

---

## **EXECUTIVE SUMMARY**

### **ES.1 Introduction**

This document is being prepared to comply with the National Environmental Policy Act of 1969 (NEPA) as amended. The Draft Environmental Impact Statement (DEIS) was prepared and made available for public comment from January 4, 2013 to February 25, 2013. The comment period was extended to March 25, 2013. A public hearing was held in Moscow on January 23, 2013. Approximately four hundred comments were received during the DEIS comment period. A summary of public involvement activities is described in Chapter 7, Public Involvement and Agency Coordination.

The US-95 Thorncreek Road to Moscow Final Environmental Impact Statement (FEIS) has been prepared in accordance with the FHWA TA 6640.8A NEPA Implementation-Guidance for Preparing and Processing Environmental and Section 4(f) Documents (FHWA 1987) and FHWA and US Department of Transportation (USDOT) Right-of-way and Environment; Environmental Impact and Related Procedures [23 CFR 771].

The FEIS presents new, changed, and corrected information since the DEIS was published. It addresses substantive public comments, provides rationale for identifying the Preferred Alternative, and lists mitigation measures. The primary changes since the DEIS are listed below:

- Revised the W-4 Alternative to avoid a Section 4(f) property and reflected the change throughout the FEIS. It is now presented as the Modified W-4 Alternative
- Revised the Section 4(f) Evaluation to include the Modified W-4 Alternative
- Prepared an addendum to the Cultural Resource Survey Reports to evaluate the Modified W-4 Alternative
- Prepared Chapter 10, Response to Comments on the DEIS
- Revised Weather Analysis
- Revised Safety Analysis
- New Hydrogeologic Analysis
- New Mobility and Road User Cost Reports
- Updated Noise Analysis
- Provided additional wildlife information (bumblebees, grassland birds, pygmy nuthatch, and giant Palouse earthworm)
- Provided additional information regarding CRP land and matrix habitats
- Provided additional information regarding invasive plants
- Revised and clarified residential and business impacts
- Revised descriptions of access
- Updated public involvement activities

- Finalized mitigation measures
- Provided additional detail regarding the vertical and horizontal alignment for the alternatives.
- Provides public comments on the DEIS and responses to the comments

The FEIS provides the lead agencies (FHWA and ITD), and a cooperating agency (the US Army Corps of Engineers (USACE)), with an in-depth analysis of the environmental effects of the alternatives so that an informed decision can be made. This FEIS is also a public disclosure of the potential environmental effects of the project and identifies a Preferred Alternative. After making its decision, and no sooner than 30 days after this FEIS is available to the public and notice of its availability has been published in the Federal Register, FHWA will issue a Record of Decision (ROD) selecting an alternative, providing the rationale for the decision and stating the mitigation measures that will be incorporated into the project.

This Executive Summary provides general information regarding the proposed project and alternatives and highlights key information from chapters of this FEIS to show how the alternatives compare to each other in their benefits and effects to the natural and human environment.

### **ES.1.1 Project Background**

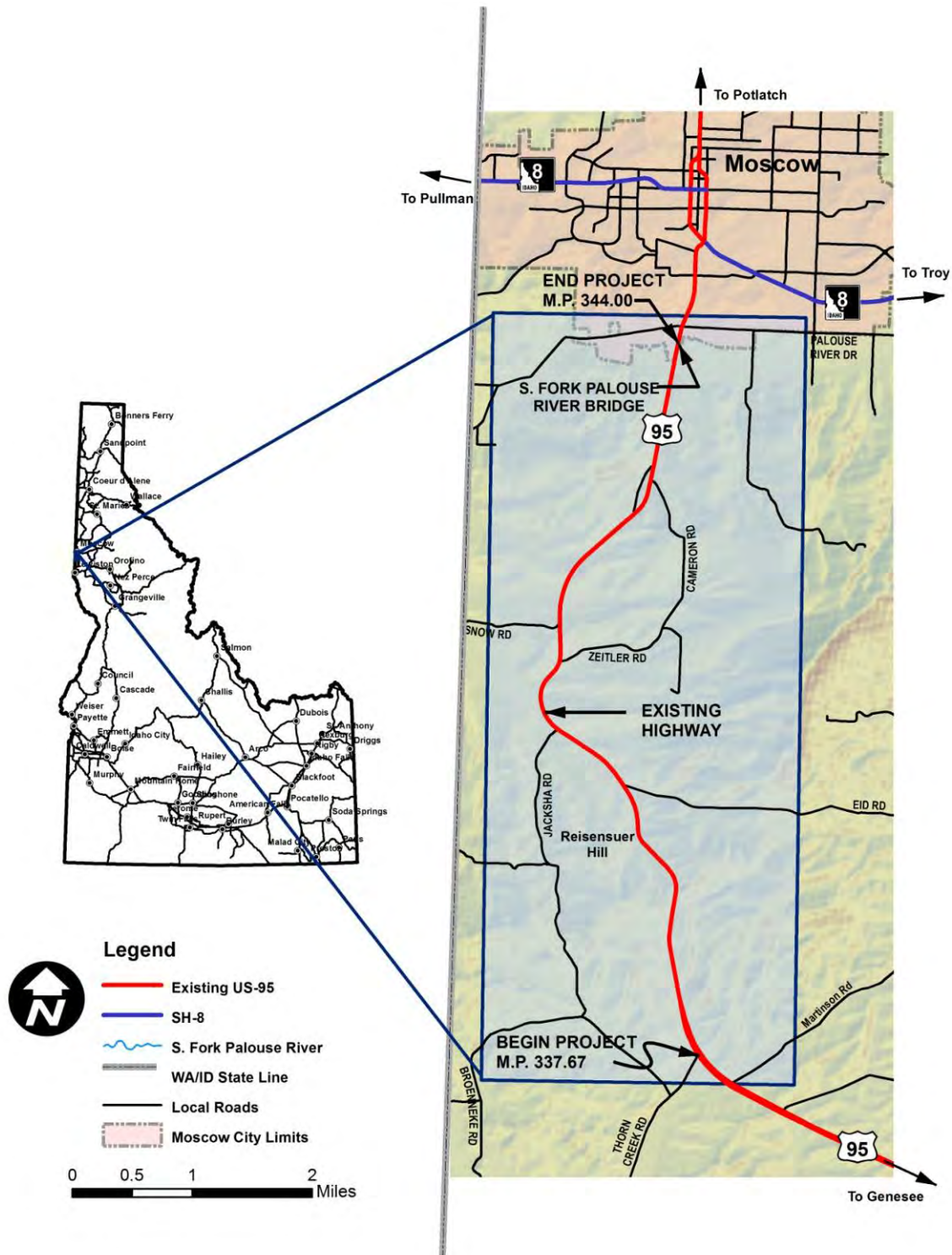
In 1999, FHWA and ITD began developing an Environmental Assessment (EA) for a 20.4-mile improvement of US-95 from the Top of Lewiston Hill to Moscow. The project intent was to widen the existing highway in the southern 15.8 miles of the project and construct 4.6 miles of a new four-lane highway in the northern section. Eleven alternatives for the northern-most section of the corridor were narrowed to two. Alternative 6 would have widened along the existing highway and Alternative 10A would have constructed a four-lane highway on new alignment near the base of Paradise Ridge.

