

Fern Valley Interchange

Finding of No Significant Impact for the Fern Valley Interchange Project and Summary of Impacts and Mitigation

Summary of the Action

The Federal Highway Administration (FHWA) and Oregon Department of Transportation (ODOT) propose to enhance transportation facilities in Phoenix, Jackson County, Oregon. One Build Alternative (North Phoenix Through) and a No-Build Alternative were analyzed in the Environmental Assessment (EA) completed for this project.

The purpose of the project is to reduce congestion and improve operational conditions at the I-5 interchange with Fern Valley Road, on Fern Valley Road within the City of Phoenix Urban Growth Boundary and on OR 99 near its intersection with Fern Valley Road. This project is needed because congestion at the interchange is increasing due to continued growth in Phoenix and southeast Medford and increased truck traffic on I-5. Increased use of the interchange by local residents, commuters, heavy trucks and regional traffic is causing vehicles to queue on the off-ramps during times of heavy peak hour traffic volumes. The capacity of the interchange is degrading rapidly, and traffic safety remains an ongoing concern. The Fern Valley Interchange does not meet current interchange design standards. The approaches to the Fern Valley Road overcrossing are steep and limit the visibility of interchange traffic. Fern Valley Road has substandard shoulders, does not have dedicated bike lanes, and has discontinuous sidewalks, creating safety concerns for bicyclists and pedestrians. Additionally, the Bear Creek Bridge on Fern Valley Road is structurally deficient and functionally obsolete.

The Build Alternative will improve Fern Valley Road by replacing the existing interchange with a newer interchange design concept: the Crossing Diamond Interchange (CDI). With this type of interchange, drivers are directed to the opposite side of the bridge to cross the interstate. This allows drivers to make “free” left turns, onto the interchange ramps. This design concept is very efficient, and has the advantage of a narrower footprint than the conventional diamond interchange design concept; thus the CDI would result in minimal right of way impacts. In addition, the CDI is anticipated to result in a significant improvement in safety—up to a 50% reduction in crashes since there are no left turns crossing opposing traffic.

West of I-5, the Build Alternative essentially follows the existing Fern Valley Road alignment, except for a slight shift to the north for the interchange placement. Fern Valley Road would have two lanes in each direction, but would turn into a one-way road just west of Bear Creek—westbound traffic would follow Fern Valley Road and eastbound traffic would use E. Bolz Road. The 2-lane Bear Creek Bridge (36 feet wide) would be replaced with a 4-lane bridge (100 feet wide). Bikes on Fern Valley Road and E. Bolz Road would be accommodated by 6-foot shoulders that would be designated by pavement markings for bike travel; bikes on OR 99 would be accommodated by 5-foot shoulders. OR 99, Fern Valley Road, and E. Bolz Road would have 6-foot sidewalks on both sides of the roadway.

East of I-5, the Build Alternative would turn north just east of the interchange, and reconnect with existing N. Phoenix Road near Arrowhead Ranch. South Phoenix Road would be extended directly north of the existing Fern Valley Road/N. Phoenix Road intersection, and turn west to connect with Realigned N. Phoenix Road directly across from Grove Way. Fern Valley Road would become a cul-de-sac, but would be retained as an approach road for adjacent properties. Bikes east of I-5 would be accommodated on 6-

foot shoulders that would be designated by pavement markings for bike travel. Pedestrians would be accommodated by 6-foot sidewalks. A multi-purpose path would be constructed in the southeast interchange quadrant from the cul-de-sac at existing Fern Valley Road to the CDI structure over I-5. This path would provide a more direct route for east/west bicycle and pedestrian travel. See Build Alternative graphic below.

Construction of the Build Alternative is expected to begin in mid to late 2012. The approximate engineering, construction and right-of-way acquisition cost of the Build Alternative is \$72.1 million (2012 dollars). This project will be funded by the FHWA, ODOT, and the City of Phoenix.



Summary of Environmental Impacts, Mitigation Measures, and Conclusions Regarding NEPA Significance

The following section summarizes the assessment completed for each environmental resource presented in the EA. The EA and associated technical reports are available and they provide a more detailed analysis and discussion of the impacts of the Build and No-Build Alternatives for each resource category.

Transportation

The Build Alternative would improve traffic conditions in the project area. All intersections in the project area would meet volume to capacity (v/c) standards and could handle the traffic projected for the year 2030. Traffic congestion would still exist in peak hours, when lines of vehicles could be relatively long, extending away from the OR 99/Fern Valley Road intersection and blocking adjacent minor street intersections. This would be caused by traffic blocking adjacent turn lanes which limits the ability of the intersection to move vehicles efficiently.

