

Chapter 4. Environmental Commitments

Chapter 4 discusses environmental commitments by resource that will be used to avoid, minimize, or mitigate adverse effects that may result from constructing, operating, or maintaining the Grade-Separated Option A (GSA) or Partial Grade-Separated Option B (PGSB) Alternative. Mitigation measures are intended to be consistent with anticipated permit requirements. Federal Highway Administration (FHWA), Washington State Department of Transportation (WSDOT), and Cowlitz County will have joint responsibility for adhering to the environmental commitments described in this chapter.

4.1 What efforts have been or will be made to avoid, minimize or mitigate for effects?

Project effects due to construction, operation, and maintenance are an inevitable part of transportation improvement programs. Efforts have been made throughout the design process to avoid and minimize impacts; such efforts will continue to be made once the preferred alternative is selected and the design is further refined. In order to minimize project effects, steps can be taken to address issues that may arise during construction and after completion of a project. The following measures could be implemented for either build alternative to avoid and minimize project effects.

Roadway Traffic Operations

Mitigation for temporary construction effects

- » Coordinate with City of Longview and Cowlitz County transportation officials to develop a detailed traffic management plan as well as work zone traffic control plans that provide a framework for detours, lane closures, staging plans, etc.
- » Develop a public outreach program to include periodic media broadcasts, a newsletter, and project website to inform residents and businesses in and around the study area of changes in vehicle, freight, pedestrian, bicycle or transit routes during construction.
- » Prepare and distribute written notices in English and Spanish (or other relevant languages) that concern construction activities and changes in vehicle, pedestrian, bicycle, or transit routes during construction.

Mitigation for long-term effects

- » Following completion of the project, re-examine and modify critical emergency response routes within the study area based on the new roadway design and "post-project" congestion and travel time data.
- » Following completion of the project, validate and maintain intersection connectivity for pedestrians and bicyclists based on the new roadway design.

Pedestrian, Bicycle, and Transit Access

Mitigation for temporary construction effects

- » Coordinate with the cities of Longview and Kelso, Port of Longview, and transit agencies during design and construction, providing advanced notice of potential pedestrian, bicycle or transit delays, detours, and access impacts during construction.
- » Provide advanced notice to residential areas about sidewalk and trail closures during construction.
- » Coordinate with the City of Longview to maintain pedestrian and bicycle connectivity between residential areas north of Industrial Way and business south of Industrial Way during construction.
- » Maintain pedestrian and bicyclist access to the segment of the Highlands Trail west of 17th Avenue. Provide a signed detour route for the 0.2-mile segment between 17th Avenue and Oregon Way.

No mitigation for long-term effects is recommended for this resource.

Neighborhoods, Community Resources, and Traditionally Underserved Populations

Mitigation for temporary construction effects

- » Send English and Spanish notices/flyers to residents, businesses, project stakeholders, schools, churches, community service organizations, Kelso/Longview Chamber of Commerce, and local media in advance of construction activities to provide information about upcoming construction activities and schedule, detour routes, and temporary utility service disruptions, if any.
- » Install variable message signs in advance of construction activities to allow travelers to plan alternate routes.
- » Consider installing signs near residential areas to encourage "local access only," and to discourage cut-through traffic, particularly the Highlands and St. Helens Neighborhoods.
- » Where construction work zones impact existing pedestrian facilities, ensure that Americans with Disabilities Act (ADA)-compliant alternate routes and detour signage are provided.

- » If feasible, incorporate goals in the construction contract that contractors utilize a designated percentage of women and minorities during construction of the project.

Mitigation for long-term effects

- » Follow WSDOT's standard, systematic process for business relocations in compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 as amended. The legal requirements and relocation process are described in WSDOT Right-of-Way Manual M 26-01 Chapter 12.
- » Ensure that pedestrian facilities (existing and newly constructed) associated with this roadway project are ADA-compliant and provide connectivity between the affected neighborhoods and employers south of Industrial Way.
- » Consider proactive design techniques to discourage people from congregating beneath elevated structures to minimize security concerns.
- » Consider community input on the aesthetics of any walls constructed as part of the project.
- » Coordinate with the City of Longview to promote safety and security by installing illumination in areas where the elevated intersection creates isolated or concealed spaces.

Businesses and Economy

Mitigation for temporary construction effects

- » Send English and Spanish notices to residents, businesses, project stakeholders, schools, churches, community service organizations, Kelso/Longview Chamber of Commerce, and local media in advance of construction activities to provide information about upcoming construction activities and schedule, detour routes, and temporary utility service disruptions, if any.
- » Install variable message signs in advance of construction activities to allow travelers to plan alternate routes.

