

OR 140 Corridor Plan:

I-5 Exit 35 to Brownsboro–Eagle Point Road

DRAFT Technical Memorandum #7

Preferred Alternative

Prepared for

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7. PREFERRED ALTERNATIVE

This technical memorandum summarizes the recommendations for the improvements that would constitute the preferred alternative for the OR 140 corridor. These recommendations are based on feedback from the Technical and Citizen Advisory Committees, comments received at the Public Open House, and input from ODOT staff.

7.1. Alternatives Considered

The alternatives analysis presented in Technical Memorandum #6 focused on four areas for consideration within the OR 140 corridor:

- Highway Redesignation
- Jackson County Reclassification
- Segment Improvements
- Intersection Improvements

During and following the presentations of the alternatives analysis, several other ideas were identified for consideration. These have been assessed and recommendations are presented in a new category of improvements: *Additional Improvements*. A table at the end of the memorandum summarizes the recommendations for all of the concepts considered.

7.2. Highway Redesignation

Three potential changes in highway designation were identified to address consistency in statewide classification or respond to system changes imposed by other projects. Two of the projects are recommended for consistency of statewide designations through the corridor, the third project represents a system change needed to respond to the full corridor improvement identified in the OR 62 Corridor Solutions EIS.

7.2.1. Concept HR-1 – Extension of OR 140 to I-5 Southbound Ramps

Concept HR-1 considers extending OR 140 and/or the statewide highway designation approximately 0.3 miles from the current terminus at the I-5 northbound ramp terminal across the freeway to the I-5 southbound ramp terminal. The purpose of this concept is to create a consistent statewide classification through the interchange with associated management objectives.

Discussion

One of the reasons for recommending the OR 140 statewide designation through the southbound ramp terminal was to establish mobility standards that would be consistent for both ramp terminals if this section of OR 140 was designated a freight route. Since the concept was developed, Oregon Highway Plan (OHP) mobility standards have changed. The statewide freight route standard of 0.85 is now the same as the interstate ramp standard of 0.85. Therefore, the inconsistency between the ramp terminals is no longer an issue.

However, while the mobility standards are now currently the same, other management objectives associated with the statewide designation may warrant additional consideration of this option. OR 140 is a statewide highway while OR 99, which intersects the I-5 southbound ramp terminal, is a district highway. While the interstate may be the overarching facility that guides the decision-making at the interchange, policies that focus on the intersecting facility designation may also play into the process.

Recommendation

A variation of Concept HR-1, the extension of the OR 140 freight route designation, is recommended as a high priority element of the OR 140 plan. Rather than extending OR 140, the designation of OR 99 will be changed from district highway to statewide highway for the segment extending between the I-5 southbound and northbound ramps. The Oregon Transportation Commission is scheduled to adopt this designation in May 2012.

7.2.2. Concept HR-2 – Extension of Freight Route Designation

Concept HR-2 considers obtaining a freight route designation for the 8.29-mile segment of OR 140 between OR 62 and I-5. The purpose of this concept is to create a consistent freight designation for OR 140 from the Klamath Falls area through to the freeway.

Discussion

Although OR 140 is designated as a statewide highway throughout the corridor study area, the freight route designation only applies to the portion of OR 140 east of OR 62. Concept HR-2 would continue the freight route designation from OR 62 to I-5. This designation would apply management objectives with a greater emphasis on freight movement than the statewide designation alone.

The updated OHP mobility standard for a statewide highway within an MPO is a maximum v/c ratio of 0.90 while a statewide freight route allows a maximum v/c ratio of 0.85. The freight route designation would change the OHP mobility standards to 0.85 between the I-5 northbound ramp terminal and the intersection with OR 62. The current HDM mobility standard would also change from 0.80 to 0.75 with the freight route designation.

With limited funding available for highway improvements in the future, identifying where investments should be targeted will be critical. The freight designation will identify OR 140 as a higher priority corridor than other corridors that may be under consideration.

Recommendation

Concept HR-2, the extension of the OR 140 freight route designation, is recommended as a high priority element of the OR 140 plan. The Oregon Transportation Commission is scheduled to adopt this designation in May 2012.

7.2.3. Concept HR-3 – Rerouting to Crater Lake Highway and Avenue G

Concept HR-3 considers a long-term plan to revise the routing of OR 140 in response to the full corridor improvement identified in the OR 62 Corridor Solutions EIS which would use Agate Road and disconnect it from Leigh Way and OR 140. To address this future disconnect, the current routing of OR 140 from Leigh Way and Agate Road would be revised to route OR 140 onto Crater Lake Highway (Old OR 62) and Avenue G.

Discussion

Construction of the full corridor improvement identified in the OR 62 Corridor Solutions EIS would impact OR 140 on its alignment along Agate Road and Leigh Way. The improvements to be constructed in Phase 1 and 2 (JTA funded) currently bring the OR 62 expressway alignment back to the existing OR 62 Crater Lake Highway alignment south of OR 140, at approximately the location where Agate Road connects to the highway. The full corridor improvement would extend these improvements northward along Agate Road, through the White City industrial area before continuing eastward along West Dutton Road and reconnecting with Crater Lake Highway. The new OR 62 expressway would overlap OR 140 along the section of Agate Road between Leigh Way and Avenue G. Leigh Way would no longer connect to Agate Road but would end in a cul-de-sac and only serve the adjacent land uses.

Recommendation

Concept HR-3, the rerouting of OR 140, is recommended as a long-term project in the OR 140 plan. However, the improvement is only necessary if OR 62 corridor improvements, beyond the JTA-funded Phases 1 and 2, are eventually completed. Thus, it should be identified as a contingency improvement rather than a planned project.

7.3. Jackson County Reclassification

Seven potential changes in functional classification were identified to address consistency with statewide classification, respond to changes in traffic demand, or respond to system changes imposed by other projects. Five of the projects were identified for consistency with statewide designations through the corridor, the sixth project is need today to address the large volume of southbound OR 62 traffic destined for westbound OR 140, and the seventh project represents a system change needed to respond to the full corridor improvement identified in the OR 62 Corridor Solutions EIS.

Ultimately, the RTP will also need to change the classification of these roadways for consistency as well. Map 5.6.1 of the RTP currently shows all of the roadways that comprise OR 140 as either Collector or Arterial roads. The RTP would need to be changed to indicate that these roads are now a state highway.

7.3.1. Concept JCR-1 – Blackwell Road Reclassification

Blackwell Road is currently classified as a Major Collector in the Jackson County TSP. Concept JCR-1 would reclassify Blackwell Road from the I-5 Interchange (Milepoint -8.29) to Kirtland

Road (Milepoint -7.02) as an Arterial for consistency with the statewide highway designation associated with OR 140.

Recommendation

As described in Concept JCR-1, the Jackson County TSP should reclassify Blackwell Road (Milepoint -8.29 to -7.02) as an Arterial during the next complete TSP update. The RTP should identify this segment of Blackwell Road as a state highway during the next RTP update.

7.3.2. Concept JCR-2 – Kirtland Road Reclassification (Rural Section)

A portion of Kirtland Road is currently classified as a Major Collector in the Jackson County TSP. Concept JCR-2 would reclassify the section of Kirtland Road from Blackwell Road (Milepoint -7.02) to the White City Urban Unincorporated (UUC) boundary (Milepoint -5.12) as an Arterial for consistency with the statewide highway designation associated with OR 140.

Recommendation

As described in Concept JCR-2, the Jackson County TSP should reclassify Kirtland Road (Milepoint -7.02 to -5.12) as an Arterial during the next complete TSP update. The RTP should identify Kirtland Road as a state highway during the next RTP update.

7.3.3. Concept JCR-3 – Kirtland Road Reclassification (White City Section)

A portion of Kirtland Road is also currently classified as an Industrial Collector in the Jackson County and White City TSPs. Concept JCR-3 would reclassify the section of Kirtland Road from the White City UUC boundary (Milepoint -5.12) to Avenue G (Milepoint -2.55) as an Arterial for consistency with the statewide highway designation associated with OR 140. This section includes the portion of Kirtland Road that currently remains under county jurisdiction, which together with a segment of Pacific Avenue, is under construction to smooth the curves for a more direct alignment with Avenue G.

