

CHAPTER 4

SUMMARY OF PROPOSED MITIGATION AND CONSERVATION MEASURES

The following provides a brief summary of the proposed mitigation and conservation measures to offset impacts associated with the proposed Fern Valley Interchange project.

TABLE 4-1: FERN VALLEY INTERCHANGE SUMMARY OF PROPOSED MITIGATION AND CONSERVATION MEASURES	
Subject	Measures
Air quality	<ul style="list-style-type: none"> Air pollution control measures, such as vehicle and equipment idling limitations, dust control, and burn restrictions Coordination of corridor signal timing for new traffic signal at OR 99/E. Bolz Road and OR 99/Fern Valley Road to minimize vehicle delay
Archaeology	<ul style="list-style-type: none"> Measures to address potential archaeological sites inadvertently discovered during construction, such as ceasing work at site of discovery if potential archaeological sites are discovered during construction, and contacting appropriate responsible agencies and/or jurisdictional authorities if a human burial is found during construction Archaeological monitoring along Payne and Bear Creeks during construction
Biology	<ul style="list-style-type: none"> Standard specifications, special provisions, and in-water work timing to minimize impacts to listed fish and aquatic habitat in Bear, Coleman and Payne Creeks— includes containing pollutants and sediments and treating stormwater from roadways Adherence to in-water work period restrictions Conservation measures to reduce impacts to species and habitat, minimize vegetation removal, and avoid spreading non-native invasive species Avoiding, minimizing, and mitigating potential impacts to wetlands and streams Removal of existing bridge piers located within the Bear Creek stream channel ODOT standard specifications for demolishing and removing bridges and over-water work Restricting bridge demolition to the non-nesting season or preventing birds from nesting on structure until demolition of bridge is complete Constructing the replacement Fern Valley Bridge to fully span Bear Creek, with no piers below the Ordinary High Water elevation Replacing 15 to 20 riparian trees if removed along Bear Creek, replanting trees and shrubs using native tree species, and monitoring to ensure survival of replanted trees and shrubs

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Geology	<ul style="list-style-type: none"> • Standard specifications for geotechnical designs; retaining walls, bridges, subgrade compaction and erosion protection • Design and construction of Bear Creek Bridge and I-5 structure to meet all current seismic standards • Design and construction of proposed retaining walls, embankment fills, cut slopes, and bridges with appropriate temporary and permanent erosion and/or scour control measures to minimize erosion potential and slope instability
Hazardous materials	<ul style="list-style-type: none"> • Standard specifications for acquiring land with potential hazardous materials, emergency response procedures, and addressing contamination discovered during construction • Compliance with all applicable federal, state, and local laws and regulations pertaining to the storage, handling, management transportation, disposal and documentation of hazardous substances
Noise	<ul style="list-style-type: none"> • Standard construction noise abatement measures, including construction restrictions on weekends and at night, use of sound-control devices, compliance with U.S. Environmental Protection Agency standards for equipment, restrictions on timing of pile driving or blasting operations, and placement of stockpiles for noise reduction • During final design, ODOT will consider a noise wall for the Bear Lake Estates. • Implementation of noise abatement measures in response to noise impact complaints
Parks and Recreation, Bear Creek Greenway	<ul style="list-style-type: none"> • Mitigation of temporary impacts to air quality using standard dust control measures • Constructing bridge footings with appropriate shape and placement to straighten Greenway multi-use path • Installing protective enclosure or other safety measures to minimize the need for path closure during construction (alternate path will be available during any path closure events via the access ramps to the Bear Creek Greenway) • Design of Bear Creek Greenway bridge to be aesthetically compatible with the Greenway • Minimizing vegetation removal • Providing Section 6(f) replacement property for about 8,200 square-foot impact to Greenway
Right of way	<ul style="list-style-type: none"> • Right of way purchased in compliance with standard acquisition and relocation assistance procedures • Compensable damages to be paid in accordance with right of way acquisition requirements • Ensuring dequate, decent, safe and sanitary replacement housing is available or providing housing under the provisions of the Last Resort Housing Program
Socioeconomics	<ul style="list-style-type: none"> • Manage traffic to maintain traffic flow during construction as much as possible • Incorporate signage and coordinate with businesses to keep connections to businesses open during construction • Maintain emergency vehicle travel at all times • Use noise abatement measures to minimize temporary impacts to due construction • Use standard construction practices, such as spraying water to control dust, in order to minimize air quality impacts to adjacent land uses during construction

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Traffic	<ul style="list-style-type: none"> • Strategically place signing and provide construction schedules to help reduce adverse effects on travel patterns--indicate changes in traffic circulation, connections or detours • Construction phasing to minimize impacts on travel patterns
Visual resources	<ul style="list-style-type: none"> • Design of Bear Creek Greenway bridge to be aesthetically compatible with the Greenway • Minimizing vegetation removal
Water resources	<ul style="list-style-type: none"> • Standard mitigation and conservation measures for in-water work (see Biology) • Design bridge to pass the 100-year flood event with no more than a one-foot backwater rise upstream of the structure • Standard specifications to reduce stormwater pollutant loads and reduce runoff rates; use stormwater low impact practices • Infiltration capacity of stormwater treatment facilities enhanced with suitable vegetation or substrate filters • Restricting stormwater from draining directly from bridges or roadways into streams without treatment • Stormwater quality treatment of all existing and new ODOT roadway surface area in the project limits, as well as any ODOT roadway surface area that drains into the project area (OR 99)
Wetlands	<ul style="list-style-type: none"> • Standard construction avoidance of temporary impacts to wetlands e.g., contain contaminants, minimize use of heavy equipment in wetlands, flag no-work areas, use of protective geotextile material to minimize erosion • 4 acres of wetland mitigation. ODOT's preferred mitigation approach is to purchase wetland mitigation credits from ODOT's vernal pool mitigation bank located near White City

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