Final Right of Way Needs Report Huetter Corridor Study



FINAL RIGHT OF WAY NEEDS REPORT HUETTER CORRIDOR STUDY

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Kootenai Metropolitan Planning Organization

Ruen-Yeager & Associates, Inc.



Development of the Huetter Corridor Study - Right of Way Needs Report was a collaborative effort with the Kootenai Metropolitan Planning Organization, the Kootenai County Area Transportation Team (Project Strategic Advisory Committee), the project Team, and the public. Sincere thanks to all involved in the Study development.

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TABLE OF CONTENTS

CHAPTERS	
EXECUTIVE SUMMARY	i
I. INTRODUCTION	1
Corridor Study Purpose	1
Corridor Study Need	1
STUDY GOALS	2
PURPOSE – RIGHT OF WAY NEEDS MAP	4
RIGHT OF WAY NEEDS MAP STATUTORY AUTHORITY	4
PROTECTIVE BUYING AND HARDSHIP RIGHT OF WAY ACQUISITION	5
II. HUETTER ROAD CORRIDOR STUDY PROCESS	7
Project Sponsor	7
Project History	8
Study Area	8
Public Involvement	10
III. ALIGNMENT ALTERNATIVES	12
TRAFFIC PROJECTIONS	12
GREENSFERRY ALTERNATIVE	12
ALIGNMENT ALTERNATIVES AND PREFERRED ALIGNMENT	16
FACILITY TYPE AND FEATURES	17
RIGHT OF WAY NEEDS MAP ANALYSES	20
IV. ENVIRONMENTAL SCAN	46
INTRODUCTION	46
CURRENT LAND USE / ZONING	46
Environmental Justice	52
BIOLOGICAL RESOURCES	54
WETLANDS AND WATER RESOURCES	59
Cultural Resources	59
SECTION 4(F) PROPERTIES	62
NOISE	63
HAZARDOUS MATERIALS AND WASTE	65
Environmental Conclusions	67
V. RIGHT OF WAY NEEDS MAP IMPLEMENTATION	69
RIGHT OF WAY PRESERVATION PROCESS	69
HUETTER CORRIDOR - NEXT STEPS	71

FIGURES

FIGURE 1.	RIGHT OF WAY NEEDS MAP	iv
FIGURE 2.	VICINITY MAP	
FIGURE 3.	Original Study Area	9
FIGURE 4.	REFINED STUDY AREA	
FIGURE 5.	AVERAGE WEEKDAY TRAFFIC VOLUMES	
FIGURE 6.	GREENSFERRY AND HUETTER CORRIDOR ADJACENT LAND USES	14
FIGURE 7.	INITIAL POTENTIAL ALIGNMENTS	
FIGURE 8.	REFINED ALIGNMENTS	19
FIGURE 9.	EAST-WEST ARTERIAL TYPICAL INTERCHANGE / INTERSECTION	
FIGURE 10.	MAINLINE TYPICAL ROADWAY SECTION	
FIGURE 11.	TYPICAL SECTION	
FIGURE 12.	WEST FRONTAGE ROAD OPTIONS	
FIGURE 13.	EAST FRONTAGE ROAD OPTIONS	
FIGURE 14.	NON-LINEAR FRONTAGE ROAD OPTION	
FIGURE 15.	SELTICE WAY CONNECTION PLAN	
FIGURE 16.	SELTICE WAY CONNECTION PROFILE	30
FIGURE 17.	INTERSTATE 90 JUNCTION STRUCTURE TYPES	
FIGURE 18.	ALIGNMENT OPTIONS	
FIGURE 19.	LAND USE	
FIGURE 20.	INFRASTRUCTURE	50
FIGURE 21.	NATURAL RESOURCES	55
FIGURE 22.	HAZARDOUS MATERIALS AND WASTE	66
FIGURE 23.	HUETTER CORRIDOR RIGHT OF WAY NEEDS MAP	