Recommendation

As described in Concept JCR-3, the Jackson County TSP and White City TSP should reclassify Kirtland Road (Milepoint -5.12 to -2.55) as an Arterial during the next complete TSP update. The RTP should identify this segment of Kirtland Road as a state highway during the next RTP update.

7.3.4. Concept JCR-4 – Avenue G Reclassification (State Section)

Like Kirtland Road, Avenue G is currently classified as an Industrial Collector in the Jackson County and White City TSPs. Concept JCR-4 would reclassify the section of Avenue G from the realignment of Kirtland Road/Pacific Avenue (Milepoint -2.55) to Agate Road (Milepoint -1.16) as an Arterial for consistency with the statewide highway designation associated with OR 140.

Recommendation

As described in Concept JCR-4, the Jackson County TSP and White City TSP should reclassify Avenue G (Milepoint -2.55 to -1.16) as an Arterial during the next complete TSP update. The RTP should identify this segment of Avenue G as a state highway during the next RTP update.

7.3.5. Concept JCR-5 – Agate Road Reclassification

Agate Road is currently classified as an Industrial Collector in the Jackson County and White City TSPs. Concept JCR-5 would reclassify the section of Agate Road from Avenue G (Milepoint -1.16) to Leigh Way (Milepoint -0.20) as an Arterial for consistency with the statewide highway designation associated with OR 140.

Recommendation

As described in Concept JCR-5, the Jackson County TSP and White City TSP should reclassify Agate Road (Milepoint -1.16 to -0.20) as an Arterial during the next complete TSP update. The RTP should identify this segment of Agate Road as a state highway during the next RTP update.

7.3.6. Concept JCR-6 – Avenue G Reclassification (County Section)

Concept JCR-6 considered the county section of Avenue G between Agate Road and OR 62 which is classified as an Industrial Collector in the Jackson County TSP. Although this section is not part of OR 140, it serves as a direct link between OR 62 and OR 140 for traffic traveling between Eagle Point and I-5. It also carries traffic from the residential areas of White City that lie east of OR 62. These demands are both expected to become an increasing portion of the traffic mix using Avenue G between OR 62 and OR 140 (Agate Road). For consistency with the mix of traffic served by this section of roadway and anticipated growth in through traffic, a reclassification from Industrial Collector to Minor Arterial is recommended. In the Jackson County TSP, Minor Arterial (Urban) and Major Collector are grouped together.

Recommendation

As described in Concept JCR-6, the Jackson County TSP should reclassify Avenue G as a Minor Arterial. This reclassification should be implemented in the short term so that any improvements to this segment of roadway would be consistent with Minor Arterial street standards.

7.3.7. Concept JCR-7 – Avenue G Reclassification with Rerouted OR 140

Concept JCR-7 addresses the county section of Avenue G between Agate Road and OR 62 if OR 140 is rerouted (Concept HR-3) in response to construction of the full corridor improvement identified in the OR 62 Corridor Solutions EIS. Since this section of Avenue G would also serve as OR 140 under these conditions, Concept JCR-7 would reclassify it as an Arterial for consistency with the statewide highway designation associated with OR 140.

Recommendation

Concept JCR-7 is recommended when Concept HR-3, the rerouting of OR 140, is implemented. The Jackson County TSP reclassification of Avenue G to Arterial would only be necessary if OR 62 corridor improvements beyond the JTA-funded Phases 1 and 2 are eventually completed. Thus, it should be identified as a contingency rather than a planned project.

7.4. Roadway Segment Improvements

Eight potential road segment improvements were identified during the concept development process to bring OR 140 up to state standards, provide additional capacity, or address safety concerns. Several of these potential improvements had options that were considered with the concept.

7.4.1. Concept RS-1 – Blackwell Road Improvements – Widening

Concept RS-1 is one of two concepts that address improvements on Blackwell Road (see also Concept RS-2 – Blackwell Road Improvements – Widening and Curve Realignment). It considers widening Blackwell Road (Milepoint -8.17 to -7.02) to meet state standards but keeping the alignment along the current centerline to minimize impacts within the existing right of way to the greatest extent possible. The purpose of this improvement is to improve safety and increase capacity along this roadway.

Discussion

Concept RS-1 is one of two concepts that were considered for this section of Blackwell Road. It would widen Blackwell Road to meet state standards for roadway width but would keep the alignment along the current centerline; it does not modify any of the existing curves along the roadway. Concept RS-2 would realign sections of the roadway to smooth curves and meet a 55 mph design speed.

Current traffic demand on Blackwell Road ranges from 8,000 to 9,000 vehicles per day (vpd). The 2034 forecast demand is expected to range from 11,000 to 12,000 vpd.

Concept RS-1 would increase capacity in the corridor and provide some safety benefits associated with the wider shoulders and a center median lane. However, it would not address the safety concerns associated with “breaking” curves along Blackwell Road. The crash analysis indicated a history of collisions near these curves.

Recommendation

Concept RS-1 is not recommended because it does not address the documented crash history associated with the corridor.

7.4.2. Concept RS-2 – Blackwell Road Improvements – Widening and Curve Realignment

Concept RS-2 considers widening Blackwell Road (Milepoint -8.17 to -7.02) to meet state standards and would realign sections of the roadway to smooth curves and meet a 55 mph design speed. Similar to Concept RS-1, the purpose of this improvement is to improve safety and increase capacity along this roadway.

Discussion

Concept RS-2 would widen Blackwell Road to meet state standards and would realign sections of the roadway to smooth curves and meet a 55 mph design speed. The spiraling curves and higher design speed should improve the safety of the roadway along those sections where curves are currently breaking and crash analysis indicates a history of collisions.

Because it would have greater safety benefits, Concept RS-2 is preferred over Concept RS-1. However, the right-of-way needs for this concept would be much more extensive than for Concept RS-1 because of the higher design speed and curve corrections.

Two roadway cross-sections were considered with Concept RS-2: A) a 2-lane rural cross-section with two 12-foot travel lanes and 8-foot shoulders within an 80-foot right of way, and B) a 3-lane rural cross-section with two 12-foot travel lanes, a 16-foot median lane, and 8-foot shoulders within a 90-foot right of way.

Forecast volumes of almost 12,000 vehicles per day (vpd) indicate that left-turn lanes would be needed at most access points; therefore, the 3-lane section is preferred over the 2-lane section. Blackwell Road will serve the Tolo Area, the Central Point Urban Reserve Area designated CP-1B, when it develops over time. This further supports the 3-lane rural concept.

Recommendation

Concept RS-2 is recommended as an element of the OR 140 Corridor Plan. It should be constructed as a 3-lane rural cross-section with setbacks that would allow for widening to 5 lanes should development in the Tolo Area (CP-1B) require additional capacity. These setbacks would also allow for construction of right-turn deceleration lanes at higher volume access points. A design speed of 55 mph is recommended along Blackwell Road although the posted speed may remain at 45 mph. Phased implementation of this concept may be difficult because of the need to realign some sections of the roadway. This section of roadway has the highest volumes in the corridor study area and a high crash rate. For these reasons, this improvement should be a high priority.

7.4.3. Concept RS-3 – Kirtland Road – Safety Improvements

Concept RS-3 considers two safety improvements that could be implemented on Kirtland Road (Milepoint -7.02 to -2.71): A) roadway delineators, and B) rumble strips. The purpose of these improvements is to address safety concerns in the corridor.

Discussion

In the crash analysis performed as part of the existing transportation system evaluation, nineteen crashes occurred at non-intersection locations along Kirtland Road between Blackwell Road and Table Rock Road. The delineators would provide a visual enhancement while the rumble strips would provide an auditory backup for drivers. These improvements could be constructed independently or together.

