Lewis Road Relocation and Reconstruction Environmental Assessment

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FEMA

U.S. Department of Homeland Security
Federal Emergency Management Agency - Region X
130 228th Street Southwest
Bothell, Washington 98201-9796

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Prepared by
URS
URS Corporation
1400 Century Square • 1501 4th Avenue • Seattle, Washington 98101 • 206.438.2700

Photo Source: Yakima County, 1996. View from Lewis Road looking northwest.

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TERMS USED IN THIS DOCUMENT

Aggradation – the process in which the rate of sediment deposition exceeds that of erosion and creates a persistent, long-term rise in the elevation of a streambed.

Area of Potential Effects (APE) – the geographic area or areas within which an undertaking may cause changes in the character or use of historic properties, if such properties exist. The area of potential effects is influenced by the scale and nature of the undertaking.

Best Management Practices (BMPs) – innovative environmental protection practices applied to help ensure that projects are conducted in an environmentally responsible manner.

Channel Migration Zone (CMZ) – the geographic area where a stream or river has been and will be susceptible to channel erosion and/or channel occupation. Because alluvial channels are rarely static through time, rivers and streams naturally migrate within their valleys. Channels respond with horizontal movement (lateral migration, avulsion, channel widening, cannel narrowing) and vertical movement (incision and aggradation) depending on site-specific circumstances and watershed conditions. Human landscape disturbance can exaggerate or constrain channel migration by affecting local and watershed processes of flooding, erosion, and deposition.

FEMA Floodway – the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height.

Floodplain – the area adjacent to a river that is susceptible to inundation, and often bears geophysical evidence of previous flood events. It is part of the lateral dimension of rivers and contributes to the interchange of materials between terrestrial components and aquatic components of the watershed.

Wildland-Urban Interface – line, area, or zone where structures and other human development meet or intermingle with the wildland ecosystems.

ACRONYMS USED IN THIS DOCUMENT

APE	Area of Potential Effects
BMP	best management practice
CFHMP	Comprehensive Flood Hazard Management Plan
CFR	Code of Federal Regulations
DAHP	Department of Archaeological and Historic Preservation
EA	environmental assessment
EO	Executive Order
FCAAP	Flood Control Assistance Account Program
FEMA	Federal Emergency Management Agency
HMTAP	Hazard Mitigation Technical Assistance Program
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NRHP	National Register of Historic Places
SHPO	State Historic Preservation Officer
USFWS	US Fish and Wildlife Service
WNHP	Washington Natural Heritage Program

Yakima County applied to the US Department of Homeland Security's Federal Emergency Management Agency (FEMA) Hazard Mitigation Grant Program (HMGP) for assistance with a road relocation project in Central Washington. The project will build upon activities outlined in the Yakima County Multi-Jurisdictional Hazard Mitigation Plan and the Naches River Comprehensive Flood Hazard Management Plan (CFHMP) to reduce flood damage and improve ingress and egress for the project area, which was identified in both plans as a high priority project.

The National Environmental Policy Act (NEPA) of 1969 and the Council on Environmental Quality regulations implementing NEPA (40 Code of Federal Regulations [CFR] Part 1500 through 1508) direct FEMA and other federal agencies to fully understand and take into consideration environmental consequences of proposed federally funded projects. Under NEPA, Congress authorizes and directs federal agencies to carry out their regulations, policies, and programs as fully as possible in accordance with the statute's policies on environmental protection. NEPA requires federal agencies to make a series of evaluations and decisions that anticipate significant effects on environmental resources. This requirement must be fulfilled whenever a federal agency proposes an action, grants a permit, or agrees to fund or otherwise authorize any other entity to undertake an action that could possibly affect the human environment. In compliance with NEPA and its implementing regulations, FEMA prepared this draft environmental assessment (EA) to analyze potential environmental impacts of alternatives.

The FEMA Hazard Mitigation Grant Program provides grants to states and local governments to implement long-term hazard mitigation measures after a major disaster declaration. The purpose of this action is to provide HMGP funding to Yakima County for mitigating their natural hazard risks.

Flooding on the Naches River typically occurs during the winter and spring. Historically, winter floods have been larger in magnitude, such as the December 1933 and February 1996 events. Lewis Road has been inundated by the Naches River on an almost annual basis, with more significant damage at approximate 5-year and higher events. Shallow, fast moving water flowing across a roadway can wash a car off the road, and as little as 6 inches of moving water can knock people off their feet (WA Department of Ecology 2008). This represents a real danger to the local residents.

The County identified the need to reduce the repetitive damages sustained to Lewis Road, while improving ingress and egress to the properties that use it. From this need the County identified the Proposed Action as a high priority in the Naches River Comprehensive Flood Hazard Management Plan and the Yakima County Multi-Jurisdictional Hazard Mitigation Plan.

This section discusses the two alternatives considered in this EA: (1) the No Action Alternative and (2) the Proposed Action Alternative to which FEMA funding would contribute.

3.1 ALTERNATIVE 1 – NO ACTION

Under the No Action Alternative, FEMA would not provide funding to relocate Lewis Road further south. The Naches River would continue to damage Lewis Road yearly and close the road during 1-5 year floods and greater events. Continued inundation and washing of the gravel surface of Lewis Road would contribute to sedimentation and continue to degrade water quality and fish habitat. Risks associated with flooding of the road and the safety hazard to residents driving through overtopped roads during flood events would continue. Current and ongoing activities to protect the properties and road would continue with County funding as available. This alternative would not meet the project needs nor the County's goals and objectives.

3.2 ALTERNATIVE 2 – PROPOSED ACTION

The Proposed Action would reconstruct Lewis Road approximately 500 feet further south of the Naches River. The total road length would be shortened by approximately 350 feet for a total length of 1,700 feet (see Appendix D). The road would be 30 feet wide, with an overall depth of 1 foot. The subgrade would be compacted and a 0.7 foot compacted depth crushed surfacing base coarse would be applied and compacted. A 0.3 foot compacted depth crushed surfacing top coarse would then be applied. The stormwater treatment for the new road would be through infiltration along side slopes adjacent to the roadway. Although the road will remain in the FEMA floodplain and floodway, the road would move to slightly higher land, allowing residents and emergency vehicles safer access during 1-, 5-, and 25-year floods. Land has been purchased from Boise Cascade Inc. for the right of way needed to relocate the road. Approximately 200 feet of the existing roadway closest to South Naches Road would be removed and planted with native vegetation. The remainder of the gravel roadway would remain but would not be maintained by Yakima County.

3.3 OTHER ALTERNATIVES CONSIDERED

A design and review team consisting of Yakima Flood Control District personnel reviewed the reoccurring flooding, safety and access issue. The team considered three other alternatives.

Raise Lewis Road - The first alternative discussed was raising the elevation of Lewis Road by approximately 3 feet on the existing alignment to a level above the approximate 20-year flood event and armoring the riverward shoulders. This alternative would not guarantee access and safety for the residences along Lewis Road, given that the raising and armoring may not be successful in a large flood event. The raised roadway would create an additional dike, raising the river flood elevation and constricting the river. This would cause additional pressure on the north side of the Naches River and on Highway 12 downstream of the area, an area which was noted in the Naches River CFHMP as being highly constricted already. This alternative would also cost roughly twice as much as the proposed alternative.

Close Lewis Road - The second alternative briefly discussed was a proposal to close the road and purchase all residential properties currently accessed by Lewis Road. According to the Yakima County Department of Assessments, this could cost upwards of $2 million for the affected parcels. This alternative was dismissed as being cost prohibitive.

Locate outside of floodplain - The third alternative considered constructing a new access road outside of the FEMA floodplain. However, land in this area is relatively flat and moving further away from the Naches River does not guarantee a higher elevation. During mapping exercises, Yakima County determined that areas further south of the proposed roadway location would be inundated during 10-year and higher flood events (see Figures 4-6). This alternative was dismissed as there were no other practicable routes outside of the floodplain.

This section discusses the existing conditions by resource and the potential effects of the No Action and Proposed Action alternatives.

For each resource category, the impact analysis follows the same general approach. Where possible, quantitative information is provided to establish impacts. Qualitatively, these impacts will be measured based on minor, moderate, and major impacts as outlined in the chart below.

Impact Intensity	Criteria
Small	Environmental effects would not be detectable or would be so minor that they would neither destabilize nor noticeably alter any important attribute of the resource.
Moderate	Environmental effects would be sufficient to alter noticeably, but not to destabilize, important attributes of the resource.
Large	Environmental effects would be clearly noticeable and would be sufficient to destabilize important attributes of the resource.

Impacts are disclosed based on the amount of change or loss of the resource from the baseline conditions. Impacts may be direct or indirect. Direct impacts are caused by an action and occur at the same time and place as the action. Indirect impacts are caused by an action and occur later in time or farther removed from the area, but are reasonably foreseeable. Cumulative impacts are discussed in Section 5.

Resources that were not analyzed in detail include air quality and visual resources. These resources will not be analyzed to any further extent.

4.1 CLIMATE, GEOLOGY AND SOILS

4.1.1 Climate

The climate in the Naches River Basin varies from desert conditions in the southern lowlands to moist alpine conditions in the mountain headwater region. Yakima County experiences moderate winters, warm and dry summer months and is classified as semi-arid. Mean annual rainfall is approximately 8 inches, and mean annual snowfall is approximately 24 inches. Temperatures range from an average low of 20° F in January to an average high of 87° F in July.

4.1.2 Geology and Soils

The Naches River flows through a broad valley between two uplifted and folded basalt ridges. In the Naches River valley, a layer of alluvium overlies the sedimentary Ellensburg formation of volcanic agglomerates and ash. The alluvium consists of poorly sorted sand and gravel deposited by glaciers and streams, of Quaternary to Recent Age. Beneath the Ellensburg formation are three basalt layers, the Saddle Hills, Wanapum, and Grande Ronde formations.

Below the confluence with the Tieton River, the river flows through a wide alluvial valley along the project area. The gradient of the river is 30.8 feet per mile below the confluence (through the project area). The channel pattern through the area is characterized by a meander-braided

transition pattern. This channel pattern is characterized as having a large sediment load with a significant fraction of sand, gravel and cobbles (Chorley et. al 1984).

Along the floodplain, the primary soil types are Weirman sandy loam, fine sandy loam, and gravelly fine sand loam. Weirman loam is characterized by stratified layers and beds or permeable gravel and sand at shallow depths. It contains minimal organic matter, and drainage through the soil is medium to very rapid. Isolated patches of Logy silt loam also occur throughout the study area. The Logy series soils are deep, well drained floodplain soils.

4.1.3 Environmental Consequences

Alternative 1 – No Action

Under the No Action Alternative, FEMA would not provide funding to relocate Lewis Road further south. Continued soil erosion would occur from flood events.

Alternative 2 – Proposed Action

No effect on climate and geology would be expected based on the small scale of the project and minor ground-disturbing activities. No environmental consequences to soils are expected from road removal and paving activities in the project area because best management practices (BMPs) for erosion control would be followed. Vegetation removal activities would not result in increased erosion of stream banks. Some soils may be removed during construction.

Direct, indirect, and cumulative effects to soil productivity, fertility, stability, or infiltration capacity would be at or below the lower levels of detection. Any effects on soil productivity or fertility would be small, and no long-term effects to soils would occur.

4.2 FLOODPLAINS

The channel width of the Naches River is variable, with a relatively wide and shallow channel. The development of bars and islands may modify flow alignments and change the location of bank erosion. Recent studies also suggest that aggradation has occurred throughout the project and surrounding area. The Naches River has historically experienced very active channel migration.

Avulsions (abrupt switching of the river to a new location), the most unpredictable and destructive type of channel migration, are common on the Naches River. Avulsions typically occur during a flood when the river reoccupies an old channel or erodes a barrier to gain access to a new path. A major avulsion occurred on the Naches River just upstream from Ramblers Park (near Gleed, WA) during the 1996 flood. Another important avulsion occurred near Kershaw Road, approximately 5.5 miles from the project area, during the same flood (Naches River CFHMP 2005).

Since 1909, the river has overtopped its banks approximately 60 times. The Naches River can remain at critical flood stage for more the 30 days, rising 11 to 16 feet. Near the project area, it usually takes at least a day for overbank flooding to occur. Most significant floods on the Naches River have remained above flood stage for five to seven days. There have been cases in

which the river crested above flood stage more than once within a two-week period (Naches River CFHMP 2005).

The current alignment of the Naches River places the brunt of the meander migration pressure on the south bank just downstream from the bridge along Lewis Road. In the project area, the river is constrained by the Town of Naches to the north. Here, the channel is fixed in one location, which increases the energy available to the river downstream for migration. To the north, the Highway 12 embankment is impeding the channel from migrating further northeast and may magnify the erosive energy of the river in the vicinity of the L-shaped meander (Naches River Channel Migration Study 2003). Both the existing and relocated Lewis Road would be located within the FEMA Floodway and floodplain (current FIRM Panel # 5302170680-B effective date June 5th, 1985; Preliminary FIRM Panel 53077CO677-D dated September 30, 2008).

Based on 44 CFR Part 9.10, the following floodplain values are present in the project area:

Flood hazard-related factors - The project area has swift floods, usually rising to flood stage over a day. Floods generally last for five to seven days. The only evacuation route for residents in the project area is through Lewis Road. Flooding may also cause erosion and debris loads.

Natural values-related factors - The water resource value of the project area is low, as natural moderation of floods does not occur. The project area includes several fish and animal species (described in Section 4.5 of this EA). No archaeological or historical sites were identified in the project area. The Naches River is easily accessible within the project area for informal recreation activities. Agricultural activities include apple orchards and vineyards.

Factors relevant to the survival and quality of wetlands - Flooding along the Naches River causes erosion, scour, channel migration, and a loss of vegetation due to excessive river volume and flow velocities, which may effect wetlands in the project area.

4.2.1 Environmental Consequences

Alternative 1 – No Action

Under the No Action Alternative, FEMA would not provide funding to relocate Lewis Road further south. The continued inundation and repair of Lewis Road would continue to be subject to seasonal and catastrophic flood events, including the natural movement of the river within its floodplain. The floodplain values listed in Section 4.2 would not change.

Alternative 2 – Proposed Action

The Proposed Action would move Lewis Road further south and away from the river. The reconstructed road would remain within the FEMA Floodway. While other alternatives were considered, removing the roadway out of the floodplain was not a practicable alternative as much of the surrounding land to the south is slightly lower in elevation. With further inundation and damage to the old portion of Lewis Road, the Naches River may carve a new channel further south of its current location. However, removal of the elevated portion of the existing road may provide more natural channel migration by making the river channel less constricted. A condition of approval will include a no-rise certification which Yakima County would provide to officials through floodrise data and maps in order to obtain the floodplain permit.

The Proposed Action would not adversely impact the floodplain values under 44 CFR Part 9.10. The following floodplain values would be improved:

Flood hazard-related factors - The only evacuation route (Lewis Road) would become more reliable and safer.

Natural values-related factors - Since Lewis Road would be relocated to higher ground further from the Naches River, the water resource value of the project area may increase.

4.3 WETLANDS AND WATER RESOURCES

Wetlands and water bodies are located in the project vicinity. The national wetland inventory identifies the south bank of the Naches River adjacent to Lewis Road as a temporarily flooding palustrine scrub/shrub wetland complex (Figure 3). The applicant mapped a small palustrine scrub/shrub wetland approximately 100-200 feet near the proposed realigned section of Lewis Road (Figure 2). This wetland has not been delineated or assessed for function and values.

4.3.1 Environmental Consequences

Alternative 1 – No Action

Under the No Action Alternative, no impacts to wetlands and water resources within the project area would be expected to occur except by regular periodic flooding of the Naches River. These impacts may include erosion, scour, channel migration, and a loss of vegetation due to excessive river volume and flow velocities. Such actions would affect the quantity and quality of wetlands and water resources in the project vicinity and along downstream portions of the Naches River.

Alternative 2 – Proposed Action

Construction of the new roadway further away from the Naches River would reduce erosive conditions to the new roadbed. Construction of the new road bed would not require mechanized vegetation or soil disturbance to wetlands or other water resources nor does it have the potential to affect the nearby wetland. However, leaving a portion of the existing roadbed (not to be county maintained) presents the continued opportunity that future flooding and erosive flows would erode the existing road. Future erosion of the existing road would temporarily reduce water quality and add additional sediments in adjacent wetlands and downstream water resources during flood events. Water quality would return to background conditions as floodwaters subside and possible erosion of the existing roadbed ceases during each flood event.