The Build Alternative would improve bike and pedestrian facilities. The Build Alternative would not directly affect bus service to Phoenix, except for potential minor delays during construction. Park-and-ride facilities and bus pull-outs may be considered during final design. Travel time for buses would be improved by reduced congestion.

The Build Alternative will result in a substantial overall improvement in traffic, safety and transportation services in the City of Phoenix and will not result in significant adverse traffic and transportation impacts.

Land Use and Planning

With respect to land use the Build Alternative will:

- Permanently convert approximately 22 acres from its current commercial, high density residential, or agricultural use to a transportation use.
- Increase the rate of development on lands near the interchange due to the improvement of traffic movement and additional capacity. These lands are designated for development by the City of Phoenix and would also develop under the No-Build Alternative. Most of the development would be commercial, as designated by the Phoenix Comprehensive Plan, but use would be types that do not generate high volumes of motor vehicle trips (e.g., discount club stores and “superstores,” supermarkets, service station/convenience markets, and fast-food restaurants). This is because the City of Phoenix adopted land use regulations pursuant to an Interchange Area Management Plan (IAMP) and would regulate development that generates high amounts of traffic.

High traffic volumes can overload an interchange, using up available traffic capacity so the interchange no longer functions effectively. The purpose of the land use regulations regulating some high traffic volume uses is to preserve the capacity of the proposed interchange for at least the first 20 years of its design life, and the capacity of Fern Valley Road, OR 99, and N. Phoenix Road in the vicinity of the interchange and to ensure the safe and efficient operation of the interchange and connecting roadways.

The Build Alternative complies with all applicable land use plans and policies, as documented in Section 3.2 of the EA. Any remaining permits will be obtained prior to construction. While the Build Alternative could accelerate the rate of development of land in the interchange area compared with the No-Build Alternative, the Phoenix Comprehensive Plan calls for this development. The Build Alternative will use

22 acres of land. Transportation uses are allowed uses in the urban zones and this is a small conversion in an area the size of the Rogue Valley (approximately 1.8 million acres).

Based on the land use analysis and the mitigation that includes implementation of the IAMP, the Build Alternative will not result in significant land use impacts.

Right of Way

The Build Alternative will require the acquisition (either in fee or easement) of approximately 22 acres of land on 42 parcels. The Build Alternative is estimated to require the following displacements: two residential relocations (on E. Bolz Road) and four business relocations (a coffee stand, two mobile food vendors and a restaurant). For perspective, these right of way requirements would represent about 2.6 percent of the City of Phoenix's 1600 tax parcels, about 2 to 3 percent of the City's 150-200 businesses and less than 1 percent of the city's 1,850 housing units.

Access control will be implemented east of I-5 along Extended S. Phoenix Road. The Build Alternative would affect approximately 51 existing approaches: 30 would be changed and 21 would be closed or relocated. Reasonable alternative access would be provided to each property or damages (if compensable) would be determined through the right of way process. The Build Alternative would result in the loss of about 67 off-street parking spaces and the removal of unmarked on-street parking on E. Bolz Road.

All property acquired by ODOT under the Build Alternative will meet the requirements of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, (Uniform Act) and the Surface Transportation and Uniform Relocation Assistance Act of 1987 to mitigate impacts to displaced occupants of the two residences and four businesses.

With implementation of these mitigation measures, the Build Alternative will have no significant impacts related to right of way acquisition.

Socioeconomics

The Build Alternative is anticipated to have the following socioeconomic impacts:

- Disruptions to relocated businesses and residents.
- Adverse impacts to adjacent businesses and residences as a result of on-street parking removal on E. Bolz Road
- Adverse impacts due to the loss of off-street parking spaces.
- Better traffic flow to businesses and residences—fewer delays and stops, shorter travel times, and higher speeds; easier routing to the northeast interchange quadrant, but more circuitous routing to the southeast quadrant.
- Restricted left-turn movements and changes in travel patterns due to median installation.
- Improved safety and circulation for vehicles, bicycles and pedestrians. Improved bike and pedestrian facilities that meet or exceed minimum ADA standards would especially benefit the elderly and/or disabled groups.
- Easier travel to community facilities (such as parks, libraries, schools, and churches) due to shorter delays and less congestion.

- Improved response times for fire and police services due to better traffic flow throughout the project area, though some increase in travel time to the southeast interchange quadrant is anticipated.
- Travel time for buses would be improved by reduced congestion.
- Additional spending, income, and jobs associated with construction.
- Direct property tax revenue decreases due to the conversion of private property to public right of way.
- Change in residential property values near the interchange due to traffic flow, less congestion, fewer delays, changes in views, changes in traffic noise, and the proximity of new development.
- Temporary detours and nuisances to businesses and residences located near construction areas.

