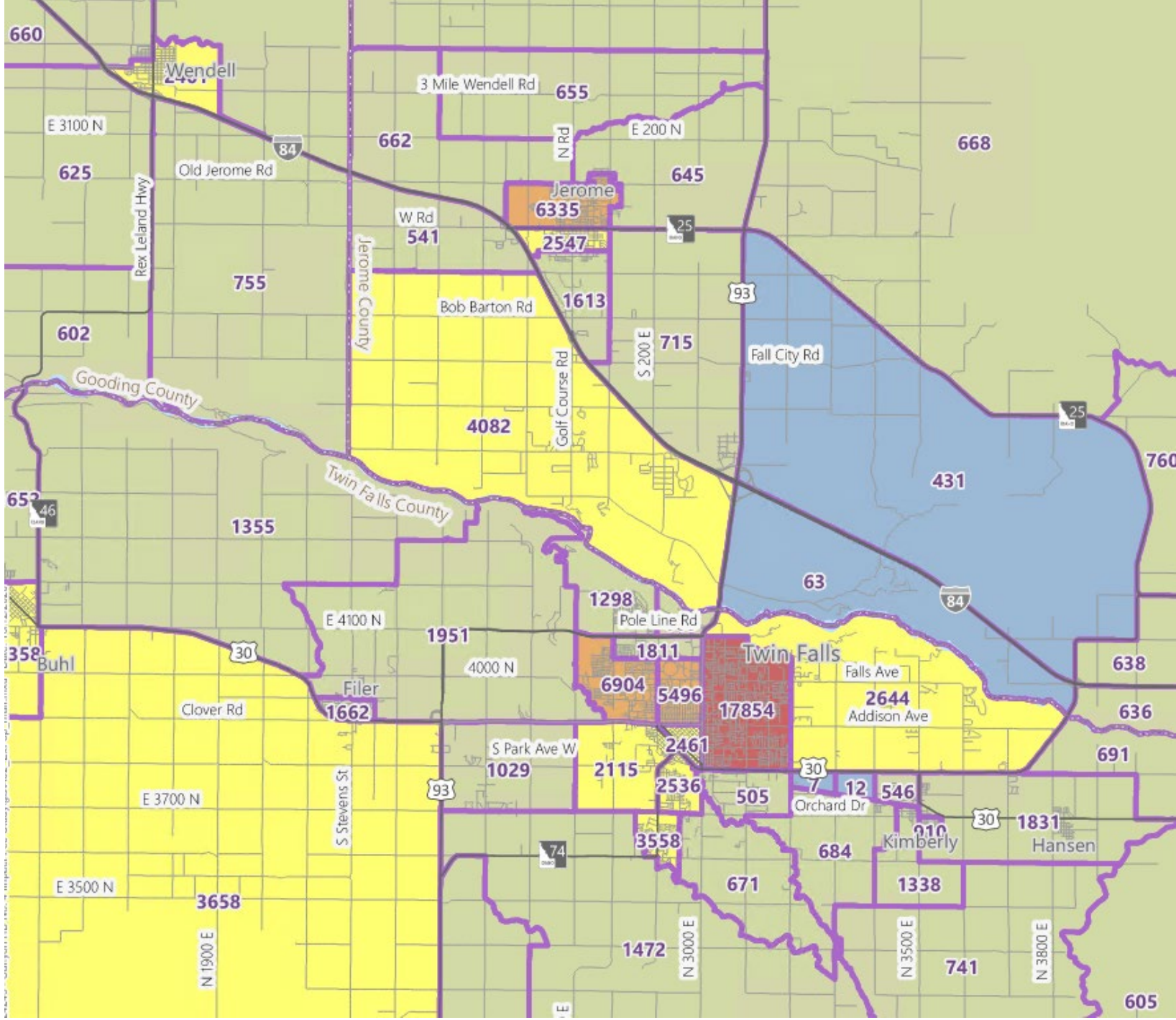
YEAR 2020 POPULATION

- Taken from the ITD Statewide Travel Demand Model
- Total Population = 103,000



Traffic Analysis Zone

Traffic Analysis Zone Population

Population	
11 - 500	2,001 - 4,500
501 - 2,000	4,501 - 10,500
	10,501 - 27,000