4.4 VEGETATION

The vegetative community in the project vicinity is a mosaic of interspersed herbaceous, shrub, and tree habitats. Shrub and tree habitats dominate the area between the existing Lewis Road and the Naches River. Herbaceous and shrub habitats dominate the site of the new Lewis Road relocation. There are approximately 45-50 trees in the project vicinity, including one small stand of ponderosa pine (*Pinus ponderosa*) situated on the north side of the proposed relocated roadbed. Trees identified in the project vicinity include ponderosa pine and black cottonwood

(*Populus balsamifera*). Shrubs included willows (*Salix* sp.), roses (*Rosa* sp.), and red-osier dogwood (*Cornus sericea*). Various unidentified grasses, soft rush (*Juncus effusus*), slender rush (*Juncus tenuis*), reed canarygrass (*Phalaris arundinacea*), klamath weed (*Hypericum perforatum*), unidentified sedges, and various common weed species were clustered throughout the herbaceous community.

4.4.1 Environmental Consequences

Alternative 1 – No Action

Under the No Action Alternative, no adverse impacts to vegetation are anticipated.

Alternative 2 – Proposed Action

The Proposed Action would have little impact on vegetation. The realignment takes advantage, to the maximum extent possible, of an existing but rarely used off-road path. Removal of commonly found herbaceous and shrub species would occur along the proposed road realignment. The realignment mostly avoids the dominant unique vegetative feature in the project area, a stand of ponderosa pines. Three to four pines may be removed depending on the final alignment. If necessary, the County may plant replacement pines. Some of the impacts from the new road alignment would be offset by removal of a portion of the existing Lewis Road. The portion of existing Lewis Road to be removed would be excavated to surrounding grade and revegetated with hydroseed. The project would not appreciably increase the presence of common weedy species beyond what is already found in the project vicinity. Yakima County would monitor the revegetated section for one season to control any invasive species that appear.

4.5 BIOLOGICAL RESOURCES

Undeveloped floodplain habitats are highly productive ecosystems that service the majority of resident and migratory fish and wildlife species. These floodplain ecosystems are particularly valuable in the arid portions of eastern Washington. They serve as fertile corridors where animals concentrate in and travel through because of the scarcity of water in the broader landscape. Floodplain ecosystems also often contain species that cannot survive in the surrounding arid landscape. Where the urban built environment intersperses with the wildland ecosystems, the value of the floodplain habitats increases exponentially because these pockets of natural habitat provide oases for fish and wildlife to pass through or survive in the wildland-urban interface. Wildlife within the project vicinity includes songbirds, birds of prey, waterfowl, deer, small mammals, reptiles/amphibians, and fish (also see Sections 4.5.1 and 4.5.2).

4.5.1 Federally Listed Species and Critical Habitat

Lists of federally endangered and threatened species and designated critical habitats with the potential to occur in Yakima County and/or the Naches River (fish) were obtained from the U.S. Fish and Wildlife Service (USFWS) and the NOAA National Marine Fisheries Service (NMFS) on December 1, 2008 and are included in Appendix B (USFWS 2008, NMFS 2008). Six animal species and one plant species are listed as endangered or threatened by the USFWS and NMFS (Table 1). Critical habitat is designated for three of the threatened species (Table 1).

Table 1. Federally endangered and threatened species potentially occurring in the project vicinity.

Species	Status	Potential to occur in project vicinity	Critical Habitat Status
Animal Species			
Steelhead - Middle Columbia River DPS (*Onchorhynchus mykiss*)	Threatened	Yes	Designated
Bull trout - Clombia River DPS (*Salvelinus confluentus*)	Threatened	Yes	Designated
Gray Wolf (*Canis lupus*)	Endangered	Yes	
Grizzly bear (*Ursus arctos horribilis*)	Threatened	Yes	
Marble murrelet (*Brachyramphus marmoratus*)	Threatened	No	
Northern spotted owl (*Strix occidentalis caurina*)	Threatened	No	Designated
Plant Species			
Ute ladies-tresses (plant; *Spiranthes diluvialis*)	Threatened	Yes	

A site investigation performed on November 25, 2008 identified that no suitable habitat is available for the marbled murrelet (*Brachyramphus marmoratus*) or the northern spotted owl (*Strix occidentalis caurina*) in the project vicinity. Steelhead (*Onchorhynchus mykiss*) and bull trout (*Salvelinus confluentus*) occupy the Naches River in the project vicinity, with the Naches River designated as critical habitat for both species. Occasional gray wolf (*Canis lupus*) and grizzly bear (*Ursus arctos horribilis*) observations occur in eastern Yakima County closer to the Cascade Mountains. The potential for these two species to occur in the project vicinity is remote because of their habit of avoiding heavily populated urban areas. The Ute's ladies-tresses orchid (*Spiranthes diluvialis*) has only been identified in Washington's Chelan and Okanagon Counties. The habitat conditions where the Ute's ladies-tresses were observed are similar to the ecological conditions in the project vicinity (WNHP 2000). Further detailed analysis of threatened and endangered species and designated critical habitats is described in the project's Biological Assessment and the Biological Assessment Addendum Letter (Appendix C).

4.5.2 Migratory Birds

The project areas provide habitat for a variety of migratory birds, including songbirds and birds of prey. The USFWS Office of Migratory Bird Management maintains a list of migratory birds (50 CFR 10.13). The Migratory Bird Treaty Act of 1918, as amended, provides federal protections for migratory birds, their active nests, eggs, and parts from harm, sale, or other injurious actions. The act contains no "take" provisions that enforce these protections.

4.5.3 Environmental Consequences

Alternative 1 – No Action

The No Action Alternative would have no adverse affects to endangered and threatened terrestrial wildlife and plant species because no new land clearing or additional urbanization would occur.

This alternative could adversely affect fish species temporarily as future flood events would erode Lewis Road. Erosive flood events would reduce water quality standards because of reduced turbidity, increased sediments, increased pollutants as the existing road erodes during flood flows. These impacts to fish species would dissipate after an erosive flood event subsides.

Alternative 2 – Proposed Action

The Proposed Action Alternative would not adversely affect listed threatened or endangered terrestrial species. No listed species are actively using the project area or have been recently sighted in the project vicinity.

This alternative could affect fish species as future flood events would erode the section of the original Lewis Road that remains in place. Erosive flood events would temporarily reduce water quality standards because of reduced turbidity, increased sediments, and increased pollutants as the existing road erodes during flood flows. These impacts to fish species would dissipate after an erosive flood event subsides, similar to the No Action Alternative.

Road construction activities would include vegetation removal and ground disturbances, which have the potential to directly and indirectly affect migratory birds. However, potentially negative impacts to migratory birds would be eliminated or greatly reduced by avoiding vegetation and land clearing activities during the most sensitive portion of the breeding season (early March through July). If seasonal restrictions are not practicable, a pre-construction survey to identify active nests should be conducted by a qualified biologist familiar with local bird species prior to any disturbing activities.

4.6 HISTORIC, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

4.6.1 Historic Resources

Examples of historic resources include canals, railroads, residences, and other buildings. An online database of the National Register of Historic Places (NRHP) and a statewide inventory of Washington Heritage Register were reviewed in December 2008 via the Washington Information System for Architectural and Archaeological Records Data system[1]. There do not appear to be any NRHP- or state-listed resources located within a one-half mile radius of the Lewis Road realignment project area.

An inventory of historic resources was recently conducted along the proposed Lewis Road realignment as a component of a broader road improvement project (Komen 2007). Though none were recorded within the Lewis Road realignment Area of Potential Effects (APE), five historic resources including three residences, a retaining wall associated with the Naches-Tieton Highway, and the Johncox Ditch, were inventoried within one mile of the Lewis Road project's APE (Komen 2007). None of these resources were recommended as eligible for the National Register of Historic Places, and no additional work was recommended. The Washington

[1] http://www.dahp.wa.gov/pages/wisaardIntro.htm

Department of Archaeology and Historic Preservation (DAHP) concurred with these findings in a letter dated November 14, 2007.

4.6.2 Archaeological and Cultural Resources

Section 106 of the National Historic Preservation Act (NHPA) holds that activities occurring on federal lands, or those that require federal permits or use federal funds, undergo a review process to protect cultural resources that are or may be eligible for listing on the NRHP.

The entire proposed project area has been subjected to previous inventory efforts that meet current archaeological site identification and reporting standards. An intensive cultural resources inventory of the Lewis Road realignment APE was recently completed as part of a Yakima County road improvement project (Komen 2007). Tribal consultation was initiated during the cultural resources inventory. This investigation included a review of existing site records and prior inventory work that is maintained at the DAHP; a review of historical maps and land records and other background information; a pedestrian survey and exploratory subsurface shovel testing; and inventory of historic resources and archaeological resources.

The 2007 investigation addressed the Lewis Road proposed alignment as a component of a broader road improvement project. Based on a literature review and review of files at DAHP, no previously-recorded resources were located within the project's APE. The proposed Lewis Road realignment was found to run through the former Boise Cascade Lumber Mill location; two foundations related to the Boise Cascade Lumber Mill were observed but were determined to be less than 50 years old and were therefore not recorded (Komen 2007:8). Ground surface visibility was excellent at the time of survey, and therefore no shovel testing was conducted along the Lewis Road alignment (Komen 2007:4,8). No archaeological resources or Traditional Cultural Properties were identified along the Lewis Road realignment as a result of this investigation, and no additional cultural resources work was recommended (Komen 2007:10). DAHP concurred with these findings in a letter dated November 14, 2007.

4.6.3 Environmental Consequences

Alternative 1 – No Action

Because no federal activity would occur under the No Action Alternative, no requirement for compliance with Section 106 of the NHPA exists. Archaeological sites and historic resources would continue to be at the same risk level for potential flood damages.

Alternative 2 – Proposed Action

The Proposed Action has the potential to adversely affect archaeological deposits during construction, both by disturbing the spatial integrity of a site and by damaging individual artifacts. The results of a cultural resources surface survey (Komen 2007) suggest that the proposed Lewis Road realignment was previously disturbed by construction and operation of a former Boise Cascade Lumber Mill. No significant (NRHP-eligible) cultural resources were found to be located within the project area. Therefore, the Proposed Action would not affect any known resources. However, given the proximity to the Naches River, and the inability of a pedestrian survey to identify potential, buried cultural resources, it is possible that as-yet

unidentified resources could be disturbed by the Proposed Action. In the event of an unanticipated discovery during construction, in compliance with various state and Federal laws protecting cultural resources, including Section 106 of the NHPA, all construction work shall cease in the immediate vicinity of the find until appropriate parties (including the SHPO) are consulted and an appropriate plan is established.

4.7 SOCIOECONOMIC AND ENVIRONMENTAL JUSTICE (EO 12898)

Executive Order (EO) 12898, Environmental Justice, directs federal agencies to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects on minority and low-income populations in the US resulting from federal programs, policies, and activities. Socioeconomic and demographic data for residents in the project vicinity was studied to determine if a disproportionate number (defined as greater than 50 percent) of minority or low-income persons have the potential to be affected by the alternatives.

Alternative 1 – No Action

Because no federal activity would occur under the No Action Alternative, no requirement for compliance with EO 12898 exists. A greater potential for flooding and economic loss would continue to exist.

Alternative 2 – Proposed Action

U.S. Census Bureau data for Yakima County was used to identify the minority[1] and low-income[2] compositions of the study area, which is located in Block Group 2 (within Census Tract 29). Census 2000 data at the county level and census block group level was reviewed. In Yakima County and Block Group 2, the minority population ranges from 34 percent to 17 percent respectively. The poverty level for Yakima County was 20 percent, while the poverty level in Block Group 2 was four percent. As the project vicinity has a lower percentage of minorities and residents below poverty level, the Proposed Action would not cause adverse economic impacts and would comply with EO 12898.

[1] A minority person is "a person who is: (1) Black (a person having origins in any of the black racial groups of Africa); (2) Hispanic (a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race); (3) Asian American (a person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands); or (4) American Indian and Alaskan Native (a person having origins in any of the original people of North America and who maintains cultural identification through tribal affiliation or community recognition)."

[2] Low-income is identified as "one whose median household income is at or below the Department of Health and Human Services poverty guidelines." Income data based on Department of Health and Human Services (HHS) guidelines are difficult to gather, so Census Bureau data are often used for environmental justice analyses.

The Council on Environmental Quality regulations for implementing NEPA requires an assessment of cumulative effects during the decision-making process for federal projects. Cumulative effects are defined as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions" (40 CFR 1508.7). Cumulative effects are considered for both the No Action and Proposed Action alternatives. Cumulative effects were determined by combining the effects of the alternative with other past, present, and reasonably foreseeable future actions.

While the proposed roadway location would remain within the floodplain, no significant cumulative impacts would occur from the Proposed Action Alternative. While some terrestrial habitat would be eliminated, due to the limited scope of the work and the proposed mitigation no loss of any sensitive species is expected that would contribute a measurable amount to the cumulative effects. The road relocation would not result in increased capacity, nor are there any plans for future land use development in the area. Other nearby road projects in Yakima County include several safety improvements to the South Naches and Naches-Tieton Roads, including widening roads and improving roadway alignment.

FEMA is the lead federal agency for conducting the NEPA compliance process for the relocation project. As the lead agency, FEMA expedites the preparation and review of NEPA documents, responds to the inquiries of residents surrounding the project area, meets the spirit and intent of NEPA, and complies with all NEPA provisions.

A public notice is required for this draft EA. The public will have the opportunity to comment on the EA for 30 days after the publication of the public notice. The notice identifies the action, location of the proposed site, participants, location of the draft EA, and who to write to provide comments. FEMA will review all written comments submitted for identification of any significant issues that need to be addressed and will incorporate them into the final EA, as appropriate.

Public involvement is ongoing and had begun before the initiation of this EA. The public has been notified in the past of the intent to carry out this action in public meetings during the preparation of the Naches River Comprehensive Flood Hazard Management Plan, the public open houses for the plan, and the meetings with the Town of Naches prior to adoption of the CFHMP by Naches. Two public meetings were held in May 2007 with direct mailings sent to the residents prior to the meetings. This project is a component of a larger project on South Naches Road. Several meetings were held in the vicinity to discuss the potential project alignment, with the most recent meeting in January 2006 where the final project alignment was presented to the public.

The following two plans are relevant to public involvement efforts supporting this EA.

Naches River Comprehensive Flood Hazard Management Plan

Public and agency involvement for the Naches River CFHMP was achieved by forming an advisory committee whose members—representatives of public and private organizations and agency representatives—assisted in establishing plan goals and objectives, identifying flood problems, and evaluating alternative solutions to flood problems. Additional agency representatives were contacted as needed throughout the plan preparation, and contact was maintained with Ecology to ensure compliance with Flood Control Assistance Account Program (FCAAP) requirements. Consensus by the group on the plan's recommendations ensures successful implementation of the Naches River CFHMP (Tetra Tech 2005).

Upper Yakima River Comprehensive Flood Hazard Management Plan

Public and agency involvement for the Upper Yakima River CFHMP was achieved by forming an Advisory Committee of 22 members who provided input through meetings and document review. The members represented the public, private organizations and agencies. Additional agency representatives were contacted as needed throughout the plan preparation, and contact with Ecology was maintained to ensure compliance with FCAAP requirements (KCM 2007).

Yakima County is required to obtain and comply with all required local, state, and federal permits and approvals prior to implementing the Proposed Action Alternative. Yakima County is required to apply, obtain and comply with both a floodplain permit and a no-rise certification prior to any construction activities. Development at the Proposed Action Alternative site shall comply with the approved site plan. Any expansion or alteration of this use beyond that initially approved would require a new or amended permit. Construction should occur during non-flood seasons, but in the event of construction with a flood season all construction equipment would need to be staged in an area not susceptible to flood events.

In the event that historically or archaeologically significant materials or sites (or evidence thereof) are discovered during the implementation of the project, the project shall be halted immediately and all reasonable measures taken to avoid or minimize harm to property. The County would then be required to consult with FEMA and the SHPO for further guidance.

The draft EA evaluated potentially significant resources that could be affected. The evaluation resulted in identification of no significant impacts associated with the resources of climate, geology and soils; floodplains; wetlands and water resources; vegetation; biological resources (endangered species act); historic, archaeological, and cultural resources; and socioeconomic and environmental justice. Obtaining and implementing permit requirements along with appropriate Best Management Practices will avoid or minimize any effects associated with the action. Should no significant impacts be identified during the public comment period, it is recommended that a finding of no significant environmental impact to the human or natural environment be issued for the Proposed Action Alternative.