Alternative 10A was selected by ITD and FHWA and a Finding of No Significant Impact (FONSI) was issued in May 2002. The project was litigated by the Paradise Ridge Defense Coalition, Inc. in 2003. The US District Court for the District of Idaho (Court) in the judgment for Civil Case number 03-0156-S-BLW decided that the EA and issuance of a FONSI were not appropriate. The court found that an Environmental Impact Statement (EIS) would be required for the northern 4.6-mile segment between Thorncreek Road and Moscow to allow full consideration of the impacts by the public and agencies. The southern 15.8 miles was allowed to proceed and construction was completed in October 2007. A Notice of Intent to prepare an EIS for the northern section was published in the Federal Register on November 13, 2003. See the DEIS, Chapter 1, Introduction for additional information.

### **ES.1.2 Project Location**

The project is located along US-95 south of the City of Moscow in Latah County, Idaho. The project begins at Thorncreek Road (MP 337.67) and continues north for 6.34 miles, ending at the South Fork Palouse River Bridge (MP 344.00). This section of US-95 travels primarily through the rolling hills and agricultural fields of the Palouse Region. See Exhibit 1. Project Location Map.

Exhibit 1. Project Location Map



### ES.2 Purpose and Need

The purpose of this project is to improve public safety and increase highway capacity on US-95 south of Moscow between Thorncreek Road (MP 337.67) and the South Fork Palouse River

Bridge (MP 344.00). Within the project limits, US-95 does not meet current American Association of State Highway and Transportation Officials (AASHTO) Standards. Additional concerns include High Accident Locations (HALs) and insufficient highway capacity. The primary deficiencies of the roadway are described in detail in the DEIS, Chapter 1, Introduction and Section 3.10, Transportation.

### ES.2.1 Need

US-95 is part of the National Highway System (NHS), a North America Free Trade Agreement (NAFTA) route spanning the United States from Canada to Mexico. Within Idaho, US-95 is classified as a principal arterial, providing the only continuous north-south highway connection between the Idaho Panhandle and the rest of the State. US-95 is a major route for commercial, residential, agricultural, and recreational travel through Idaho.

#### *Public Safety*

**Horizontal Curves and Vertical Grades.** The existing highway has several horizontal curves and vertical grades that do not meet AASHTO standards. The ascending grade on the south side of Reisenauer Hill is an approximately 4.3 percent and the descending grade on the north side of Reisenauer Hill is approximately 6 percent. The crash statistics for the highway between 2003 and 2012 show that this section of US-95 averages 25.3 crashes per year and is expected to reach 27.4 crashes per year by 2017. Reisenauer Hill is the most prominent topographical feature the alignments go over, with the steepest grades and some of the highest crash rates. As ADTs in this segment continue to increase and the two-lane highway reaches capacity, these conditions are expected to worsen.

**Crashes.** High Accident Locations (HALs) are based on the past three years of crash data and change annually. Three HALs are located in the project limits based on the DEIS crash data. These segments have the highest crash rates in ITD District 2 and ranked in the top 13 of Idaho State HALs. See Table 1. High Accident Locations (HALs).

**Table 1. High Accident Locations (HALs)**

Milepost Location on US-95	Idaho HAL Ranking
337.67 - 338.17	6
338.67 - 339.62	13
340.62 - 341.12	4

Source: (ITD 2012a)

Based on the updated crash data, two of District 2's top five official HALs are located within this section of highway. Statewide, the two HALs are ranked as numbers 17 and 34. See Table 2. Updated High Accident Locations (HALs).

**Table 2. Updated High Accident Locations (HALs)**

Milepost Location on US-95	Idaho HAL Ranking
337.67 to 339.62	34
340.62 to 341.62	17

Source: (ITD 2013)

**Access.** There are 66 approaches<sup>1</sup> from the highway to either public, commercial and field locations in this 6.34-mile segment of US-95. The many approaches do not meet the ITD Access Control Policy due to spacing, sight distance, and the width and grade of the approaches, which contribute to intersection-related conflicts. Since the DEIS was published, access for the proposed US-95 Action Alternatives was designated as Expressway Access Control which would limit approaches to only ITD designated locations as determined during the design and right-of-way process. This access control would not be in effect until payment is made to adjacent property owners for the restriction of existing access rights. See Sections 2.4.2, 3.10 and 4.10 and Table 76. General Responses to Issues under Access for more detail.

The north end of the project is the most densely populated area with the highest number of intersection related crashes. The southern end of the project has closely spaced approaches with curves, which have also resulted in a high number of intersection related crashes.

**Surface Conditions.** In addition to the primary deficiencies, this section of US-95 has a substandard rating for the pavement surface. Both the surface roughness and the amount of cracking fall below the minimum standard indices used to determine acceptable pavement performance.