Disruptions relating to the relocations of four businesses and two residences would occur—but the impact is not substantial in terms of the number of businesses and residences in the Phoenix area. On-street parking removal along E. Bolz Road would affect adjacent businesses and residences, but parking is available on those affected properties. The removal of 67 off-street parking spaces from businesses does not appear to affect the viability of those businesses. Overall, the traffic flow to businesses and residences in the project area would improve, resulting in fewer delays and stops, shorter travel times, and higher speeds.

While there would be a change in circulation patterns to the northeast interchange quadrant, improvements in traffic circulation with the Build Alternative would result in easier travel to that quadrant. The Build Alternative would result in a more circuitous route to the southeast interchange quadrant and to some businesses affected by out-of-direction travel, but the improved traffic circulation in the entire project area is anticipated to help counter the out-of-direction travel.

The decrease in annual property tax revenue of about \$174,000 resulting from the removal of property from the tax rolls with the Build Alternative is only about 0.6% of Jackson County's annual property tax revenues (2005-2006 fiscal year). This is likely to be countered by the Build Alternative because better traffic flow throughout the area could contribute to business attraction and retention and new residential development, resulting in increased industry diversity, increased demand for housing and services, higher tax revenues and more revenue to businesses and governments.

Emergency response times, and bicycle and pedestrian safety and circulation would improve as a result of the Build Alternative. There would be an increased potential for park-and-ride and safe bus pull-out locations.

Analysis of census data combined with windshield surveys of the area within 500 feet of the Build alternative footprint did not identify low income or minority populations living near the interchange. In general, the population nearest the Fern Valley Interchange will experience the majority of the adverse impacts, as well as the majority of the beneficial impacts associated with the Build Alternative. The Build Alternative will not cause disproportionately high and adverse impacts to any low income or minority populations (per Executive Order 12898 regarding Environmental Justice).

Under the Build Alternative, ODOT will meet the requirements of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and the Surface Transportation and Uniform Relocation Assistance Act of 1987 to mitigate impacts to displaced occupants of the two residences. With the implementation of these mitigation measures, the Build Alternative will have no significant impacts related to socioeconomics and environmental justice.

Parks and Recreation

The Build Alternative would have no impacts to Blue Heron Park, City Hall Park, the Phoenix Elementary School Playground or the Phoenix High School recreational facilities. The Bear Creek Greenway multi-use path will be slightly realigned by the widening of the Bear Creek Bridge, but this impact has been determined to be minimal and beneficial. The multi-use path will be straightened where it passes under the Bear Creek Bridge, improving site distance for users and aesthetics. The proposed project will not adversely affect the protected features, attributes or qualities which qualify the Bear Creek Greenway multi-use path for protection under Section 4(f). Construction schedules and techniques will minimize the need for path closures (ie: protective closure over the path during construction to all bicycle and pedestrian traffic to continue using the path). Some temporary closures of the multi-use path nearest the bridge will be necessary to ensure public safety, but these closures will be minimized by rerouting bike and pedestrian traffic using the ramps to Fern Valley Road and traffic control measures to allow safe crossings of Fern Valley Road.

The Build Alternative will have minor and beneficial impacts to the Bear Creek Greenway multi-use path and no impacts to any other parks or recreation facilities in the project area. The Build Alternative will have no significant impacts to parks or recreation facilities.

Cultural Resources

Historic

Two historic resources in the project-affected area were determined to be eligible for listing on the National Register of Historic Places: the Medford Canal and Coleman Ranch (now known as Arrowhead Ranch). Although the Build Alternative would likely increase the rate of development in the vicinity of these two historic resources, development that adds substantial traffic would be constrained by the IAMP. As a result, the type and scale of future development would be consistent with what has been occurring in the area: a gradual trend of increasing urbanization. While this increasing urbanization represents a change from the historic rural character of the area, it is not of the scale or degree sufficient to constitute an adverse impact on either historic resource. Based on this finding, it was determined that there would be No Historic Properties Adversely Affected by the Build Alternative. The State Historic Preservation Office (SHPO) has concurred with the project findings.

Archaeology

No archaeological resources were identified in the project-affected area; therefore the Build Alternative is not anticipated to result in impacts to known archaeological sites. A Finding of No Historic Properties Affected (Archaeology) was made for the Build Alternative. The SHPO concurred with the project finding. If archaeological resources are discovered during construction of the project, measures would be taken to ensure their identification and protection.

Section 106 Finding

Based on the historic resource analysis and associated avoidance and minimization measures, FHWA made a Section 106 finding of No Adverse Effect for the Build Alternative. SHPO concurrence with this finding occurred on January 21, 2009.