Mitigation for long-term effects

- » Conduct all right-of-way acquisitions and commercial relocations in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, as well as the Washington Relocation Assistance – Real Property Acquisition Policy. All affected property owners will be compensated for property rights acquired at fair market value and relocation assistance will be provided. The Uniform Act provides protection and assistance for people affected by the acquisition, rehabilitation, or demolition of real property for federal or federally funded projects. This law was enacted by Congress to ensure that people whose real property is acquired, or who move as a direct result of projects receiving federal funds, are treated fairly and equitably and receive assistance in moving from the property they occupy.

Visual Resources

Mitigation for temporary construction effects

- » During construction, retain as much of the existing vegetation as possible, particularly mature trees located between roadways and adjacent land uses.
- » Where feasible, set up construction staging areas in locations that are out of sight from a majority of viewers.
- » Shield construction lighting and/or focus lighting on work areas to minimize ambient spillover of light into adjacent areas.
- » Survey and document the existing visual character of construction of staging areas prior to construction and restore construction staging areas to pre-project conditions once construction is complete.

Mitigation for long-term effects

- » Consider contouring cuts and fills to visually blend with the surrounding landscape.
- » Develop a range of options for wall textures consistent with local projects to reflect landscape context and to blend with the local environment. Textures may include fractured fin, random board finish, smooth coping strips along the top of wall or incorporated into wall surfaces. Provide an opportunity for community members to review and provide input on these options.
- » Install street lights that focus light toward the roadway and minimize the spillover of light into residential areas.
- » Implement roadside restoration in accordance with WSDOT's Roadside Policy Manual, utilizing a combination of trees, low growing native shrubs, and grasses to screen and separate various conflicting land uses, blend large structures into the landscape, provide positive driver guidance, and reduce the negative effects of light and glare from reflective surfaces, new luminaires, and signals.
- » During final design, retain as much existing vegetation as possible, particularly mature trees between residences and roadways.

Historic and Archaeological Resources

Mitigation for temporary construction effects

- » Develop and implement an inadvertent discovery plan. If unidentified archaeological resources or human remains are encountered during construction, work should immediately cease in the vicinity of the discovery to avoid further damages to the resource. WSDOT, FHWA, Washington State Department of Archaeology and Historic Preservation (DAHP), and affected Native American tribes should be notified so the significance of the discovery can be evaluated and the appropriate course of action implemented.

Mitigation for long-term effects

- » Prepare and comply with the stipulations of a programmatic agreement approved by DAHP.

Parks and Recreation Resources

Mitigation for temporary construction effects

- » Provide notice of upcoming trail closures and notice of pedestrian and bicycle detour routes.

Mitigation for long-term effects

- » Ensure project design does not preclude a future connection of the existing trail to a planned trail east of Oregon Way, including pedestrian and bicycle crossing of Oregon Way.

Railroads and Public Utilities

Mitigation for temporary construction effects

- » Coordinate with utility owners to provide notice of upcoming construction activities and avoid disruptions to utility service.
- » Coordinate with Union Pacific Railroad and BNSF Railway to schedule construction activities related to rail crossings and/or rail realignments to avoid or minimize disruptions to rail operations.

Mitigation for long-term effects

- » Comply with the conditions of existing utility agreements.
- » During future design efforts, confirm the location of utilities in the study area by field investigations, including locating lines below ground.
- » Consider conducting a Subsurface Utility Engineering study for this project. The Subsurface Utility Engineering process combines civil engineering, surveying, and geophysics, and has been shown to reduce relocations normally necessitated by highway construction projects, reduce delays to the project caused by waiting for utility work to be completed so highway construction can begin, and reduce unexpected conflicts with utilities.
- » Coordinate with the Washington Utilities and Transportation Commission and comply with the petition process for approval of modifications (including grade-separation) to rail crossings per RCW 81.53.060.

Land Use

Mitigation for temporary construction effects

- » Provide notice of upcoming traffic impacts to property and business owners in the study area on a frequent basis.
- » Provide residents, tenants, and property owners in the study area with advance notice of potential access or utility disruptions as a result of construction activities.

Mitigation for long-term effects

- » Conduct all right-of-way acquisitions and commercial relocations in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, as well as the Washington Relocation Assistance – Real Property Acquisition Policy. All affected property owners will be compensated for property rights acquired at fair market value and relocation assistance will be provided. The Uniform Act provides protection and assistance for people affected by the acquisition, rehabilitation, or demolition of real property for federal or federally funded projects. This law was enacted by Congress to ensure that people whose real property is acquired, or who move as a direct result of projects receiving federal funds, are treated fairly and equitably and receive assistance in moving from the property they occupy.
- » Follow the substantive requirements of the applicable federal, state, and local land use statutes, including zoning and critical area regulations, to protect land uses, resource lands, and critical areas.