### ***Highway Capacity***

**Capacity and Operating Conditions.** The AASHTO standards and ITD Policy for capacity for a rural highway is a Level of Service (LOS) B. This segment of US-95 currently has a volume of 5,364 ADT and is operating at a LOS C. This is considered a high-density traffic flow with restricted movements and delays for short periods. By the 2037 design year, the volume for this segment of US-95 is projected to be 8524 ADT and would be operating at LOS D. This is at-capacity and would result in delays due to congestion.

**Roadway Width.** The existing roadway consists of two undivided 12-foot travel lanes with two-foot shoulders. The clear zone and shoulder width, which are important elements for safety,

---

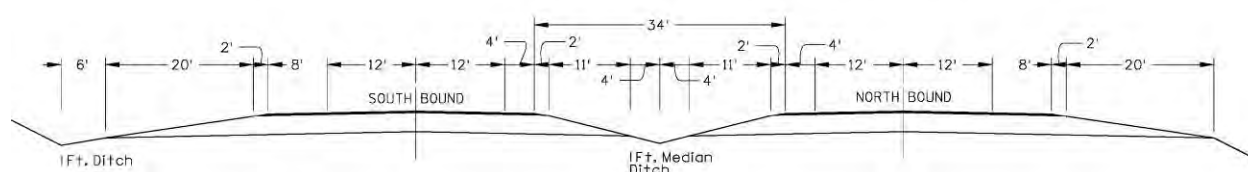
<sup>1</sup> IDAPA 39.03.42 definition of approach is a connection between the outside edge of the shoulder or curb line and the abutting property at the highway right-of-way line, intended to provide access to and from said highway and the abutting property. An approach may include a driveway, alley, street road or highway.

vary throughout the corridor and do not meet the AASHTO standards<sup>2</sup>. This two-lane segment of US-95 is also a bottleneck for the four-lane highway at the northern and southern ends of the project.

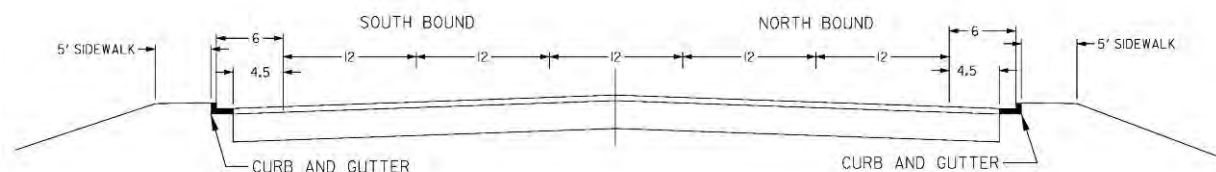
### ES.3 Proposed Solution

The proposed solution or “action” would be constructed to meet the AASHTO standards. The existing two-lane undivided highway from Thorncreek Road to the South Fork Palouse River Bridge would be replaced with a four-lane divided highway with a 34-foot median through the majority of the corridor. A four-lane highway with center turn lane, curb, gutter and sidewalk would be constructed at the northern end of the project. See Exhibit 2. Typical Section: Four-Lane Divided Highway and Exhibit 3. Typical Section: Four-lane Highway with Center Turn Lane and Curb, Gutter and Sidewalk. The elements of the proposed action are described in detail in Chapter 2, Alternatives.

**Exhibit 2. Typical Section: Four-Lane Divided Highway**



**Exhibit 3. Typical Section: Four-lane Highway with Center Turn Lane and Curb, Gutter and Sidewalk**



The highway would be designed to meet the capacity and safety needs for the 2037 design year. It would be designed to include the following:

- *Lanes* – Four travel lanes with a 34-foot median, four-foot wide shoulders on the left and eight-foot paved shoulder on the right, would transition to four travel lanes with a continuous 12-foot center turn lane and six-foot shoulders, curb, gutter and a five-foot

<sup>2</sup> AASHTO standards are outlined in the Roadside Design Guide 2011 (4<sup>th</sup> Edition).

wide sidewalk. This would match the existing US-95 cross sections at the South Fork Palouse River Bridge and south of Thorncreek Road.

- *Speed Limit* – The posted speed would be 65 mph for the four-lane divided highway section. It would be 35 mph or 45 mph (depending on the alternative) in the section with a four-lane highway with center turn lane, curb, gutter, and sidewalk at the north end of the project where there are no curves. It is possible that the speed limit could be increased in the future; however, this would require a speed limit study to be conducted.
- *Turn Lanes* – Right and left turn lanes would be constructed at all county road intersections.
- *Stormwater* – In the rural sections, a minimum one-foot deep, V-shaped ditch would be located on either side of the roadway in cut sections and in the center median. The urban section would have curbs and gutters and would be designed to meet the requirements of the National Pollutant Discharge Elimination System (NPDES) and treated in accordance with applicable state and federal laws. A Stormwater Pollution Prevention Plan (SWPPP) would be developed and implemented to comply with the Construction General Permit (CGP). Stormwater in this area would be collected and managed with temporary and permanent Best Management Practices (BMPs) such as grassy swales and check-dams, in order to meet the requirements of the CGP and Total Maximum Daily Loads (TMDLs).
- *Access* – The existing US-95 is currently designated as Statewide Access Control. The proposed US-95 Action Alternatives were designated as Expressway Access Control through an Idaho Transportation Board action on January 15 & 16, 2014. Expressway Access Control is a segment of a highway designated by the Idaho Transportation Board for use as a through highway, with partially controlled access, accessible only at locations specified by ITD, and characterized by medians, limited at-grade intersections, and high speeds. An existing segment of state highway may only be designated as an expressway if payment is made to adjacent property owners for the restriction of existing access rights [Idaho Administrative Procedures Act (IDAPA) 39.03.42].

While the District Engineer has the authority to approve a decrease in the spacing requirements for other access types, Expressway Access Control does not have spacing requirements; therefore, access is allowed only at locations designated by ITD which will be determined in collaboration with the landowner during the right-of-way process. This is stated in the IDAPA 39.03.42 Section 400.03, which is reflected in ITD's 0606 Form for Current Access Purchase Determination. A blank sample of the ITD 0606 Form that would be used is provided in the Safety Analysis Technical Report. ITD will be required to comply with their access policy and will have the regulatory power to limit access.