TABLES

TABLE 1.	CORRIDOR OPTIONS TRAFFIC COMPARISON	15
TABLE 2.	V/C RATIO THRESHOLDS	15
TABLE 3.	VOLUME TO CAPACITY RATIO RANGES	16
TABLE 4.	CORRIDOR OPTIONS RIGHT OF WAY COMPARISON	16
TABLE 5.	INTERSTATE 90 INTERCHANGE ANALYSIS SUMMARY	41
TABLE 6.	FACILITY CROSS-SECTIONAL MINIMUM DIMENSION SUMMARY	44
TABLE 7.	LAND USE AND ZONING WITHIN THE PROJECT CORRIDOR	47
TABLE 8.	MAJOR LAND USES WITHIN THE CORRIDOR STUDY AREA	51
TABLE 9.	MINORITY POPULATION IN THE PROJECT VICINITY	53
TABLE 10.	LOW INCOME POPULATION IN THE PROJECT VICINITY	53

TABLE 11.	SPECIES FOR KOOTENAI COUNTY FEDERALLY LISTED UNDER THE ENDANGERED SPECIES ACT	. 54
TABLE 12.	ADDITIONAL SPECIES FOR KOOTENAI COUNTY WITH SPECIAL STATE PROTECTION STATUS (SPECIES OF GREATEST CONSERVATION NEED)	. 56
TABLE 13.	ARCHEOLOGICAL RESOURCES IN THE PROJECT VICINITY	60
TABLE 14.	IDAHO ARCHEOLOGICAL SURVEYS IN THE PROJECT VICINITY	61
TABLE 15.	FHWA NOISE ABATEMENT CRITERIA	. 64
TABLE 16.	SELECTED NOISE SENSITIVE RESOURCES IN THE CORRIDOR STUDY AREA	. 64
TABLE 17.	HAZARDOUS SITES IN HUETTER CORRIDOR	. 65

APPENDIX

- APPENDIX A PROTECTIVE BUY AND HARDSHIP ACQUISITION
- APPENDIX B FREQUENTLY ASKED QUESTIONS
- APPENDIX C PUBLIC COMMENTS
- APPENDIX D GREENSFERRY ROAD ALTERNATIVE
- APPENDIX E IDAHO TRANSPORTATION DEPARTMENT ACCESS MANAGEMENT POLICY
- APPENDIX F FEDERAL HIGHWAY ADMINISTRATION ADDITIONAL INTERCHANGES POLICY
- APPENDIX G HUETTER CORRIDOR SUMMARY
- APPENDIX H ENVIRONMENTAL SCAN REFERENCES
- APPENDIX I HUETTER CORRIDOR RIGHT OF WAY PRESERVATION IMPLEMENTATION POLICY

EXECUTIVE SUMMARY

KMPO has studied the potential for a north-south roadway between US Highway 95 and State Highway 41 to serve existing traffic and future transportation growth on the Rathdrum Prairie and meet regional mobility needs. Previous studies and current development patterns within Kootenai County and the Cities of Rathdrum, Post Falls, Coeur d'Alene, and Hayden have identified significant increases for future travel demand within the study area. Specifically, projected growth within the area will result in future capacity issues on the existing transportation network and require preservation of right of way for future roadway facilities. This report presents the Right of Way Needs Map prepared for the Huetter Corridor Study.

The Huetter Road area has long been discussed as a potential corridor for a new major transportation route. The overall goals of the Right of Way Needs Study were:

- Determine Corridor right of way needs (Primary Goal).
- Provide an alignment that minimizes and supports right of way needs.
- Establish a right of way preservation process.
- Determine general right of way width requirements.
- Minimize right of way acquisition needs ("smallest footprint").
- Minimize impacts to existing / planned developments, utility substations, and the Coeur d'Alene Airport.
- Minimize impacts to existing Huetter Road properties and accesses.

Figure 1 provides the Right of Way Needs Map adopted by the Kootenai Metropolitan Planning Organization Board on August 2, 2007. The corridor generally follows and occupies the existing Huetter Road right of way and parallels the Spokane International / Union Pacific Railroad right of way (north of Lancaster Avenue) connecting Interstate 90 to US Highway 95 at State Highway 53. The right of way footprint illustrated provides for a:

- High-Speed Facility with a design speed of 70 MPH (Type V facility with no direct access allowed to the facility except at interchanges under the Idaho Transportation Department Access Management Policy).
- Grade separated facility (approximately 25 feet below the existing grade surface).
- Pedestrian / bicycle trail generally paralleling the west side of the facility.
- Parallel frontage road (relocated Huetter Road) on the west side of the Huetter Corridor.
- Multi-use corridor for potential land application of treated effluent wastewater to help mitigate noise and visual impacts and provide for dual use of a public facility by agencies.
- Right of way footprint that adequately addresses the needs of a four lane facility with six lane capability to meet future needs.
- Local arterials Poleline Avenue, Prairie Avenue, Hayden Avenue, Wyoming Avenue, and Lancaster Avenue are five lane roads at-grade separated arterials.

