OR 140 Corridor Plan

Open House

November 16, 2011

WELCOME

DAVID EVANS AND ASSOCIATES INC.

OR 140 Corridor Plan

What is it?

- A planning study of the OR 140 Corridor from I-5 Exit 35 through White City to Brownsboro-Eagle Point Road

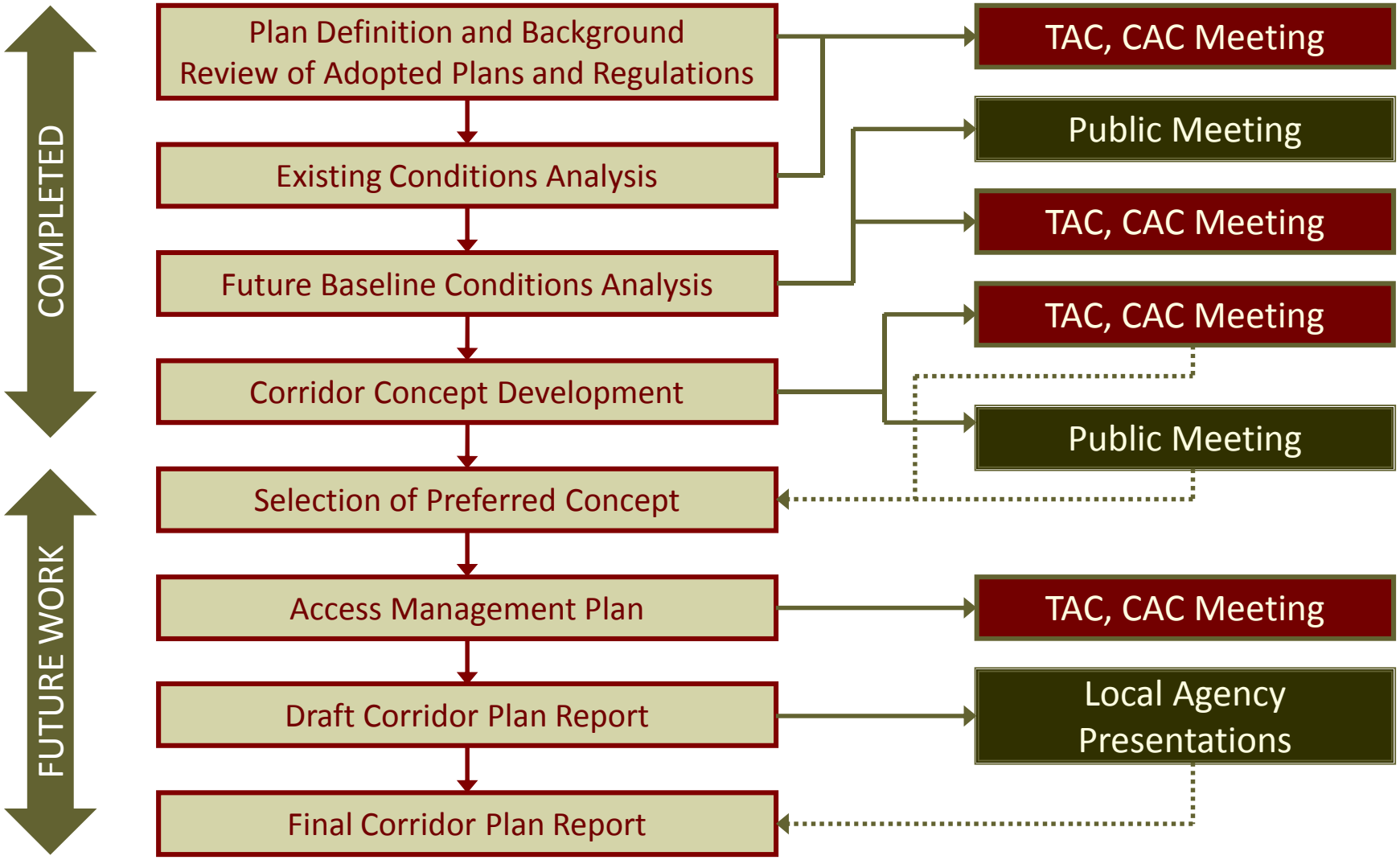
What does a planning study do?

- Inventory facilities and understand how the corridor operates
- Recommend ways to make existing and future traffic flow better

What is the purpose of today's Open House?

- Review improvement concepts under consideration for the corridor
- Ask questions about the concepts
- Provide feedback on comment cards

Corridor Planning Process



Concept Development

- Concepts
  - Address deficiencies along the OR 140 corridor as identified through existing and future baseline analysis

- Type of Improvements
  - **Highway Redesignation** – address consistency in statewide classification or respond to system changes imposed by other projects
  - **Jackson County Reclassification** – address consistency between the state and county
  - **Segment Improvements** – address geometric, safety, or operational deficiencies in the OR 140 corridor
  - **Intersection Improvements** – address geometric, safety, or operational deficiencies at individual intersections

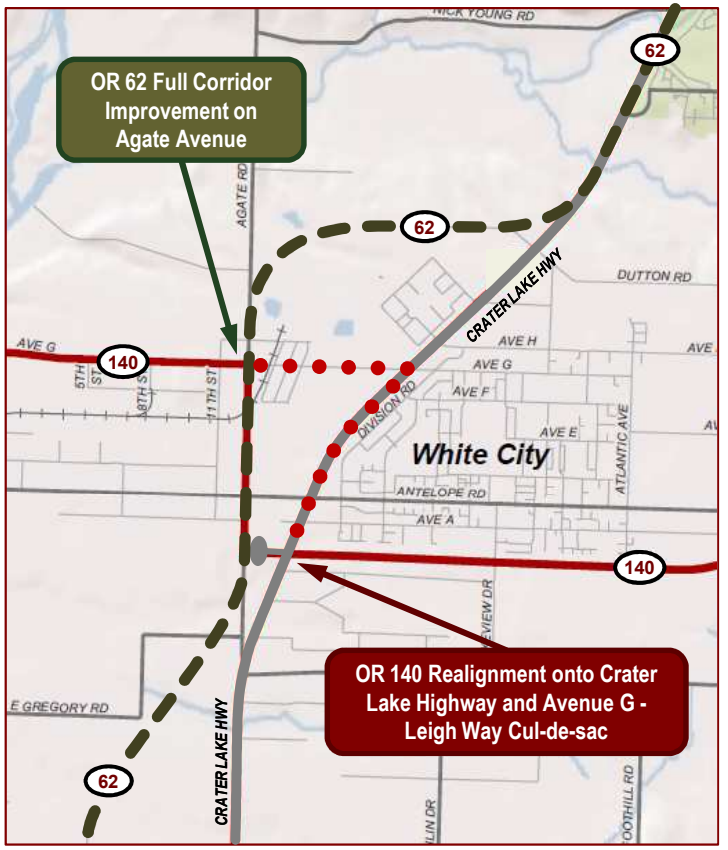
- Roadway Network Assumptions
  - All concepts assume that OR 62 Phase 1 and 2 improvements (Jobs in Transportation Act) are constructed
  - Some concepts respond to the completion of the full corridor improvement identified in the OR 62 Corridor Solutions Environmental Impact Statement (EIS)