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Tetra Tech, and KCM, Inc. 2005. Naches River Comprehensive Flood Hazard Management Plan Update, Yakima County. February.

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APPENDIX A Figures

Figure 1 – Vicinity Map

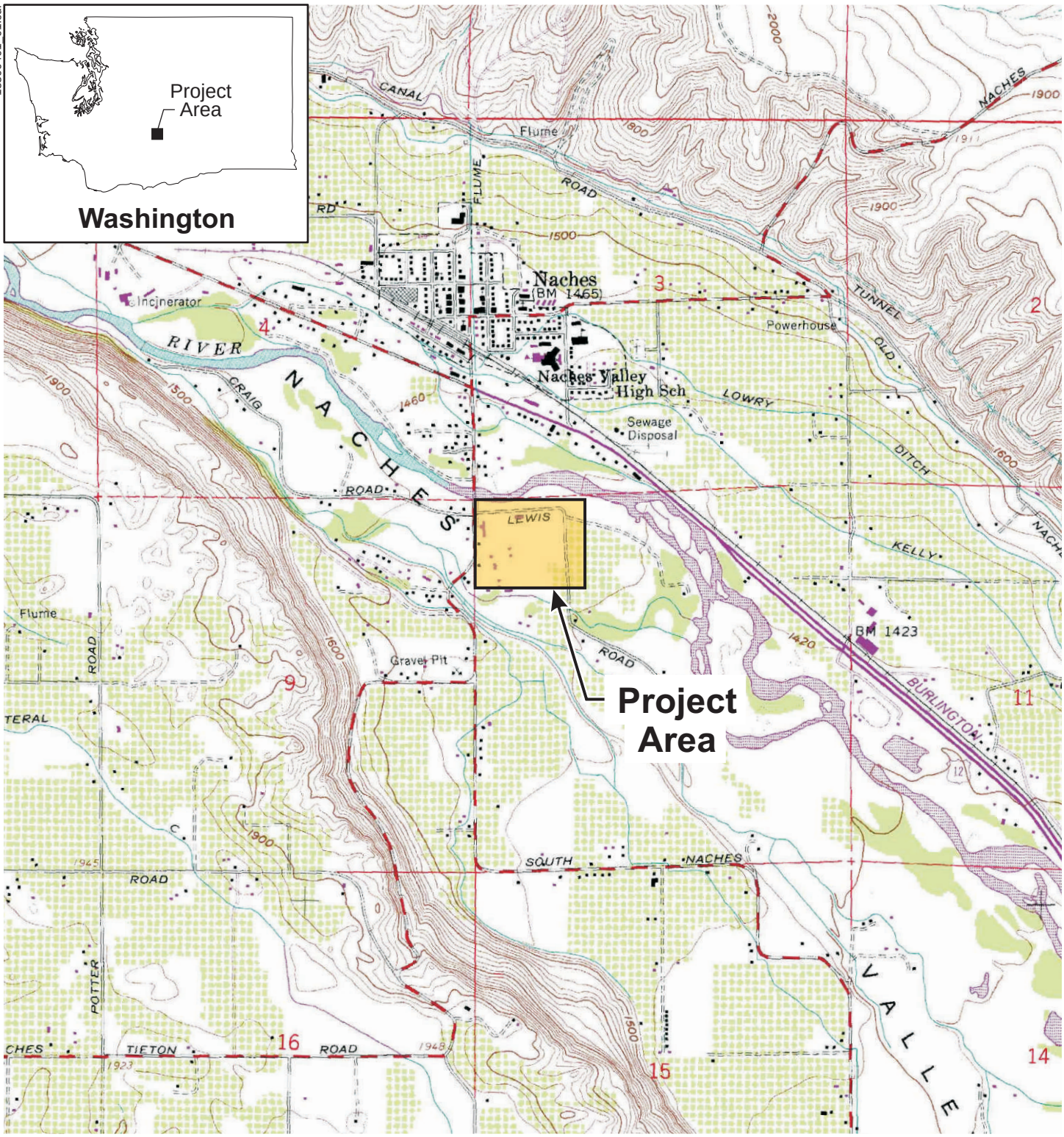
Figure 2 – Proposed Project

Figure 3 – National Wetland Inventory

Figure 4 – 5-Year Flood Event

Figure 5 – 10-Year Flood Event

Figure 6 – 25-Year Flood Event



Source: USGS 7.5-minute topographic quadrangle, Naches, Washington, 1978

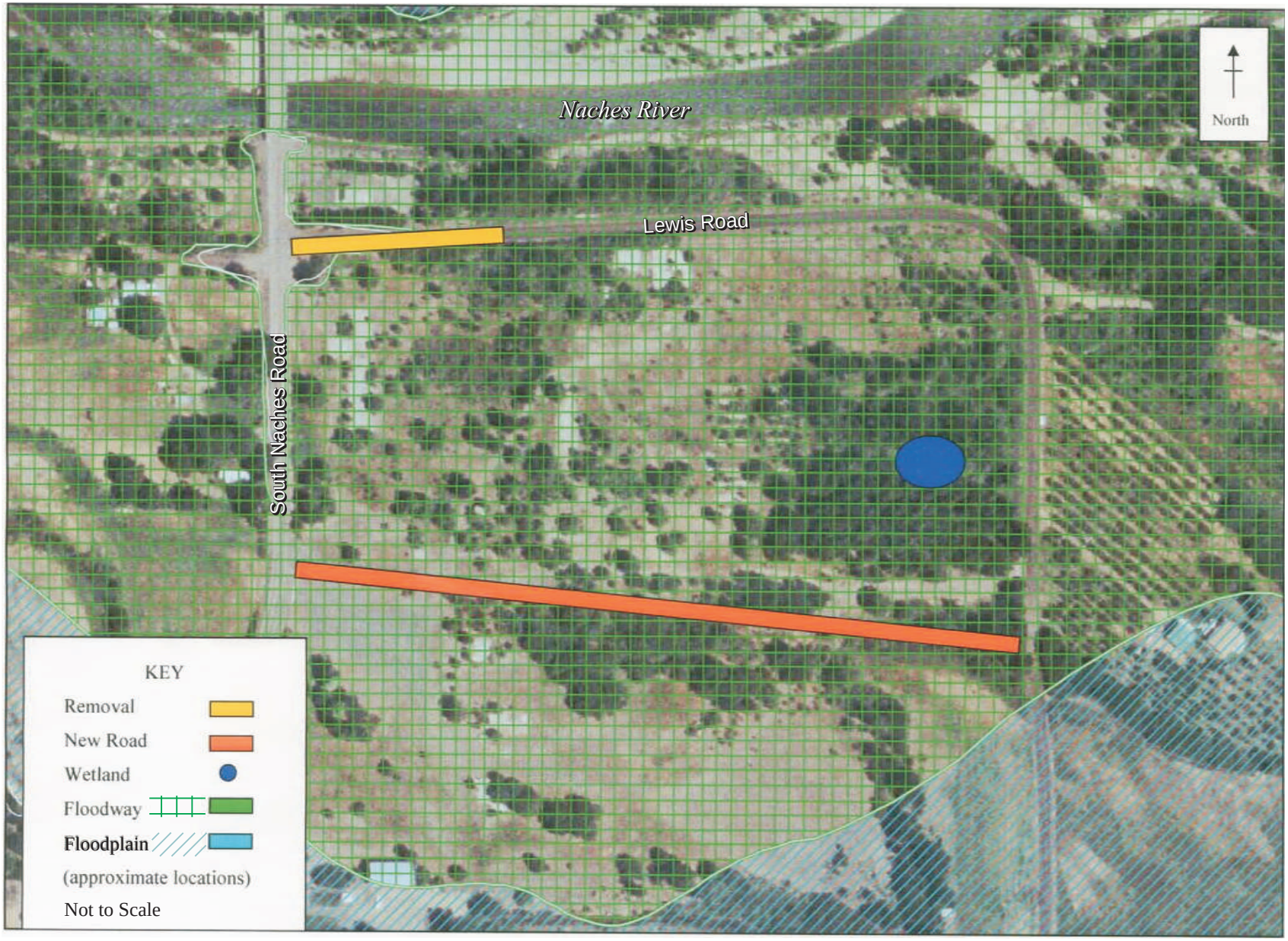
Job No. 15300401

Figure 1
Site Location Map

URS

Lewis Road Relocation Project
Yakima County, Washington

15300401_02.cdr



Source: Yakima County

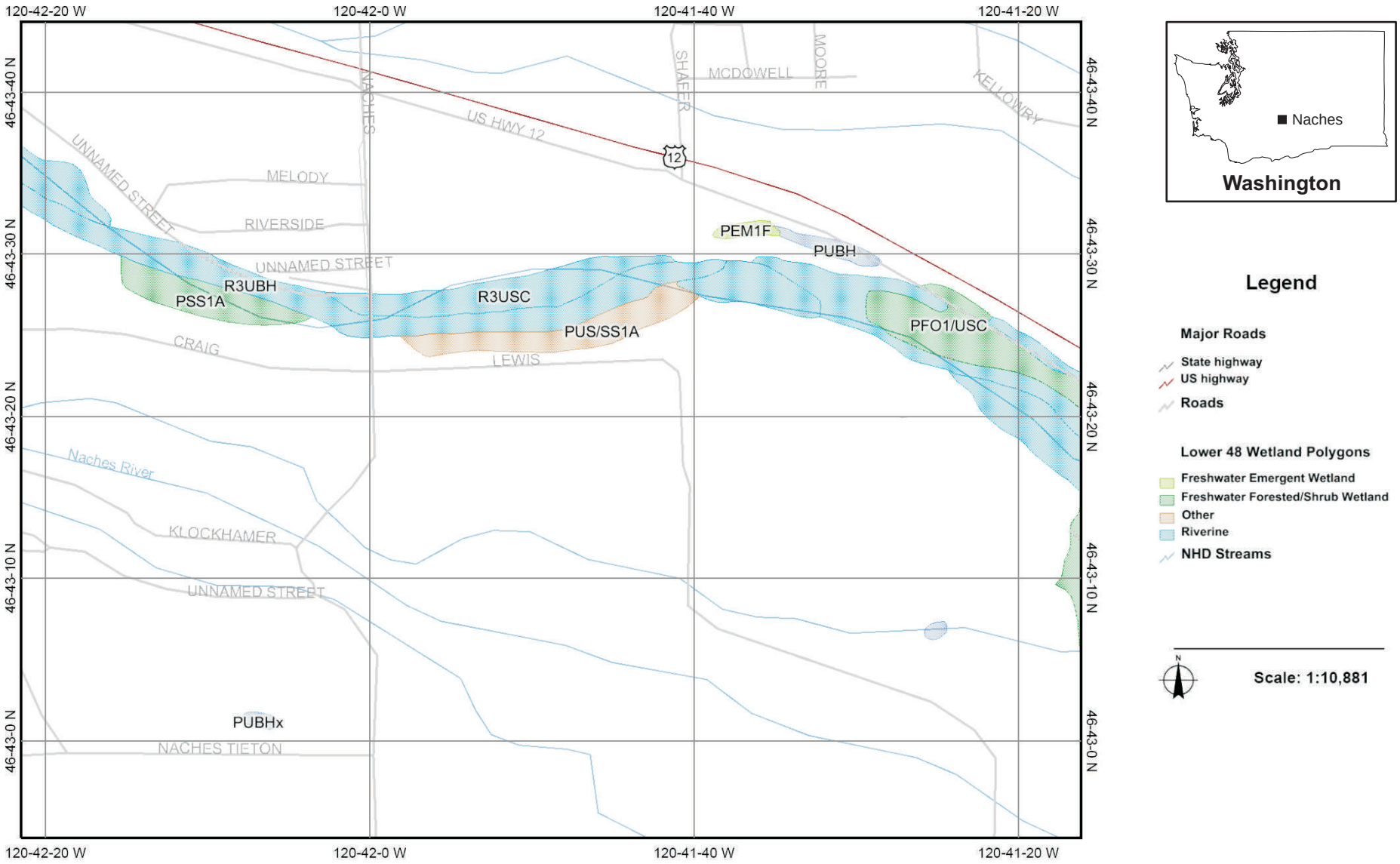
Figure 2
Proposed Project

Job No. 15300401

URS

Lewis Road Relocation Project
Yakima County, Washington

15300401_03.cdr



Source: US Fish & Wildlife Service National Wetlands Online Mapper

Figure 3

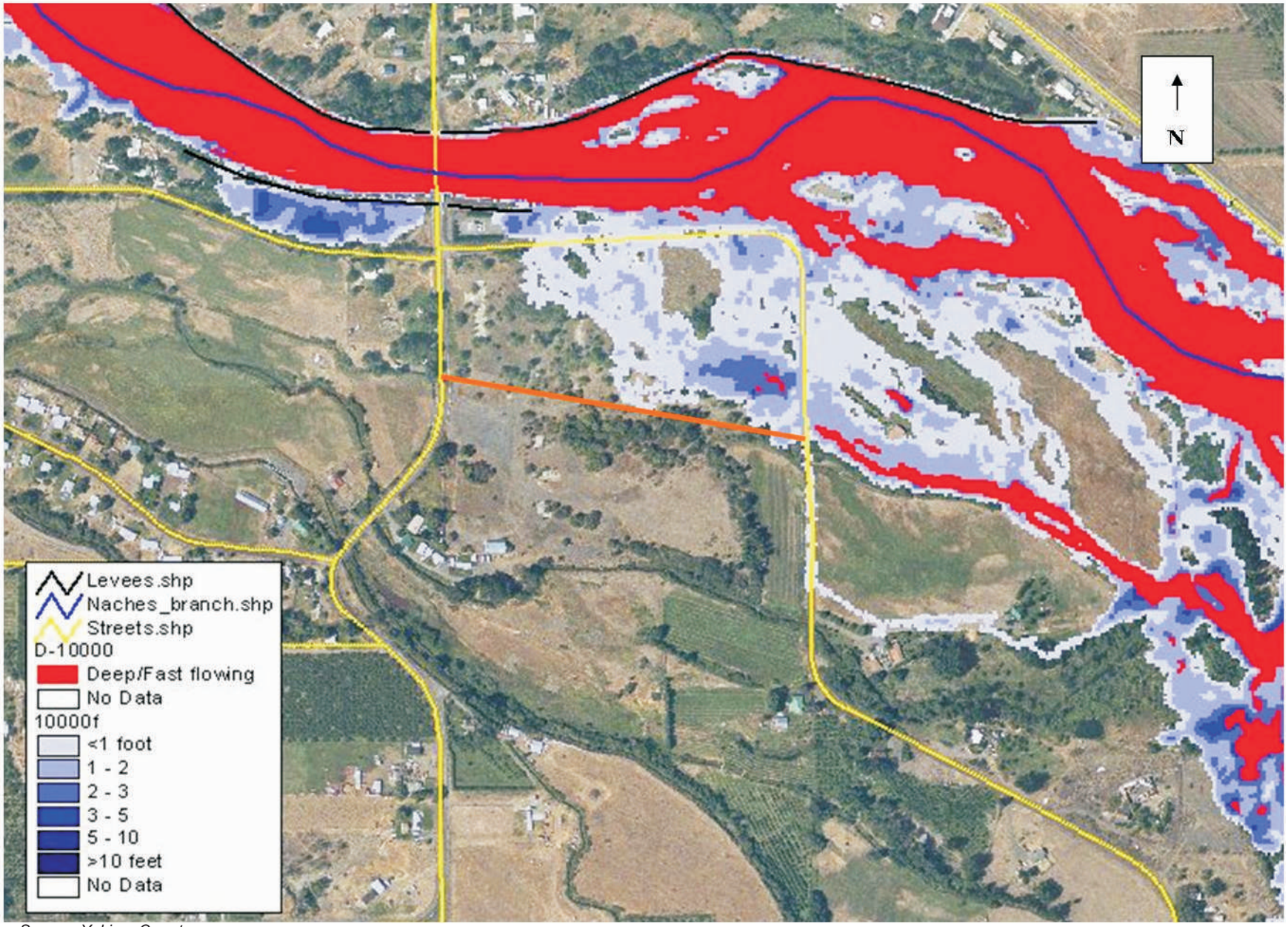
National Wetland Inventory

Job No. 15300401

URS

Lewis Road Relocation Project
Yakima County, Washington

15300401_04.cdr



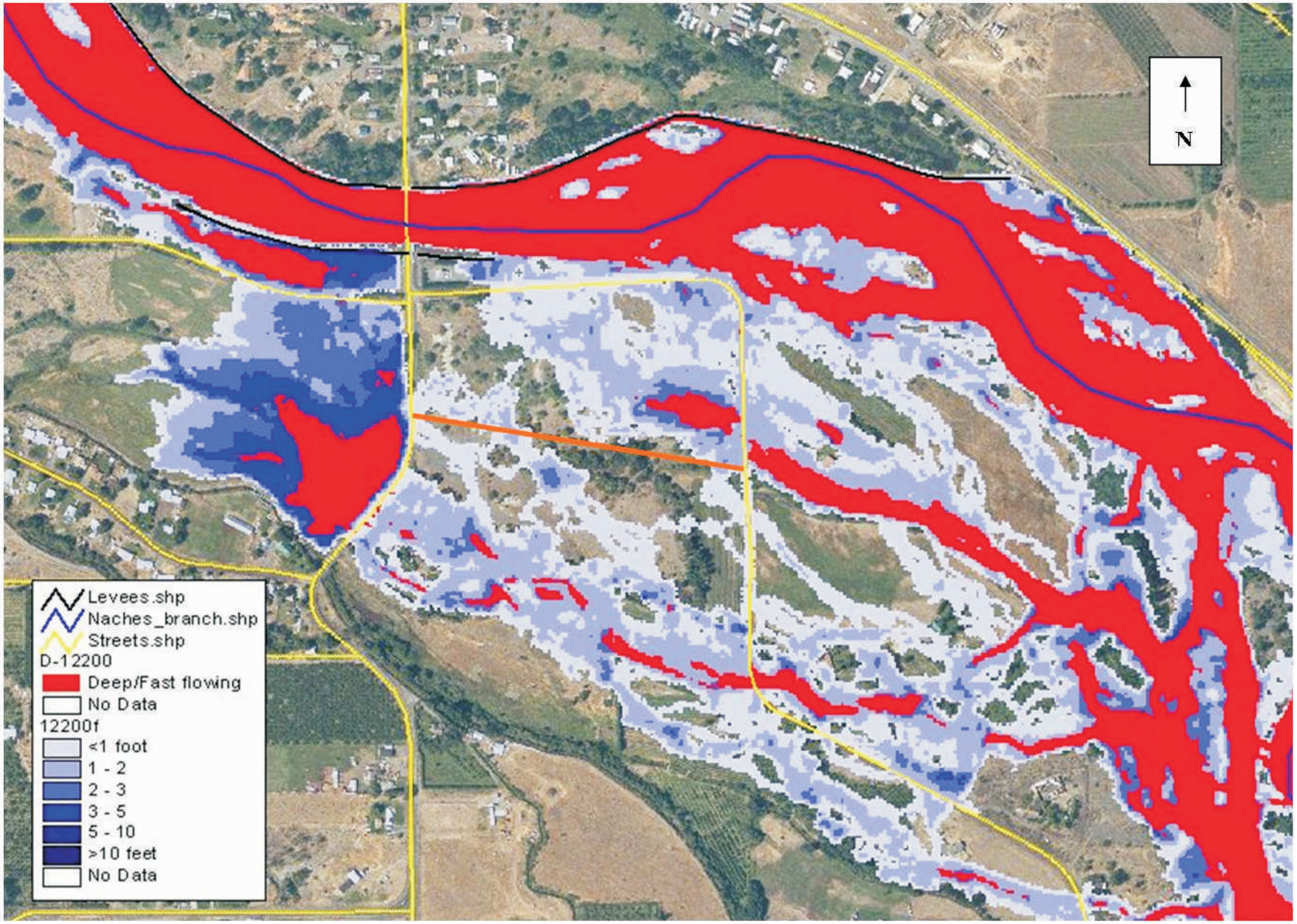
Source: Yakima County

Job No. 15300401

Figure 4
5-Year Flood Event

URS

Lewis Road Relocation Project
Yakima County, Washington



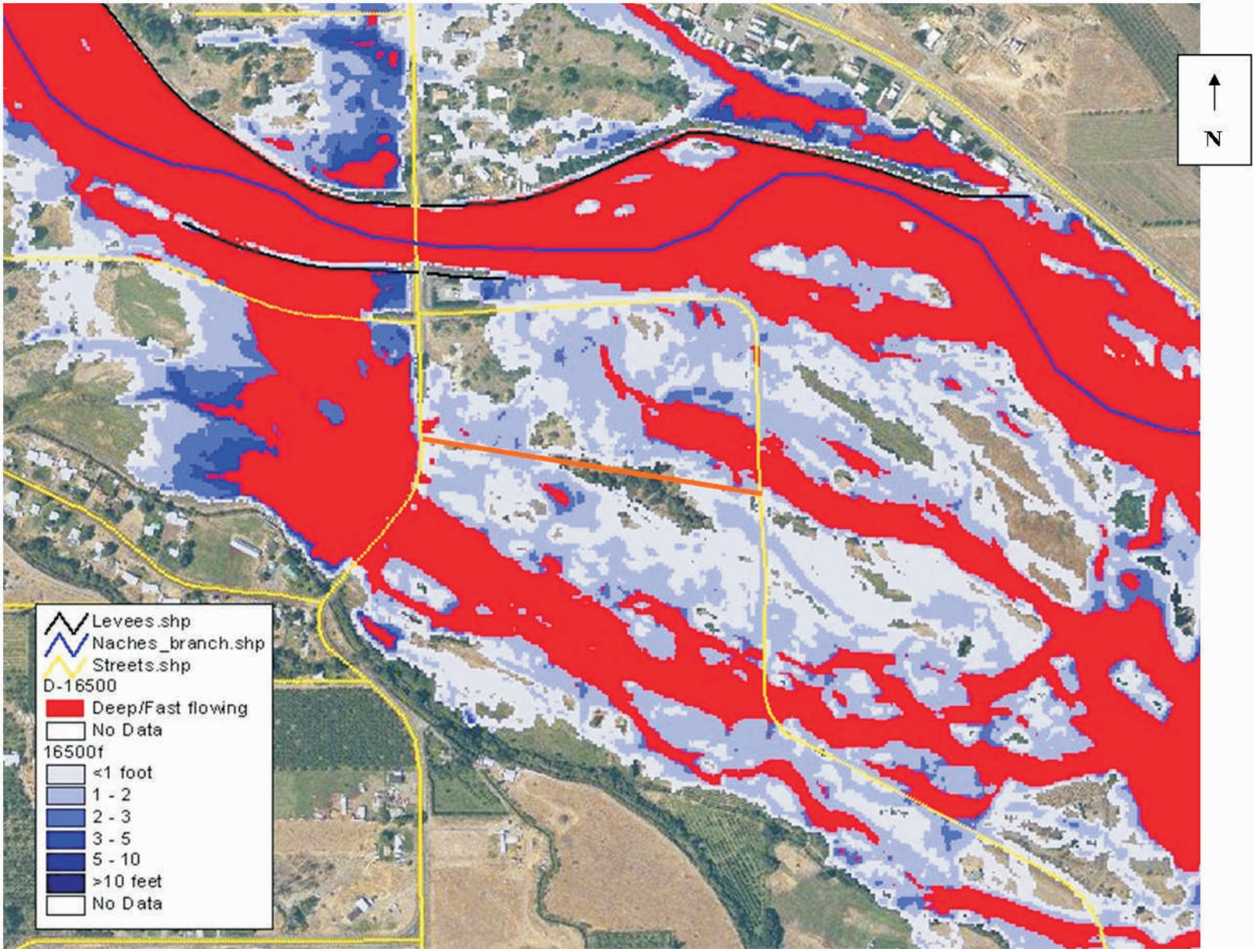
Source: Yakima County

Job No. 15300401

Figure 5
10-Year Flood Event

URS

Lewis Road Relocation Project
Yakima County, Washington



Source: Yakima County

Figure 6
25-Year Flood Event

Job No. 15300401

URS

Lewis Road Relocation Project
Yakima County, Washington

YAKIMA COUNTY
Updated 7/24/2008

LISTED

Endangered

Gray wolf *(Canis lupus)*

Threatened

Bull trout *(Salvelinus confluentus)* – Columbia River distinct population segment
Grizzly bear *(Ursus arctos horribilis)*
Marbled murrelet *(Brachyramphus marmoratus)*
Northern spotted owl *(Strix occidentalis caurina)*
Spiranthes diluvialis (Ute ladies'-tresses), plant

Designated

Critical habitat for the northern spotted owl
Critical habitat for the Columbia River distinct population segment of the bull trout

CANDIDATE

Fisher *(Martes pennanti)* - West Coast distinct population segment
Greater sage grouse *(Centrocercus urophasianus)* – Columbia Basin distinct population segment
Mardon skipper (*Polites mardon*), butterfly
Yellow-billed cuckoo (*Coccyzus americanus*)

SPECIES OF CONCERN

Animals

Bald eagle *(Haliaeetus leucocephalus)* (delisted, monitor status)
Black swift (*Cypseloides niger*)
Burrowing owl *(Athene cunicularia)*
Ferruginous hawk *(Buteo regalis)*
Larch Mountain salamander *(Plethodon larselli)*
Loggerhead shrike *(Lanius ludovicianus)*
Long-eared myotis (*Myotis evotis*)
Northern goshawk *(Accipiter gentilis)*
Olive-sided flycatcher *(Contopus cooperi)*
Pacific lamprey *(Lampetra tridentata)*
Pallid Townsend's big-eared bat *(Corynorhinus townsendii pallescens)*
Peregrine falcon (*Falco peregrinus*) (Delisted, monitor status)
Redband trout (*Oncorhynchus mykiss*)

River lamprey *(Lampetra ayresi)*
Sagebrush lizard *(Sceloporus graciosus)*
Sharptail snake (*Contia tenius*)
Townsend's ground squirrel (*Spermophilis townsendii*)
Western brook lamprey (*Lampetra richardsoni*)
Western gray squirrel *(Sciurus griseus griseus)*
Westslope cutthroat trout *(Oncorhynchus clarki lewisi)*
Wolverine *(Gulo gulo)*

Vascular Plants

Astragalus columbianus (Columbia milk-vetch)
Calochortus longebarbatus var. *longebarbatus* (Long-bearded sego lily)
Castilleja cryptantha (Obscure indian-paintbrush)
Cryptantha leucophaea (Gray cryptantha)
Cypripedium fasciculatum (Clustered lady's-slipper)
Erigeron basalticus (Basalt daisy)
Lomatium tuberosum (Hoover's desert-parsley)
Pinus albicaulis (Whitebark pine)
Sisyrinchium sarmentosum (Pale blue-eyed grass)
Tauschia hooveri (Hoover's tauschia)

Mark Eberlein
FEMA- Region X
130 228th Street SW
Bothell, WA 98021-9796

December 16, 2008

U.S. Fish and Wildlife Service
Attn: Robert Newman
Upper Columbia Fish and Wildlife Office
11103 East Montgomery Drive
Spokane, Washington 99206

And

National Marine Fisheries Service
Attn: Steve Landino, State Director
510 Desmond Drive SE, Suite 103
Lacey, Washington 98503

Re: South Naches River Road Re-Alignment Project, Yakima County, WA.
USFWS Reference: 1-9-04-I-177 (File #807.4000).
NMFS Tracking No.: 2004/00332

Dear Mr. Newman and Mr. Landino:

In March of 2004, the Washington State Department of Transportation (WSDOT) submitted a Biological Assessment (BA) for informal consultation to the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) (collectively "the Services") for the South Naches River Road Re-Alignment Project in Yakima County, Washington (WSDOT Project #LA05467). Concurrence letters from the USFWS (dated April 8, 2004) and from the NMFS (dated July 7, 2004) were received by WSDOT. Since this time, the project has not been built and several changes to the project have occurred including a change in the action agency, a project design change, the designation of critical habitat for bull trout, and the delisting of the bald eagle. The effects analysis determinations however, have not changed.

On May 31, 2007 the Federal Emergency Management Agency (FEMA) received an application from Yakima County requesting funding through the Hazard Mitigation Grant Program to re-align a portion of Lewis Road. Attached to this application were the aforementioned Services consultation letters to WSDOT and the original BA prepared by WSDOT. FEMA requests that the USFWS and NMFS review the changes detailed