Hazardous Materials

Mitigation for avoidance of contamination

- » Evaluate structures to be demolished for the presence of hazardous materials.
- » Conduct site assessments to evaluate soil and groundwater conditions near the hazardous materials associated with structures to be demolished and in areas proposed for excavations.
- » Use the results of the soil and groundwater sampling to develop project specific provisions for storage and disposal of contaminated material during construction.
- » Remove and dispose of hazardous materials, and remediate contaminated soil and groundwater through a construction contract special provision in accordance with applicable regulations.
- » Evaluate soil conditions near the construction area as grading activities occur. If hazardous materials are encountered, remove and assess soil and groundwater conditions through a construction contract requirement special provision.
- » Coordinate with utilities to remove and relocate transformers along the alignment per WSDOT Standard Specifications Page 1-68 section 1-07.17(1) and as included in contract plans or placed into a construction contract special provision.
- » Conduct a Phase II environmental site assessment (an on-the ground assessment that includes sampling and laboratory analysis to confirm the presence of hazardous materials) of all properties where a full or partial acquisition

or temporary easement is planned to accurately assess the potential for existing environmental contaminants on each property.

Mitigation for construction planning

- » Develop construction plans that specify procedures, including best management practices, to be employed for construction of the project. The plans will include direction for spill prevention, control, and countermeasure plans, temporary erosion and sedimentation control plans, and plans for handling and disposal of known and unanticipated contamination.
- » Develop a site-specific Health and Safety Plan describing monitoring requirements and the use of personal protective equipment.
- » Pre-assign a dangerous waste identification number, along with planning for soil handling and disposal to reduce soil handling time, so soils can be loaded onto trucks during initial excavation and hauled to treatment or disposal facilities.

Mitigation for disposal options for contamination

- » Adjust construction methods to minimize the volume of contaminated soil and/or groundwater encountered.
- » Properly manage and dispose of encountered contaminated soil and/or groundwater.

No mitigation for long-term effects is recommended for this resource.

Traffic Noise Levels

Mitigation for temporary construction effects

- » To the extent feasible, conduct noisier construction activities during daytime hours to reduce noise levels during sensitive nighttime hours.
- » Apply additional measures as needed and to the extent feasible to reduce noise levels, including equipping engines with adequate mufflers, turning off equipment during prolonged periods of nonuse, and locating compressors and generators away from residences.

Mitigation for long-term effects

- » During final design of the Preferred Alternative, update the feasible and reasonable analysis for potential noise barriers that could reduce predicted traffic noise to residences along the west side of Oregon Way.

Water, Wetlands, and Floodplains

Mitigation for temporary construction effects

- » Require construction contractor to submit a culvert bypass plan and maintain the flow through the existing CDID Ditch No. 3 during and after construction.

- » Maintain access to the Oregon Way Pump Station during and after construction.
- » Comply with WSDOT standard specification (Sections 1-07.15 and 8-01) requirements and special provisions for temporary water pollution control and erosion control during construction.
- » Comply with Section 404(b)(1) Guidelines for Specifications of Disposal Sites for Dredged or Fill Material.
- » Protect the existing CDID Ditch No. 3 from sediment-laden runoff during construction.

Mitigation for long-term effects

- » Purchase mitigation credits at the Coweeman Mitigation Bank to offset loss of wetlands and open water resources.
- » Heavily revegetate proposed highway embankments along the western arm of the project adjacent to the wetlands associated with the Weyerhaeuser pond and CDID Ditch No. 3 to the maximum extent practicable to establish a forested buffer of primarily evergreen trees and associated woody understory that would enhance buffer function, provide light and glare screening, provide shading of wetlands, stabilize embankment slopes, promote water infiltration and storage, improve water quality, and provide wildlife habitat for local wetland-dependent species. Establish and monitor the vegetated buffer for a minimum of 5 years to meet performance standards developed during the permit application process. Conduct seasonal weed control and replanting activities and annual scientific monitoring throughout that time period.

Soils and Geology

Mitigation for temporary construction impacts

- » Maintain vegetation to the extent possible, and provide adequate surface water runoff systems.
- » Construct erosion and sediment control measures downslope.
- » Use temporary erosion control blankets and mulching to minimize erosion prior to vegetation establishment.
- » Use retaining structures designed for the loads from moving soils.
- » Implement construction specifications and quality assurance programs that prohibit over-steepened slopes.
- » Relocate or protect utilities where ground settlement cannot be avoided.
- » Control changes in groundwater elevation near critical structures with localized dewatering and groundwater injection methods.
- » Use sheetpile barrier systems to control the horizontal extent of groundwater withdrawal.