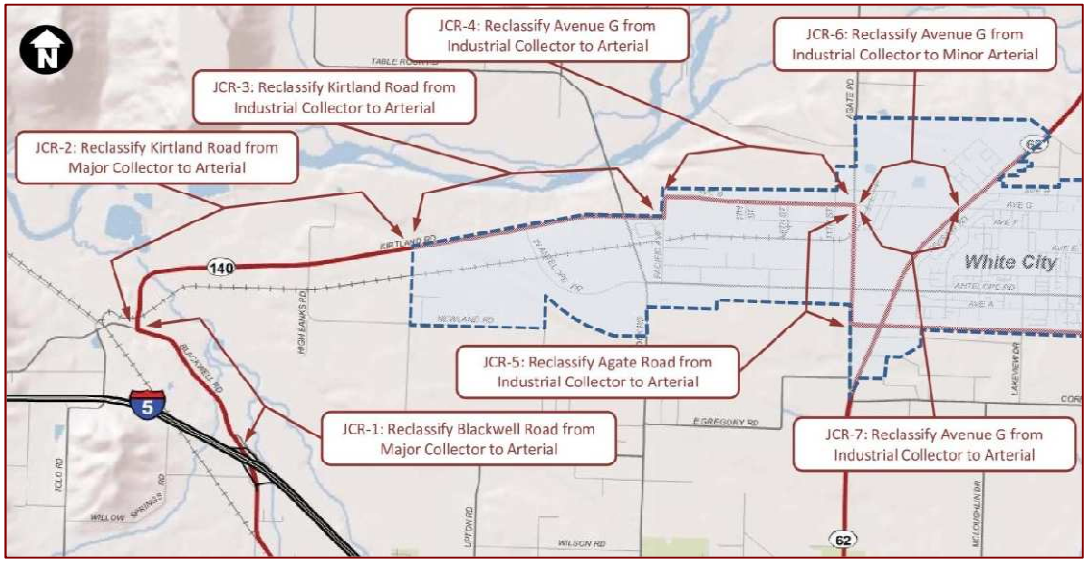
Concept Evaluation Criteria

- Traffic Operations and Safety
  - Does the improvement address existing operational or safety concerns?
  - Will it cause additional concerns?
- Basic Roadway Geometry and Right of Way
  - How might the improvement look?
  - Would it require additional right of way?
- Environmental and Land Use
  - Would the improvement have any potential impact to land uses or environmental resources?
- Cost Opinion
  - How much would it cost?

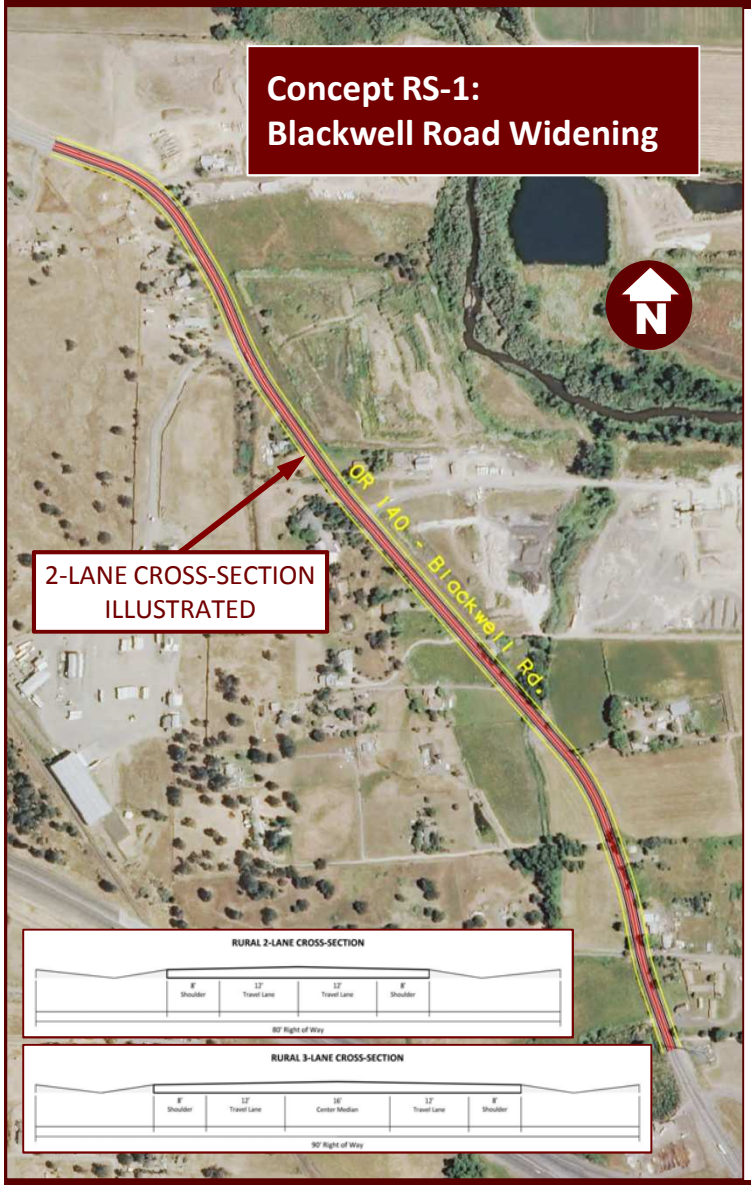
Highway Redesignation & Reclassification

- Highway Redesignation
  - Extend statewide designation through Exit 35
  - Extend freight designation west of OR 62
  - Reroute OR 140 along Crater Lake Highway and Avenue G when OR 62 full corridor improvements are implemented (inset right)
- Jackson County Reclassification
  - Changes to Transportation System Plan for consistency with OR 140 route (inset below)