Based on the analysis in the EA, the Build Alternative will not have adverse impacts to historic or archaeological resources in the project area, and therefore will have no significant impacts to cultural resources.

Section 4(f)

The Build Alternative does not involve a Section 4(f) use of any public wildlife or waterfowl refuge; wild or scenic river; significant archaeological or historic site; or park or recreation lands. Changes to the Bear Creek Greenway through the Build Alternative will enhance recreational activities on the multi-use path. Although changes include short-term detours and path realignment, they do not adversely affect the features, activities or attributes of the Bear Creek Greenway, nor do they constitute a Section 4(f) use.

The Build Alternative is not anticipated to have adverse impacts or a use of Section 4(f) protected resources. Short-term detours on the Bear Creek Greenway multi-use path will occur during construction of the Bear Creek Bridge, but use of the path will be accommodated during this time and closures are not expected. Following replacement of the Bear Creek Bridge, the multi-use path will have an improved alignment. With these proposed mitigation measures, the Build Alternative will not have significant impacts to Section 4(f) protected resources.

Section 6(f)(3) of the Land and Water Conservation Fund Act (LWCF)

Section 6(f)(3) of the Land and Water Conservation Fund (LWCF) Act of 1965, as amended, states that public property acquired or developed using LWCF funds cannot be converted to uses other than public outdoor recreation unless properties of at least equal fair market value and reasonably equivalent usefulness and location are substituted. Jackson County acquired tax lots on the north and south sides of the Bear Creek Bridge with LWCF funds.

The Build Alternative would replace the Bear Creek Bridge that spans the Bear Creek Greenway. The new bridge would be wider than the existing right of way width, so the tax lots on the north and south sides of the bridge would be impacted. These tax lots are Section 6(f)(3) protected recreational properties and serve as riparian buffer along Bear Creek and for the Bear Creek Greenway trail. The impacts from the widening of the bridge – about 2,900 square feet (0.07 acres) would be relatively minor. These impacts would be less than one percent of the total 6(f)(3) protected area (6.73 acres) of the affected tax lots.

ODOT, Jackson County Parks, Oregon Parks and Recreation Department (OPRD) and the National Park Service (NPS) are coordinating to identify replacement properties similar in value, function (equivalent usefulness), and location to replace the 6(f)(3) impacted area. ODOT and Jackson County are discussing 39-1E-04DA tax lot 2900, 39-1E-04DB tax lot 2000 or 39-1E-04AC tax lot 900 as proposed replacement locations for the 6(f)(3) impacted properties. These properties are currently undeveloped and act as riparian buffer for Bear Creek in an area where Jackson County would like to expand the Bear Creek Greenway's multi-use path. Any one of these parcels, once incorporated into the Bear Creek Greenway's multi-use path, would provide the same recreational functions as the 6(f)(3) encumbered properties that are proposed to be impacted by the Build Alternative.

With the incorporation of replacement properties for impacts to properties purchased with LWCF funds, the Build Alternative will not result in significant impacts to Bear Creek Greenway parcels encumbered by Section 6(f)(3), nor would the Build Alternative result in significant impacts to any other park or recreational facilities.

Noise

Future year 2030 traffic noise levels with the No-Build Alternative are predicted to increase 1-2 dBA over existing conditions throughout the project area due to expected growth in traffic volumes. By the year 2030, under the No-Build Alternative, there are several locations that are predicted to experience noise levels that meet or exceed ODOT's noise abatement criteria: The Bavarian Inn (predicted future noise level of 70 dBA – 5 dBA higher than the 65 dBA noise abatement criterion), The 36 residences within the Bear Lake Estates (predicted future noise level of 68 to 74 dBA – 3 to 9 dBA higher than the 65 dBA noise abatement criterion), The outdoor use area (pool) at the Pear Tree RV Resort (predicted future noise level of 65 dBA – meeting the 65 dBA noise abatement criterion) and the commercial properties along OR 99 (predicted future noise level of 70 dBA – meeting the 70 dBA noise abatement criterion).

The No-Build Alternative and the Build Alternative are predicted to result in the same noise level at the Bear Lake Estates, since noise levels at the Bear Lake Estates are primarily influenced by the proximity of the complex to I-5. The predicted future noise level for the outdoor use area at the Pear Tree RV Resort is also the same for the No Build Alternative and the Build Alternative (65 dBA). The Build Alternative is predicted to increase the noise level at the Bavarian Inn and the commercial properties along OR 99 by 3 dBA for the Build Alternative (73 dBA) compared with the No-Build Alternative (70 dBA). Two residences along E. Bolz Road are predicted to meet ODOT's noise abatement criteria under the Build Alternative (65 dBA), but would remain under the abatement criterion with the No-Build Alternative (63 dBA).