- Potential at-grade fully directional interchange at:
 - Interstate 90
 - Poleline Avenue
 - Prairie Avenue
 - Hayden Avenue
 - Wyoming Avenue
 - Lancaster Avenue
 - Junction of State Highway 53 / US Highway 95

Through the study process, multiple draft alignment options were considered, as well as the north and south extents of the study area. These options utilized the existing roadways and railroad rights of way, with a northern connection in the vicinity of State Highway 53 and a southern connection along Interstate 90 and Seltice Way.

Originally, the study would have included an extension south over the Spokane River connecting to US Highway 95 in the Cougar Gulch area or south of the gulch at another location. Due to the current prevailing and projected travel patterns (directionally north / south - north of Interstate 90 and directionally east / west - west of US Highway 95) and low through traffic volume demands on US 95 south of Interstate 90 (less than ten percent); the southern extent of the study area would be limited to a refined study corridor north of Interstate 90. Primarily if the study segment north of Interstate 90 did not address the area's future transportation needs, then the study segment south of Interstate 90 would not meet the purpose and need of the study. As borne out by the study data, it was determined that the need for a facility for only the segment north of Interstate 90 to State Highway 53 was warranted at this time.

Three south Sub-Options were reviewed for the Interstate 90 / Huetter Mainline interchange and two north Sub-Options were reviewed for the Corridor segment parallel to the Spokane International / Union Pacific Railroad right of way. At the southern end of the Corridor, the *Ravine and West Huetter Sub-Options* impact the least amount of developable property by taking advantage of topography and aligning with the existing Huetter Road right of way sooner. The *North Railroad Sub-Option* is needed only if the railroad right of way is not abandoned with the Bridging the Valley Project (KMPO, 2004). The Bridging the Valley project would combine both the Burlington Northern Santa Fe (BNSF) railroad mainline track with the Union Pacific Railroad mainline track in one rail corridor using the BNSF alignment.

Of the Sub-Option alignments, the preferred selected alignment incorporates a hybrid of the corridor alignments including, *Ravine Sub-Option, West Huetter Alignment to* Prairie Avenue, transitioning to the *east side of Huetter Road* north of Prairie Avenue, then northeasterly as the *North Railroad Sub-Option* along the west side of the Spokane International / Union Pacific Railroad right of way to the junction of US Highway 95 and State Highway 53. A relocated Huetter Road serving as the frontage road for the facility would parallel the corridor in a non-linear alignment from Mullan Avenue to approximately one quarter mile north of Wyoming Avenue.

The Right of Way Needs Map as presented in this study is a tool for the local and regional planning efforts. Appropriate approval and adoption of the map by the Kootenai Metropolitan

Planning Organization, the Post Falls and Lakes Highway Districts, Kootenai County, the Cities of Rathdrum, Post Falls, Coeur d'Alene, and Hayden, and the Idaho Transportation Department assures its place in the planning process. The use of the map should be considered as a proactive measure and an opportunity to preserve right of way along the future transportation facility corridor. At a minimum, the map can be used in an advisory capacity for local jurisdictions when working with developers or, in a more regulatory capacity, the map can be adopted as part of the jurisdiction's planning documents that requires developers to set aside land through dedication or permanent restrictive easement to meet future transportation needs.

The next steps in the Huetter Corridor Study will be to complete the Federal Highway Administration (FHWA) / ITD Access Point Decision Report and the Conceptual Design process to determine the "Preferred Alternative" through the National Environmental Policy Act (NEPA) process, which would entail preparation of a categorical exclusion, environmental assessment, or environmental impact statement. A public involvement and technical advisory process will also be included.