below and recommend an appropriate course of action for FEMA's compliance under the Endangered Species Act (ESA) and Magnuson-Stevens Act (MSA).

Action Agency

The regulations (50 CFR 402.08) implementing Section 7 of the ESA of 1973, as amended, allow a Federal agency to designate a non-Federal representative to conduct informal consultations or prepare BAs by giving written notice to the Director for such designation. On May 10, 1999, Gene Fong, Division Administrator of the Federal Highways Administrations (FHWA) provided the Services with written notice so designating WSDOT as the FHWA non-Federal representative.

The original BA prepared by WSDOT for FHWA for the South Naches Road Alignment Project included the re-alignment of a portion of Lewis Road. The project has not been built. Under the Hazard Mitigation Grant Program, FEMA has been requested to provide funding to re-align the portion of Lewis Road which was part of the original, larger WSDOT project. FEMA would not fund the entire project discussed in the original BA, but only the Lewis Road re-alignment. Therefore, FHWA would remain responsible for the remainder of the project as described in the aforementioned BA and FEMA would require ESA and MSA compliance for the Lewis Road re-alignment only.

Project Description Changes

The original project is described in paragraph one of the Executive Summary in the 2004 BA which states:

> *Yakima County, in cooperation with the FHWA, plans to realign the existing roadway beginning at the junction of US 12 in the City of Naches and proceeding south on the South Naches Road. The project will include the addition of sidewalks along the first 1370 feet of road beginning at the junction of US 12 and S. Naches Road. A new roadway is proposed just beyond the existing Naches River Bridge and will continue southwest to connect with the Naches-Tieton Road approximately 2100 feet. Included with the improvement of South Naches Road, Lewis Road will be re-located out of the Naches River floodway.*

As previously stated, FEMA is considering funding the Lewis Road re-alignment only and the remainder of the project actions would remain the responsibility of the FHWA.

Design changes were identified after comparing the description of the Lewis Road re-alignment between the 2004 BA and the 2007 Hazard Mitigation Application. The changes are as follows:

1) ***Floodway vs. Floodplain***. On page 2 of the original BA, the design included relocating Lewis Road 600 feet to the south, away from the Naches River and into the area that is not considered the floodway of the Naches River. Under recently changed floodway delineations (FEMA Firm Preliminary Map) , the

proposed new location is no longer outside the floodway, but under the new guidelines it would remain within the floodway, but be located 600 feet further away from the river than at present.

2) ***Road Removal.*** The original design included removing the entire existing roadway and fill. The new design would remove a portion of Lewis Road (approximately 1700 feet) and the remaining roadway would not be maintained. The portion to be removed would be where Lewis Road approaches South Naches Road (see Appendix A, Figure 2).

3) ***Stormwater treatment.*** On page 2 of the original BA, it states that "*stormwater treatment for the new impervious surface will be through infiltration along side slopes adjacent to the roadway and through the use of bio-swales."* However, on page 31 it states "*A stormwater site plan has not yet been developed but based on weather patterns and annual precipitation with the project action area, it is likely that infiltration, using vegetation on embankment slopes, in an appropriate method."* The 2007 application states that the relocation of the 1700 feet of Lewis Road "*will utilize a design to mitigate stormwater runoff that was not in effect when the current road was designed.*" The stormwater treatment for the new road will be through infiltration along side slopes adjacent to the roadway.

4) ***In-water work window.*** Although there is no in-water work proposed for the Lewis Road relocation, the 2004 BA did have some in-water work near the South Naches channel. This work would remain as part of the FHWA project, but not as part of the FEMA segment. The 2004 BA proposed an in-water work window of June 1 to October 31. USFWS (Krupka 2008) commented that bull trout are most likely present in the Naches River between mid-September and mid-July. As discussed later under the species information, sub-adult and adult bull trout are present year-round in the Naches River, but an in-water work window of mid-July through mid-September may be more appropriate to coincide with the time of reduced numbers of bull trout in the project area (as the spawning adults would be in the headwaters and out of the project area). Construction activities would likely occur during the spring and summer, but at this time it does not appear necessary to impose an in-water work window for the FEMA segment. To minimize and reduce potential sedimentation impacts to Naches River and to support the "may affect, not likely to adversely affect" determinations, it would be prudent for construction methods to use Best Management Practices for minimizing dust, debris, and construction related pollutants to ensure to the extent practicable that no pollutants enter the Naches River and sedimentation is minimized.