Noise mitigation (sound walls) is not recommended by the ODOT Project Team for the commercial properties along OR 99. Per ODOT abatement policy, noise barriers are not considered to be consistent with commercial or industrial zoning and abatement is not recommended for these types of land uses (ODOT Noise Manual, section 4.526). These types of land uses require visibility from highways for patronage. A noise barrier would reduce this visibility.

The ODOT Project Team did not recommend mitigation for the residences along E. Bolz Road. Per section 4.521 of the ODOT Noise Manual, noise abatement measures must obtain substantial noise reductions of at least 5 dBA to be considered feasible. Sound walls would not be effective in reducing the noise levels at least 5 dB due to openings in the wall to accommodate driveways at these residences.

Noise mitigation (sound walls) is not recommended by the ODOT Project Team for Bear Creek Mobile Home Estates and the outdoor pool area of Pear Tree RV Park. These sites will experience only slight increases in noise levels in the design year compared to the existing conditions. It is not ODOT's policy to provide abatement to noise impacted properties when there are only slight increases in noise levels from the existing condition to the future design year (ODOT Noise Manual, sections 4.525; and 4.800). In addition, Bear Creek Mobile Home Estates and Pear Tree RV Park continued to be developed after the construction of I-5. Since 1996, ODOT has advised, through the Noise Manual, that unless a highway project causes the traffic noise levels at residences to increase by 5 dBA or more, noise mitigation would not be considered reasonable and will not be recommended, (ODOT Noise Manual, section 4.526).

Standard noise abatement measures, such as restrictions on construction at night and during holidays, would be used to minimize construction noise impacts (see Section 3.10.3 of the EA). The City of Phoenix requires a noise variance if construction would occur outside the hours of 7:00 a.m. to 7:00 p.m. on weekdays or if weekend construction is required.

Based on the limited and minor increases in noise predicted in the noise analysis, the Build Alternative will not result in significant noise impacts.

Air Quality

Impacts to air quality from the construction and operation of the Build Alternative are not expected to cause exceedances of State and Federal air quality standards in the future—either at intersections improved by the project or in adjacent neighborhoods.

The Build Alternative would meet “regional conformity” requirements because the project is located in the Medford-Ashland PM₁₀ Air Quality Maintenance Area (AQMA) and is included in the current conforming 2034 *Regional Transportation Plan* and the amended 2008-2011 *Transportation Improvement Program*.

The Fern Valley project would meet “project-level” conformity requirements for the following reason: because the Build Alternative would meet the Conformity Requirements of the Clean Air Act, Medford-Ashland PM₁₀ *Statewide Improvement Program*. The Build Alternative would not cause new exceedances of the National Ambient Air Quality Standards (NAAQS), nor would they worsen any existing air quality conditions or delay attainment of the standards. Particulate matter emissions from transportation projects are regulated by requiring that the project not exceed the Average Daily Traffic thresholds stated in the 2007 *Statewide Air Quality Report*.

The Build Alternative would adhere to ODOT construction specifications and best construction practices to reduce air quality impacts. Contractors would be required to comply with air pollution control measures during construction to minimize short-term air quality impacts to adjacent properties—especially near residential areas, sidewalks and bike routes. These measures include: vehicle and equipment idling limitations, burn restrictions, and spraying water to control dust during earthmoving and grading. The construction contractor would be required to submit for ODOT review and approval, a pollution control plan to reduce emissions during construction.

The Build Alternative is not anticipated to result in exceedances of federal air quality standards. The Build Alternative would meet the conformity requirements of the Clean Air Act, Medford-Ashland PM₁₀ State Implementation Plan. The Build Alternative would likely result in a reduction of Mobile Source Air Toxics emission by the year 2030. Based on the air quality analysis and associated mitigation measures, the Build Alternative is will not result in significant air quality impacts.

Visual Resources

The Build Alternative would result in the following visual impacts:

- The addition of continuous sidewalks along OR 99, thus enhancing the visual cohesiveness of the area;
- The creation of a new public road connection to OR 99 from Coleman Creek Estates, affecting both the views to and from some homes in that neighborhood;
- The removal of large shade trees and two houses on the east side of E. Bolz Road, affecting the views along and from E. Bolz Road;
- A new, wider bridge over Bear Creek and new ramps from the road to the Bear Creek Greenway path, resulting in an improvement of existing visual conditions to and from the Greenway;
- Change the visual environment of the northeast interchange quadrant by locating a new highway facility in the orchard and hill contours near the Urban Growth Boundary;

- Change in the visual environment of the southeast interchange quadrant by moving the major intersection east of I-5 further away from the Phoenix Hills subdivision and existing businesses; and
- Change to and from I-5 by building a new and wider structure over I-5.
- Construction-related visual impacts associated with the Build Alternative would affect views from nearby properties, vehicles, bikes and pedestrians. These changes would be temporary and of a relatively short duration.