I. INTRODUCTION

KMPO has studied the potential for a north-south roadway between US 95 and SH 41 to serve future transportation growth on the Rathdrum Prairie and meet future regional mobility needs. Previous studies and current development patterns within the County and specifically on the Rathdrum Prairie have identified significant increases for future travel demand within the Corridor. Projected growth within the area will result in capacity issues on the existing transportation network and requires preservation of right of way for future transportation facilities.

The potential for Huetter Road to become a major north-south corridor has been discussed for many years, and it has been on the Kootenai County long-range transportation plan map as adopted August 25, 1998. Various studies over the past few years such as the Kootenai County Transportation Plan (KMPO, October, 2007), the US 95 Corridor Study (October, 2003), and current development patterns within the County have identified significant increases for future travel demand within the area between US 95 and SH 41. Projected traffic growth will not be addressed even with improvements to both the US 95 and SH 41 corridors without additional capacity improvements within the Huetter Corridor study area (KMPO Travel Demand Model Year 2030 forecast travel demands).

The preparation of the Right of Way Needs Report and Map addresses future travel demand within the Huetter Corridor. This report through agency adoption and implementation provides a vehicle to preserve the Corridor right of way.

CORRIDOR STUDY PURPOSE

Previous studies and current development within Kootenai County have identified future travel demand primarily north of Interstate 90 connecting to US 95. Growth within the area will result in future capacity issues on the existing transportation network and will require preservation of right of way for future transportation facilities. The intent of the corridor study was to address future mobility needs in Kootenai County. The final study purpose developed with the KMPO and the Strategic Advisory Committee was:

The overall purpose of the Huetter Road Corridor Study is to determine the right of way need for an improved roadway to the existing transportation facilities to address future mobility needs in Kootenai County, parallel to existing US 95 and SH 41.

CORRIDOR STUDY NEED

The need for the study was a direct response to:

- KMPO Travel Demand Model results for year 2030
- County and City development trends
- Capacity issues on other roadways
- Need for preservation of right of way for future facilities
- The desired facility type to provide a high-speed to high-speed facility
- Need to address multi-modal transportation

• Need to address future transportation capacity within the study area

The Kootenai County Metropolitan Planning Organization (KMPO) Board is the agency responsible for transportation planning and travel demand modeling at the regional level within Kootenai County and serves as a coordinator of all multi-modal planning within the County. As such, the Board reviewed three types of potential transportation facilities to address future north / south capacity needs:

- Controlled Access Facility (High-Speed to High-Speed): Design speed of 70 MPH with grade separated interchanges at key arterial connections (Interstate 90, Prairie Avenue, and US 95), with limited access frontage road.
- Managed Access Facility (High-Speed to Mid-Speed): Design speed of 45 MPH, Urban Principal Arterial with managed access, interchanges located at approximately mile spacing within the corridor.
- Urban Principal Arterial (High-Speed to Low-Speed): Design speed of 35 MPH, at-grade facility, no direct parcel access, and traffic signal controlled intersecting roadways.

Figure 2 illustrates the project's vicinity and location of the Huetter Corridor. Previous studies and current development patterns within the County have identified significant increases for future travel demand within the corridor.

STUDY GOALS

The goals of the Huetter Corridor Study were:

- Determine Corridor right of way needs (Primary Goal).
- Establish a right of way preservation process.
- Determine general right of way width requirements.
- Minimize right of way acquisition needs ("smallest footprint").
- Minimize impacts to existing and planned developments, utility substations, and the Coeur d'Alene Airport.
- Minimize impacts to existing Huetter Road, study area properties, and existing and future accesses.
- Provide an alignment and layout that supports potential right of way needs.

A number of sub-goals for the Huetter Corridor Study were identified and used in the study process:

- Protect future transportation investments through identification of long-range right of way needs and implementation controls.
- Provide an alternate route for some US 95 and SH 41 traffic to meet regional travel demand.
- Through intergovernmental coordination, address regional transportation issues and future land use needs.