5) ***Culverts, Stream Crossings, roadside ditches.*** There are no culverts, stream crossings, or roadside ditches along the segment of Lewis Road that is proposed to be removed. The road prism is slightly elevated above general ground surface grade, but no obvious channels conveying stormwater were noted during a site visit on November 25, 2008 by a URS biologist.

Environmental Baseline

The existing Lewis Road is compact gravel and dirt and the new road would be paved.

The environmental baseline only describes the riparian area and channel of the South Naches River Channel (a historic side channel currently functioning as an irrigation canal), rather than the main channel of the Naches River which is the river channel potentially impacted by the Lewis Road project's actions.

The BA does not contain matrices of pathways and indicators for the mid-Columbia River steelhead DPS (NMFS Matrix) and bull trout (USFWS Matrix). It does, however, have a description of NMFS indicators for the South Naches River Channel in the text. In many cases the text does not indicate the status of the NMFS indicators or how the project will affect the indicators. The BA does not address the subpopulation size, growth and survival, life history diversity and isolation, and integration of species and habitat conditions indicators for bull trout.

The only time the environmental baseline text addresses the main channel of the Naches River and its riparian area is for the Large Woody Debris, Pool Frequency and Quality, and off-channel habitat indicators. For those indicators, the text states that the re-alignment of the Lewis Road and potential subsequent levee setback would re-connect the Naches River with a portion of its floodplain, providing a beneficial effect. This is incorrect for two reasons. First, page 2 of the BA states that a levee setback is not directly associated with the project, but that Yakima County has funds for a possible levee setback. Secondly, a levee between Lewis Road and the Naches River was not found to exist during a November 25, 2008 site visit by a URS biologist.

Finally, recent changes of FEMA mapping of the Naches River Floodway have extended the extent of the floodway to encompass the proposed new alignment of the Lewis Road (see Appendix A, Figure 2).

Species Evaluation

The status or critical habitat designations have changed from those listed in the South Naches Road Re-alignment BA for the following species. In the case of chum salmon and bull trout, errors in the BA are also addressed.

Bald Eagle (*Haliaeetus leucocephalus*):

The bald eagle has been de-listed under the ESA by the U.S. Fish and Wildlife Service and is no longer a species considered in a Biological Assessment.

Bull Trout (*Salvelinus confluentus*):

The BA makes the statement that surveys in 2001 found only two bull trout in the Naches basin. This is incorrect and the survey referenced was a Forest Service survey of a

limited area of the Naches basin. The Naches River fluvial bull trout stock spawns primarily in the American River, Rattlesnake Creek, and Crow Creek, with limited spawning occurring in other headwater tributaries of the Naches River (USFWS 2001). Spawning surveys of the three major spawning tributaries (1999-2007) indicate approximately 88 redds per year (USFWS 2001, Anderson 2008). Adult and sub-adult bull trout occur year-round throughout the Naches River mainstem, including the reach of the Naches River in the vicinity of the project (Anderson 2008). Mature bull trout do not spawn every year (but more like every other year), and therefore non-spawning but adult bull trout are present in the project area all year. The only change during the spawning season, is that a portion of the mature bull trout leave the project area to spawn in the headwaters in late summer and early fall. The 2004 BA appears to primarily concern itself with the likelihood of bull trout occurring in the South Naches River Channel.

Bull Trout critical habitat:

The BA references critical habitat for bull trout proposed for designation on November 29, 2002 (67 FR 71236-71438). The proposed critical habitat included the entire Naches River basin below naturally occurring impassable barriers, with a lateral extent defined as the bankfull width of the stream channel.

A final rule designating bull trout critical habitat was published on September 26, 2005, after the BA was written (70 FR 56212-56311). The final rule excluded portions of the Naches River basin from critical habitat designation, but the mainstem of the Naches River in the project vicinity remained designated as critical habitat for bull trout with the same lateral extent as defined in the proposed critical habitat designation.

Canada Lynx (*Lynx canadensis*) critical habitat:

Critical habitat for Canada Lynx was proposed on November 9, 2005, after the BA was written (70 FR 68294). Designated critical habitat for Canada lynx was finalized on September 9, 2006 (71 FR 66008-66059). The closest existing designated critical habitat for Canada lynx to the project action area is in Chelan County, with no critical habitat in the vicinity of the project area.

Marbled murrelet (*Brachyramphus marmoratus*):

The BA does not mention that critical habitat has been designated on May 24, 1996 for the marbled murrelet (61 FR 26256-26320). Critical habitat for marbled murrelet is not designated east of the Cascade Mountain crest, so it is not an issue for this BA.

Northern spotted owl (*Strix occidentalis*):

Critical habitat for northern spotted owl was revised on August 13, 2008 (73 FR 47326-47374). Designated critical habitat for northern spotted owl remains essentially the same as what was present in the original final rule, with the nearest critical habitat to the project area approximately fifteen miles west of the project.

Mid-Columbia River Steelhead (*Oncorhynchus mykiss*):

Although steelhead primarily spawn in tributaries (higher up in the watershed), there is no barrier to preclude them from spawning in the project area. The only studies of spawning steelhead in the Naches basin have been redd counts, which are highly questionable because steelhead primarily spawn in the spring (March-June) when the streams are high and turbid (particularly likely to be true in project area). As a result, steelhead redds have only been observed during years of reduced spring flows and usually only in tributaries (generally warmer tributaries).

Mid-Columbia River Steelhead DPS critical habitat:

Critical habitat for mid-Columbia River steelhead is mentioned in the main body of the text, but not in the summary table present in the executive summary. At the time that the BA was written, critical habitat was defined as including all portions of the riparian habitat that contribute to the functioning of the in-stream habitat. This would have included the entire project action area of the Lewis Road project. Critical habitat for the mid-Columbia River steelhead DPS was revised on September 2, 2005 (70 FR 52630). The Naches River channel in the vicinity of the project remains designated as critical habitat for middle Columbia River steelhead but the lateral extent of critical habitat is now defined as the bankfull width of the stream channel.

Chum salmon (*Oncorhynchus keta*) EFH:

Chum salmon habitat is incorrectly listed as Essential Fish Habitat under the Magnuson-Stevens Fishery Conservation and Management Act. EFH has not been designated for chum salmon in the Columbia River watershed. In addition, although historically present in the Naches River basin, chum salmon have been extirpated from the basin and the remaining chum salmon population in the Columbia River watershed is considered a single ESU (lower Columbia River chum salmon) that has been federally listed as threatened and is essentially restricted to the Columbia River watershed downstream from Bonneville Dam (with a few hundred fish passing over Bonneville Dam annually and none documented to occur in the Naches River watershed).

Effects Analysis

A final rule designating bull trout critical habitat was published on September 26, 2005, after the BA was written (70 FR 56212-56311). Therefore a supplemental effects analysis is provided below.

In the critical habitat final rule for bull trout, the USFWS defined the eight (8) primary constituent elements (PCEs) to be essential for the conservation of bull trout. All lands identified as essential and proposed as critical habitat contains one or more of the PCEs.

The eight PCEs are identified in bold italics, followed by the effects analysis to that PCE.

1. ***Water temperatures that support bull trout use. Bull trout have been documented in streams with temperatures from 32 to 72° F (0- to 22 °C), but are found more frequently in temperatures ranging from 36 to 59°F (2 to 15°C)*:** The project would have no effect on water temperatures that support bull trout use.

2. ***Complex stream channels with features such as woody debris, side channels, pools, and undercut banks to provide a variety of depths, velocities, and instream structures*:** The existing conditions of the road does contribute fine sediment to the river during high flood events. There is minimal riparian vegetation in this area and the proposed project would include vegetation plantings that may improve the riparian area. Relocating the road will marginally improve floodplain function by allowing the river to flood naturally on this side of the river as it is confined on the opposite bank by a levee. However, benefits are somewhat reduced because the entire road is no longer being removed. Therefore, flood events will continue to scour and erode portions of the road that are not removed.

3. ***Substrates of sufficient amount, size, and composition to ensure success of egg and embryo overwinter survival, fry emergence, and young-of-the-year and juvenile survival*:** There is no spawning in this reach of the river.

4. ***A natural hydrograph, including peak, high, low, and base flows within historic ranges*:** The project will have no effect on peak or base flows.

5. ***Springs, seeps, groundwater sources, and subsurface water to contribute to water quality and quantity as a cold water source*:** The project activities would have no impact on this PCE.

6. ***Migratory corridors with minimal physical, biological, or water quality impediments between spawning, rearing, overwintering, and foraging habitats, including intermittent or seasonal barriers induced by high water temperatures or low flows*:** The project will have limited benefit in reducing sedimentation impacts to the river because only a portion of the road is proposed to be removed. The existing road is compact dirt and gravel and is overtopped during high flood events. The remaining road will no longer be maintained and the impact of that to the river is uncertain.

7. ***An abundant food base including terrestrial organisms of riparian origin, aquatic macroinvertebrates, and forage fish*:** The project will not reduce the quantity or quality of a food base for bull trout.

8. ***Permanent water of sufficient quantity and quality such that normal reproduction, growth, and survival are not inhibited*:** The project will have no impact on water supply.

Revised Effects Determinations

Table 1. Species Effects Determinations

Species	Listing Status-2004	Listing Status-2008	Determination of Effect-2004	Determination of Effect-2008
Bald Eagle	T	Delisted	NE	Delisted
Bull Trout	T	T	NLAA	NLAA
Canada Lynx	T	T	NE	NE
Gray Wolf	T	T	NE	NE
Grizzly Bear	T	T	NE	NE
Marbled Murrelet	T	T	NE	NE
Mid-Columbia Steelhead	T	T	NLAA	NLAA
N. Spotted Owl	T	T	NE	NE
Ute Ladies tresses	T	T	NE	NE

Table 2. Revised Critical Habitat Effects Determinations

Species	Critical Habitat Status-2004	Critical Habitat Status-2008	Determination of Effect-2004	Determination of Effect-2008
Bald Eagle	Not designated	Species delisted, NA	NA	NA
Bull Trout	Proposed	Designated on 9/26/05	Not likely to adversely modify proposed critical habitat	May affect, not likely to adversely affect (NLAA)
Canada Lynx	Not designated	Designated on 9/9/06	NA	NE
Gray Wolf	Not designated in Washington State	Not designated in Washington State	NA	NA
Grizzly Bear	Not designated	Not designated	NA	NA
Marbled Murrelet	Designated on 5/24/96	Still designated	No effects call provided	NE
Mid Columbia Steelhead	Designated	Revised 9/2/05	NLAA	NLAA
N. Spotted Owl	Designated	Revised on 8/13/08	NE	NE
Ute Ladies tresses	Not designated	Not designated	NA	NA

Table 3. EFH Effects Determinations

Essential Fish Habitat For:	2004 Determinations	2008 Determinations
Chinook	NLAA*	No effect
Coho	NLAA*	No effect

* Effects determinations for EFH are different than for ESA species. The appropriate effects determinations are either no effect or adverse affect (see EFH regulations).

References

Anderson, Eric. 2008. Personal communication with Eric Anderson (Fisheries Biologist, WDFW), December 2, 2008. Washington Department of Fish and Wildlife, Region 3 Office, Yakima, Washington.

Krupka, J. 2008. Comments and questions via email in response to the scoping notice for Lewis Road Relocation. December 10, 2008.

USFWS (US Fish and Wildlife Service). 2001. Yakima basin case history for bull trout (Salvelinus confluentus). In U.S. Fish and Wildlife Service bull trout workshop. U.S. Fish and Wildlife Service, Columbia River Fisheries Program Office, Vancouver, Washington.

Huibregtse, Louman Associates, Inc.
CIVIL ENGINEERING • LAND SURVEYING • PLANNING

TRANSMITTAL MEMO

Public Services

JAN 09 2009

Phone: 509-966-7000 / FAX: 509-965-3800

rm Gary Don Steve Dave

Date: January 9, 2009 **Project No.:** 06058

To: Yakima County Public Services **Attention:** Mark Brzoska

From: Gene Soules

Re: Lewis Road

We are sending you attached the following items:

One (1) set of stamped and signed plan sheets for the above referenced project.

Mark:

Here's the plans you asked for. As I had mentioned on the phone, I needed to adjust the profile grade on Lewis Road from Sta. 11+40 to EOP to provide cover over the irrigation culvert at Sta. 14+13. This changed the earthwork quantities from what I gave you last week.

They are now:

New Lewis Road: (including old road approach at Sta. 13+13 Lt.)

Roadway Excavation	=	1140 CY
Roadway Embankment	=	1042 CY
CSTC	=	633 CY
CSBC	=	1609 CY

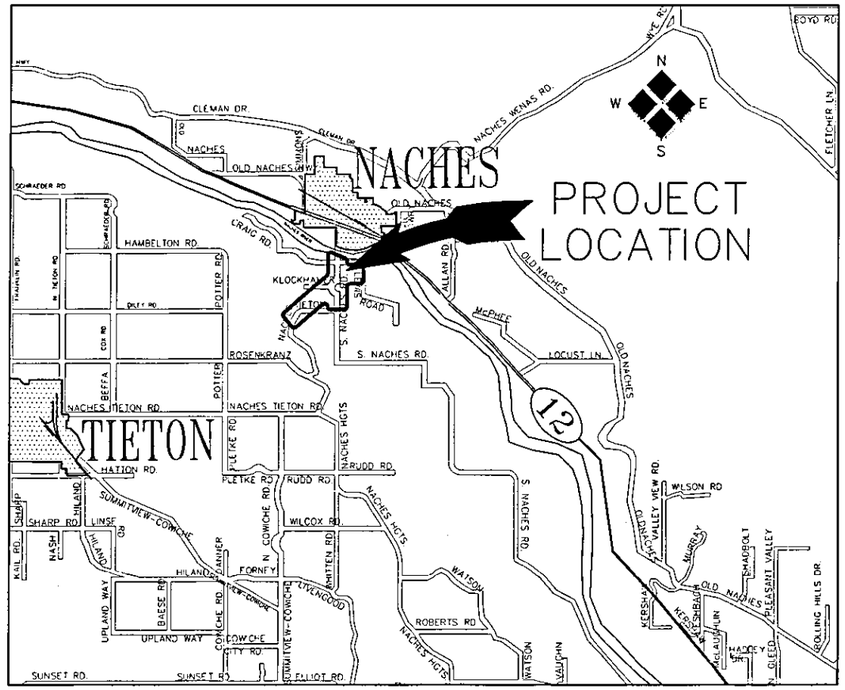
Existing Lewis Road:

Embankment Removal	=	2546 CY

Copy to:_____ **Signed:** Gene Soules

SOUTH NACHES
ROAD IMPROVEMENT PROJECTS

NACHES-TIETON RD. M.P. 3.59 TO BRIDGE NO. 35
LEWIS RD. M.P. 0.00 TO 0.32



VICINITY MAP
NOT TO SCALE

LEGEND

EXISTING FEATURES

- PROPERTY LINE
- FENCE (ALL TYPES)
- OVERHEAD POWER
- UNDERGROUND POWER
- OVERHEAD TELEPHONE
- UNDERGROUND TELEPHONE
- UNDERGROUND GAS
- UNDERGROUND WATER
- SANITARY SEWER
- IRRIGATION LINE
- BURIED CABLE TV
- TELEPHONE POLES
- TELEPHONE PEDESTAL
- POWER POLES
- GUY WIRE ANCHOR
- MAILBOX
- TELEPHONE HAND HOLE
- IRRIGATION VALVE
- IRRIGATION BLOWOFF VALVE
- SPRINKLER HEADS
- STANDPIPE
- CATCH BASIN
- PROPERTY CORNER
- FIRE HYDRANT
- WATER VALVE
- WATER METER
- TV CABLE BOX
- TREES
- HEDGE
- SHRUBS

NEW FEATURES

- NEW RIGHT OF WAY LINE
- HMA PAVEMENT
- NEW AND/OR RELOCATED FENCE
- CATCHPOINT, CUT
- CATCHPOINT, FILL
- SILT FENCE
- MONUMENT
- CHECK DAM
- NEW GUARDRAIL

DATUM ELEVATION

Control disk in top of round concrete monument, 0.5 feet below grade. Approximately 96.5 feet NE of main entrance to the Naches Ranger Station. Elevation: 1462.50' (NAVD 88)

INDEX:

NOTICE TO CONTRACTOR

THE CONTRACTOR IS ADVISED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES SHOWN HEREON IS BASED UPON UTILITY INFORMATION OF RECORD, INFORMATION PROVIDED TO YAKIMA COUNTY, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE CONTRACTOR MUST CALL THE LOCAL UTILITY COORDINATION COUNCIL AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION TO REQUEST FIELD LOCATIONS OF UTILITIES. 1-800-424-5555 IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY PERTINENT LOCATIONS AND ELEVATIONS ESPECIALLY AT CONNECTION POINTS, UTILITY CROSSINGS AND AT POTENTIAL UTILITY CONFLICTS. FIELD VERIFY DEPTHS BY POTHOLING PRIOR TO BEGINNING ANY CONSTRUCTION WORK TO ALLOW FOR RELOCATION OR ADJUSTMENT OF GRADE OR ALIGNMENT OF PLANNED INSTALLATIONS. NOTIFY THE ENGINEER BEFORE POTHOLING AND IMMEDIATELY IF UTILITIES ARE OTHER THAN SHOWN. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR POTHOLING OR ADJUSTMENTS. ALL PRIVATE UTILITIES UTILITY POLES AND TELEPHONE PEDESTALS WILL BE RELOCATED BY OTHERS.