Recommendation

Concept RS-3 is recommended as an element of the OR 140 Corridor Plan. Installation of delineators is already under design for a portion of this corridor. Rumble strips are recommended as a medium priority project but priority should be elevated if a pattern of single vehicle, run-off-the-road crashes continues. When installing rumble strips consideration should be given to accommodating bicycle usage on the shoulders by providing recurring short gaps in the continuous rumble strip pattern.

7.4.4. Concept RS-4 – Kirtland Road – Widening

Concept RS-4 considers widening the shoulders on Kirtland Road (Milepoint -7.02 to -2.71) to 8 feet. The purpose of the concept is to achieve consistency with the design standards for a statewide highway.

Discussion

Kirtland Road is currently a two-lane roadway with a roadway surface of 32 to 36 feet and a right-of-way width that varies from 60 feet to 80 feet. The new construction around the realigned Blackwell/Kirtland Road intersection already has 8-foot shoulders and approximately 85 percent of Kirtland Road already has 6-foot shoulders; only the area beginning 0.1 miles west of Table Rock Road to Pacific Avenue has 4-foot shoulders. A portion of this section is under construction by Jackson County as part of the realignment of Pacific Avenue.

Current traffic demand on Kirtland Road ranges from more than 7,000 vehicles per day (vpd) near Blackwell Road to about 4,000 vpd east of Table Rock Road. The 2034 forecast demand is expected to range from about 10,500 near Blackwell Road to over 7,000 east of Table Rock Road. The two-lane cross-section should be able to accommodate future demand along Kirtland Road. Some intersections may benefit from the addition of left-turn lanes to provide safe and efficient operations; the considerations for turn lanes are addressed in *Section 7.5. Intersection Improvements*.

Kirtland Road crosses a number of creeks and canals, including Bear Creek and Whetstone Creek. Flooding near existing culverts has been an issue noted by some project participants. Kirtland Road also runs through a number of areas with a wetlands classification of palustrine, emergent that may contain high quality vernal pools.

Recommendation

Concept RS-4 is not recommended because it would provide minimal benefit to roadway users while raising a number of environmental concerns. Furthermore the safety improvements recommended under Concept RS-3 would address many of the existing safety concerns on this section of the corridor.

Flooding near existing culverts has been an issue noted by some project participants. These flooding issues should be considered when any culvert maintenance is performed in the future.

7.4.5. Concept RS-5 – Avenue G – Widening

Concept RS-5 considers upgrading Avenue G (Milepoint -2.55 to -1.16) with the purpose of meeting state standards. In addition to achieving standards, this concept also considers what improvements may be needed to safely serve future industrial development along the corridor.

Discussion

Avenue G is currently a two-lane roadway with a roadway surface of 36 to 37 feet and a right-of-way width of 100 feet. Three state cross-sections were considered for this concept: A) a 2-lane rural cross-section with two 12-foot travel lanes and 8-foot shoulders, B) a 3-lane rural cross-section with two 12-foot travel lanes, a 16-foot median lane, and 8-foot shoulders, and C) a 3-lane urban cross-section with two 12-foot travel lanes, a 14-foot median lane, 6-foot bike lanes, and 6-foot sidewalks. All three cross-sections could be accommodated within the existing 100-foot right of way.

Current traffic demand on Avenue G is estimated at about 4,500 vehicles per day (vpd) and 2034 forecast demand is expected to be near 8,000 vpd. Development of the adjacent White City industrial area would contribute to this growth.

While left-turn lanes may not be necessary under current conditions, they may be needed as the area develops and both through and local traffic volumes increase. Therefore, a 3-lane section is preferred over the 2-lane section. Furthermore, because Avenue G lies within the White City Urban Unincorporated Community (UUC) boundary, the 3-lane urban section is preferred over the rural section.

Recommendation

Concept RS-5 with a 3-lane urban section is recommended as an element of the OR 140 Corridor Plan. Phased implementation of this concept should be considered. The roadway could be widened to provide the center turn lane and wider shoulders while the adjacent lands remain largely undeveloped. The urban features, such as curb, gutter, and sidewalks could be added as the area begins to develop. Some of the improvements could also be tied to development of adjacent lands. Although a landscape strip is not required between the curb and the sidewalk, it should be considered to further buffer pedestrians from the higher speed traffic. As parcels develop along Avenue G, construction of sidewalks at a location consistent with the future roadway alignment is recommended as part of the development approval.

7.4.6. Concept RS-6 – Agate Road – Widening

Concept RS-6 considers upgrading Agate Road (Milepoint -1.16 to -0.20) with the purpose of meeting state standards. In addition to achieving standards, this concept also considers what improvements may be needed to safely serve future industrial development along the corridor.

Discussion

Agate Road is currently a two-lane roadway with a roadway surface of 32 to 40 feet and a right-of-way width of 100 feet. Two state cross-sections were considered for this concept: A) a 3-lane rural cross-section with two 12-foot travel lanes, a 16-foot median lane, and 8-foot shoulders, and B) 3-lane urban cross-section with two 12-foot travel lanes, a 14-foot median lane, 6-foot bike lanes, and 6-foot sidewalks. Both cross-sections could be accommodated within the existing 100-foot right of way.

Current traffic demand on Agate Road is estimated at about 4,500 vehicles per day (vpd) and 2034 forecast demand is expected to be near 8,000 vpd. Development of the adjacent White City industrial area would contribute to this growth. This forecast does not include the full corridor improvement for OR 62.

While left-turn lanes may not be necessary under current conditions, they may be needed as remaining parcels develop or redevelop, and both through and local traffic volumes increase. Therefore, a 3-lane section is preferred over the 2-lane section. Furthermore, because Avenue G lies within the White City Urban Unincorporated Community (UUC) boundary, the 3-lane urban section is preferred over the rural section.

Recommendation

Concept RS-6 with a 3-lane urban section is recommended as an element of the OR 140 Corridor Plan. Phased implementation of this concept should be considered. The roadway could be widened to provide the center turn lane and wider shoulders without other elements of the urban cross-section. The urban features, such as curb, gutter, and sidewalks could be added as volumes grow or the adjacent parcels develop or redevelop. Although a landscape strip is not required between the curb and the sidewalk, it should be considered to further buffer pedestrians from the higher speed traffic. Many of the parcels along Agate Road are already developed; however, construction of sidewalks at a location consistent with the future roadway alignment is recommended as part of the approval process for development or redevelopment.

7.4.7. Concept RS-7 – Avenue G – County Section Widening

Concept RS-7 considers upgrading the county section of Avenue G between Agate Road and OR 62 to a 3-lane cross section. The purpose of this concept is to better serve anticipated demand from both through and local traffic.

Discussion

The county section of Avenue G between Agate Road and OR 62 serves as a direct link between OR 62 and OR 140 for traffic traveling between Eagle Point and I-5. It also carries traffic from the residential areas of White City that lie east of OR 62. These demands are both expected to become an increasing portion of the traffic mix using Avenue G between OR 62 and OR 140 (Agate Road).

Avenue G is currently a two-lane roadway (industrial collector) with a roadway surface of 36 feet and a right-of-way width of 80 feet. Two county cross-sections were considered for this concept: A) 3-lane Industrial Collector with two 12- to 14-foot travel lanes, a 14-foot median lane, and 6-foot shoulders, and B) a Minor Arterial/Major Collector with two 12-foot travel lanes, a 14-foot median lane, 6-foot bike lanes, 7-foot planting strips, and 6-foot sidewalks. Both cross-sections could be accommodated within the existing 80-foot right of way.

Current traffic demand on Avenue G between Agate Road and OR 62 is estimated at about 4,000 vehicles per day (vpd) and 2034 forecast demand is expected to be near 7,500 vpd. Development of the adjacent industrial area would contribute to this growth. This forecast does not include the full corridor improvement for OR 62.