ITD would buy access rights from adjacent properties during right-of-way acquisition, and access will be recorded in the deeds. Existing approaches<sup>3</sup> would be allowed to remain at locations where construction of joint access is not economically justified. See Section 2.4.2, 4.10, Transportation Effects and Table 76. General Responses to Issues under Access for additional detail. The board agenda, minutes, and a blank sample of the ITD 0606 Form that would be used is provided in the Safety Analysis Technical Report.

- *Clear Zone* – The clear zone would be a minimum of 30 feet for the four-lane divided highway.
- *Vertical Grade* – The roadway would have a maximum of a five percent vertical grade.
- *Horizontal Curve* – The rural section would have a 2910-foot minimum radius at a 5.4 percent super elevation, which is adequate for a design speed of 70 mph. The urban section will have a 1760-foot minimum radius at a three percent super elevation, which is adequate for design speeds of 35 mph and 45 mph.
- *Stopping Sight Distance*<sup>4</sup> – the stopping sight distance would be a minimum of 730 feet, which is adequate for a design speed of 70 mph on level grades. This will increase or decrease depending on the grade.
- *LOS* – The LOS for the 2037 design year would be LOS A for both the rural section with the four-lane divided highway and the urban four-lane with center turn lane, curb, gutter and sidewalk.
- *Bicycle/Pedestrian Facilities* – The shoulders on the outside lanes of the highway in the rural and urban sections would be shared use lanes but would not be specifically marked for bicycle use. The five-lane section would have sidewalk for pedestrian use.

Adding a lane in each direction to create a four-lane section would alleviate the bottleneck caused by the existing two-lane segment, improving the capacity and traffic flow safely. Improving the grades, curves, stopping sight distance, access control and clear zone widths to meet AASHTO standards would improve the safety and capacity of the highway. The proposed actions would reduce the projected crash rate for this segment of US-95 by more than 50 percent.

## ES.4 Alternatives Screening

NEPA requires that a range of reasonable alternatives, including a No Action Alternative, be evaluated in detail. The Council on Environmental Quality (CEQ) defines “reasonable

---

<sup>3</sup> IDAPA 39.03.42 definition of approach is a connection between the outside edge of the shoulder or curb line and the abutting property at the highway right-of-way line, intended to provide access to and from said highway and the abutting property. An approach may include a driveway, alley, street road or highway.

<sup>4</sup> Stopping sight distance on a roadway should be sufficiently long to enable a vehicle traveling at or near the design speed to stop before reaching a stationary object in its path. The design speed for the proposed alternative is 70 mph for rural sections.

alternatives” as those that are practicable or feasible from a technical and economic standpoint and those that achieve the project’s purpose and need. The alternatives were developed in consideration of natural and social effects, engineering design considerations, and input from the public, agencies, and local elected officials. The alternatives were developed, evaluated and screened in two phases as summarized below. See the FEIS, Chapter 2, Alternatives and the Screening of Alternatives Technical Report for details.

**Level One.** The goal of the Level One screening process was to collect preliminary information and to evaluate broad transportation concepts. Early in the project scoping, traffic and safety data for the corridor was collected and analyzed. This information helped to identify the roadway deficiencies and to identify the project purpose and need.

In 2004 ITD conducted community interviews and implemented an extensive public involvement process to introduce the proposed project and obtain community input. See Chapter 7, Public Involvement and Agency Coordination. Key public and agency involvement opportunities during the DEIS development have included the following:

- An Interdisciplinary Team (IDT) was formed that included ITD, FHWA, US Army Corps of Engineers (USACE), Environmental Protection Agency (EPA), US Fish and Wildlife Service (USFWS), Idaho Department of Fish and Game (IDFG) and Idaho Department of Environmental Quality (IDEQ). They reviewed and provided comment on project information, technical reports and collaborated with FHWA and ITD on specific topics as needed.
- Monthly newsletters and monthly breakfast meetings featuring technical experts provided an opportunity for the public to learn about the project and to ask questions.
- A project website with project information and technical reports was used to inform and update the public during project development.
- Two-day public meetings and open houses were held in 2004, 2005 and 2006.
- A two-day public workshop for community members to review the range of alternatives and provide input was held in 2005.
- Postcard invitations were sent to all residents of Moscow and Genesee for key public involvement opportunities.
- A mobile project kiosk with project information and updates was placed at several public facilities in the area between November 2004 and June 2005.

Transportation concepts that were evaluated included the No Action, Action Alternative, Transportation System Management (TSM), Transportation Demand Management (TDM) and Mass Transit. The TSM, TDM and Mass Transit alternatives were not forwarded for further consideration because of the rural nature and low population density of the project area and

because they would not address the safety deficiencies of the existing roadway and therefore would not address the purpose and need. The No Action and Action Alternatives were forwarded for further consideration.

Design elements to address the roadway deficiencies were evaluated and incorporated into typical sections for the Action Alternatives. See ES.3, Proposed Solution and Section 1.4, Purpose and Need.

**Level Two.** The goal of the Level Two screening process was to identify a range of alternatives and to screen them. The No Action and 10 Action Alternatives were identified and categorized into the western, central and eastern corridors. These alternatives can be seen in Exhibit 4. Initial Alternatives.

One alternative from each corridor was forwarded for detailed analysis to give a range of alignment alternatives. Seven alternatives were eliminated from further consideration during the Level Two screening process. These alternatives were not advanced due to high adverse effects on the natural or built environment, less benefit compared to the other alternatives, or because they were similar to other alternatives that were advanced for detailed analysis. See Chapter 2, Alternatives, for detail regarding the screening process and rationale.

The alternatives' benefits and effects to the natural and human environments were evaluated and organized into a comparative spreadsheet. Criteria used to screen the alternatives are listed below.