Blackwell Road Improvements



Purpose: Safety, Capacity, Consistency with Statewide Design Standard

Options: 2-Lane Rural Cross-Section
3-Lane Rural Cross-section

Traffic Operations:
- 2-Lane – Some congestion without left-turn lanes
- 3-Lane – Center median provides left-turn refuge

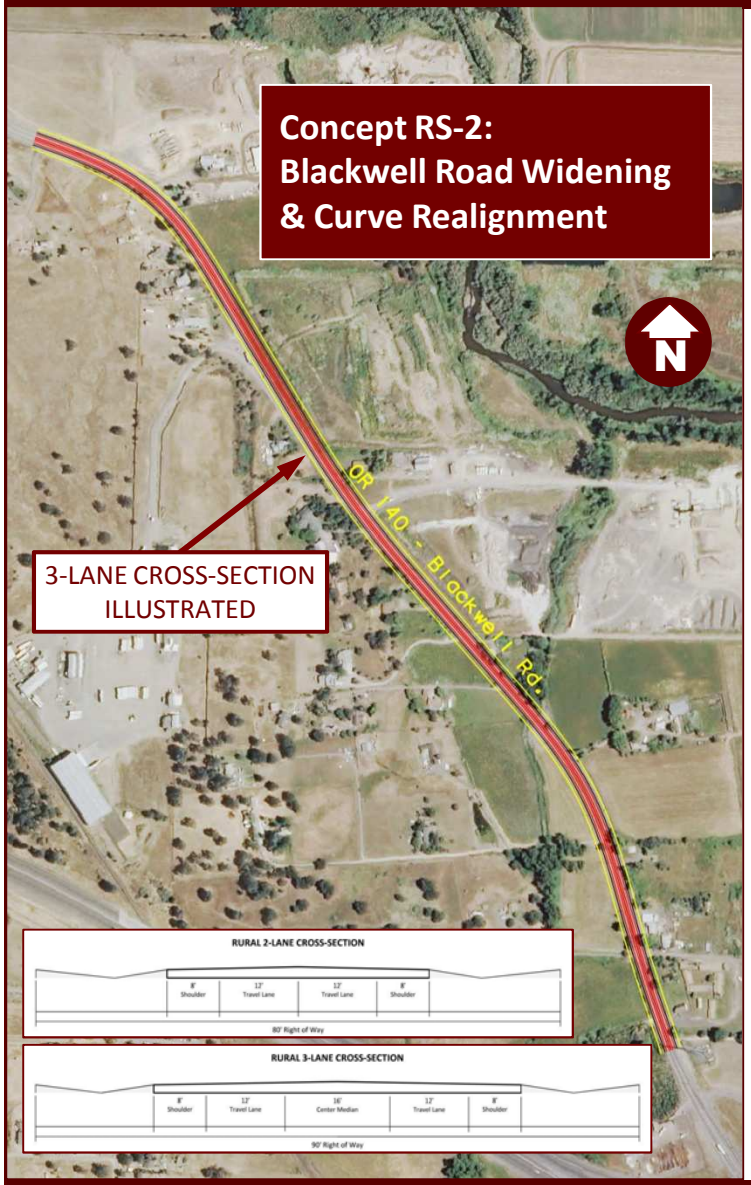
Safety:
- 2-Lane – Some benefit from wider shoulders
- 3-Lane – Center lane for left-turning vehicles & wider shoulders

Basic Roadway Geometry & Right of Way (ROW):
- Keeps alignment on current centerline but modifications possible
- Does not modify "breaking" curves
- ROW requirements could be less than shown

Environmental & Land Use:
- 2-Lane – Up to 20' additional ROW needed, close to some structures
- 3-Lane – Up to 30' additional ROW needed, close to some structures
- Crosses Willow Creek

Cost Opinions:
- 2-Lane – $1.4 million
- 3-Lane – $3.6 million

Blackwell Road Improvements



Purpose: Safety, Capacity, Consistency with Statewide Design Standard

Options: 2-Lane Rural Cross-Section
3-Lane Rural Cross-section

Traffic Operations:
Same as Concept RS-1

Safety:
Same as Concept RS-1 but smooth curves & higher design speed could reduce run-off-road crashes

Basic Roadway Geometry & Right of Way (ROW):
Realigns sections of roadway to smooth curves and meet 55 mph design speed
Could not be constructed within existing ROW
ROW requirements could be less than shown

Environmental & Land Use:
More ROW needed than Concept RS-1
Roadway alignment avoids structures
Crosses Willow Creek

Cost Opinions:
2-Lane – $6.2 million
3-Lane – $8.7 million

Kirtland Road Improvements

Concept RS-3: Kirtland Road Safety Improvements

Purpose: Safety – 19 crashes in 5 years – 9 involved a single vehicle that ran off the road

Safety:

Delineators - Crash research indicates benefits of delineators may be offset by increased likelihood of fixed object collisions

Basic Roadway Geometry & Right of Way (ROW):

Delineators – Installed in outside paved shoulder

Environmental & Land Use:

Delineators - No impacts

Cost Opinions:

Delineators - $15,000

Safety:

Rumble Strips - Crash research indicates rumble strips can provide measurable reduction single vehicle, run of the road crashes

Basic Roadway Geometry & Right of Way (ROW):

Rumble Strips – Only where shoulders are more than 4’ wide which is 85% of Kirtland

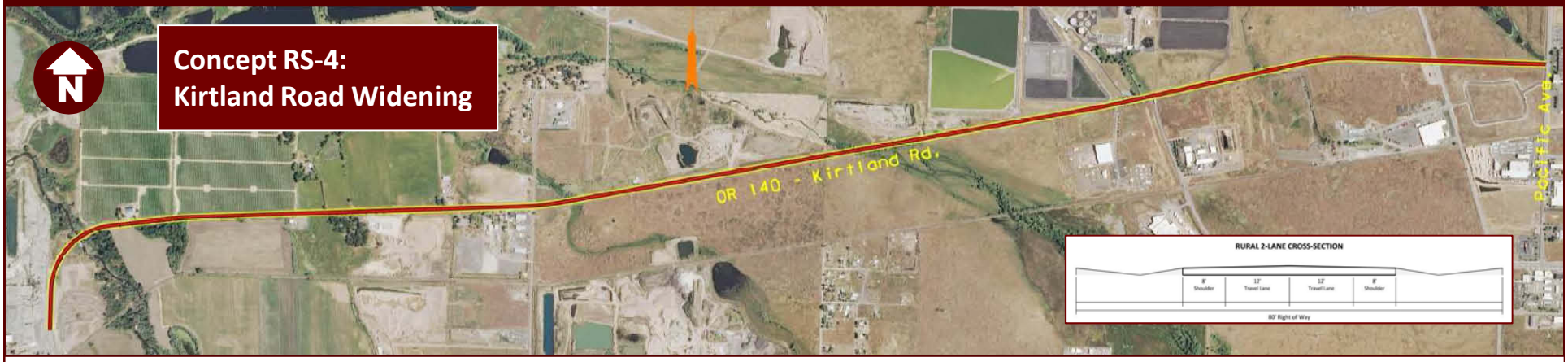
Environmental & Land Use:

Rumble Strips – Intermittent noise when vehicles drive over them – may be heard by some residences

Cost Opinions:

Rumble Strips - $10,000

Kirtland Road Improvements



Purpose: Consistency with Statewide Design Standard

Traffic Operations:

2-lane cross-section can accommodate future demand

Safety:

2’ to 4’ shoulder widening provides slightly more vehicle maneuvering room

Basic Roadway Geometry & Right of Way (ROW):

Keeps alignment along centerline, may be accommodated in existing ROW

Environmental & Land Use:

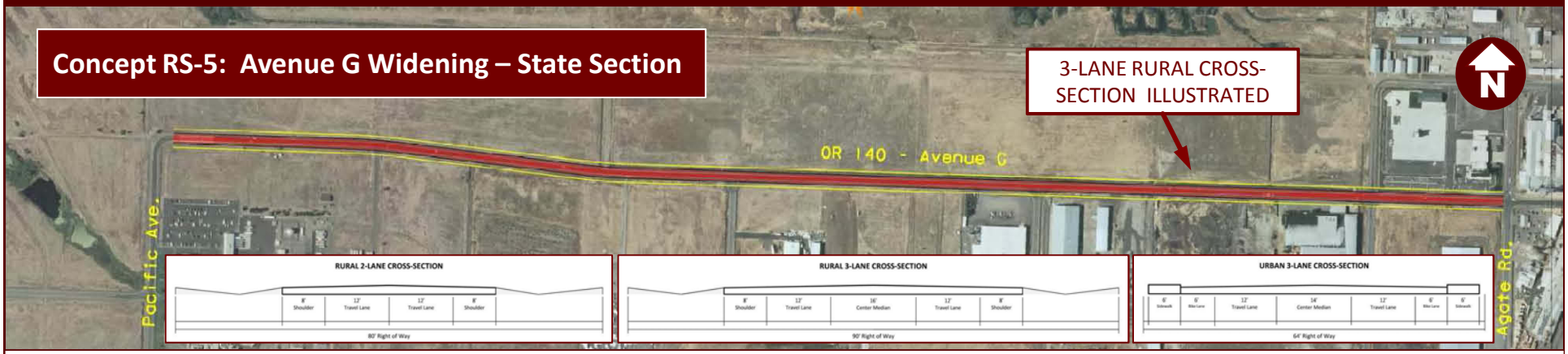
Several creeks and canals including Bear Creek and Whetstone Creek

Adjacent wetlands (Palustrine, Emergent) that may contain high value vernal pools

Cost Opinions:

Road Widening - $2.4 million

Avenue G Improvements (State Section)



Purpose: Consistency with Statewide Design Standard

Traffic Operations:

2-Lane Rural – Some congestion without left-turn lanes
3-Lane Rural – Center median provides left-turn refuge
3-Lane Urban – Center median plus sidewalks

Basic Roadway Geometry & Right of Way (ROW):

Keeps alignment along centerline
Existing ROW is 100' – can accommodate all options

Cost Opinions:

2-Lane Rural – $1.3 million
3-Lane Rural – $4.4 million
3-Lane Urban – $7.6 million

Options: 2-Lane Rural Cross-Section
3-Lane Rural Cross-Section
3-Lane Urban Cross-Section

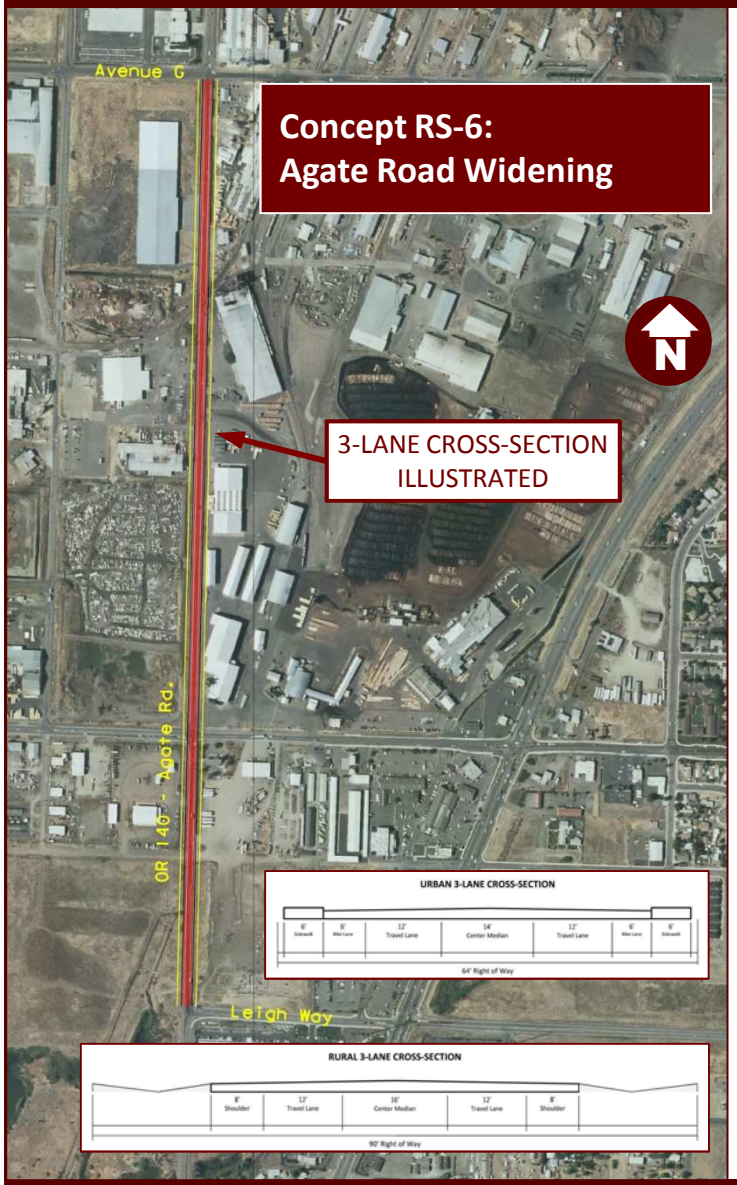
Safety:

2-Lane Rural – Some benefit from wider shoulders
3-Lane Rural – Center lane for left-turning vehicles and wider shoulders
3-Lane Urban – Center lane plus sidewalks & curbs

Environmental & Land Use:

Area zoned industrial
Potential economic benefit for adjacent properties from higher capacity road with turn lanes
No natural resources mapped in area

Agate Road Improvements



Purpose: Safety, Capacity, Consistency with Statewide Design Standard

Options: 3-Lane Rural Cross-Section
3-Lane Urban Cross-section

Traffic Operations:
- 3-Lane Rural – Center median provides left-turn refuge
- 3-Lane Urban – Center median plus sidewalks

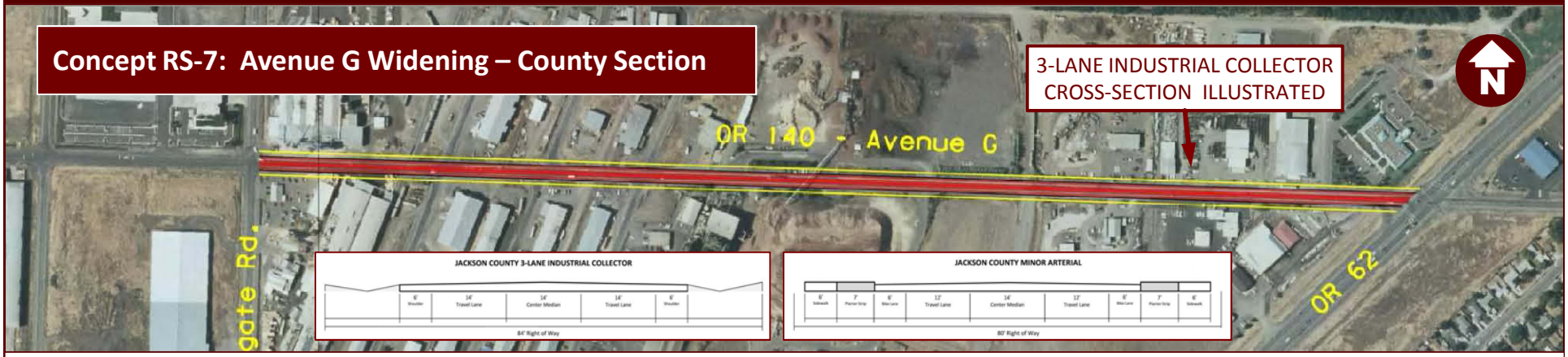
Safety:
- 3-Lane Rural – Center lane for left-turning vehicles
- 3-Lane Urban – Center lane plus sidewalks & curbs

Basic Roadway Geometry & Right of Way (ROW):
- Keeps alignment along centerline
- Existing ROW is 100' – can accommodate all options
- Full upgrade of railroad crossing

Environmental & Land Use:
- Area zoned industrial
- Potential economic benefit for adjacent properties from higher capacity road with turn lanes
- No natural resources mapped in area

Cost Opinions:
- 3-Lane Rural – $3.9 million
- 3-Lane Urban – $6.0 million

Avenue G Improvements (County Section)



Purpose: High demand traveling to OR 140 from White City and OR 62 to north

Traffic Operations:

Industrial Collector – Center median provides left-turn refuge

Minor Arterial – Center median plus sidewalks

Basic Roadway Geometry & Right of Way (ROW):

Keeps alignment along centerline

Existing ROW is 80' – can likely accommodate all options

Full upgrade of railroad crossing

Cost Opinions:

Industrial Collector (3 lanes) – $2.6 million

Minor Arterial – $5.0 million

Options: 3-Lane Industrial Collector (County Standard)
Minor Arterial (County Standard)

Safety:

Industrial Collector – Center lane for left-turning vehicles

Minor Arterial – Center lane plus sidewalks & curbs

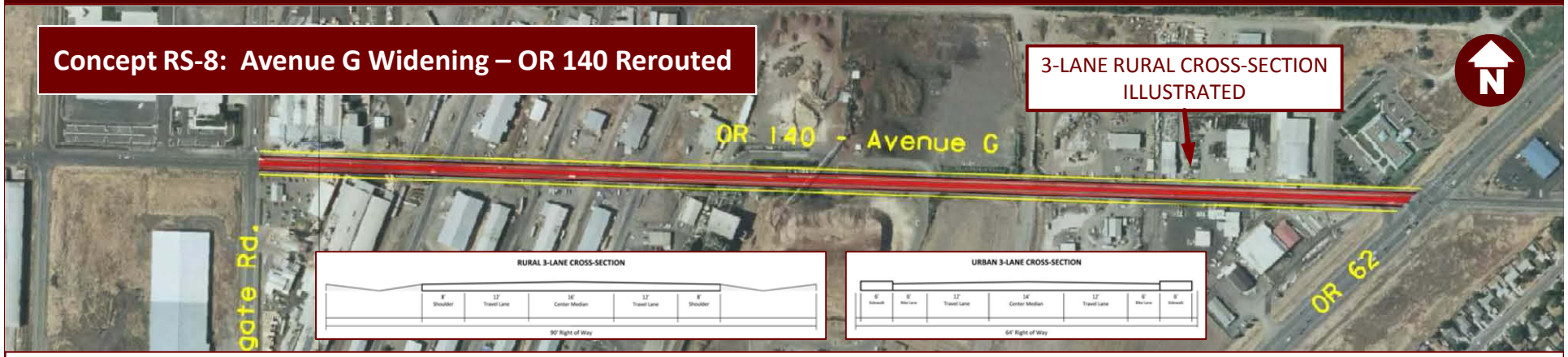
Environmental & Land Use:

Area zoned industrial

Potential economic benefit for adjacent properties from higher capacity road with turn lanes

No natural resources mapped in area

Avenue G Improvements (OR 140 Rerouted)