- Enhance traffic operations to improve safety through roadway design, traffic controls, and access management within the Corridor.
- Alleviate future operational deficiencies on parallel corridors through additional parallel arterial capacity.
- Consider multi-modal needs through the alternatives analyses and linkages to existing and planned facilities and services, such as pedestrian / bicycle and transit improvements.
- Enhance regional freight and goods movement within Kootenai County for economic development opportunities.
- Provide access management controls along the Corridor and roadway improvements to promote traffic safety and efficient operations.
- Through a collaborative process with Corridor stakeholders, the public, and agencies of jurisdiction within Kootenai County, seek to determine regional needs and develop appropriate solutions.

Key products of the study include a determination of where the new route would likely be constructed and how much right of way to set aside; an environmental scan; and policy direction for preserving a right of way corridor as adjacent properties develop and the region continues to grow.

Several conceptual alignments were examined for the Huetter Corridor, along with an alternative proposal to develop an alignment within a Greensferry Road Corridor connecting to the US 95 / SH 53 junction instead of the Huetter Corridor alignment. Based on an examination of future travel demands and regional mobility needs, a four to six lane controlled access facility was envisioned that would serve high-speed traffic. On August 2, 2007, after reviewing technical information and considering public and agency comments, the KMPO Board adopted an alignment for the future Huetter Corridor. Based upon Board discussions, it was determined that future capacity needs would best be served with the Huetter Corridor alignment, which may potentially replace the current portion of US 95 between Interstate 90 and State Highway 53.

PURPOSE – RIGHT OF WAY NEEDS MAP

The purpose of the Right of Way Needs Map is to identify a future transportation facility's right of way requirements along the Preferred Alignment, as determined by the study's purpose and need. As discussed above, the overall study's purpose and goals have, within their definition and scope, many references that establish why the Right of Way Needs Map development process is necessary. For example, future growth within the area is projected to create traffic demand issues on existing transportation facilities, thereby requiring the preservation of right of way for future facilities. Preservation of the Corridor right of way protects future transportation investments and can provide an alternate route for existing roadways that address future land use.

RIGHT OF WAY NEEDS MAP STATUTORY AUTHORITY

The Right of Way Needs Map was developed using a process consistent with Idaho Code. Specifically, **Title 67, Chapter 65, Local Land Use Planning, Section 67-6517,** which states:

"Future Acquisitions Map. Upon recommendation of the Planning or Planning and Zoning Commission, each governing board may adopt, amend, or repeal a future acquisitions map in accordance with the notice and hearing procedures provided in section 67-6509, Idaho Code. The map shall designate land proposed for acquisition by a public agency for a maximum twenty (20) year period. Lands designated for acquisition may include land for:

- a) Streets, roads, or other public ways, or transportation facilities proposed for construction or alteration;
- b) Proposed schools, airports, or other public buildings;
- c) Proposed parks or other open spaces;
- d) Lands for other public purposes."

Title 40, Section 605 of the Idaho Code also provides:

"Commissioners may lay out new highways within the county as they determine to be necessary."

Title 40, Section 202 of Idaho Code details the method for designation of highways and public right of ways. This step, the development of a Right of Way Needs Map, is being prepared as specifically described in Title 40, Section 202(a) of the Idaho Code:

"(a) The Board of County or Highway District Commissioners shall cause a map to be prepared showing the general location of each highway and public right of way in their jurisdiction, and the Commissioners shall cause notice to be given of intention to adopt the map as the official map of that system, and shall specify the time and place at which all interested persons may be heard."

The Right of Way Needs Map is also allowed under the Federal Highways Administration under Title 23: Highways, Part 710 - Right of Way and Real Estate, Subpart E - Property Acquisition Alternatives, Section 710.501 Early Acquisition:

"(a) *Real Property Acquisition*. The State may initiate acquisition of real property at any time it has the legal authority to do so based on program or project consideration. The State may undertake early acquisition for corridor preservation, access management, or other purposes."

PROTECTIVE BUYING AND HARDSHIP RIGHT OF WAY ACQUISITION

In the event that properties need to be acquired to secure the future right of way, an alternate process is provided under the Protective Buying and Hardship Right of Way Acquisition, 23 CFR 710.503. This action can be used to assist in the corridor preservation process.

Under normal circumstances, the acquisition of right of way with Federal-aid funds cannot proceed until after the environmental approval for the project has been issued. At times, circumstances may justify an exception to the process by allowing the acquisition of a limited number of properties prior to the completion of environmental process. The two situations for which FHWA can grant such an exception are:

• **Protective Buying:** The early acquisition of a particular parcel or limited number of parcels to prevent imminent development and increased costs on the preferred location.