Because Avenue G lies within the White City Urban Unincorporated Community (UUC) boundary, urban features that include curbs, gutters, and sidewalks are desirable. Therefore, the Minor Arterial/Major Collector section is preferred over the Industrial Collector. Furthermore, the Minor Arterial/Major Collector section could accommodate increased traffic demand in response to construction of the full corridor improvement identified in the OR 62 Corridor Solutions EIS where this section of Avenue G would also serve as OR 140 under these conditions.

Recommendation

Concept RS-7, an upgrade to minor arterial standards, is recommended for implementation by Jackson County whether or not Concept HR-3, the rerouting of OR 140, is implemented. Phased implementation of this concept should be considered. The roadway could be widened to provide the center turn lane and wider shoulders without other elements of the urban cross-section. The urban features, such as curb, gutter, and sidewalks could be added as volumes grow or the adjacent parcels develop or redevelop. Many of the parcels along Avenue G are already developed; however, construction of sidewalks at a location consistent with the future roadway alignment is recommended as part of the approval process for development or redevelopment.

7.4.8. Concept RS-8 – Avenue G – OR 140 Reroute Widening

Concept RS-8 responds to the completion of the full corridor improvement identified in the OR 62 Corridor Solutions Environmental Impact Statement (EIS) by upgrading Avenue G between Agate Road and OR 62 with the purpose of meeting state standards.

Discussion

Construction of the full corridor improvement identified in the OR 62 Corridor Solutions EIS would disconnect the existing OR 140 route, as discussed under other concepts. To address this future disconnect, rerouting OR 140 along Crater Lake Highway and Avenue G would be partnered with the OR 62 full corridor improvement.

As discussed for Concept RS-7, current traffic demand on Avenue G between Agate Road and OR 62 is estimated at about 4,000 vehicles per day (vpd) and 2034 forecast demand is expected to be near 7,500 vpd. Forecasting from the OR 62 Corridor Solutions EIS indicates that future traffic volumes on Avenue G may be similar with the full corridor improvement construction although it is likely that some increase in traffic could be anticipated.

Concept RS-7 with the Minor Arterial/Major Collector designation is recommended for implementation by Jackson County. This cross-section is consistent with the state 3-lane urban cross-section considered with Concept RS-8. The rural cross-section is not appropriate within White City Urban Unincorporated Community (UUC) boundary.

Recommendation

If improvements associated with Concept RS-7 are implemented, then Concept RS-8 is not necessary; therefore, it is not recommended as part of the OR 140 Corridor Plan.

7.5. Intersection Improvements

Twelve potential intersection improvements were identified to improve traffic flow, provide additional capacity, or address safety concerns.

7.5.1. Concept I-1 – Blackwell Road & Kirtland Road Traffic Signal

Concept I-1 considers installing a traffic signal at the intersection of Blackwell Road and Kirtland Road. The purpose of this concept is to provide additional capacity at the intersection to accommodate future growth.

Discussion

The Blackwell Road/Kirtland Road intersection is currently STOP-controlled on the eastbound (Blackwell Road) approach with free-flowing movements on the northbound (Blackwell Road) and southbound (Kirtland Road) approaches. Traffic operations analysis indicates that the eastbound left-turn movement currently experiences some congestion during peak conditions. The extent of that congestion depends on how drivers execute the left-turn movement. Some drivers turn left directly into the northbound travel lane while others may be using the center median refuge to execute a “two-stage” left turn. A two-stage turn is made when the eastbound driver at the STOP sign seeks a gap in the southbound traffic and turns left into the median, waits for a gap in the northbound traffic, then pulls into the northbound travel lane.

If drivers do not take advantage of the center median refuge, the existing v/c ratio for the eastbound approach is estimated at 0.77; however, if the two-stage left turn is included in the

calculation, the v/c ratio could be as low as 0.40. For the 2034 future condition, the v/c ratio is estimated at 1.12 with no median usage, and 0.45 with the two-stage left-turn movement. A survey of driver behavior at this location has not been conducted, so the number of left turns that are executed in the two-stage method is not available.

Recommendation

Concept I-1 is not recommended for the OR 140 Corridor Plan at this time; however, future consideration of a traffic signal may be necessary if the City of Central Point expands their urban growth boundary (UGB) to include the Tolo urban reserve area (CP-1B).

7.5.2. Concept I-2 – Kirtland Road & High Banks Road Left-Turn Lanes

Concept I-2 considers adding eastbound and westbound left-turn lanes on Kirtland Road (OR 140) at High Banks Road to provide a refuge for vehicles turning left from the highway to the side street. The purpose of this concept is to improve the safety of the intersection but it would also add some capacity.

Discussion

The Kirtland Road/High Banks Road intersection is currently STOP-controlled on the High Banks Road approaches with free-flowing movements on Kirtland Road (OR 140). Kirtland Road has no left-turn lanes but both the eastbound and westbound approaches have right-turn tapers to facilitate deceleration and turns. Permitted speed on Kirtland Road is 55 mph.

Installation of left-turn lanes would reduce the likelihood of rear end collisions that involve vehicles stopped on the highway while waiting to make a left turn onto High Banks Road. One crash of this type was reported at the High Banks Road intersection during the 5-year crash analysis period.

Preliminary analysis using ODOT's turn lane criteria¹ indicates that neither existing nor future traffic volumes are sufficient to warrant left turn lanes for either the eastbound or westbound approach. However, expansion of existing development south of the intersection and limitations of travel on certain county roadways may result in higher traffic volumes than estimated in the regional model.

Recommendation

Concept I-2 is recommended as an element of the OR 140 Corridor Plan. Although current traffic volumes on High Banks Road are low, the concept would address existing safety concerns as well as accommodate future growth in the area. This should be considered a lower priority project unless traffic volume growth or an increase in crashes related to left turns occurs.

¹ Section 7.2 Turn Lane Criteria, Analysis Procedures Manual, April 2006, Updated January 2011, online reference: http://www.oregon.gov/ODOT/TD/TPAU/docs/A_APM/APM.pdf. Note: These criteria are also consistent with the criteria in Appendix F of the Highway Design Manual.

7.5.3. Concept I-3 – Kirtland Road & West Antelope Road Left-Turn Lane

Concept I-3 considers adding a westbound left-turn lane on Kirtland Road at West Antelope Road to provide a refuge for vehicles turning left from the highway to the side street. The purpose of this concept is to improve the safety of the intersection but it would also add some capacity.

Discussion

The Kirtland Road/West Antelope Road intersection is a “T” intersection currently STOP-controlled on the West Antelope Road approach with free-flowing movements in the Kirtland Road (OR 140). Kirtland Road has no westbound left-turn lane but does have an eastbound right-turn lane. Permitted speed on Kirtland Road is 55 mph.

Only seven vehicles making the westbound left-turn movement were counted in a four-hour period which is not sufficient to warrant a left-turn lane. However, the Rogue Valley Transit District (RVTD) is considering expanding service in the White City area and may include a loop that would involve westbound vehicles turning left from Kirtland Road to West Antelope Road.

No crashes were reported at the West Antelope Road intersection during the 5-year crash analysis period.

Recommendation

Concept I-3 is recommended as an element of the Oregon 140 Corridor Plan. Although current left-turning traffic volumes to West Antelope Road are low, the concept would address long-term safety concerns and support RVTD service expansion. This should be considered a lower priority project unless traffic volume growth or RVTD service expansion occurs.

7.5.4. Concept I-4 – Avenue G & Agate Road – Intersection Realignment

Concept I-4 is one of two concepts that address improvements at the Avenue G and Agate Road intersection (see also Concept I-5 – Avenue G & Agate Road – Channelization and Traffic Signal). It considers realigning the intersection of Avenue G and Agate Road with purpose of giving priority to the through movements on OR 140.

Discussion

OR 140 makes a 90 degree turn at the four-way, STOP-controlled intersection of Avenue G and Agate Road. Concept I-4 would realign to create a smooth curve that allows through movement between the west leg of Avenue G and the south leg of Agate Road. The east leg of Avenue G would approach the realigned OR 140 roadway at a right angle with STOP control. The second intersection would be formed by the north leg of Agate Road, which would stop at the east leg of Avenue G. This second intersection would be realigned slightly from its current location.