Most impacts to the visual environment associated with the Build Alternative would be positive: the addition of continuous sidewalks, improved aesthetics of the new bridges, and moving a major intersection further away from the Phoenix Hills neighborhood. Other visual impacts include a change of view to and from the new Coleman Creek Estates public road connection, which would impact a small portion of the neighborhood—and could enhance the entrance; the removal of trees and houses along E. Bolz Road, a transitional commercial area; and realigning N. Phoenix Road in the developing rural area east of I-5. Based on the visual resource analysis and associated mitigation measures, the Build Alternative will not result in significant impacts to the visual environment.

Biological Resources

The Build Alternative would result in the following biological impacts:

- Temporary adverse impacts to Bear Creek and its fisheries resources during construction (ie: increased sedimentation and turbidity in the creek; construction debris and/or chemical contamination from heavy machinery entering the creek).
- Removal of 0.79 acres of riparian vegetation to construct the new bridge and bike/pedestrian ramps from Fern Valley Road to the Bear Creek Greenway multi-use path.
- Temporary in-water impacts, including increased sedimentation and turbidity during construction.
- Restoration of the natural channel following removal of the two piers currently located within the Bear Creek channel below the Ordinary High Water Mark (OHWM).

The Build Alternative will have no effect on Endangered Species Act (ESA) listed terrestrial wildlife or rare plant species due to the amount of existing development, lack of species presence, and minimal and fragmented suitable habitat for these species in the interchange vicinity. Noxious weeds are currently well established in the project vicinity. Fill material has the potential to further introduce noxious weeds that may displace additional native vegetation. Therefore an ESA Finding of No Effect on listed terrestrial species and designated critical habitat was made by FHWA.

A Biological Assessment (BA) was completed to address impacts to Southern Oregon/Northern California Coast (SONCC) coho salmon and its designated critical habitat that occur in Bear Creek. . The findings conclude that the Build Alternative “may affect, [and is] likely to adversely affect” SONCC coho salmon and “may affect, but wouldn’t likely adversely modify the designated critical habitat for SONCC coho salmon”. In addition the findings state that the proposed action may temporarily impair the functioning of Essential Fish Habitat (EFH) for Pacific Salmon during construction. Included in the Biological Assessment are avoidance and minimization measures proposed to reduce potential impacts to ESA (and by extension, EFH) regulated species and habitats. National Marine Fisheries Service (NMFS) issued a Biological Opinion (BiOp) on June 17, 2010; it stated that the proposed action is not likely to jeopardize the continued existence of SONCC coho salmon nor result in the destruction or adverse modification of critical habitat designated for SONCC coho salmon. The BiOp contains an “incidental take

permit” in the event incidental take of SONCC coho occurs during project construction. Additionally, NMFS provided “reasonable and prudent measures” to further reduce potential project effects. ODOT will incorporate the reasonable and prudent measures contained in the BioOp into the contract plans and specifications for the Build Alternative.

The following conservation and mitigation measures are outlined in the BA are summarized below:

- Containing potential pollutants and sediments to prevent them from entering creeks.
- Treating stormwater from roadways to remove pollutants and moderate peak/base flows prior to allowing the water to reach Bear Creek or its tributary streams.
- Avoiding and minimizing the removal of native vegetation and impacts to wetlands and streams.
- Replanting riparian trees and shrubs at a 1:1 ratio to replace up to 0.79 acre of vegetation removed for construction activities.
- Mitigating any impacts to wetlands to ensure no net loss of wetland habitat or functions.
- Constructing the Bear Creek Bridge to fully span Bear Creek, with no piers below the OHWater elevation.
- Removal of two existing bridge piers in the Bear Creek stream channel. In-water work to remove these piers would include work area isolation measures (e.g., isolating piers from streamflow) to avoid and/or minimize impacts to fish species and habitat and stream channel restoration, following removal.
- Avoiding and minimizing the spread of invasive weeds. ODOT would require that the contractor clean construction equipment to avoid importing and tracking weed seed into the project area. Construction specifications would require that all imported soil, fill, and erosion control materials are either certified weed free or inspected by ODOT to insure the source is weed free.
- Restricting bridge demolition to the non-nesting season or preventing birds from nesting on the structure until demolition of the existing bridge is completed.

Based on the ESA Finding of No Effect for USF&WS trust species, and the analysis and associated conservation and mitigation measures listed above for SONCC coho and EFH, it was determined that the Build Alternative would result in minor, temporary effects to SONCC coho, and a minor loss of 0.79 acres of riparian habitat. Based on this documentation the Build Alternative will not result in significant impacts to biological resources.