- Air Quality
- Archaeological Sites
- Design Standards
- Displacements
- Environmental Justice
- Estimated Construction Cost
- Hazardous Materials
- Historic Sites
- Noise
- Plant Species and Communities of Concern
- Prime Farmland
- Regulatory Floodways and Floodplains
- Right-of-Way Acres
- Safety
- Socio-Economic
- State Sensitive Species
- Threatened and Endangered Species
- Ungulates
- Visual Analysis
- Water Quality
- Weather
- Wetlands and Tributaries

## **ES.5 DEIS Alternatives**

NEPA laws and regulations require that a No Action Alternative be considered in the range of reasonable alternatives. In addition to the No Action Alternative, three Action Alternatives were carried forward for detailed analysis in the DEIS, the W-4, C-3 and E-2 alternatives. See Exhibit 4. Initial Alternatives. All three Action Alternatives and the No Action Alternative were evaluated with the design elements as described in ES.3, Proposed Solution.

Exhibit 4. Initial Alternatives

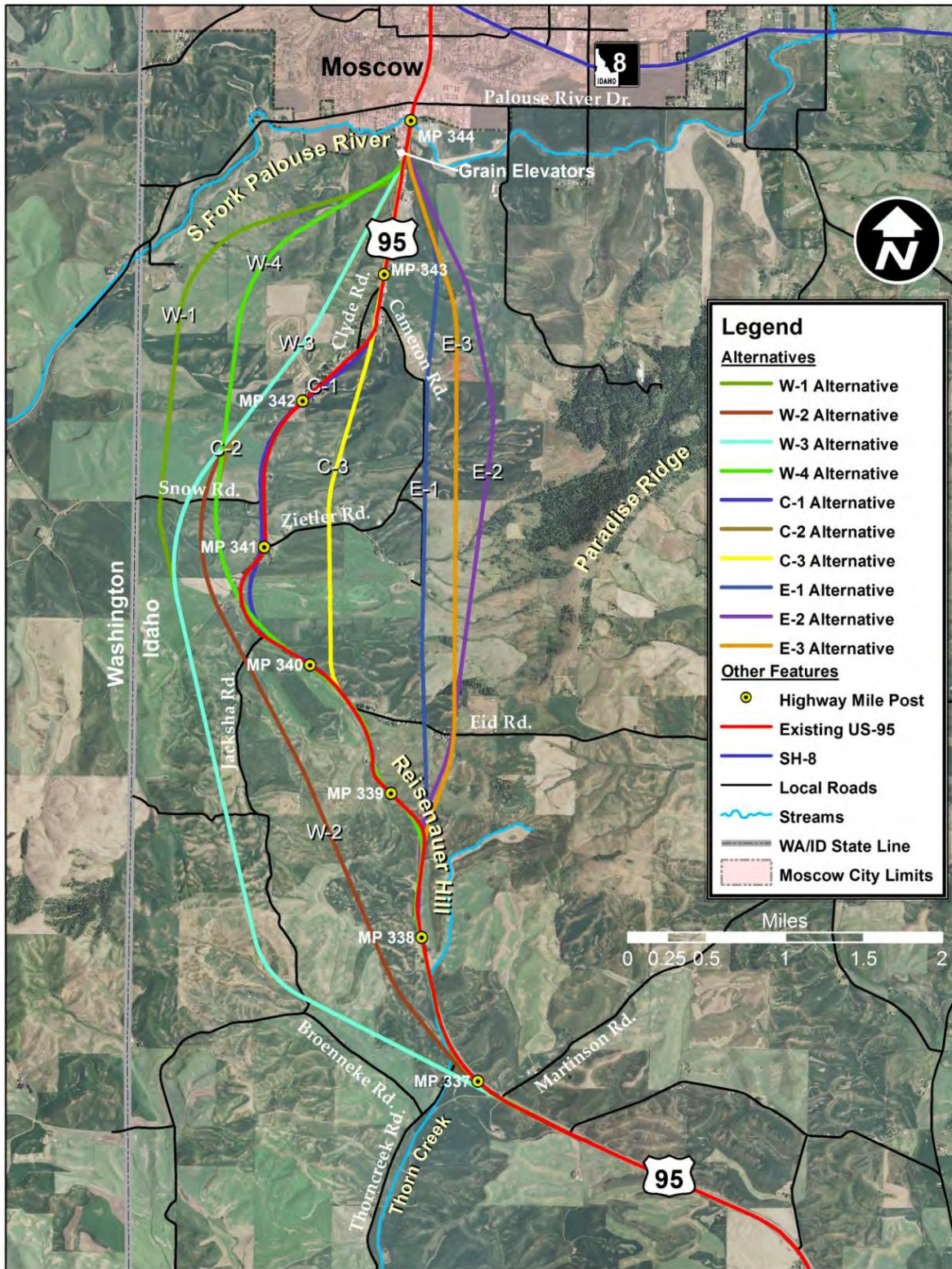
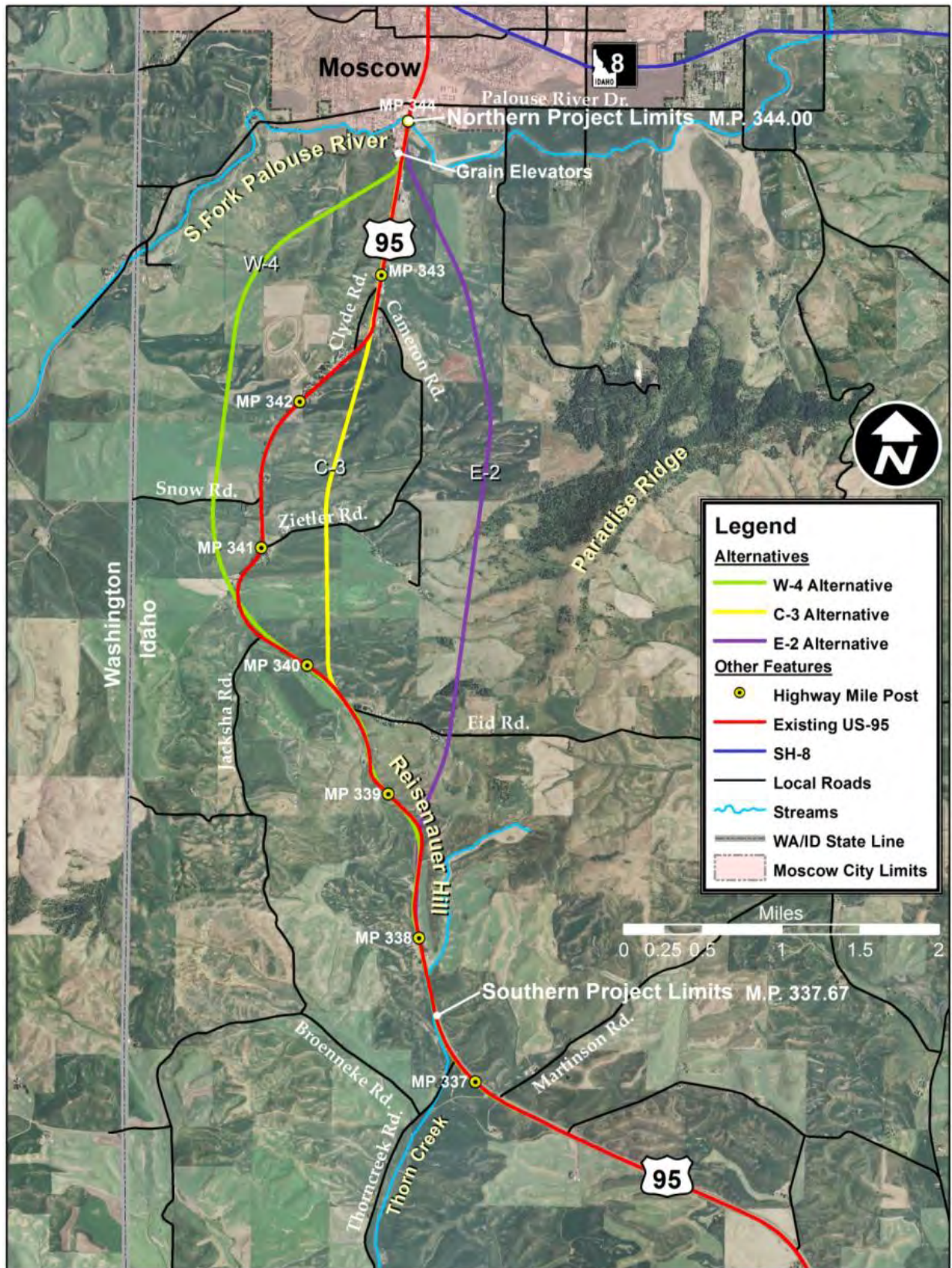