Purpose: Widen Avenue G to meet state standards in response to OR 140 Reroute and OR 62 Full Corridor

Traffic Operations:

3-Lane Rural – Center median provides left-turn refuge
3-Lane Urban – Center median plus sidewalks

Basic Roadway Geometry & Right of Way (ROW):

Keeps alignment along centerline
Existing ROW is 80' – can likely accommodate all options
Full upgrade of railroad crossing

Cost Opinions:

3-Lane Rural – $2.6 million
3-Lane Urban – $5.0 million

Options: 3-Lane Rural Cross-Section
3-Lane Urban Cross-section

Safety:

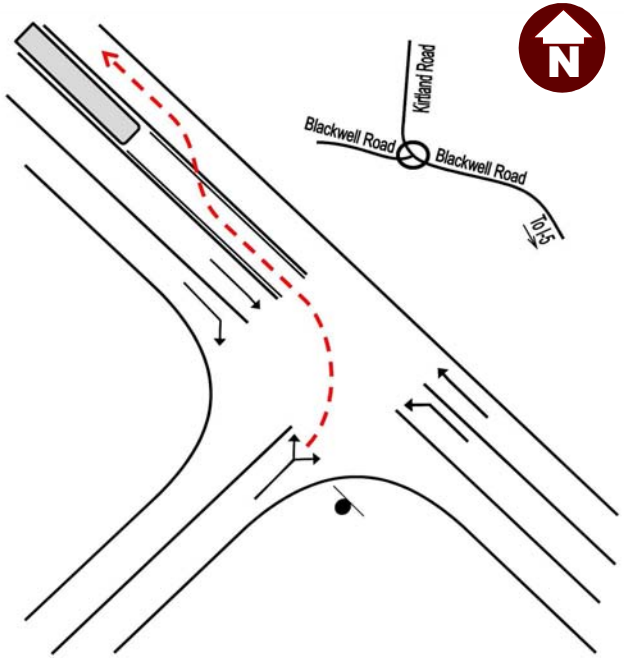
3-Lane Rural – Center lane for left-turning vehicles
3-Lane Urban – Center lane plus sidewalks & curbs

Environmental & Land Use:

Area zoned industrial
Potential economic benefit for adjacent properties from higher capacity road with turn lanes
No natural resources mapped in area

Blackwell Road & Kirtland Road Improvements

Concept I-1: Blackwell Road and Kirtland Road Traffic Signal



Purpose: Capacity

Traffic Operations:

- Opportunity for 2-stage left turn (illustrated to left)
- Long term operations depends on frequency of 2-stage left turn – intersection demand could be greater than capacity if not happening
- Current traffic volumes do not meet traffic signal criteria but future volumes would meet traffic signal criteria
- Intersection would operate well with traffic signal

Safety:

- Traffic signals frequently have higher crash rates than STOP signs although the type and severity of the crashes differs

Basic Roadway Geometry & Right of Way (ROW):

- Installed within ROW
- Persistent congestion should be present & traffic volumes should meet warrants before a traffic signal is installed

Environmental & Land Use:

- Some access points nearby
- No natural resources mapped in area

Cost Opinion: $0.5 million

Kirtland Road Intersection Improvements

Purpose: Safety

Traffic Operations:
- Left-turn lane criteria not met by current or future traffic volumes

Safety:
- Left-turn lane would provide refuge for vehicles stopped to make left turn onto High Banks
- 1 collision related to left turns in 5 years

Basic Roadway Geometry & Right of Way (ROW):
- Eastbound and westbound left-turn lanes added within existing ROW

Environmental & Land Use:
- Some nearby driveways
- Wetlands (vernal pools) in southeast quadrant

Cost Opinion: $1.5 million

Purpose: Safety & Future Transit Service

Traffic Operations:
- Left-turn lane criteria not met by current or future traffic volumes
- Potential RVTD loop on Kirtland to West Antelope

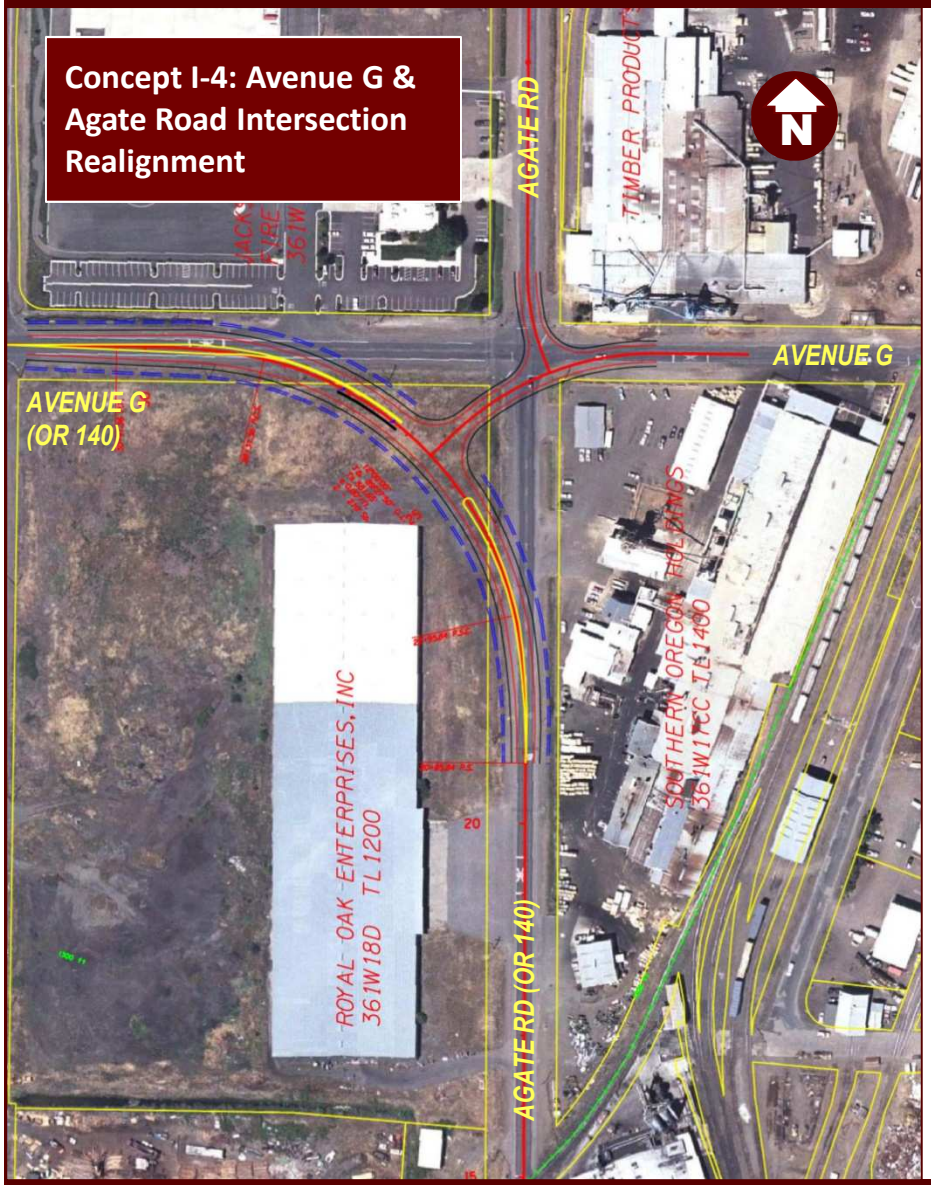
Safety:
- Left-turn lane would provide refuge for vehicles stopped to make left turn onto West Antelope
- No collisions reported in 5 years