• **Hardship Acquisition:** The early acquisition of a particular parcel or limited number of parcels to alleviate hardship to a property owner or owners on the preferred location.

The text for the Protective Buying and Hardship Right of Way Acquisition, 23 CFR 710.503 is found in the Appendices of this report.

II. HUETTER ROAD CORRIDOR STUDY PROCESS

This chapter introduces the project's sponsor, provides a project history, and establishes the context for which the Right of Way Needs Map is completed.

PROJECT SPONSOR

The Huetter Road Corridor Study's sponsor is the Kootenai County Metropolitan Planning Organization (KMPO). The KMPO Board is the agency responsible for transportation planning and travel demand modeling at the regional level within Kootenai County and serves as a coordinator of all multi-modal planning within the County. The KMPO provides a coordinated planning effort between the public, cities, small towns, Highway Districts, County, state, transit providers, and the Coeur d'Alene Tribe. The KMPO Board consists of representatives from the Cities of Coeur d'Alene, Hayden, Post Falls, Rathdrum, Idaho Transportation Department (ITD), Kootenai County, East Side Highway District, Lakes Highway District, Post Falls Highway District, and Worley Highway District. The KMPO has a technical advisory transportation committee, Kootenai County Area Transportation Team (KCATT). The KCATT meets monthly to discuss and advise the KMPO Board on technical transportation issues. The KCATT also served as the Strategic Advisory Committee for the study.



PROJECT HISTORY

The corridor has been considered as a viable future transportation route in Kootenai County for a number of years. The project has been included in prior study efforts:

- Project was first formally considered and adopted in *Kootenai County Transportation Plan (KCATT)*, 1997 – 2017.
 - Plan development included public involvement efforts.
 - KCATT Plan recommended an upgraded facility connecting US 95 at SH 53, to Interstate 90 in the Huetter Road area, and south across the Spokane River connecting to US 95.
- Included in the US 95 Corridor Plan as the Huetter Bypass or Alternate Route for US 95.
 - Study started in Summer 2000.
 - Plan included extensive public involvement process.
 - Recommended as a study 'Short Term Improvement' to preserve right of way along Huetter Road.
 - Recommended as a study 'Long Term Project' to construct a high-speed facility along existing US 95 or an alternate route.
- Current Huetter Corridor Study is a continuation of prior efforts.

The Huetter Corridor Study provides the foundation for the Right of Way Needs Map. Current and forecast travel demands were used from the regional travel demand model maintained by KMPO. The model's results illustrate that future traffic volumes and system capacity deficiencies cannot be accommodated without additional transportation system improvements. These findings from the travel demand model, which support the project's purpose and need, have led to the development of a Right of Way Needs Map.

STUDY AREA

As stated in the project's goals, the study provides an alternate route for some of the US 95 and SH 41 traffic to meet regional mobility needs. Therefore, at the inception of the Huetter Road Corridor study, a wide breadth of north and south travel within Kootenai County was examined. As illustrated in Figure 3, the project's original Study Area was generally bounded by Meyer Road on the west, SH 53 on the north, Atlas Road on the east, and US 95 south of the Spokane River. Originally, the study would have included a facility extension over the Spokane River connecting to US Highway 95 in the Cougar Gulch area or further south.





Initial analysis of the Study Area south of the Spokane River yielded many obstacles to providing a route that by-passed much of the congestion at the Interstate 90 and US 95 interchange. These obstacles include locating a feasible and community endorsable location for a new Spokane River crossing, developing a new facility over difficult and significant vertical grades and terrain found south of the river, and avoiding potentially large impacts to existing private properties and existing conservation easements. Thus, it was determined by KMPO to exclude, at this time, the area south of the Spokane River and focus corridor planning efforts north of Interstate 90. Figure 4 illustrates the revised Corridor Study Area.