This concept raises both operational and safety concerns. Although the realignment favors the through traffic movement on OR 140, this is not the dominant traffic flow through the

intersections. The major traffic movements are east-west on Avenue G and north-south on Agate Road and these through movements are expected to remain dominant in the future. Preliminary analysis of this intersection configuration indicates that it would not meet state mobility standards. The realignment may also have safety concerns because the two intersections would be less than 200 feet apart with some queuing between.

Recommendation

Concept I-4 is not recommended for the OR 140 Corridor Plan. It would fail to meet state mobility standards and it raises safety concerns that are not present today.

7.5.5. Concept I-5 – Avenue G & Agate Road – Channelization and Traffic Signal

As an alternative to Concept I-4, Concept I-5 considers channelizing the eastbound right-turn movement to facilitate the turn on OR 140. It would also install a traffic signal at the Avenue G/Agate Road intersection if persistent congestion is present and traffic volumes meet signal warrants.

Discussion

Concept I-5 would include an eastbound right-turn lane on Avenue G, a channelizing island for the right-turn movement, and a southbound acceleration and merge lane on Agate Road. The increased turning radius would allow both passenger vehicles and trucks to make the right turn at higher speeds than the existing corner. Traffic would be fully merged before the railroad crossing on Agate Road.

Although traffic operations would improve, analysis of the four-way STOP control at this intersection indicates that the eastbound approach of Avenue G (OR 140) would not meet mobility standards in the long term. Concept I-5 would install a traffic signal at the Avenue G/Agate Road intersection if persistent congestion is present and traffic volumes meet signal warrants.

Recommendation

Concept I-5 is recommended as an element of the Oregon 140 Corridor Plan. The right-turn lane channelization could be implemented at any time (medium priority based on moderate traffic demand forecasts) but the traffic signal would not be installed unless traffic volume warrants were met.

7.5.6. Concept I-6 – Agate Road & Leigh Way – Intersection Realignment

Concept I-6 is one of two concepts that address improvements at the Agate Road and Leigh Way intersection (see also Concept I-7 – Agate Road & Leigh Way – Channelization and Traffic Control). It considers realigning the intersection of Agate Road and Leigh Way with purpose of giving priority to the through movements on OR 140.

Discussion

OR 140 makes a 90 degree turn at the intersection of Agate Road and Leigh Way. Concept I-6 would realign the intersection of Agate Road and Leigh Way to give priority to the through movements on OR 140. OR 140 would be realigned to create a smooth curve that allows through movement between the north leg of Agate Road and the east leg of Leigh Way. The south leg of Agate Road would approach the realigned OR 140 roadway at a right angle with STOP control.

Traffic volumes at this Agate Road/Leigh Way intersection currently favor the north-south movement. However, with the improvements on OR 62, the volumes are expected to shift and future volumes at the intersection are expected to favor the movement along OR 140. The realigned intersection would facilitate freight movement within the OR 140 corridor.

The realignment would require right of way from at least two parcels in the northeast quadrant of the intersection. Some power lines may lie within the required right of way.

Recommendation

Concept I-6 is not recommended for the OR 140 Corridor Plan. Although it would improve traffic flow along OR 140, it would do so at substantially higher cost than Concept I-7.

7.5.7. Concept I-7 – Agate Road & Leigh Way – Channelization and Traffic Control

As an alternative to Concept I-6, Concept I-7 considers channelizing the eastbound right-turn movement to facilitate the turn on OR 140 combined with changes in STOP-sign traffic control to give priority to the movements on OR 140.

Discussion

Concept I-7 would increase the turning radius and channelize the westbound right-turn movement to facilitate the turn for westbound traffic traveling on OR 140 from Leigh Way to Agate Road. The increased turning radius would allow both passenger vehicles and trucks to make the right turn at higher speeds than the existing corner.

By modifying the traffic control to stop northbound traffic, the right-turning traffic from Leigh Way would not need to stop at Agate Road. The modified traffic control cannot be analyzed but volumes are expected to remain at a level where mobility standards could be met. Because the traffic control proposed in this concept is non-standard, some drivers may be confused by which approaches are expected to stop and who has the right of travel. This could lead to turning or angle collisions.

Like Concept I-6, the improvements would require additional right of way in the northeast quadrant of the intersection but the impacts would be substantially fewer with this concept and the power lines would be avoided.

Recommendation

Concept I-7 is recommended as an element of the Oregon 140 Corridor Plan. The change in traffic control could be implemented at any time with or without the right-turn lane channelization. Traffic control modifications should be considered a higher priority while the turn lane should be medium priority based on moderate traffic demand forecasts.

7.5.8. Concept I-8 – OR 140 & Lakeview Drive Left-Turn Lanes

Concept I-8 considers adding eastbound and westbound left-turn lanes on OR 140 at Lakeview Drive to provide a refuge for vehicles turning left from the highway to the side street. The purpose of this concept is to improve the safety of the intersection but it would also add some capacity.

Discussion

The OR 140/Lakeview Drive intersection is currently STOP-controlled on the Lakeview Drive approaches with free-flowing movements on OR 140. There are no left-turn lanes on OR 140 at Lakeview Drive but both the eastbound and westbound approaches have right-turn tapers to facilitate deceleration and turns. Posted speed on OR 140 is 55 mph.

One crash involving improper passing of a vehicle turning left was reported at the Lakeview Drive intersection during the 5-year crash analysis period. Left-turn lanes would reduce the likelihood of this collision type in the future.

Preliminary analysis using ODOT's turn lane criteria indicates that existing traffic volumes are sufficient to warrant a left turn lane for the eastbound approach.

Recommendation

Concept I-8 is recommended as an element of the OR 140 Corridor Plan. Current traffic volumes on Lakeview Drive appear to meet warrants for installation of an eastbound turn lane and an existing crash history support this project as medium to high priority improvement.

7.5.9. Concept I-9 – OR 140 & Riley Road/E Antelope Left-Turn Lanes

Concept I-9 considers adding eastbound and westbound left-turn lanes on OR 140 at Riley Road to provide a refuge for vehicles turning left from the highway to the side street. The purpose of this concept is to improve the safety of the intersection but it would also add some capacity.

Discussion

The OR 140 intersection with Riley Road/E Antelope Road is currently STOP-controlled on the side street approaches with free-flowing movements on OR 140. OR 140 currently has no left-turn lanes at Riley Road or Antelope Road but both the eastbound and westbound approaches have wide shoulders (10 feet eastbound and 8 feet westbound) and short right-turn tapers to facilitate deceleration and turns. Posted speed on OR 140 is 55 mph.

Two crashes involving a rear end collision with a left-turning vehicle stopped in the travel lane were reported at the Riley Road/E Antelope Road intersection during the 5-year crash analysis period. Left-turn lanes would reduce the likelihood of this collision type in the future.

Preliminary analysis using ODOT's turn lane criteria indicates that existing traffic volumes are sufficient to warrant left turn lanes for the eastbound approach.

Recommendation

Concept I-9 is recommended as an element of the OR 140 Corridor Plan. Current traffic volumes at Riley Road/E Antelope Road appear to meet warrants for installation of turn lanes and an existing crash history support this project as medium to high priority improvement.

7.5.10. Concept I-10 – OR 140 & Meridian Road Left-Turn Lanes

Concept I-10 considers adding eastbound and westbound left-turn lanes on OR 140 at Meridian Road to provide a refuge for vehicles turning left from the highway to the side street. The purpose of this concept is to improve the safety of the intersection but it would also add some capacity.

Discussion

The OR 140/Meridian Road intersection is currently STOP-controlled on the Meridian Road approaches with free-flowing movements on OR 140. There are no left-turn lanes on OR 140 at Meridian Road. The westbound approach has a right-turn taper to facilitate deceleration and turns while the eastbound approach has a 10-foot shoulder. Posted speed on OR 140 is 55 mph.