Mitigation for long-term effects

- » Consider the use of stone columns or grouted columns in areas with liquefiable and/or compressible soils.
- » Consider the use of pile-supported embankments to transfer earth loads to incompressible layers.
- » Excavate unsuitable and/or liquefiable soils beyond the footprint of each embankment and replace with engineered fill as necessary.

Fish, Wildlife, and Vegetation

Mitigation for temporary construction effects

- » Ensure that fresh concrete and/or concrete by-products are prevented from entering surface waters during construction. Any water having direct contact with uncured concrete shall be contained and treated or removed from the site (as appropriate) to prevent discharge to surface waters and/or wetlands.
- » Establish concrete truck chute cleanout areas to properly contain wet concrete and wash water.
- » Install high visibility fencing around preservation areas before construction to avoid unintended impacts to vegetation or other sensitive areas.
- » Implement a site-specific Temporary Erosion and Sediment Control plan to minimize erosion and sedimentation.
- » Implement a site-specific Spill Prevention, Control, and Countermeasures plan to minimize spills and ensure all harmful materials will be properly stored and contained.
- » Restore disturbed areas of temporary impacts according to the most current version of the WSDOT Roadside Classification Plan (WSDOT 2017) and permitting requirements.
- » Inspect equipment daily for leaks and proper function. Ensure that equipment will be clean and free of external petroleum-based products.
- » Ensure that any wastes resulting from the project shall become the responsibility of the contractor and will be disposed at a properly permitted site of their choosing.
- » Install and maintain best management practices as stated in the most current version of the WSDOT Highway Runoff Manual (WSDOT 2017) to ensure that no foreign material, such as pavement slurry from asphalt grinding equipment, will be sidecast, and to control and prevent sediments from entering aquatic systems.
- » At a minimum, comply with Washington Department of Ecology's State Water Quality Standards or permit modifications and with all requirements of the most current version of the WSDOT Highway Runoff Manual (WSDOT 2017).
- » Require that all unstable slopes resulting from construction activities with a high likelihood of delivery of material to

listed species-bearing waters will be stabilized within 2 days from October 1 to April 30 and within 7 days from May 1 to September 30.

- » Require all equipment to be fueled and maintained more than 200 feet from the nearest wetland, ditches, flowing or standing water, unless site specific review completed by the project biologist indicates that no impacts to the resource areas will result due to topography or other factors. Exceptions to this requirement may be allowed for large cranes, pile drivers, and drill rigs if they cannot be easily moved.
- » Ensure that no paving, chip sealing, or stripe painting will be initiated in rainy weather.

No mitigation for long-term effects is recommended for this resource.

Air Quality

Mitigation for temporary construction effects

- » Reduce construction impacts by incorporating applicable measures from the Associated General Contractor of Washington Guidelines (AGC 1997) into the project's construction specifications.
- » Spray exposed soil with water or other dust palliatives to reduce emissions and deposition of particulate matter.
- » Cover all trucks transporting materials, wetting materials in trucks, or providing adequate freeboard (space from the top of the material to the top of the truck) to reduce deposition of particulates during transportation.
- » Provide suitable construction entrances to remove particulate matter that vehicles will otherwise carry offsite to decrease deposition of particulate matter on area roadways.
- » Remove particulate matter deposited on paved, public roads to reduce mud and resultant windblown dust on area roadways.
- » Route and schedule construction trucks to reduce delays to traffic during peak travel times to reduce secondary air quality impacts caused by a reduction in traffic speeds while waiting for construction trucks.
- » Place quarry spall aprons where trucks enter public roads to reduce mud track-out.
- » Gravel or pave haul roads to reduce particulate emissions.
- » Require appropriate emission-control devices on all construction equipment powered by gasoline or diesel fuel to reduce carbon monoxide (CO) and ozone precursors (NO_x) emissions in vehicular exhaust.
- » Use maintained equipment to reduce CO and NO_x emissions.
- » Enforce WSDOT's no idle policy that directs employees to turn off engines when their vehicles are not in motion.

-
- » Plant vegetative cover as soon as possible after grading to reduce windblown particulates in the area.
 - » Route construction trucks away from residential areas to minimize annoyance from dust.

No mitigation for long-term effects is recommended for this resource.

Energy and Greenhouse Gas

Mitigation for temporary construction effects

- » Include detours and strategic construction timing (such as night work) in the project traffic plan to continue moving traffic through the area and reduce backups to the traveling public to the extent possible.
- » Set up active construction areas, staging areas, and material transfer sites in a way that reduces standing wait times for equipment.
- » Work with agency partners to promote ridesharing and other commute trip reduction efforts for employees working on the project.

No mitigation for long-term effects is recommended for this resource.

Cumulative Effects

No mitigation for cumulative effects is recommended as part of this project.