Water Resources

Flood zone designations have been assigned to Bear Creek, Coleman Creek, and Payne Creek. These three creeks have also been identified by the Oregon Department of Environmental Quality (ODEQ) as having water quality impairments for both temperature and bacteria. With the Build Alternative there would be no adverse floodway impacts from the project because the design of the replacement of the new Bear Creek Bridge would result in similar or slightly improved water conveyance.

With the Build Alternative, impervious surface area would result in about 27.7 acres of total future impervious surface area, and about 11.2 acres of net new impervious surface area. Net new impervious surface is defined as the difference between the total future impervious surface area and the total existing impervious surface area, minus any impervious surface that will be removed during construction.

Stormwater detention facilities currently treat runoff from the Home Depot and portions of the existing interchange, but stormwater from portions of the Highway 99 area is currently untreated. With the Build Alternative, a net increase of 11.2 acres of impervious surface area would be created in the project area. Stormwater runoff from the total contributing impervious surface area for the Build Alternative (which includes any ODOT stormwater generated outside of the project area that discharges to the project area) would be treated to remove pollutants and provide flow control prior to reaching streams. This would

include the 11.2 acres of net new impervious surface, as well as existing ODOT impervious surface areas that are currently not receiving stormwater treatment. Due to the treatment of all new impervious surface areas, and some areas of existing roadway that are not currently receiving treatment, the Build Alternative will result in no change to the baseline water quality of Bear Creek, or a slight improvement, compared to the No-Build condition. The Build Alternative would not result in violations of in-stream water quality standards in Bear Creek.

The Build Alternative would require relocation of the existing Home Depot stormwater treatment pond in order to construct the new roadway alignment; however, this would not be expected to result in any net change in stormwater discharge quality from this site.

To prevent adverse impacts to Bear Creek and its tributaries, stormwater detention facilities would be included in the project to address water quality issues and manage runoff affected by the project. Stormwater pollutant loads (particularly sediment and dissolved copper) and stormwater runoff rates would be reduced to existing conditions, or slightly improved, through a combination of detention ponds, treatment swales, vegetated ditches or other water quality treatment methods. Stormwater detention facilities would help mitigate the increase in peak flow rates. Required stormwater facilities would be placed within ODOT's right of way. Based on the water resource analysis conducted for this project, no violations of in-stream water quality standards are anticipated as a result of the Build Alternative.

The Build Alternative will help facilitate planned development on lands adjacent to the interchange and designated by the City of Phoenix for industrial, commercial and residential uses. New residential, commercial or industrial development is anticipated to increase the volume of stormwater runoff in the project area. Increases in stormwater flows and volumes would be mitigated in accordance with Rogue Valley Sewer Services requirements for stormwater treatment and ODEQ requirements for stormwater treatment and flow control. Implementation of stormwater mitigation measures would occur in conjunction with new development activities. The amount of new impervious surface area that could be produced within the project footprint is small relative to the size of the Bear Creek watershed, so the Build Alternative it is not expected result in detectable water quality changes within Bear Creek.

Based on the water resources analysis conducted for this project, the relatively small increase in net new impervious surface, and the water quality and flow control mitigation measures included in the Build Alternative, the Build Alternative is not anticipated to result in significant stormwater impacts to the Bear Creek watershed.

Wetlands and Waters of the State/U.S.

The Build Alternative would result in approximately four acres of fill in wetlands and less than 0.25 acre of fill and removal in other waters of the State/U.S. Most wetlands in the project footprint are generally low to moderate quality due to proximity to existing roads, developed areas and ongoing agricultural activity. Anticipated impacts to high quality wetlands would be negligible (less than 0.01 acre). The Bear Creek Bridge replacement would remove both existing bridge piers below the OHWM (a footprint of less than 0.01 acre, about eight square feet), resulting in a net benefit to Bear Creek.

Mitigation to compensate for wetland impacts anticipated with the Build Alternative will include purchasing mitigation credits from ODOT's vernal pool wetlands bank near White City. The ODOT vernal pool wetlands bank contains high quality vernal pool wetlands and is within the Bear Creek watershed. This will result in no net loss of wetlands.

The Build Alternative could increase the rate of development on lands currently planned for development near the interchange, within the Phoenix Urban Growth Boundary. State and Federal law would require

future development or road projects in the area to mitigate for impacts to wetlands by creating or restoring additional wetlands.

Based on the analysis conducted for wetlands, the low quality of most of the wetlands impacted, and the mitigation for impacted wetlands at the ODOT vernal pool mitigation bank, the Build Alternative is not anticipated to result in significant impacts to wetlands.