Two crashes involving a rear end collision with a left-turning vehicle stopped in the travel lane and another crash involving improper overtaking of a left-turning vehicle were reported at the Meridian Road intersection during the 5-year crash analysis period. Left-turn lanes would reduce the likelihood of these collision types in the future.

Preliminary analysis using ODOT's turn lane criteria indicates that neither existing nor future traffic volumes are sufficient to warrant left turn lanes for either the eastbound or westbound approach.

Recommendation

Concept I-10 is recommended as an element of the OR 140 Corridor Plan. Although current traffic volumes on Meridian Road are low, the concept would address existing safety concerns. This should be considered a lower priority project unless traffic volume growth or an increase in crashes related to left turns occurs.

7.5.11. Concept I-11 – OR 140 & Brownsboro-Meridian Road Left-Turn Lanes

Concept I-11 considers adding eastbound and westbound left-turn lanes on OR 140 at Brownsboro-Meridian Road to provide a refuge for vehicles turning left from the highway to

the side street. The purpose of this concept is to improve the safety of the intersection but it would also add some capacity.

Discussion

The OR 140/Brownsboro-Meridian Road intersection is currently STOP-controlled on the Brownsboro-Meridian Road approaches with free-flowing movements on OR 140. There are no left-turn lanes at Brownsboro-Meridian Road. The westbound approach has a passing lane while the eastbound approach has a 10-foot shoulder. Posted speed on OR 140 is 55 mph.

No crashes were reported at the Brownsboro-Meridian Road intersection during the 5-year crash analysis period.

Preliminary analysis using ODOT's turn lane criteria indicates that neither existing nor future traffic volumes are sufficient to warrant left turn lanes for either the eastbound or westbound approach.

Recommendation

Concept I-11 is recommended as an element of the OR 140 Corridor Plan. Although current traffic volumes on Brownsboro-Meridian Road are low and a review of the crash history doesn't show any recent collisions, the concept would address safety concerns. This should be considered a lower priority project unless traffic volume growth or an increase in crashes related to left turns occurs.

7.5.12. Concept I-12 – OR 140 & Brownsboro-Eagle Point Road Left-Turn Lanes

Concept I-12 considers adding eastbound and westbound left-turn lanes on OR 140 at Brownsboro-Eagle Point Road to provide a refuge for vehicles turning left from the highway to the side street or private access. The purpose of this concept is to improve the safety of the intersection but it would also add some capacity.

Discussion

The OR 140/Brownsboro-Eagle Point Road intersection is currently STOP-controlled on the Brownsboro-Eagle Point Road approach with free-flowing movements on OR 140. There is no left-turn lane on OR 140 at Brownsboro-Eagle Point Road or the private access to the south. The westbound approach has a taper and 10-foot shoulder for deceleration for right turns. Posted speed on OR 140 is 55 mph.

No crashes related to turning movements were reported at the Brownsboro-Eagle Point Road intersection during the 5-year crash analysis period.

Preliminary analysis using ODOT's turn lane criteria indicates that neither existing nor future traffic volumes are sufficient to warrant left turn lanes for the eastbound approach.

Recommendation

Concept I-12 is recommended as an element of the OR 140 Corridor Plan. Although current traffic volumes on Brownsboro-Eagle Point Road are low and a review of the crash history doesn't show any recent collisions, the concept would address safety concerns. This should be considered a lower priority project unless traffic volume growth or an increase in crashes related to left turns occurs.

7.6. Additional Improvements

During and following the presentations of the alternatives analysis, several other ideas were identified for consideration. These ideas are discussed below with recommendations for those improvements that would be included in the preferred alternative for the OR 140 corridor.

7.6.1. Concept A-1 – Right Turn Deceleration Lanes

Concept A-1 considers deceleration lanes for traffic turning right from OR 140 onto a side street. The purpose of this concept is to improve the safety on the highway by separating the slowing traffic from the through traffic.

Discussion

These criteria were evaluated at 11 of the study area intersections where a right-turn deceleration lane might be appropriate:

- Kirtland Road/High Banks Road
- Kirtland Road/W Antelope Road
- Avenue G/5th Street
- Avenue G/8th Street
- Avenue G/11th Street
- OR 140/Lakeview Drive
- OR 140/Riley Road
- OR 140/Kershaw Road
- OR 140/Meridian Road
- OR 140/Brownsboro-Meridian Road
- OR 140/Brownsboro-Eagle Point Road

Preliminary analysis using ODOT's right-turn turn lane criteria² indicates that existing traffic volumes are sufficient to warrant a right-turn lane at only one location: OR 140 eastbound at Riley Road/E Antelope Road.

The OR 140 intersection with Riley Road/E Antelope Road is currently STOP-controlled on the side street approaches with free-flowing movements on OR 140. OR 140 currently has no left-turn lanes at Riley Road or Antelope Road but both the eastbound and westbound approaches have wide shoulders (10 feet eastbound and 8 feet westbound) and short right-turn tapers to facilitate deceleration and turns. Posted speed on OR 140 is 55 mph.

² Section 7.2 Turn Lane Criteria, Analysis Procedures Manual, April 2006, Updated January 2011, online reference: http://www.oregon.gov/ODOT/TD/TPAU/docs/A_APM/APM.pdf. Note: These criteria are also consistent with the criteria in Appendix F of the Highway Design Manual.

Installation of a right-turn deceleration lane would reduce the likelihood of several types of collisions that involve vehicles slowing on the highway to make a right turn. Two crashes involving a rear end collision were reported at the Riley Road/E Antelope Road intersection during the 5-year crash analysis period. Both are related to eastbound vehicles slowing to make a turn from OR 140 onto the side street but, based on the descriptions in the crash report, both appear to be related to left-turning vehicles rather than right-turning vehicles.

Recommendation

Concept A-1, installation of right-turn deceleration lanes, is recommended at one location as an element of the OR 140 Corridor Plan. Current traffic volumes at Riley Road/E Antelope Road appear to meet warrants for installation of an eastbound right-turn lane. This project should be implemented together with the additional left-turn lanes at this intersection.

7.6.2. Concept A-2 – Right-Turn Acceleration Lanes

Concept A-2 considers acceleration lanes for traffic turning right from a side street and merging onto the highway. The intention of this concept is to improve the safety of vehicles entering the highway.

Discussion

The 2003 Highway Design Manual³ discourages the use of acceleration lanes for at-grade intersections; however, it acknowledges that they may be appropriate under some circumstances. Criteria for a design exception to permit a right-turn acceleration lane include posted speed, operations, volume, percentage trucks, crash patterns, and access spacing.

These criteria were evaluated at 11 of the study area intersections where an acceleration lane might be appropriate:

- Kirtland Road/High Banks Road
- Kirtland Road/W Antelope Road
- Avenue G/5th Street
- Avenue G/8th Street
- Avenue G/11th Street
- OR 140/Lakeview Drive
- OR 140/Riley Road
- OR 140/Kershaw Road
- OR 140/Meridian Road
- OR 140/Brownsboro-Meridian Road
- OR 140/Brownsboro-Eagle Point Road

None of the intersections met the criteria.

Recommendation

Concept A-2 is not recommended for the OR 140 Corridor Plan.

³ Section 9.2.1 Turn Lane Criteria, Highway Design Manual, 2003, Updated June 2008, online reference: ftp://ftp.odot.state.or.us/techserv/roadway/web_drawings/HDM/Rev_E_2003Chp09.pdf.

7.6.3. Concept A-3 – Flashing Yellow Beacons

Concept A-3 considers flashing yellow beacons at unsignalized intersections. The purpose of this option is to improve the safety of vehicles entering the highway by alerting mainline drivers to the presence of intersection activity.

Discussion

Unlike installation of traffic signals, there are no warrants for flashing beacons. A history of crashes, particularly angle collisions that could be related to a lack of driver awareness, is the major factor for consideration.