YAKIMA COUNTY PUBLIC SERVICES
TRANSPORTATION SERVICES DIVISION

GARY EKSTEDT, P.E.
COUNTY ENGINEER

APPROVED FOR CONSTRUCTION

BY _____ DATE _____

COMMITMENT • SERVICE • EXCELLENCE
YAKIMA COUNTY

C 3211
SOUTH NACHES ROAD

FC 3122
LEWIS ROAD

REGION NO.	STATE
10	WASH
FED. AID. PROV. NO. STPR Y 393(002)	

PREPARED UNDER THE DIRECTION OF:

EUGENE W. SOULES
STATE OF WASHINGTON
17460
REGISTERED PROFESSIONAL ENGINEER
1-21-09

Hulbregtse, Louman Associates, Inc.
801 North 39th Avenue ◆ Yakima, WA 98902
(509) 966-7000 ◆ FAX (509) 965-3800

DRAWN: A.J.H.	CHECKED BY: G.W.S.
SCALE:	HORIZ. NONE
	VERT. NONE
REVISION:	
FNAME: 06048 SH 1-3.dwg	

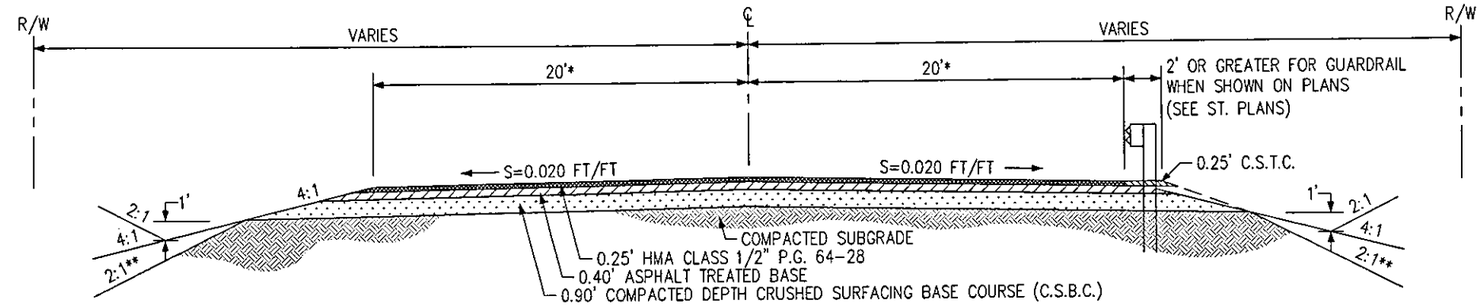
COVER SHEET, LEGEND, INDEX, AND VICINITY MAP

SHEET 1 OF 24

PLOT DATE: 01-21-09

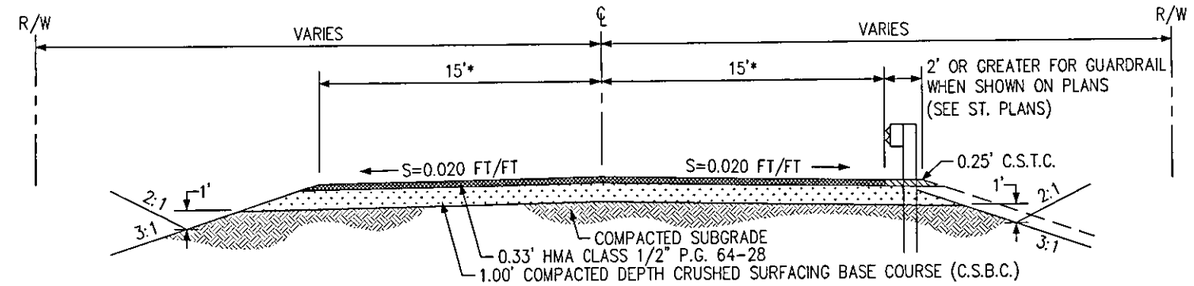
GENERAL NOTES:

1. THE CONTRACTOR IS ADVISED THAT HIS PROPOSED MEANS AND METHODS OF CONSTUCTION ARE SUBJECT TO APPROVAL OF THE ENGINEER, AND MAY BE REJECTED IF THE ENGINEER DETERMINES THAT THE PROPOSED MEANS AND METHODS OF CONSTRUCTION CAUSE DAMAGE OR CONSTITUTE OR CREATE A HAZZARD TO THE WORK OR TO PERSONS OR PROPERTY, OR WILL NOT PRODUCE THE FINISHED WORK IN ACCORDANCE WITH THE TERMS OF THE CONTRACT. THE ENGINEER'S APPROVAL OF THE CONTRACTOR'S MEANS AND METHODS OF CONSTRUCTION, OR HIS FAILURE TO EXERCISE HIS RIGHT TO REJECT SUCH MEANS AND METHODS OF CONSTRUCTION, SHALL NOT RELIEVE THE CONTRACTOR OF THE OBLIGATION TO ACCOMPLISH THE RESULT INTENDED BY THE CONTRACT. THE EXERCISING OF SUCH RIGHT TO REJECT SHALL NOT CREATE A CAUSE FOR ACTION FOR DAMAGES.
2. EXISTING TRAFFIC SIGNS SHALL BE RELOCATED AND MAINTAINED UNTIL NEW PERMANENT SIGNING IS INSTALLED.
3. ROADWAY EXCAVATION AND EMBANKMENT QUANTITIES SHOWN ON THE PLAN AND PROFILE SHEETS ARE RAW QUANTITIES FOR INFORMATIONAL PURPOSES AND HAVE NOT BEEN ADJUSTED FOR SHRINK/SWELL.
4. ALL IRRIGATION, CROSS AND APPROACH CULVERTS SHALL HAVE BEVELED ENDS. THE MINIMUM COVER OVER ALL APPROACH CULVERTS SHALL BE ONE FOOT.
5. TRAFFIC ON SOUTH NACHES ROAD SHALL BE MAINTAINED DURING THE RECONSTRUCTION WORK.



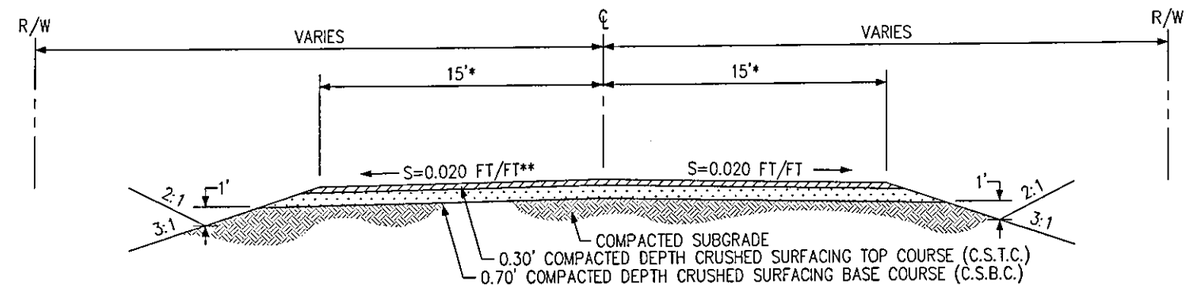
TYPICAL ROADWAY SECTION "A"

NACHES TIETON ROAD, STA 68+50 TO STA 88+93.83,
SOUTH NACHES ROAD, STA 88+93.83 TO STA 103+84.6,
* VARIES: STA. 68+50 TO 70+00, STA. 102+35 TO 103+85, SEE PLANS
** STA. 86+00 TO 103+84.6, 2:1
** STA. 99+00 TO 101+30 LT, 1.5:1



TYPICAL ROADWAY SECTION "B"

(OLD) NACHES-TIETON ROAD, STA 0+00 TO STA 2+00 - 4:1 SLOPE
KLOCKHAMER ROAD, STA 3+00 TO STA 5+00
OLD SOUTH NACHES ROAD, STA 5+00 TO STA 7+00 *20'
CRAIG ROAD, STA 8+00 TO STA 10+00



TYPICAL ROADWAY SECTION "C"

LEWIS ROAD, STA 0+20 TO STA 17+00
* VARIES: STA. 16+00 TO 17+00, SEE PLANS
** VARIES: STA. 0+20 TO 0+80 IS PAVED WITH 0.30' HMA CLASS 1/2" PG 64-28 AND 0.70' C.S.B.C.

MONUMENT SCHEDULE		
NACHES-TIETON ROAD	NORTHING	EASTING
PC STA. 70+12.08	504371.0815	1588671.6233
POC STA. 71+39.35	504495.3168	1588699.2504
INT STA. 71+60.94	504516.3405	1588704.1642
PT STA. 78+86.45	505100.8110	1589106.7387
PC STA. 83+90.56	505387.4851	1589521.4085
PT STA. 86+70.62	505576.7147	1589726.6167
POC STA. 88+93.83	505749.4513	1589867.9842
PC STA. 92+12.97	505996.4305	1590070.1117
POC STA. 96+98.66	506430.9289	1590276.2687
PT STA. 99+20.73	506651.6633	1590295.9970
POC STA. 101+75.62	506906.4912	1590290.4163

AS SHOWN ON PLANS DENOTES LOCATION OF INSTALLATION OF COUNTY FURNISHED MONUMENT CASE AND COVER.

STATION	LT	RT	SUPPORT
NACHES-TIETON RD. 84+95	✓		TYPE 2
S. NACHES RD. 93+80		✓	TYPE 2
S. NACHES RD. 96+60		✓	TYPE 1

MAILBOX SCHEDULE

(mb) AS SHOWN ON PLANS, DENOTES MAILBOX LOCATION PER MAILBOX SCHEDULE SHOWN ON THIS SHEET.

MAILBOX LOCATIONS WERE DETERMINED BY THE POSTMASTER. VERIFY FINAL SUPPORT TYPE AND LOCATION.

INSTALL MAILBOX SUPPORTS PER WSDOT STANDARD PLAN H-12, 12A.

YAKIMA COUNTY
COMMITMENT • SERVICE • EXCELLENCE

C 3211
SOUTH NACHES ROAD

FC 3122
LEWIS ROAD

REGION NO.	STATE
10	WASH
FED. AID. PROV. NO.	
STPR Y 393(002)	

PREPARED UNDER THE DIRECTION OF:

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STATE OF WASHINGTON
17460
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1-21-09

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(509) 966-7000 ◆ FAX (509) 965-3800

DRAWN: A.J.H.	CHECKED BY: G.W.S.
SCALE:	HORIZ. NONE
	VERT. NONE
REVISION:	
FNAME: 06048 SH 1-3.dwg	

ROADWAY SECTIONS AND NOTES

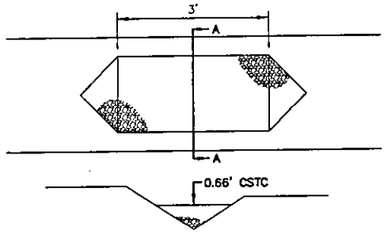
PLOT DATE: 01-21-09

SUMMARY OF QUANTITIES

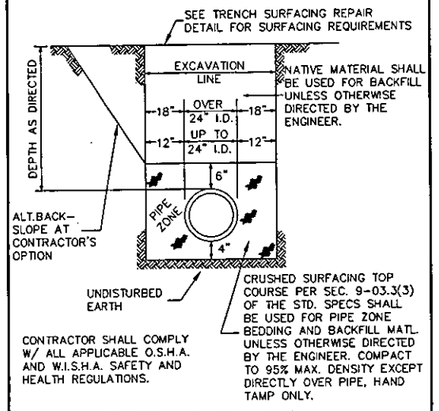
ITEM NO.	TOTAL QUANTITIES	UNIT	ITEM DESCRIPTION	SCHEDULE A NACHES-TIETON RD./SO. NACHES RD.	SCHEDULE B LEWIS ROAD
			PREPARATION		
1	1	LS	MOBILIZATION	1	1
2	1	LS	CLEARING AND GRUBBING	1	1
3	1	LS	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	1	1
			EARTHWORK		
4	18130	CY	ROADWAY EXCAVATION INCLUDING HAUL	14440	3690
5	8000	CY	COMMON BORROW INCLUDING HAUL	8000	
			DRAINAGE		
6	250	CY	QUARRY SPALLS (TRUCK MEASURE)	250	
7	70	LF	SCHEDULE A CULVERT PIPE 12 IN. DIAM.	70	
8	60	LF	SCHEDULE A CULVERT PIPE 18 IN. DIAM.		60
			STRUCTURE		
9	1	LS	PRECAST THREE SIDED BRIDGE STRUCTURE No. 3	1	-
10	1	LS	REMOVE EXISTING BRIDGE NO. 34	1	-
11	520	CY	STRUCTURE EXCAVATION CLASS A, INCL. HAUL	520	
12	1	LS	SHORING OR EXTRA EXCAVATION CLASS A	1	-
13	470	CY	GRAVEL BACKFILL FOR WALLS	470	
14	1	LS	DEWATERING	1	-
15	12	EA	ECOLOGY BLOCK IN PLACE	12	
			SURFACING		
16	16000	TON	CRUSHED SURFACING BASE COURSE	13000	3000
17	1600	TON	CRUSHED SURFACING TOP COURSE	400	1200
18	4600	TON	ASPHALT TREATED BASE	4600	
			ASPHALT PAVEMENT		
19	2900	TON	HMA CL. 1/2 IN PG-64 28	2900	
20	220	TON	HMA FOR APPROACH	170	50
			EROSION CONTROL AND PLANTING		
21	20	DAY	ESC LEAD	20	
22	2200	LF	SILT FENCE	2000	200
23	9	EA	CHECK DAM	9	
24	1	ACRE	MULCHING WITH PAM	1	
25	2	ACRE	SEEDING, FERTILIZING, AND MULCHING	2	
			TRAFFIC		
26	2380	LF	BEAM GUARDRAIL, TYPE 1	2380	
27	2	EA	BEAM GUARDRAIL TRANSITION SECTION, TYPE 2	2	
28	2	EA	BEAM GUARDRAIL TRANSITION SECTION, TYPE T10	2	
29	4	EA	BEAM GUARDRAIL ANCHOR TYPE 1	4	
30	4	EA	BEAM GUARDRAIL ANCHOR TYPE 5	4	
31	3	EA	BEAM GUARDRAIL ANCHOR TYPE 7	3	
32	5	EA	BEAM GUARDRAIL FLARED TERMINAL	5	
33	1	EA	BEAM GUARDRAIL NON-FLARED TERMINAL	1	
34	14	DAY	PORTABLE TEMPORARY TRAFFIC CONTROL SIGNA	14	
35	1	LS	PERMANENT SIGNING	1	
36	10500	LF	PAINT LINE	10500	
37	200	LF	SINGLE SLOPE CONCRETE BARRIER	200	
38	1640	HR	FLAGGERS AND SPOTTERS	1500	140
39	1	LS	TRAFFIC CONTROL SUPERVISOR	1	
40	1	LS	OTHER TEMPORARY TRAFFIC CONTROL	1	
41	1	LS	CONSTRUCTION SIGNS CLASS A	1	
			OTHER ITEMS		
42	560	SF	SHORING OR EXTRA EXCAVATION CLASS B	560	
43	1	LS	SPCC PLAN	1	
44	1	EA	MAILBOX SUPPORT TYPE 1	1	
45	2	EA	MAILBOX SUPPORT TYPE 2	2	
46	11	EA	MONUMENT CASE AND COVER (COUNTY FURNISH	11	
47	EST.	FA	MINOR CHANGE	$5,000	$5,000