Exhibit 5. DEIS Alternatives



### ***No Action***

The No Action Alternative would not involve any major improvements to US-95 but would include short-term minor restoration activities to the existing 6.34-mile segment.

Improvements would include minor safety, paving and maintenance activities for the continued operation of the existing roadway. It would not involve improving or widening this segment of US-95 to meet AASHTO standards. The No Action Alternative provides a baseline for comparison of the other alternatives.

### ***W-4 Alternative***

The W-4 Alternative that was evaluated in the DEIS was shifted during the FEIS development to avoid a historic farmstead that is also a Section 4(f) Resource. This alternative is called the Modified W-4 Alternative and is evaluated in detail in this FEIS.

### ***Modified W-4***

This alternative would be approximately 6.65 miles long. It would begin at Thorncreek Road and would closely follow existing US-95 between Thorncreek and Jacksha roads. The alignment would then shift west of existing US-95. Modified W-4 would cross Snow Road, stay west of Clyde Hill and connect back into the existing US-95 near the grain elevators south of Moscow. Existing US-95 between Jacksha Road and the grain elevators (2.91 miles) may be turned over to the North Latah Highway District (NLHD). See Exhibits 13 –18. Alignment Alternatives in Chapter 2, Alternatives for more detail.

### ***C-3***

This alternative would be approximately 5.94 miles long. It would begin at Thorncreek Road and would closely follow existing US-95 to just north of Eid Road. The alignment would then shift to the east of existing US-95 and cross Zeitler Road. C-3 would connect back into existing US-95 just south of Cameron Road, near Johnson Trucking. From Johnson Trucking north to the South Fork of Palouse River Bridge this alternative would utilize the existing alignment. Existing US-95 north of Eid Road to south of Cameron Road (2.71 miles) may be turned over to the NLHD. See Exhibits 13 –18. Alignment Alternatives in Chapter 2, Alternatives for more detail.

### ***E-2 (Preferred Alternative)***

This alternative would be approximately 5.85 miles long. It would begin at Thorncreek Road and would closely follow existing US-95 to the top of Reisenauer Hill where it would then shift to the east of existing US-95. The alignment would connect back into existing US-95 near the grain elevators south of Moscow. Existing US-95 from the top of Reisenauer Hill to the grain elevators (5.43 miles) may be turned over to the NLHD. This is FHWA and ITD's Preferred Alternative. See Exhibits 13 –18. Alignment Alternatives in Chapter 2, Alternatives for more detail.

## ES.6 Alternative Benefits and Effects

Each of the four alternatives was analyzed for a full spectrum of environmental effects in compliance with 23 CFR 771 and FHWA Technical Advisory (TA) 6640.8A NEPA Implementation-Guidance for Preparing and Processing Environmental and Section 4(f) Documents. Information for the W-4 Alternative that was evaluated in the DEIS was replaced with information for the Modified W-4 Alternative. The major differences between alternatives are summarized in Table 3. Summary of Alternatives' Benefits and Effects. See Chapter 4, Environmental Consequences and the respective technical reports for details regarding the resources and effects.

**Table 3. Summary of Alternatives' Benefits and Effects**

Resources	Alternatives			
	No Action	Modified W-4	C-3	E-2
Predicted Crashes (total crashes 2017 through 2036)	642.5	244.9	260.2	213.9
Access Points	66	36	47	22
Residential Impacts	0	3	2	7
Potential Residential Impacts	0	2	5	6
Business Impacts	0	0	0	0
Potential Business Impacts	0	0	8*	0
Right-of-Way new/existing/total (acres)	0	206/45/251	154/55/ 209	207/22/229
Prime Farmland (acres)	0	49.7	25.1	50.8
Cultural/Section 4(f) Resources	0/0	0/0	0/0	0/0
Floodplains (acres)	0	1.6	1.8	0
Wetlands (acres)	0	1.85	0.99	3.61
Tributaries –# Crossings/Linear feet of affected channel	0	10/3,592	5/7,808	5/2,592
Hazardous Material Sites	0	4	13 (1 potential cleanup)	4
Noise Impacted Receptors **	9	No noise impacted receptors would remain after construction	No noise impacted receptors would remain after construction	1 noise impacted receptor would remain after construction
Construction /Total Cost (mil \$)***	0	52/62	43/58	46/55

\*The Green Acre RV stalls are counted as one business.