Hazardous Materials

The Build Alternative may impact three sites of high concern that may contain hazardous materials: residences (potential asbestos), truck stop, and orchard; and three sites of moderate concern (gas station and farm buildings).

The following is a summary of the mitigation measures that are included in the Hazardous Material Technical Report. These will be included in the project specifications to reduce potential exposure to hazardous materials.

- Prior to acquisition and/or leasing of land containing hazardous waste the appropriate regulatory agencies would be contacted to determine whether more recent information is available and whether further assessment is necessary.
- For all facilities, structures or residences in the project area that will be renovated, relocated or demolished the appropriate regulatory agencies will be contacted to assure proper handling and disposal of regulated materials (ie: asbestos, lead-containing materials, PCB light ballasts, mercury containing fluorescent light tubes and halide lights).
- Entering into agreements with regulatory agencies (ie: Prospective Purchase Agreement) may lessen future liabilities resulting from impacted properties).
- Conducting additional research such as geotechnical surveys at sites with suspected or known UST's could reduce the risk of encountering buried UST's, product pipelines or other anomalies such as utility lines.
- Emergency response procedure's consistent with existing laws and regulations would be developed for use by ODOT personnel and the construction contractor(s) in the unlikely event of a major hazardous material release.
- Controls and measures would be planned, designed and implemented to avoid further exacerbation of impacted sites and to prevent future releases or spills.

Mitigation for each of the listed sites could vary based on the different site conditions and/or levels of contamination or suspected contamination within the soil and/or groundwater. Standard specifications include procedures for acquiring land with potential hazardous materials, emergency response mitigation, and addressing contamination discovered during construction. ODOT would comply with all applicable federal, state, and local laws and regulations as they pertain to the storage, handling, management, transportation, disposal and documentation of hazardous substances.

Based on the hazardous materials analysis and associated mitigation measures listed above, the Build Alternative will not result in significant hazardous materials impacts.

Geology

The Build Alternative could have the following impacts: temporary slope instability during construction of proposed cuts and fills required for roads and retaining walls; erosion issues due to permanent cut and fill slopes; and elevated ground water levels could impact construction that require subgrade excavation such as bridge and or wall foundations. . Both the Fern Valley Road structure over I-5 and the Bear Creek Bridge would be constructed to current seismic standards, which would result in a substantial increase in safety. To minimize the potential for erosion and slope instability all proposed retaining walls, fills, cut slopes and bridges would be designed and constructed with appropriate temporary and permanent erosion and/or scour control measures in accordance with ODOT AASHTO and FHWA guidelines. Based on the geological analysis and associated mitigation measures, the Build Alternative will not result in significant geologic impacts.

Utilities

Utilities that are expected to be impacted by the Build Alternative include: water, sanitary sewer, storm sewer, storm drains, natural gas, electricity, and phone/communication lines. Utility modifications and relocations would be coordinated with the utility owners. Any service interruptions during construction will be short in duration. Costs would be incurred both by the utility companies and ODOT for utility relocation. Once the Build Alternative is completed, the service provided by the modified or relocated utilities will be as good as or better than service prior to construction. Based on the utility analysis and associated mitigation measures, the Build Alternative will not result in significant impacts to utilities.

Climate Change and Greenhouse Gas Emissions

Climate change and Greenhouse gas emissions are global issues occurring on a mega-scale. No single transportation project is sufficiently large to have an effect on these global issues; therefore, the Build Alternative is not anticipated to result in significant impacts to climate change issues. ODOT is pursuing these issues on a statewide basis, while USDOT pursues these issues on a national basis.

Public Comments and FHWA Responses

The public comments collected during the public comment response period for this EA (October 18, 2010 through November 16, 2010) are presented in Attachment A, along with FHWA responses to those comments and a signed copy of the transcript from the public hearing which was held on November 3, 2010.

Federal Highway Administration Finding of No Significant Impact for the Fern Valley Interchange Project

The FHWA has determined that the Build Alternative: North Phoenix Through will have no significant impact on the human environment. This Finding of No Significant Impact is based on the I-5: Fern Valley Interchange Environmental Assessment (EA) and this Finding of No Significant Impact which has been independently evaluated by the FHWA and determined to adequately and accurately discuss the need, environmental issues, and impacts of the proposed project and appropriate mitigation measures. These documents provide sufficient evidence and analysis for determining that an Environmental Impact Statement is not required. The FHWA takes full responsibility for the accuracy, scope, and content of the EA.

Date

Phillip A. Ditzler

Division Administrator

This page intentionally left blank

Attachment A

Public and Agency Comments Received During the EA Comment Period, FHWA Responses, and Supporting Materials