ROAD DITCH CHECK DAM SCHEDULE

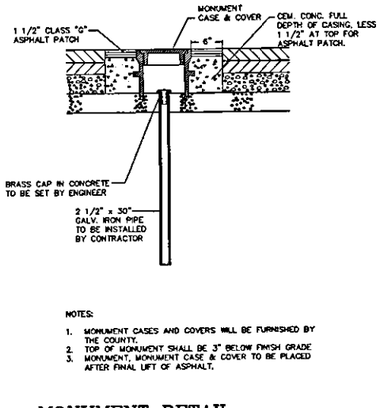
STATION	
77+00	LEFT AND RIGHT
78+50	LEFT AND RIGHT
80+00	LEFT AND RIGHT
84+50	LEFT AND RIGHT
85+25	RIGHT



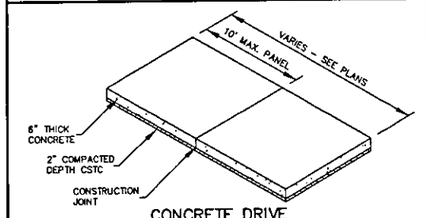
'A–A'
NOT TO SCALE



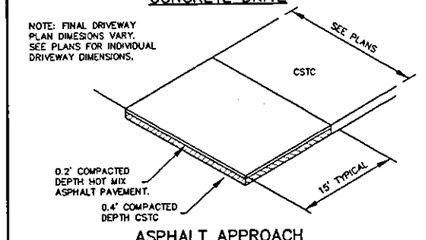
TYPICAL TRENCH DETAIL
NOT TO SCALE



MONUMENT DETAIL
NOT TO SCALE



CONCRETE DRIVE



ASPHALT APPROACH

RESIDENTIAL DRIVEWAY/ APPROACH
NOT TO SCALE

YAKIMA COUNTY
COMMITMENT • SERVICE • EXCELLENCE

C 3211
SOUTH NACHES ROAD

FC 3122
LEWIS ROAD

REGION NO.	STATE
10	WASH
FED. AID. PROV. NO. STPR Y 393(002)	

PREPARED UNDER THE DIRECTION OF:

EUGENE W. SCHULES
STATE OF WASHINGTON
17460
REGISTERED PROFESSIONAL ENGINEER
1-21-09

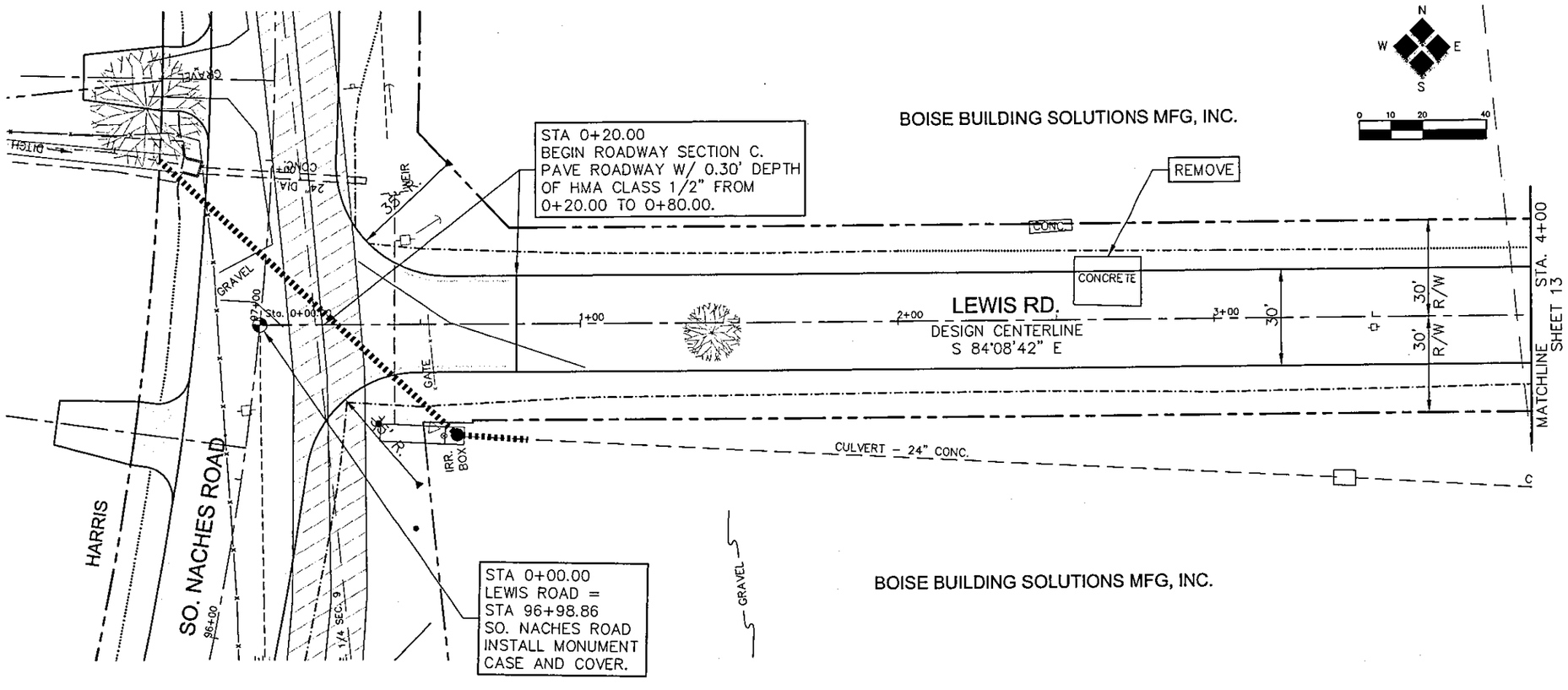
Hulbregtse, Louman Associates, Inc.
801 North 39th Avenue ◆ Yakima, WA 98902
(509) 966-7000 ◆ FAX (509) 965-3800

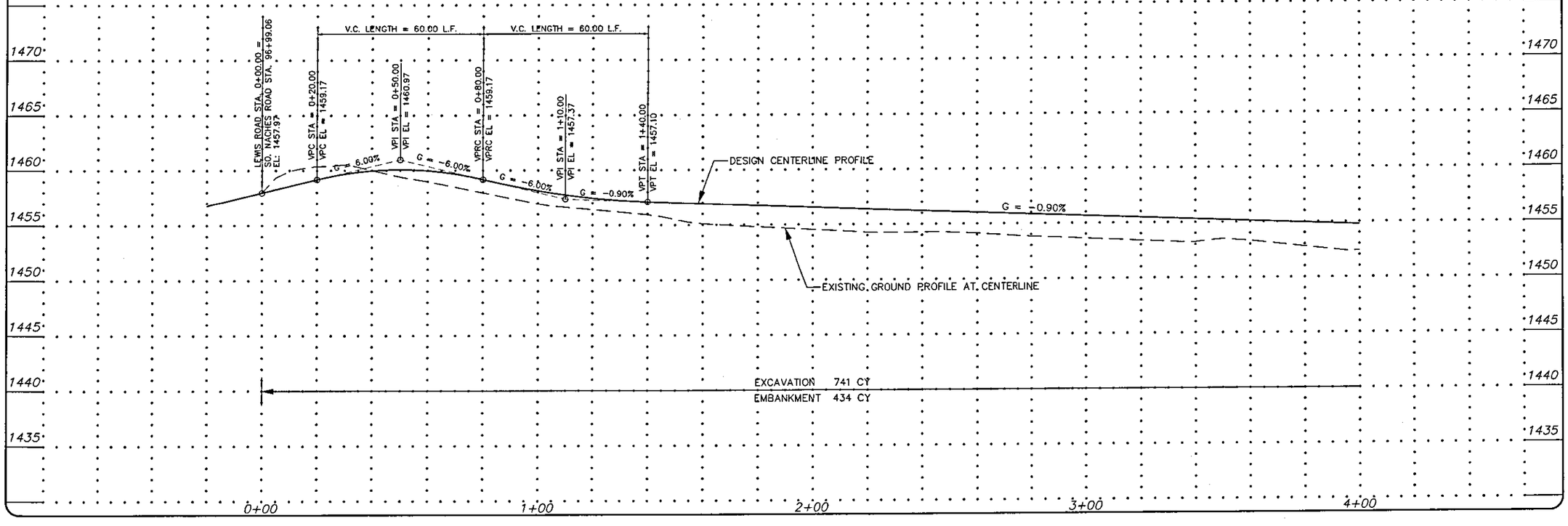
DRAWN: A.J.H.	CHECKED BY: G.W.S.
SCALE:	HORIZ. NONE
	VERT. NONE
REVISION:	
FNAME: 06048 SH 1-3.dwg	

SUMMARY OF QUANTITIES AND PROJECT DETAILS

SHEET 3 OF 24

PLOT DATE: 01-21-09





YAKIMA COUNTY
COMMITMENT • SERVICE • EXCELLENCE

SOUTH NACHES ROAD IMPROVEMENT PROJECTS

LEWIS ROAD

FC 3122

PREPARED UNDER THE DIRECTION OF:

EUGENE W. SOULES
STATE OF WASHINGTON
17460
REGISTERED PROFESSIONAL ENGINEER
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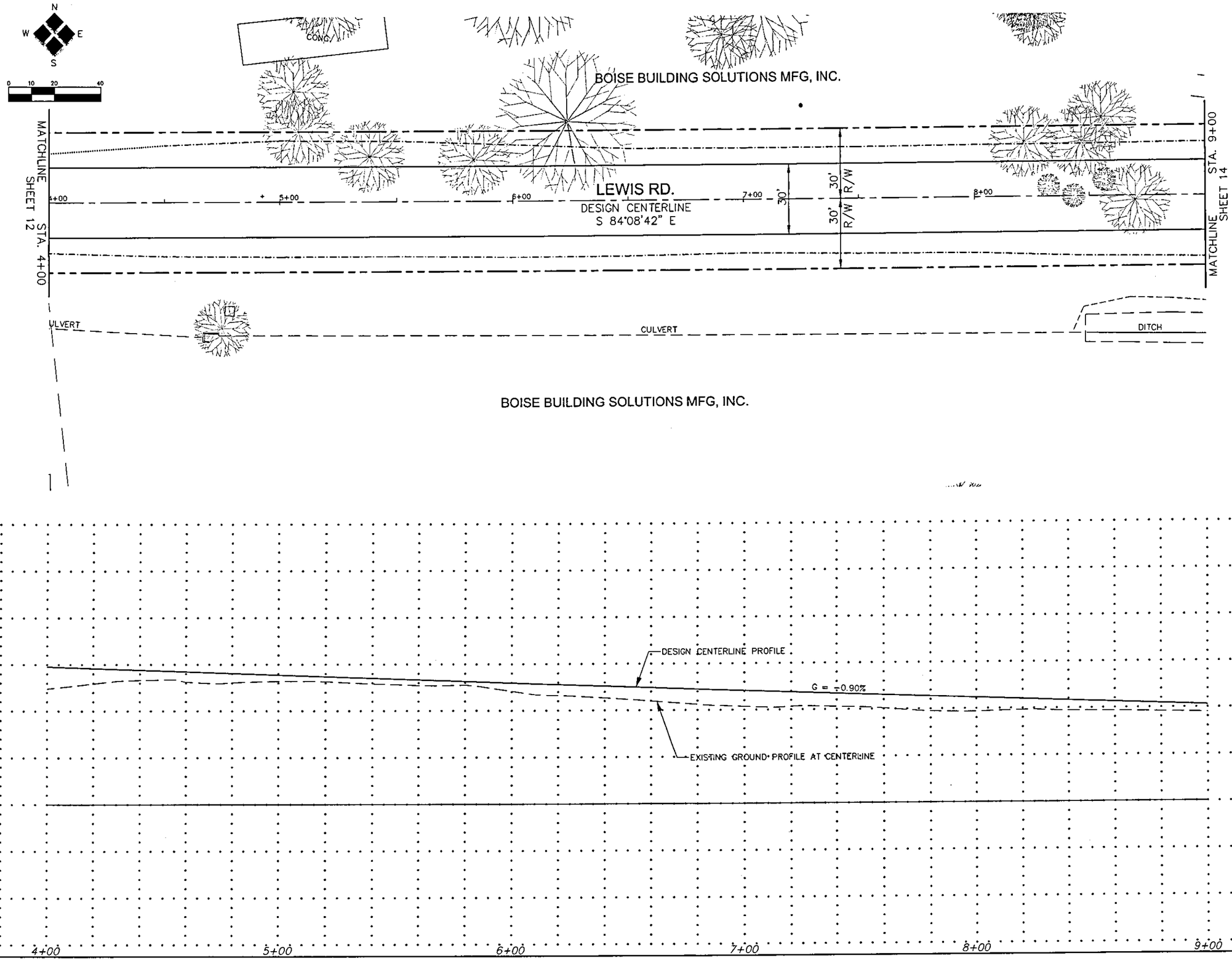
	VERT. AS SHOWN
REVISION:	
FNAME: 06058 SH 12-15.dwg	

PLAN AND PROFILE
LEWIS ROAD
STA. 0+00 TO
STA. 4+00

SHEET 12 OF 25

PLOT DATE: 01-06-09



YAKIMA COUNTY
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SOUTH NACHES ROAD IMPROVEMENT PROJECTS

LEWIS ROAD

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STATE OF WASHINGTON
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Huibregtse, Louman Associates, Inc.
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(509) 966-7000 ◆ FAX (509) 965-3800

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	VERT. AS SHOWN
REVISION:	
FNAME: 06058 SH 12-15.dwg	

PLAN AND PROFILE
LEWIS ROAD
STA. 4+00 TO
STA. 9+00

SHEET 13 OF 25

PLOT DATE: 01-06-09

BOISE BUILDING SOLUTIONS MFG, INC.

SHEET 13
MATCHLINE STA. 9+00

GRAVEL

PC Sta 9+60.00

9+00 DESIGN CENTERLINE S 84°08'42" E

10+00

LEWIS RD.
DESIGN CENTERLINE
S 82°54'16" E

11+00

PC Sta 11+79.26

12+00

30' R/W
30' R/W

24'

+00

GRAVEL

PC Sta 14+31.94

28' Radius Sta 14+60.00

30'

DITCH

25' R.

CULVERT

DITCH

WIER BOX

BOISE BUILDING SOLUTIONS MFG, INC.

STA 13+13.33, LT.
CONSTRUCT ROAD APPROACH
SEE SHEET 21 FOR PROFILE.