\*\* Noise impacted receptors that would be removed due to right-of-way acquisition are not included in these numbers.

\*\*\* The estimated cost includes excavation, rock ballast, plant mix, structures, traffic control and illumination. It excludes engineering, construction engineering, mitigation and right-of-way.



### ***No Action***

The No Action Alternative would include minor safety and maintenance projects; however, the narrow roadway, curves and steep grades would still not meet AASHTO standards. With the projected increase in traffic volumes the crash rate for the No Action Alternative is estimated to have 27.4 crashes in 2017. From 2017 through 2036 the No Action Alternative is estimated to have 642.5 crashes, with 256.5 of those crashes being fatal or injury crashes. The No Action would have a LOS D by 2037 and would be substantially more congested than existing conditions.

The No Action Alternative would not require right-of-way acquisition. It would have some environmental effects such as uncollected and untreated stormwater, the highest noise impacts, and air quality degradation, and would have some minor environmental effects but it would have the least overall effect. The No Action Alternative would have the worst safety and LOS compared to any of the Action Alternatives. It would not meet the project purpose and need.

### ***Modified W-4***

The Modified W-4 Alternative is aligned west of existing US-95 similar to the W-4 Alternative but a short section of the centerline was shifted approximately 120 ft east to avoid a historic farmstead. Modified W-4 would impact fewer residences than the E-2 Alternative and would have similar effects to hazardous materials compared to E-2. The Modified W-4 would have the greatest effects to farmlands, use the greatest total right-of-way and affect the greatest number of tributary crossings. It would not affect potential habitat for long-eared myotis and northern alligator lizard, and pygmy nuthatch habitat associated with ponderosa pine stands near Paradise Ridge. It would also have the greatest total fatal and injury crashes. Of the alternatives, the Modified W-4 Alternative would be the least consistent with the land use plans.

### ***C-3***

The C-3 Alternative would run closest to the current highway and would utilize much of the existing US-95 alignment. It is predicted to have the highest total number of crashes of the Action Alternatives. The primary differences between the C-3 Alternative and the other Action Alternatives are that C-3 would require the least amount of new right-of-way compared to Modified W-4 and E-2 but would have the greatest potential business impacts and affect the greatest number of hazardous material sites. It would have the greatest amount of floodplain impact and approximately three times the length of tributary channel compared to the E-2 Alternative. It would avoid the pine stands that are habitat for Pygmy nuthatch and potential habitat for northern alligator lizard and long-eared myotis, similarly to the Modified W-4. C-3 would also have the least wetland effects. It would have the fewest impacts to residences would be compatible with land use plans.

**E-2 (Preferred Alternative)**

E-2 is aligned east of existing US-95. The primary advantages of E-2 are that it is aligned through flatter topography, has the fewest number of approaches, and has the greatest safety improvement. E-2 would affect the least amount of tributary channel and would avoid floodplains. Similarly to the other alternatives, it would avoid cultural and Section 4(f) resources. The primary disadvantage of E-2 over the other alternatives is that it would be located in close proximity to Paradise Ridge which supports a Ponderosa pine stand and various shrubs that provide the best ungulate habitat in the project area (Sawyer 2010). E-2 would affect pine stands that are pygmy nuthatch habitat and potential habitat for long-eared myotis and northern alligator lizard. It would also have the highest noise impacts to residences of the action alternatives. The E-2 Alternative would have the greatest indirect effects to Palouse remnants, planned and ongoing Palouse restoration projects and a key conservation area for Spalding's catchfly recovery primarily due to potential weed establishment and spread outside the right-of-way compared to the other alternatives. E-2 would be compatible with land use plans.

**ES.7 Preferred Alternative**

The evaluation of effects during the screening process, detailed analyses presented in this FEIS, and the public and agency comments on the DEIS resulted in the lead agencies, FHWA and ITD, identifying the E-2 Alternative as the Preferred Alternative. The E-2 Alternative is identified as the Preferred Alternative for the following reasons:

- It would have the greatest safety improvement.
- It would have the fewest access points and at-grade county intersections.
- It would have the least effect to streams.
- It would avoid potential business impacts and floodplains.
- It would have the shortest five-lane typical section and overall shortest length.
- It best meets the project purpose and need.

**ES.8 Topics of Concern or Controversy**

During the public and agency involvement processes, it became evident through repeated written and verbal comments, that there were specific concerns and controversy related to the following topics:

- Effects of the E-2 Alternative on Paradise Ridge including effects to the Palouse remnants, weed dispersal, potential wildlife effects and mitigation for wildlife impacts
- Effects of weather on safety within corridors
- Visual impacts to Moscow residents

In response to public and agency concerns, FHWA and ITD prepared detailed studies and shared the findings through the extensive public involvement process and considered them in decision-making.

**Wildlife Habitat and Wildlife Movement.** IDFG, EPA and USFWS prefer the C-3 Alternative to the E-2 Alternative. This is primarily due to the E-2 Alternative's direct and indirect effects to wildlife, weed dispersal to Palouse remnants, and the effects to wildlife habitat and movement due to its proximity to Paradise Ridge and other native habitats. The primary reasons that C-3 was not identified as the Preferred Alternative were because it would have the greatest predicted total crashes with the greatest number of at-grade access points compared to the other Action Alternatives.