A review of the five-year crash history for OR 140 indicates two unsignalized intersections with crash rates that are higher than the critical crash rate⁴ calculated for the corridor: Riley Road at OR 140 (6 crashes) and Meridian Road at OR 140 (5 crashes). Installation of a left-turn lane on OR 140 at both these locations is already recommended as part of this plan. This improvement is expected to reduce the frequency of rear end and some turning collisions at these intersections but left-turn lanes are likely to have little effect on the potential for angle collisions. Each of these intersections had one or two angle collisions within the five-year analysis period. However, the rate of angle collisions is so low that it would be difficult to show a documentable benefit to installation of a flashing yellow beacon in addition to the turn lanes.

Recommendation

Concept A-3 is not recommended for the OR 140 Corridor Plan.

7.6.4. Concept A-4 – Additional Roadway Delineation

Concept A-4 considers additional roadway delineation throughout the corridor study area. The purpose of this option is to improve the safety of vehicles traveling along the highway.

Discussion

There are existing roadway delineators (reflectors mounted on posts) on OR 140 east of OR 62 and there are plans to add delineators along Kirtland Road between Blackwell Road and Table Rock Road. Concept RS-3 also recommends rumbles strips along Kirtland Road as well because of the higher than average crash rate in this section of the corridor.

However, additional delineations should be considered along all of the rural sections of the corridor:

- At minimum, roadway delineators and rumble strips should be added along Blackwell Road as part of the improvements identified in Concept RS-2.
- Delineators could also be added on the improved section between Table Rock Road and Avenue G and along Avenue G to Agate Road but these sections are within the White

⁴ Section 4.4.2.5.Critical Rate, Highway Safety Manual, 2010,

City Urban Unincorporated Community Boundary and the crash history shows only one crash where a vehicle ran off the road under icy conditions.

- On OR 140 east of OR 62, there were no crashes where a vehicle “ran off the road” between OR 62 and Kershaw Road but there were eight of these crashes at various locations between Kershaw Road and Brownsboro-Eagle Point Road. Four of these crashes were weather related and the other four were attributed to improper driving. Rumble strips could be added to augment the reflective delineators with an auditory alert when vehicles are drifting from a lane and allow for a safe recovery.

Recommendation

Concept A-4, additional roadway delineation, is recommended at several locations as an element of the OR 140 Corridor Plan. Delineation (reflective markers and rumble strips) should be incorporated into the improvements along Blackwell Road (Concept RS-2). Rumble strips should also be added to OR 140 east of OR 62 as a medium- to low-priority improvement.

7.6.5. Concept A-5 – Truck Weigh Stations

Concept A-5 considers potential locations for sites that the Motor Carrier Division of ODOT could use for portable scale (weigh station) operations in the westbound direction on OR 140. There is an existing eastbound scale site located between Milepoints 2.64 and 2.79.

Discussion

Staff at Motor Carrier provided two potential locations: one in the vicinity of Milepoint 1.0 and the other in the vicinity of Milepoint 2.5 opposite the eastbound scales. Dimensions of the area needed to install the scales are between 300 and 500 feet in length with a width of 40 feet except for a short section (near the middle of the site) that would need to be 54 feet wide.

In the vicinity of Milepoint 1.0, OR 140 has more than 200 feet of right of way, much of it on the north side of the highway. The highway is 44 feet wide. OR 62 is located at Milepoint 0.0, west of this potential site, while Lakeview Drive is located at Milepoint 1.03, east of this potential site. There are no private access points or reservations of access on OR 140 on the north side of the highway between these two public roadways.

The potential scale location near Milepoint 1.0 could accommodate the dimensions associated with the portable scales site without acquiring any additional right of way. To meet ODOT’s access spacing standards and minimize conflicts with vehicles turning at the intersection, the entrance to the scales would need to be located at least $\frac{1}{4}$ mile west of Lakeview Drive. There are transmission lines that cross the highway at Milepoint 0.81 that could pose a problem with developing the scales site at this location. Adjacent lands are residential some noise mitigation could be necessary. There are some mapped wetlands (palustrine, emergent) documented in this vicinity and impacts to wetlands should be avoided; mitigation and permitting will be necessary if impacts cannot be avoided.

In the vicinity of Milepoint 2.5, OR 140 has 130 feet of right of way and the highway is 44 feet wide. Kershaw Road is located at Milepoint 2.29, west of this potential site, while Riley Road/E Antelope Road is located at Milepoint 3.59, east of this potential site. There are four gated field access points and an access reservation on the north side between the two public roadways.

The potential scale location near Milepoint 2.5 would likely require some additional right of way from the adjacent parcel to accommodate the dimensions associated with the portable scales site. To minimize conflicts with vehicles turning at Kershaw Road, the exit from the scales would need to be located at least $\frac{1}{4}$ mile east of Kershaw Road. This would not conflict with any of the gated field access points but would not meet ODOT's access spacing standards. The adjacent lands are currently in agricultural use but some of the Jackson County zoning rural residential and some is agricultural. There are some mapped wetlands (palustrine, emergent) documented in this vicinity and impacts to wetlands should be avoided; mitigation and permitting will be necessary if impacts cannot be avoided. Hopkins Canal also crosses under the highway twice with culverts located at Milepoints 2.42 and 3.03.

Recommendation

To support Motor Carrier's needs, a westbound site for portable scales operations should be included in the OR 140 Corridor Plan. The specific location will require additional research before a final determination can be made.

7.6.6. Concept A-6 – Recreational Trail Connections

Concept A-6 considers the need for a connection between on-street bicycle and pedestrian improvements on Blackwell Road with the nearby recreational trail system.

Discussion

The Bear Creek Greenway Trail through the Rogue Valley currently ends at the Dean Creek Trailhead southwest of I-5 Interchange 35, the western terminus of OR 140. The Rogue River Greenway Trail will connect westward from the Bear Creek Greenway to Grants Pass. The Trail crosses Kirtland Road near the intersection with Blackwell Road at a new undercrossing that was constructed as part of the improvements that realigned the intersection and gave priority to OR 140 travel.

The trail has not been constructed in the vicinity of this undercrossing but improvements on Blackwell Road identified under Concept RS-2 should include connections between on-street bicycle and pedestrian improvements and the future trail.

Recommendation

Concept A-6, connections between on-street bicycle and pedestrian improvements and the future recreational trail, is recommended at several locations as an element of the OR 140 Corridor Plan. This project should be installed with Concept RS-2, the Blackwell Road improvements.

7.6.7. Concept A-7 – Dry Creek Landfill Access

Concept A-7 considers options to improve access to the Dry Creek Landfill should operations expand and truck demand on OR 140 subsequently increase.

Discussion

The primary access for trucks destined for the Dry Creek Landfill is located on a private road that connects with OR 140 from the south side at Milepoint 2.81. The posted speed on OR 140 is 55 mph at this location. There is an eastbound truck weigh station located on the south side of OR 140 between Milepoints 2.64 and 2.79, west of this private roadway.

With potential expansion of activity at the landfill, truck volumes to this private roadway would measurably increase several safety and operational concerns which would need to be addressed. The heaviest traffic movements would be the eastbound right-turn movement from OR 140 onto the private road and a northbound left-turn movement from the private road onto OR 140. Safety concerns with the eastbound right turns focus on two issues: 1) the increase potential for rear end collisions as more vehicles are slowing on the highway and 2) the conflict between trucks slowing to make the right turn towards the landfill and trucks entering the highway from the weigh station. Safety concerns with the northbound left-turns focus on the increased potential for turning or angle collisions as trucks turn onto the highway, particularly since acceleration rates for trucks are much slower than for passenger vehicles. Operational concerns are primarily focused on increase delay for the northbound left-turning vehicles as they look for gaps in the traffic stream.

Two approaches can be taken to addressing these concerns. One option focuses on improving the geometry of the intersection to better accommodate the increased activity at this location. The other option reroutes traffic on local streets to another highway intersection that already has been substantially improved.