DITCH

BETHUNE

STA 14+13.54
INSTALL 60 L.F. OF SCH. A
18" DIAM. CULVERT PIPE.
IE IN: 1444.30
IE OUT: 1444.30

CULVERT

MATCHLINE STA. 14+25
SHEET 15

CURVE DATA – C4	
PC STATION	11+79.26
NORTHING	506305.6967
EASTING	1591448.8217
DELTA	82°44'49"
TANGENT	176.16'
RADIUS	200.00'
ARC LENGTH	288.84'
CHORD BRG	S 41°31'51" E
CHORD LENGTH	264.39'

1470
1465
1460
1455
1450
1445
1440
1435

-2.00% -2.00% | 0.00% -2.00% | +2.00% -2.00% | +4.00% -4.00%

CROWN | SUPERELEVATION TRANSITION –, LEFT | FULL SUPERELEVATION –, LEFT | FULL SUPERELEVATION LEFT

STA. 10+69.84 FIN EL: 1448.75
STA. 11+04.84 FIN EL: 1448.44
VPI STA. 11+40.00 FIN EL: 1448.12
STA. 12+09.84 FIN EL: 1447.98
VPI STA = 14+00.00 FIN EL = 1447.60

DESIGN CENTERLINE PROFILE

G = -0.90%

G = -0.20%

EXISTING GROUND PROFILE AT CENTERLINE

EXCAVATION 337 CY
EMBANKMENT 359 CY

9+00 10+00 11+00 12+00 13+00 14+00 14+25

YAKIMA COUNTY
COMMITMENT • SERVICE • EXCELLENCE

SOUTH NACHES
ROAD IMPROVEMENT
PROJECTS

LEWIS ROAD

FC 3122

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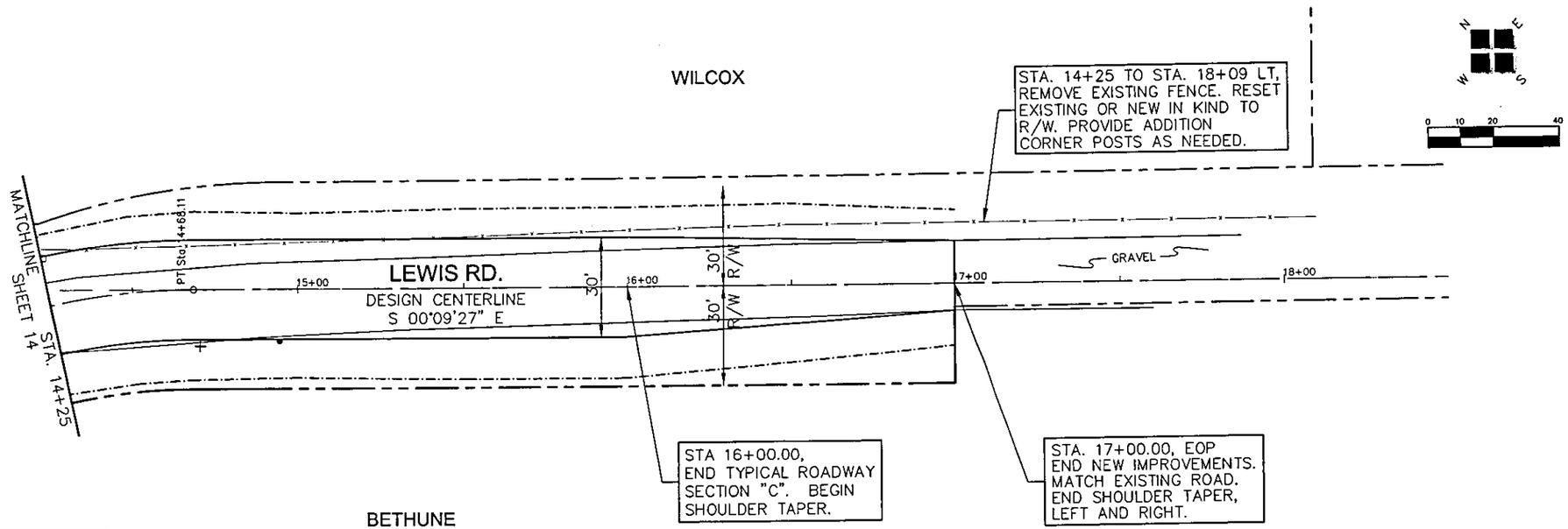
DRAWN: A.J.H.	CHECKED BY: G.W.S.
SCALE:	HORIZ. AS SHOWN
	VERT. AS SHOWN
REVISION:	
FNAME:	06058 SH 12-15.dwg

PLAN AND PROFILE
LEWIS ROAD
STA. 9+00 TO
STA. 14+25

SHEET 14 OF 25

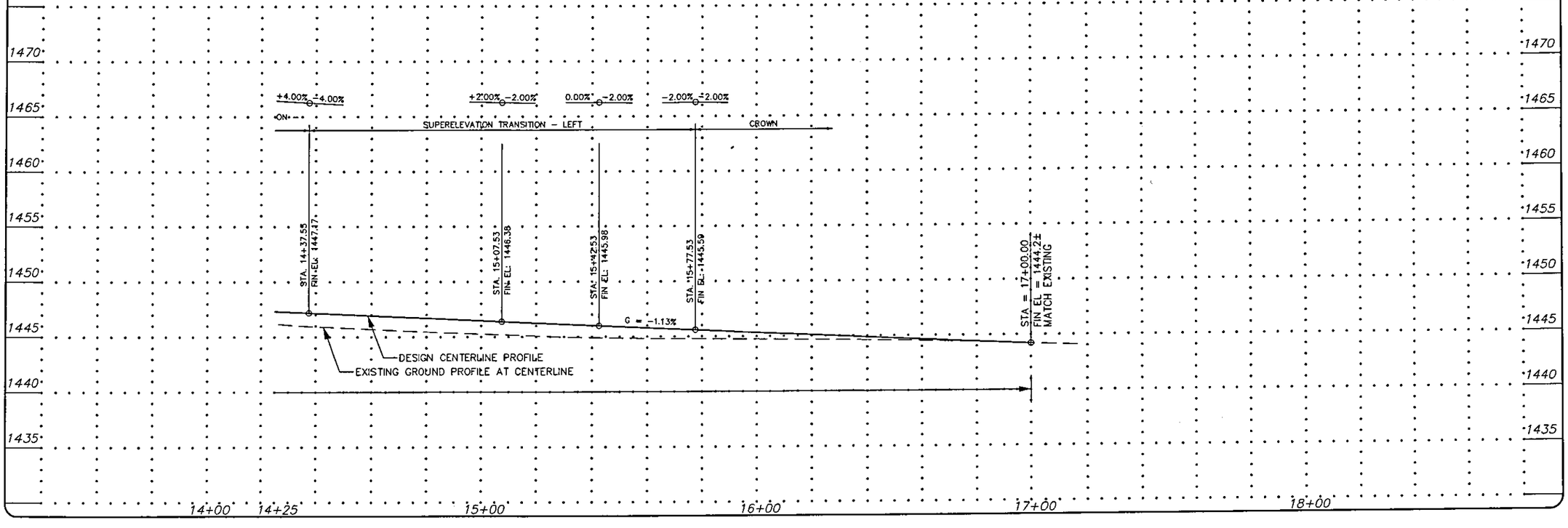
PLOT DATE: 01-06-09

WILCOX



BETHUNE

CURVE DATA – C4	
PC STATION	11+79.26
NORTHING	506305.6967
EASTING	1591448.8217
DELTA	82°44'49"
TANGENT	176.16'
RADIUS	200.00'
ARC LENGTH	288.84'
CHORD BRG	S 41°31'51" E
CHORD LENGTH	264.39'



YAKIMA COUNTY
COMMITMENT • SERVICE • EXCELLENCE

SOUTH NACHES ROAD IMPROVEMENT PROJECTS

LEWIS ROAD

FC 3122

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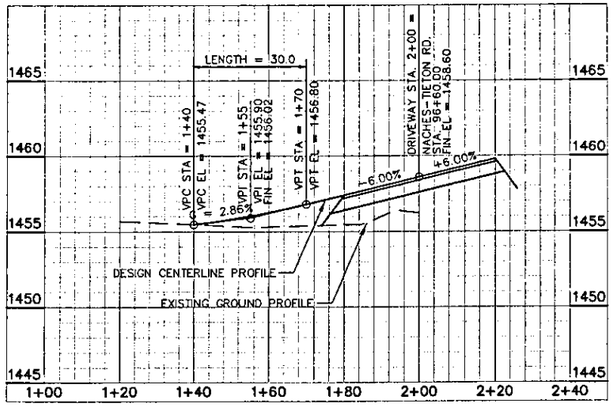
	VERT. AS SHOWN
REVISION:	
FNAME: 06058 SH 12-15.dwg	

PLAN AND PROFILE
LEWIS ROAD
STA. 14+25 TO
STA. 17+00

SHEET 15 OF 25

PLOT DATE: 01-06-09

SO. NACHES RD. 96+60.0, LT.



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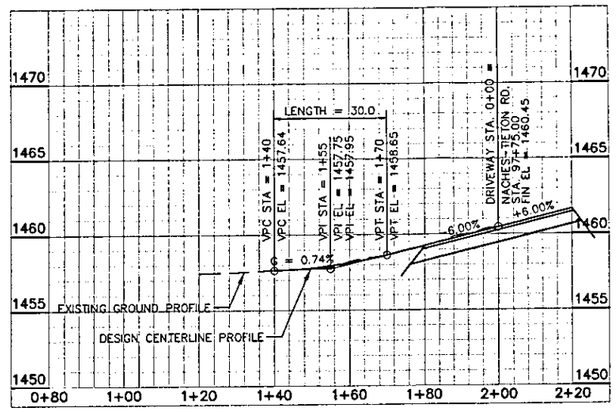

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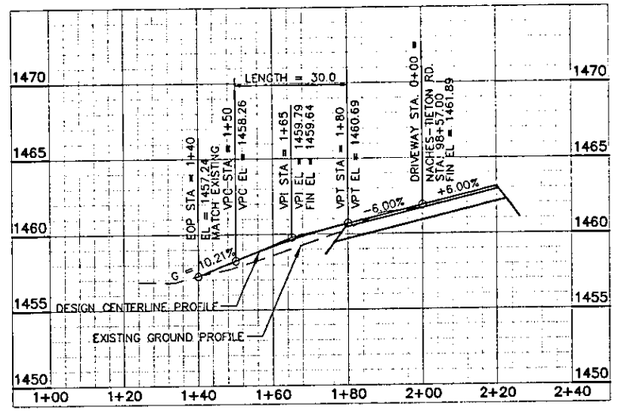

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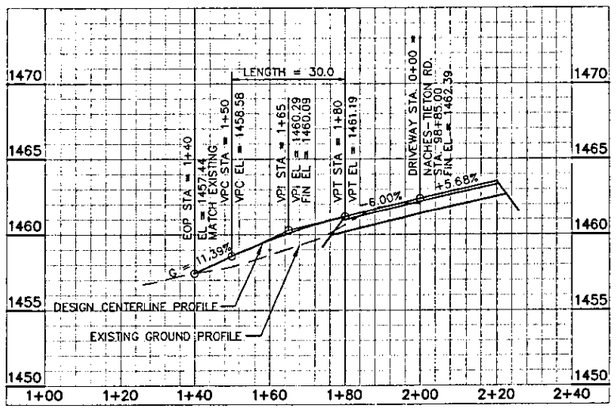

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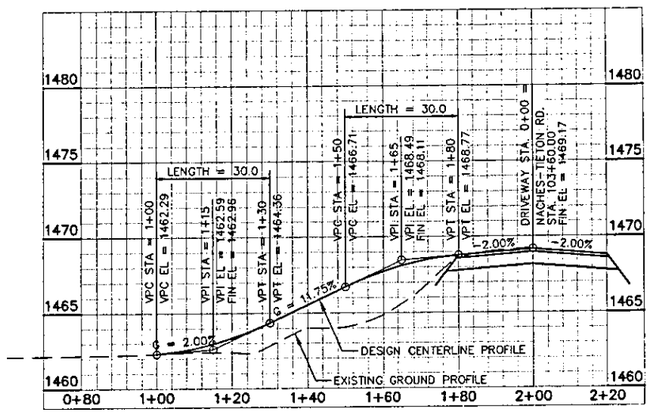
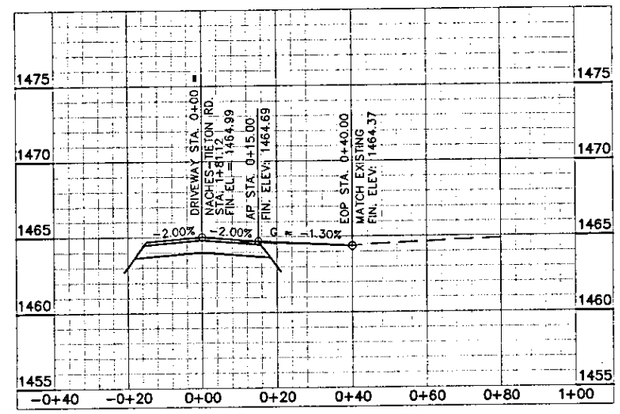
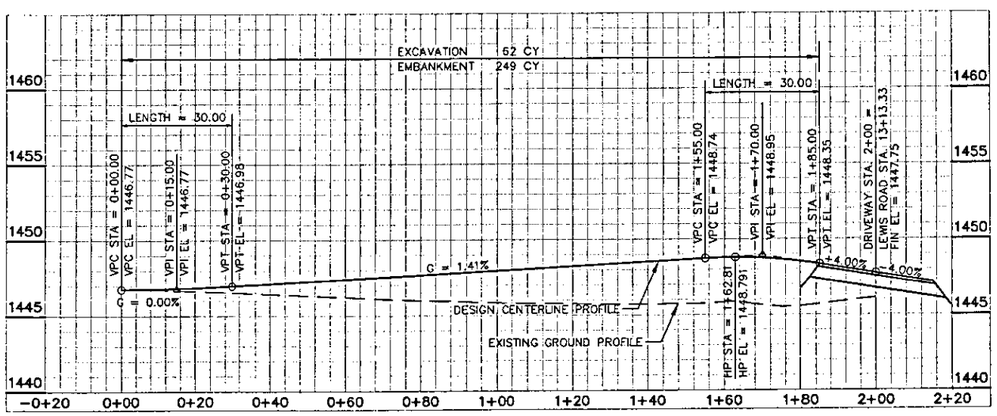


KLOCKHAMER RD. 1+81.12, RT.



LEWIS RD. 13+25.0, LT.



YAKIMA COUNTY
COMMITMENT • SERVICE • EXCELLENCE

SOUTH NACHES ROAD IMPROVEMENT PROJECTS

LEWIS ROAD

C 3211

PREPARED UNDER THE DIRECTION OF:

EUGENE W. SOULES
STATE OF WASHINGTON
17460
REGISTERED
PROFESSIONAL ENGINEER
1-7-09

Hulbregtse, Louman Associates, Inc.
801 North 39th Avenue ◆ Yakima, WA 98902
(509) 966-7000 ◆ FAX (509) 965-3800

DRAWN: A.J.H.	CHECKED BY: G.W.S.
SCALE:	HORIZ. NONE
	VERT. NONE
REVISION:	
FNAME: 06048 SH 20-21.dwg	

APPROACH PROFILES

SHEET 21 OF 24

PLOT DATE: 01-06-09

The following conditions and measures shall be followed:

- The applicants shall obtain all required local, state, and federal permits and approvals prior to implementing the Proposed Action Alternative and comply with any and all conditions imposed.
- The applicant is responsible for selecting, implementing, monitoring, and maintaining best management practices to control erosion and sediment, reduce spills and pollution, and provide habitat protection.
- Any change to the approved scope of work will require re-evaluation for compliance with NEPA and other laws and Executive Orders.
- In the event that archaeological or historic materials are discovered during project activities, work in the immediate vicinity should be discontinued, the area secured, and the State and FEMA notified.
- Construction shall occur during non-flood seasons. However, should construction be required during the flood season, as determined by the local floodplain administrator, all construction equipment shall be staged in an area not susceptible to flood events or be readily transportable out of the floodplain to avoid any flood damages.

PUBLIC NOTICE

Federal Emergency Management Agency
Draft Environmental Assessment
Lewis Road Relocation and Reconstruction
Yakima County, WA

The US Department of Homeland Security's Federal Emergency Management Agency (FEMA) proposes to provide funding to Yakima County for a road relocation and construction project in central Washington.

FEMA prepared a draft environmental assessment (EA) for the proposed project pursuant to the National Environmental Policy Act (NEPA) of 1969 and FEMA's implementing regulations found in 44 Code of Federal Regulations (CFR) Part 10. The EA evaluates alternatives for compliance with applicable environmental laws, including Executive Orders #11990 (Protection of Wetlands), #11988 (Floodplain Management), and #12898 (Environmental Justice). Many alternatives were evaluated during the development of the Naches River Comprehensive Flood Hazard Management Plan (CFHMP) and the Upper Yakima River CFHMP. The alternatives evaluated in the EA are the (1) no action; and (2) reducing flood damage and providing improved ingress and egress for residents along Lewis Road by relocating and reconstructing Lewis Road. No practicable alternatives outside the floodplain were identified.

The proposed action, while remaining in the floodplain, would offer some reduction in potential road damage and loss of lives from residences traversing it when the road is inundated during flood events. However, the road would still be subject to future damages by virtue of its location in the floodplain and floodway. Further analysis is available in the EA.

The EA is available for review online at the FEMA environmental website at: http://www.fema.gov/plan/ehp/envdocuments under Region X. If no significant issues are identified during the comment period, FEMA will finalize the EA, issue a Finding of No Significant Impact (FONSI) and fund the project. Unless substantive comments are received, FEMA will not publish another notice for this project. However, should a FONSI be issued, it will be available for public viewing at http://www.fema.gov/plan/ehp/envdocuments under Region X.

The draft EA is also available for review on February 6, 2009 at the Yakima County Public Services Department at 128 N. 2nd Street, Yakima, Washington.

Written comments on the draft EA should directed no later than 5 pm on March 6, 2009 to Steven Randolph, Program Manager, FEMA Region 10, 130 228th Street SW, Bothell Washington 98021-9796 or by e-mail at steven.randolph@dhs.gov. Comments can also be faxed to 425-487-4613.