PUBLIC INVOLVEMENT

The study included an extensive public involvement effort with several formal and informal presentations, open house meetings, and opportunities for comments from local jurisdictions, the KMPO, and local developers and landowners. In addition to the public meetings, project information was posted to the KMPO website and was updated regularly to include project related information. These meetings were instrumental in gathering background information regarding future growth and future facility needs. Comments received helped guide the development process



Public Open House in Post Falls

and form the final Right of Way Needs Map. Conducting individual agency meetings as well as a number of KMPO Board meetings served as a venue for public input and discussion of the study. A "Frequently Asked Questions" paper was also developed for the study.

The dates and agencies presentations are listed below:

D

Date	Participant
January 12, 2006	Associated Highway Districts of Kootenai County
January 24, 2006	KCATT
February 2, 2006	KMPO
February 3, 2006	City of Post Falls
February 3, 2006	Post Falls Highway District
February 9, 2006	City of Coeur d'Alene
February 10, 2006	City of Hayden
February 10, 2006	Lakes Highway District
February 10, 2006	Kootenai County

The Frequently Asked Questions paper and summaries of Public Comments received are included in the Appendices of this report.



III. ALIGNMENT ALTERNATIVES

TRAFFIC PROJECTIONS

Using the KMPO travel demand model, both existing and future traffic volumes were reviewed to assess the need for a facility between SH 41 and US 95. Traffic volumes for the average weekday were reviewed for other arterial routes within the area. As shown on Figure 5, traffic volumes are projected to increase significantly by 2030. Traffic volumes for the years 2003 and 2030 indicated that a new facility could address future transportation needs within the study corridor.

GREENSFERRY ALTERNATIVE

As a result of the KMPO Board meeting on November 2, 2006, a Greensferry Corridor was suggested as an alternative to the Huetter Corridor option to provide connectivity from Interstate 90 to US 95. The City of Post Falls has been pursuing a Greensferry Road Overpass / Interchange to address local circulation needs for several years. The subsequent analyses for the Greensferry option included updating the KMPO travel demand model for the forecast year 2030, a comparison of parcels that would be impacted by the options, and planning level cost estimates of potential right of way acquisition for both the Greensferry and Huetter alternatives. Figure 6 provides a comparison of land uses for both corridors.



A summary of the traffic volumes and subsequent volume to capacity ratios (Table 1) were compared to

assess which corridor would have the greatest benefit in addressing future traffic demands. The volume to capacity ratio is a measure of the result of the flow rate of a roadway lane divided by the capacity of the roadway lane.

The v/c ratio, also referred to as degree of saturation, represents the sufficiency of an intersection to accommodate the vehicular demand. A v/c ratio less than 0.85 generally indicates that adequate capacity is available and vehicles are not expected to experience significant queues and delays. As the v/c ratio approaches 1.0, traffic flow may become unstable, and delay and



queuing conditions may occur. Once the demand exceeds the capacity (a v/c ratio greater than 1.0), traffic flow is unstable and excessive delay and queuing is expected. For design purposes, a v/c ratio between 0.85 and 0.95 generally is used for the peak hour of the horizon year (generally 20 years out). Overdesigning of an intersection should be avoided due to negative impacts to pedestrians associated with wider street crossings, the potential for speeding, land use impacts, and cost.





Table 1. Corridor Options Traffic Comparison							
Corridor Options with Resulting US 95 Traffic		Greensferry		Huetter		US 95	
Intersecting Roadways	Direction	Volumes	V/C	Volumes	V/C	Greensferry Option V/C	Huetter Option V/C
Interstate 00	NB	1,580	.40	1,750	.44	.36	.33
Interstate 90	SB	1,700	.43	1,090	.30	.26	.26
Prairie Avenue	NB	780	.20	1,510	.38	.77	.77
	SB	790	.20	1,370	.34	.33	.32
Haudan Ayanya	NB	780	.20	1,410	.35	.75	.73
Hayden Avenue	SB	790	.20	1,120	.28	.46	.44
Lancaster Road	NB	510	.14	300	.08	.33	.32
	SB	260	.07	290	.08	.17	.13
Corridor Average Volume to Capacity Ratio		NB	.24		.31	.55	.54
		SB	.23		.25	.31	.29
Source: KMPO Travel Demand Model							

For comparison purposes (Table 2), the assessment of traffic operations using volume to capacity ratio thresholds gives a general indication of traffic delays and flow.