To improve the private road intersection to safely serve a higher traffic demand turning lanes would be needed. In the eastbound direction, a right-turn deceleration lane would separate the turning traffic from the through traffic on the highway to reduce the conflict between slowing vehicles and higher speed vehicles. The existing weigh station would need to be relocated to a point further west of the intersection to accommodate the deceleration lane and eliminate the conflict between trucks entering the highway from the weigh station and those slowing to turn right destined for the landfill. Relocating the weigh station may raise several concerns with mapped wetlands in the area and the Hopkins Canal culvert at Milepoint 2.42. The addition of a westbound left-turn lane on OR 140 should also be considered. Even though most traffic would be coming from the opposite direction, the westbound left-turn lane would create a refuge area on the east side of the intersection that could facilitate truck turning and acceleration onto OR 140.

The other option would be to consider a connection westward to Kershaw Road, where left-turn lanes, right-turn deceleration lanes, and a flashing yellow beacon are already installed. The connection could utilize the unimproved, gated lane between the private road that serves

the landfill and Thunder Road in the Jackson County Sports Park. This connection would require a significant upgrade to the existing facilities to accommodate the truck demand from the landfill. Thunder Road is an internal circulation road for the Sports Park and issues about conversion to a public roadway would also need to be addressed. Another alternative within this option would be to construct a new roadway that skirts the Sport Park to connect with Kershaw Road. However, mapped wetlands and Hopkins Canal are some of the issues that would need to be addressed.

Recommendation

While Concept A-7 highlights some potential safety concerns that may arise on OR 140, it addresses a private roadway serving private development. The options discussed should be considered with a land use action rather than the corridor planning process. No improvement is recommended as part of the OR 140 Corridor Plan.

7.7. Summary of Recommendations

The following table summarizes each of the concepts and the recommendations for implementation.

Table 7-1. Summary of OR 140 Concepts - Highway Redesignation

Concept	Milepoints	Recommendation	Implementation
<i>HIGHWAY REDESIGNATION CONCEPTS</i>			
Concept HR-1 – Extension of OR 140 to I-5 Southbound Ramps	-8.29 on OR 140 to 0.34 on OR 99	Recommended	Scheduled OTC adoption May 2012
Concept HR-2 – Extension of Freight Route Designation	-8.29 to 0.00	Recommended	Scheduled OTC adoption May 2012
Concept HR-3 – Rerouting to Crater Lake Highway and Avenue G	0.00 to -1.16	Recommended	Contingency only – dependent of future extension of the OR 62 Expressway Improvements
<i>JACKSON COUNTY RECLASSIFICATION CONCEPTS</i>			
Concept JCR-1 – Blackwell Road Reclassification	-8.29 to -7.02	Recommended	Next Jackson County TSP & RTP Update
Concept JCR-2 – Kirtland Road Reclassification (Rural Section)	-7.02 to -5.12 (White City UUC)	Recommended	Next Jackson County TSP & RTP Update
Concept JCR-3 – Kirtland Road Reclassification (White City Section)	-5.12 (White City UUC) to -2.55	Recommended	Next Jackson County & White City TSP Updates & RTP Update
Concept JCR-4 – Avenue G Reclassification (State Section)	-2.55 to -1.16	Recommended	Next Jackson County & White City TSP Updates & RTP Update
Concept JCR-5 – Agate Road Reclassification	-1.16 to -0.20	Recommended	Next Jackson County & White City TSP Update & RTP Update
Concept JCR-6 – Avenue G Reclassification (County Section)	NA	Recommended	Short-term so that minor arterial standard is applied for any roadway improvements

Table 7-1. Summary of OR 140 Concepts - Highway Redesignation

Concept	Milepoints	Recommendation	Implementation
Concept JCR-7 – Avenue G Reclassification with Rerouted OR 140	NA	Recommended	Contingency only – dependent of future extension of the OR 62 Expressway Improvements
ROADWAY SEGMENT CONCEPTS			
Concept RS-1 – Blackwell Road Improvements – Widening	-8.17 to -7.02 widening	Not recommended	NA
Concept RS-2 – Blackwell Road Improvements – Widening and Curve Realignment	-8.17 to -7.02 widening	Recommended as a 3-lane rural section with setbacks for 5 lanes	High priority due to crash rate and anticipated volume
Concept RS-3 – Kirtland Road – Safety Improvements	-7.02 to -2.71	Recommended	Medium priority but priority should be elevated if a high crash pattern persists
Concept RS-4 – Kirtland Road – Widening	-7.02 to -2.71	Not recommended	NA
Concept RS-5 – Avenue G – Widening	-2.55 to -1.16	Recommended as a 3-lane urban section	Phased implementation with development
Concept RS-6 – Agate Road – Widening	-1.16 to -0.20	Recommended as a 3-lane urban section	Phased implementation with development or volume growth
Concept RS-7 – Avenue G – County Section Widening	NA (County Road)	Recommended	Phased implementation with volume growth and parcel redevelopment
Concept RS-8 – Avenue G – OR 140 Reroute Widening	NA (County Road)	Not recommended	NA
INTERSECTION IMPROVEMENT CONCEPTS			
Concept I-1 – Blackwell Road & Kirtland Road Traffic Signal	-7.02	Not recommended at this time	May need future consideration with development of Tolo area
Concept I-2 – Kirtland Road & High Banks Road Left-Turn Lanes	-5.37	Recommended	Lower priority – monitor for traffic growth or increase in crash frequency
Concept I-3 – Kirtland Road & West Antelope Road Left-Turn Lane	-3.74	Recommended	Lower priority – monitor for traffic growth or RVTD service expansion
Concept I-4 – Avenue G & Agate Road – Intersection Realignment	-1.16	Not recommended	NA
Concept I-5 – Avenue G & Agate Road – Channelization and Traffic Signal	-1.16	Recommendation	Medium priority – monitor for traffic growth and signal warrants
Concept I-6 – Agate Road & Leigh Way – Intersection Realignment	0.20	Not recommended	NA
Concept I-7 – Agate Road & Leigh Way – Channelization and Traffic Control	0.20	Recommended	Higher priority for traffic control changes, Medium priority for turn lane – monitor for volume growth
Concept I-8 – OR 140 & Lakeview Drive Left-Turn Lanes	1.03	Recommended	Medium to high priority based on existing warrants and crash history

Table 7-1. Summary of OR 140 Concepts - Highway Redesignation

Concept	Milepoints	Recommendation	Implementation
Concept I-9 – OR 140 & Riley Road/E Antelope Left-Turn Lanes	3.59	Recommended	Medium to high priority based on existing warrants and crash history
Concept I-10 – OR 140 & Meridian Road Left-Turn Lanes	5.03	Recommended	Lower priority – monitor for traffic growth or increase in crash frequency
Concept I-11 – OR 140 & Brownsboro-Meridian Road Left-Turn Lanes	7.41	Recommended	Lower priority – monitor for traffic growth or increase in crash frequency
Concept I-12 – OR 140 & Brownsboro-Eagle Point Road Left-Turn Lanes	7.98	Recommended	Lower priority – monitor for traffic growth or increase in crash frequency
ADDITIONAL CONSIDERATION CONCEPTS			
Concept A-1 – Right Turn Deceleration Lanes	Various	Recommended at Riley/E Antelope Rd (MP 3.59)	Medium to high priority – install with left-turn lanes (Concept I-9)
Concept A-2 – Right-Turn Acceleration Lanes	Various	Not recommended	NA
Concept A-3 – Flashing Yellow Beacons	Various	Not recommended	NA
Concept A-4 – Additional Roadway Delineation	Various	Recommended on some segments	Higher priority on Blackwell Rd – install with Concept RS-2, Medium to low priority on OR 140 east of OR 62
Concept A-5 – Truck Weigh Stations	Approx. 1.0 or 2.5	Recommended	Priority and installation dependent on Motor Carrier needs and support
Concept A-6 – Recreational Trail Connections	Approx. -7.0	Recommended	Higher priority – install with Concept RS-2
Concept A-7 – Dry Creek Landfill Access	2.81	Not recommended as public project	Address with land use action for Dry Creek Landfill