Sources:ITD Statewide Travel Demand Model

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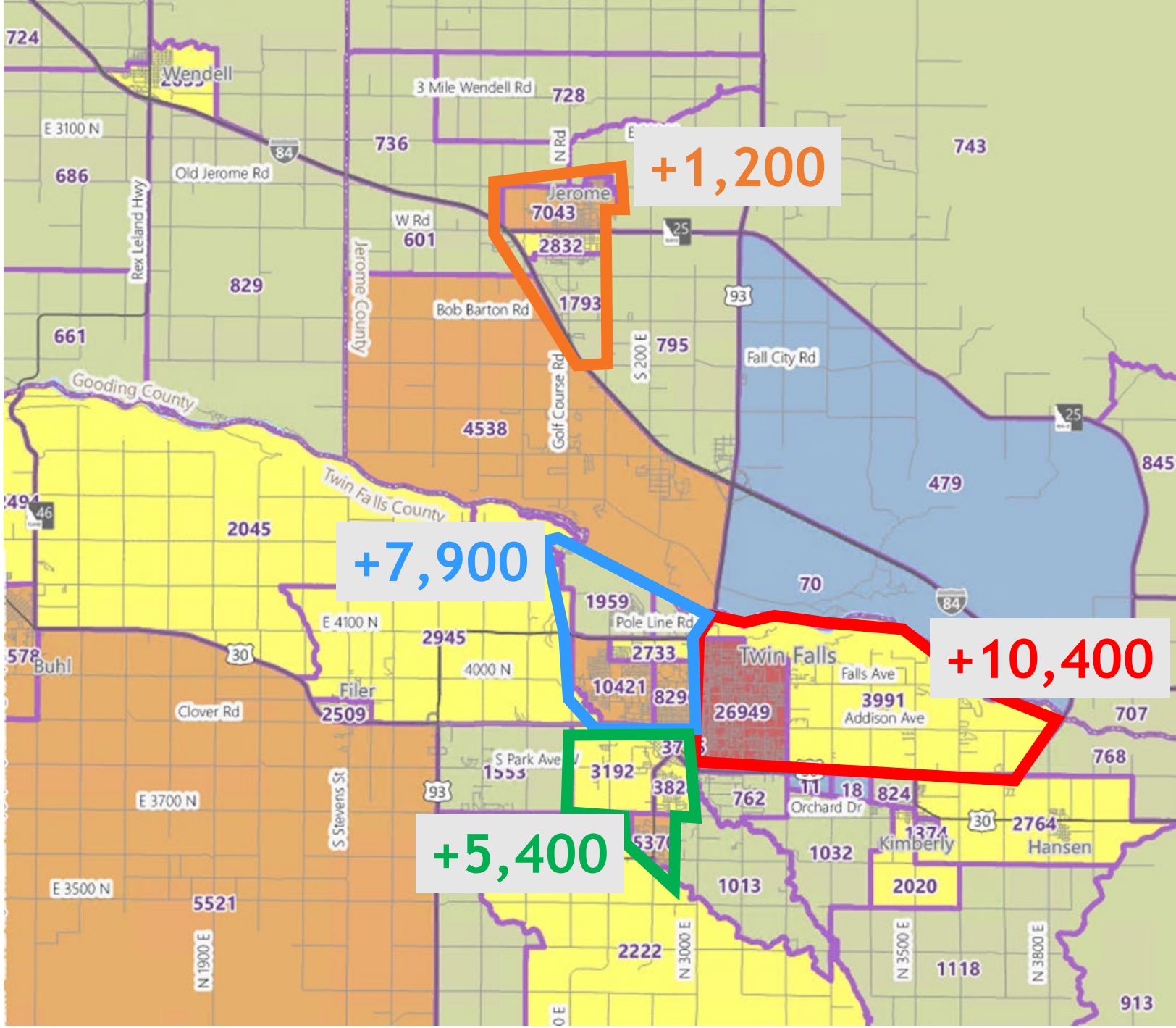
YEAR 2040 POPULATION

- Growth concentrated in Twin Falls
- Some growth in Jerome and outside urban areas
- Total Population = 144,000
  - Annual growth rate = 1.8%