Basic Roadway Geometry & Right of Way (ROW):
- Westbound left-turn lane added within existing ROW

Environmental & Land Use:
- Some nearby driveways
- No natural resources mapped in area

Cost Opinion: $1.2 million

Avenue G & Agate Road Intersection Improvements



Purpose: Priority for Highway Movements

Traffic Operations:

- Heaviest traffic movements: north-south & east-west
- Realignment would result in high turning movements and very low through traffic
- Some movements would operate worse than current configuration
- Conflicts with OR 140 Reroute to Avenue G for OR 62 full corridor improvements

Safety:

- Two closely spaced intersections

Basic Roadway Geometry & Right of Way (ROW):

- Two intersections created from one
- Additional ROW needed

Environmental & Land Use:

- Driveways could require reconstruction, relocation, or closure
- ROW impacts in southwest quadrant
- No natural resources mapped in area

Cost Opinion: $1.3 million

Avenue G & Agate Road Intersection Improvements

Purpose: Capacity and improved flow for highway movements

Traffic Operations:

- Heaviest traffic movements: north-south & east-west (same as I-4)
- Vehicles can turn right at higher speeds
- Acceleration and merge lane allows right turns without stopping
- Some traffic movements would eventually have long delays with 4-way STOP
- Current traffic volumes do not meet traffic signal criteria but future volumes would meet traffic signal criteria
- Intersection would operate well with traffic signal

Basic Roadway Geometry & Right of Way (ROW):

- Adds eastbound right-turn lane on Avenue G, channelizing island for right-turn movement, and acceleration and merge lane on Agate
- Additional ROW needed
- Persistent congestion should be present & traffic volumes should meet warrants before a traffic signal is installed

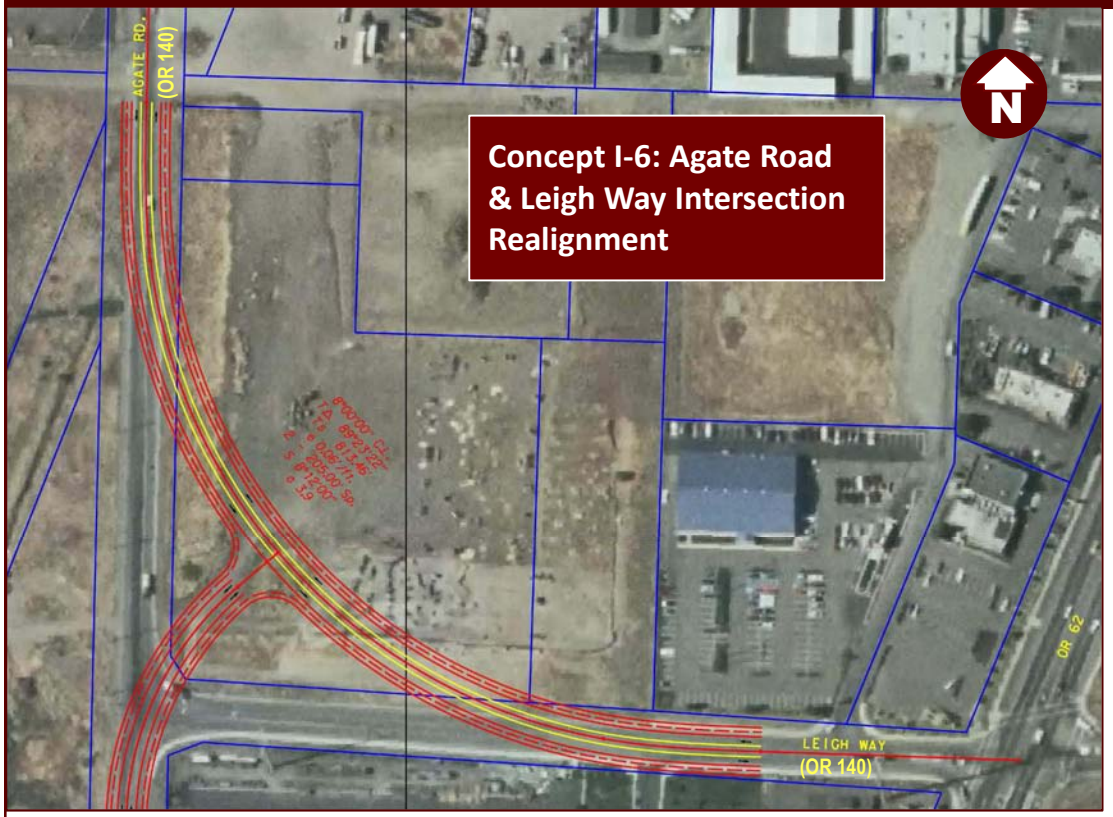
Environmental & Land Use:

- One driveway located in merge lane
- Minor ROW impacts in southwest quadrant
- No natural resources mapped in area

Cost Opinion:

- $1.6 million for channelization and merge lane
- $0.5 million for traffic signal

Agate Road & Leigh Way Intersection Improvements



Purpose: Priority for Highway Movements

Traffic Operations:

- Current traffic patterns favor north-south movement
- Patterns will change with OR 62 Phase 1 & 2 to favor OR 140
- Coordination between projects recommended

Basic Roadway Geometry & Right of Way (ROW):