There has been disagreement between IDFG and ITD regarding appropriate mitigation for the direct and indirect effects due to the conversion of land that may be utilized by wildlife (privately-owned farmland and Conservation Reserve Program (CRP) land), which would be converted to highway right-of-way and therefore represents a loss in wildlife habitat. IDFG had prepared a wildlife assessment (IDFG 2006), which provided mitigation recommendations for the loss of habitat in the project area and the direct and indirect effects of alternatives on wildlife and wildlife habitat. Three other wildlife studies were also prepared which concluded wildlife species, including ungulates, may utilize the project area, which offers low to moderate quality habitat for wildlife. The eastern corridor has more suitable habitat than the central or western corridors. More suitable habitat is available north, south and east of the project area or concentrated in the gullies (Ruediger 2007).

While high quality habitat for ungulates is not present in the project area, the E-2 Alternative would have a greater effect on wildlife habitat than either Modified W-4 or C-3. Mitigation for direct habitat loss, indirect habitat loss, or loss of connectivity for moose or elk was reviewed in the report titled *Assessment of Potential Big Game Impacts and Mitigation Associated with Highway Alternatives from Thorncreek Road to Moscow* (Sawyer 2010). The report findings recommended future monitoring of wildlife crashes to determine whether future mitigation might be warranted in sections of E-2 but did not recommend other mitigations for ungulates.

Through a series of correspondence and meetings between 2007 and the FEIS publication, ITD and IDFG evaluated the impacts and discussed several mitigation options including, additional monitoring, wildlife crossing structures, ratio-based funding for Palouse Ecoregion restoration, and conservation projects, and additional funding to replace the roadway footprint. Many other specific wildlife mitigations were also suggested. Prior to the FEIS publication, IDFG agreed with ITD and FHWA's position to not provide monetary compensatory mitigation funds to IDFG. ITD and IDFG agreed upon other mitigation measures that compensate for identified

impacts, and will be incorporated into the project design to minimize harm to wildlife and habitat. ITD and IDFG will collaborate on the details of the mitigation measures before final design. See the FEIS, Section 4.8 Vegetation, Fish and Wildlife and Chapter 9, Environmental Commitments.

**Weather Conditions.** During the public meetings held from 2004 to 2006, weather as it pertained to safety was a major topic of concern. The public expressed concern that the topographic differences between the alternative corridors (west, central and east), could result in differing climatic conditions that could influence safety.

To respond to this concern, a detailed weather analysis was developed that evaluated the differences in the weather in three corridors. The study measured wind speed, precipitation, snow, and road ice over the five month winter period. This five-month data set was used to rank the larger 30+ year data set from the University of Idaho (UI) Plant Sciences Farm (PSF). The Weather Analysis was revised after the DEIS was published. The revised report is titled *Weather Analysis and Climate Study for US Highway 95, Thorncreek Road to Moscow, Four Proposed Alternatives, No-Build, W-4, C-3 and E-2 (Qualls 2014)* and provides additional year-round data and additional data on snow accumulation. It also offers clarification of weather principles. The studies concluded that while there may be minor variations in climatic conditions in the corridors, they were not substantial enough to warrant additional safety factors in the safety analysis.

The Modified W-4 and C-3 alternatives would descend at a steeper grade near Reisenauer Hill where snow accumulation is greater compared to the E-2 Alternative, which descends at a flatter grade further north where snow accumulation is less. However, the improvement of the lane widths, clear zones, steep grades and curves are more influential factors to safety and all the action alternatives would be designed to AASHTO standards and would be safe. Therefore, weather was considered when developing the design elements but will not be a major factor for comparing the alternatives. See Chapter 3, Affected Environment and Chapter 4, Environmental Consequences. Detail may be found in the Revised Weather Analysis (Qualls 2014).

**Visual.** There are differing opinions regarding the visual effects of the W-4 and E-2 alternatives and what may be an adverse impact to one person may not be to another. The Citizens for a Safe Highway 95, claiming to represent people collectively owning 80 percent of the land along E-2, were in favor of the E-2 Alternative due to the “spectacular view” of the Palouse and of the City of Moscow for travelers. They believe that the beauty of Paradise Ridge could transform the highway into a gateway for Moscow, and that E-2 could promote and preserve the Palouse landscape through scenic highway status. The group opposed alternative W-4, stating that it

would disrupt westerly views and promote farmland conversion disrupting the agricultural setting (HDR 2005a).

The Paradise Ridge Defense Coalition, who opposed the E-2 Alternative, felt the expansion of the roadway should follow the existing route as much as possible in order to minimize the ecological footprint of road. In the view of those opposed to an E-2 Alternative, the ridge should remain untouched because it provides both aesthetic and environmental value as one of the last remaining natural prairie in the area (HDR 2006).

### **ES.9 Planned Projects**

There are no other major transportation projects planned for the area. The Ring Road project is a planned loop around the City of Moscow that would permit through traffic on both US-95 and SH-8 to travel around the perimeter of the City; however, it is in a conceptual phase and no detailed alignment has been proposed, nor is project funding identified. The Ring Road Concept has been developed to a point that an alignment is proposed based on topographic conditions, expected design standards, and anticipated use. The alignment has been included in the adopted City of Moscow Comprehensive Plan, the Latah County Comprehensive Plan, and the North Latah County Highway District Transportation System Plan. While a final detailed alignment has not been developed, in the area of the interaction with the US-95 realignment project, the Ring Road alignment options are fairly limited and all of the action alternatives for the US-95 Thorncreek Road to Moscow project would be designed to accommodate future construction of the Ring Road Concept. See Chapter 6, Indirect and Cumulative Effects and Community Profile - Induced Development Technical Reports for more information regarding planned developments.

### **ES.10 Permits and Approvals**

If an Action Alternative is selected, then permits and approvals will be required and may include; Section 404 permits, NPDES Construction General Permit, Notice of Demolition, Section 401 Water Quality Certification, Stream Channel Alteration Permit and Floodplain permits. See Table 5. Permits and Approvals in Chapter 1, Introduction. Additional requirements for each alternative are listed in Chapter 9, Environmental Commitments.

### **ES.11 Next Steps**

FHWA and ITD have published a 30-day notice of availability in the Federal Register for this FEIS. FHWA will then issue a ROD selecting an Action Alternative, a combination of the Action Alternatives, or the No Action Alternative. The ROD will also provide the rationale for the decision and identify mitigation measures. See Exhibit 6. Typical EIS Process Diagram.