Traffic Analysis Zone

Traffic Analysis Zone Population

Population	
11 - 500	2,001 - 4,500
501 - 2,000	4,501 - 10,500
	10,501 - 27,000

Sources:ITD Statewide Travel Demand Model

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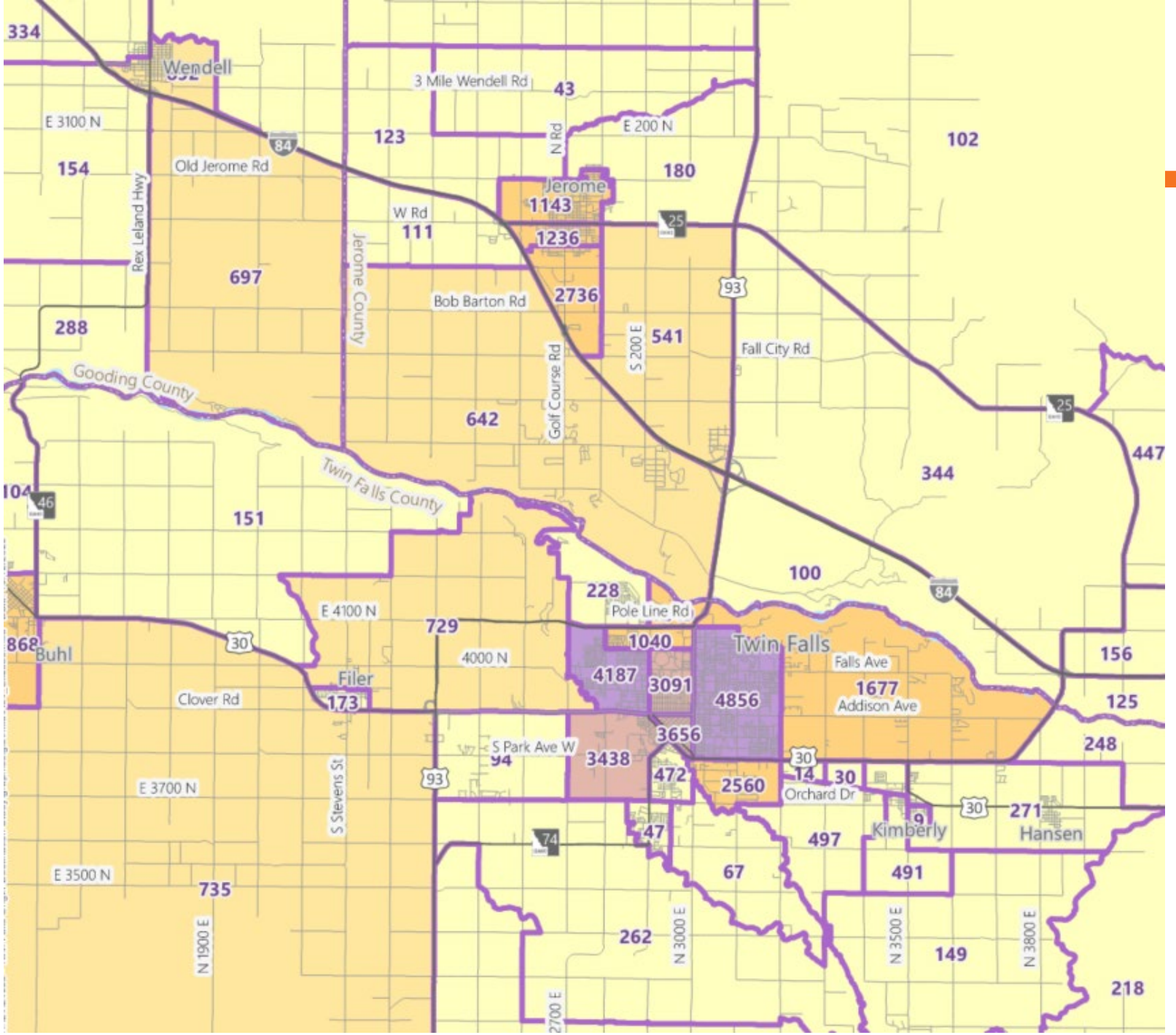
YEAR 2020 EMPLOYMENT