- Intersection realigned to stop south leg of Agate
- Design speed of 45 mph
- 3-lane urban section with curbs & sidewalks
- Additional ROW needed

Environmental & Land Use:

- ROW impacts in northeast quadrant
- Power lines in northeast quadrant may be impacted
- No natural resources mapped in area

Cost Opinion: $5.4 million

Agate Road & Leigh Way Intersection Improvements

Purpose: Improved flow for highway movements

Traffic Operations:

- Current traffic patterns favor north-south movement (same as I-6)
- Patterns will change with OR 62 Phase 1 & 2 to favor OR 140
- Vehicles can turn right at higher speeds without stopping
- Change in traffic control – Agate northbound stops, Leigh left stops,
- Coordination between projects recommended

Safety:

- Non-standard traffic control may be confusing
- Potential for more turning or angle conflicts

Basic Roadway Geometry & Right of Way (ROW):

- Adds channelizing island for westbound right turn on Leigh
- Changes STOP sign locations
- Additional ROW needed

Environmental & Land Use:

- Minor ROW impacts in northeast quadrant
- No natural resources mapped in area

Cost Opinion: $0.5 million

OR 140 Intersection Improvements

Concept I-8: OR 140 Left-Turn Lanes at Lakeview Drive

Purpose: Safety

Traffic Operations:
Left-turn lane criteria are met by current traffic volumes

Safety:
Left-turn lane would provide refuge for vehicles stopped to make left turn onto Lakeview
1 collision related to left turns in 5 years

Basic Roadway Geometry & Right of Way (ROW):
Eastbound and westbound left-turn lanes added within existing ROW

Environmental & Land Use:
Some adjacent wetlands (vernal pools)

Cost Opinion: $1.2 million

Concept I-9: OR 140 & Left-Turn Lanes at Riley Road

Purpose: Safety

Traffic Operations:
Left-turn lane criteria are met by current traffic volumes

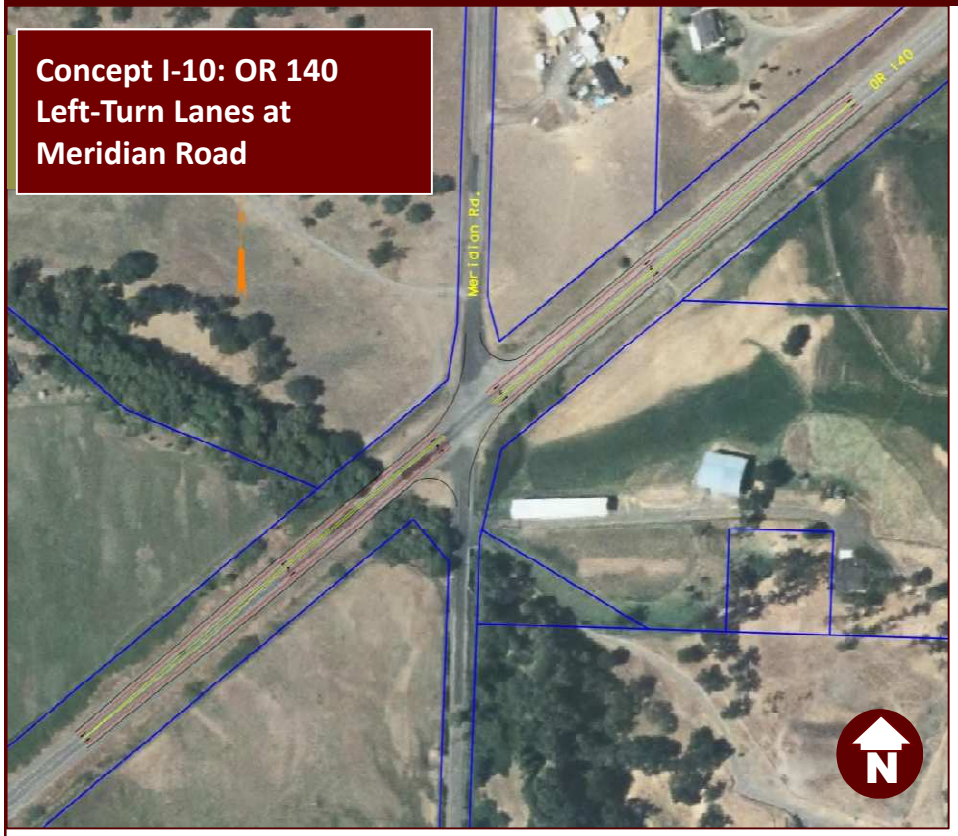
Safety:
Left-turn lane would provide refuge for vehicles stopped to make left turn onto Riley
2 collisions related to left turns in 5 years

Basic Roadway Geometry & Right of Way (ROW):
Eastbound and westbound left-turn lane added within existing ROW

Environmental & Land Use:
Some adjacent wetlands (vernal pools)

Cost Opinion: $1.2 million

OR 140 Intersection Improvements



Purpose: Safety

Traffic Operations:

Left-turn lane criteria not met by current or future traffic volumes

Safety:

Left-turn lane would provide refuge for vehicles stopped to make left turn onto Meridian

2 collisions related to left turns in 5 years

Basic Roadway Geometry & Right of Way (ROW):

Eastbound and westbound left-turn lane added within existing ROW

Bridge of Antelope Creek located ~100 feet to west – structure could accommodate 3 travel lanes but shoulders would be limited to less than 3 feet

Environmental & Land Use:

Antelope Creek is existing habitat for Coho Salmon

Cost Opinion: $1.3 million

OR 140 Intersection Improvements

Purpose: Safety

Traffic Operations:
- Left-turn lane criteria not met by current or future traffic volumes

Safety:
- Left-turn lane would provide refuge for vehicles stopped to make left turn onto Meridian
- No collisions reported in 5 years

Basic Roadway Geometry & Right of Way (ROW):
- Eastbound and westbound left-turn lanes added within existing ROW

Environmental & Land Use:
- No natural resources mapped in area

Cost Opinion: $1.7 million

Purpose: Safety

Traffic Operations:
- Left-turn lane criteria not met by current or future traffic volumes

Safety:
- Left-turn lane would provide refuge for vehicles stopped to make left turn onto Brownsboro-Eagle Point
- No collisions reported in 5 years

Basic Roadway Geometry & Right of Way (ROW):
- Eastbound and westbound left-turn lane added within existing ROW

Environmental & Land Use:
- No natural resources mapped in area

Cost Opinion: $1.3 million