- Taken from the ITD Statewide Travel Demand Model
- Total # of Jobs = 44,194



Traffic Analysis Zone

Traffic Analysis Zone Population

Employees	
1 - 500	1,001 - 3,000
501 - 1,000	3,001 - 4,000
	4,001 - 4,900

Sources:ITD Statewide Travel Demand Model

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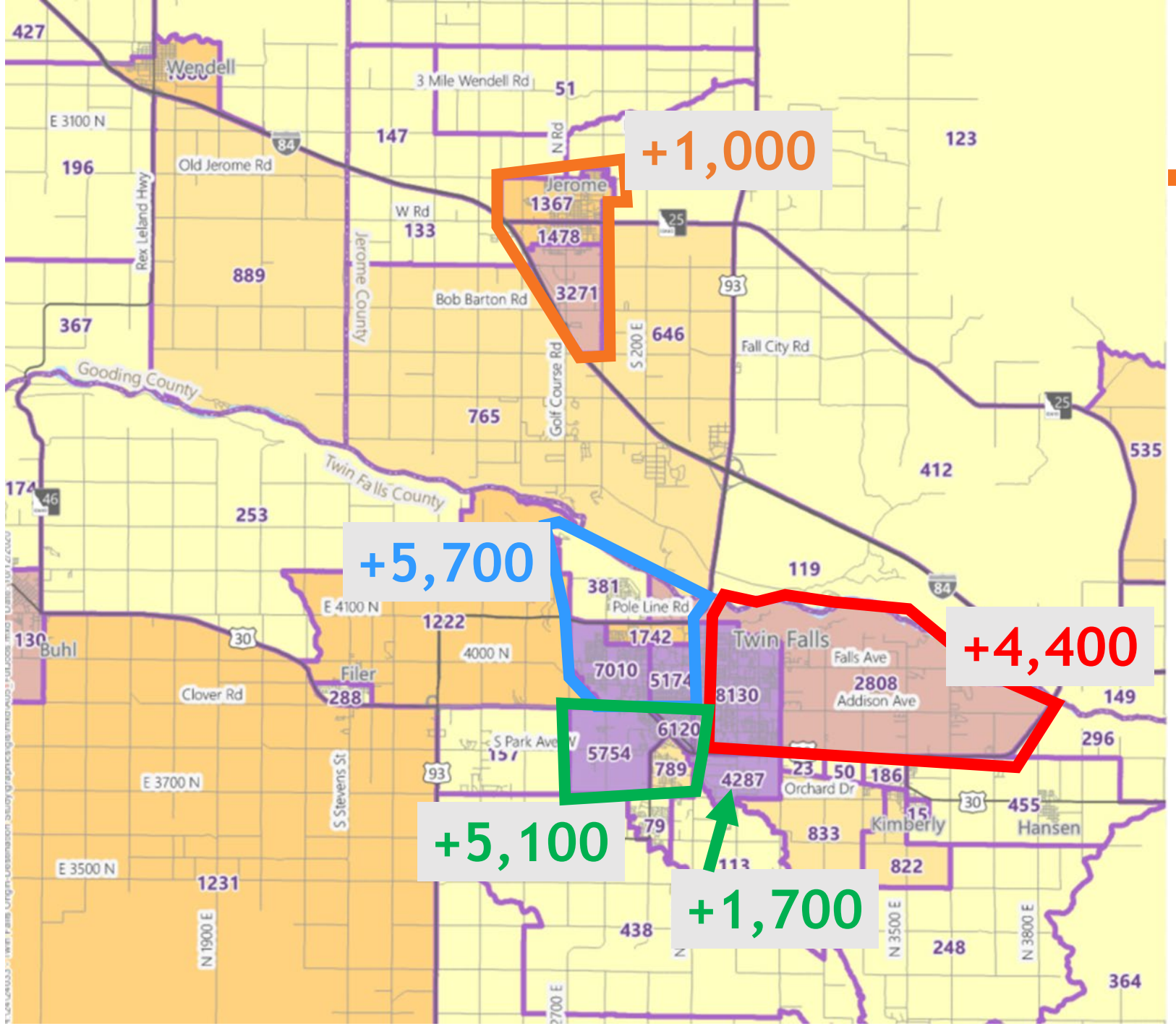
YEAR 2040 EMPLOYMENT

- Similar trend to population growth
  - concentrated in Twin Falls
  - some growth in Jerome and outside urban areas
- Total # of Jobs = 68,679
  - Annual growth rate = 2.2%



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Sources:ITD Statewide Travel Demand Model