Table 2. V/C Ratio Thresholds				
Critical Volume-to- Capacity Ratio	Assessment			
< 0.85	Intersection is operating under capacity. Excessive delays are not experienced.			
0.85-0.95	Intersection is operating near its capacity. Higher delays may be expected, but continuously increasing queues should not occur.			
0.95-1.0	Unstable flow results in a wide range of delay. Intersection improvements will be required soon to avoid excessive delays.			
> 1.0	The demand exceeds the available capacity of the intersection. Excessive delays and queuing are anticipated.			
Source: U.S. Department of Transportation Federal Highway Administration: Highway Capacity Manual, 2000, Chapter 7 – Operational Analysis Method				

Again for comparison purposes, the KMPO Metropolitan Transportation Plan uses the following to equate volume to capacity ratios to level of service (Table 3).

Table 3. Volume to Capacity Ratio Ranges				
Approximate Levels of Service	Traffic Operations			
LOS A	0.00 - 0.60			
LOS B	0.61 - 0.70			
LOS C	0.71 - 0.80			
LOS D	0.81 - 0.90			
LOS E	0.91 – 1.00			
LOS F	> 1.00			

As illustrated in Table 4, based upon the review of right of way costs and acres of land use impacted by the facility, as well as the volume to capacity ratios (Table 1) of the Huetter Corridor versus the Greensferry Alternative and the relative improvements to the US 95 intersection, the KMPO Board reaffirmed their decision to only consider the Huetter Corridor as it better met the study purpose and need.

Table 4. Corridor Options Right of Way Comparison				
Comparison Criteria	Greensferry Corridor	Huetter Corridor		
Number of Parcels Impacted	694	399		
Acres of Land Impacted	3,080	2,544		
Corridor Shared Parcels and Acres	23 / 675	23 / 675		
Estimated Corridor Influence Area Property Values	\$580,411,830	\$377,162,210		
Corridor Comparative Cost Difference	154% greater than Huetter Corridor cost			
Source: KMPO, 2006.				

The Greensferry Road Corridor alternative summary is provided in the Appendices of this report.

ALIGNMENT ALTERNATIVES AND PREFERRED ALIGNMENT

Based on the revised Corridor study area (Figure 4), potential facility alignments were analyzed. Figures 7 and 8 summarize the progression of alignments examined. As illustrated, the existing

Huetter Road is at the core of all alignments analyzed. Huetter Road is an established right of way, centrally located between US 95 and SH 41, where future growth and transportation capacity needs are projected. In the end, KMPO determined that the Preferred Alignment, "Option1d", best fit the project's overall purpose and need. The Preferred Alignment connects to Interstate 90 east of the existing Huetter Rest Area / Idaho Port of Entry, travels north generally along the existing Huetter Road to Lancaster Avenue and then northeasterly paralleling the Spokane International Railroad - Union Pacific Railroad right of way, and connects to US 95 at SH 53.

It should be noted that the term "Preferred Alignment" defined in this report is being used in the context of establishing the project's Right of Way Needs Map, solely. This report describes the alignment that was determined to best meet the project's stated purpose and need. It is not intended to be the "Preferred Alignment" as determined through the Federal Highway Administration (FHWA) / ITD Conceptual Design process, the Access Point Decision Report process, nor the "Preferred Alternative" as determined through the National Environmental Policy Act (NEPA) process. The project's FHWA and NEPA processes are anticipated to occur during the next phase of the study.

FACILITY TYPE AND FEATURES

Referencing the project's purpose, KMPO concluded that a high-speed to high-speed Type V Controlled Access Facility (ITD Access Management Policy is provided in the Appendices of this report) was the most appropriate facility to meet the project's needs. Other facility features would include:

- Fully directional interchange at Interstate 90 east of the Huetter Rest Stop and Idaho Port of Entry.
- Grade separated full access interchanges at intersecting arterials (future five lane roadways) at one mile intervals from/to Interstate 90.
 - Poleline Avenue
 - Prairie Avenue
 - Hayden Avenue
 - Wyoming Avenue
 - Lancaster Avenue
 - Junction of State Highway 53 / US Highway 95
- Limited access frontage road (relocated Huetter Road) on the west side of the Huetter Corridor with three lanes widening to five lanes at the intersecting arterial roads, if required.
- West Huetter Corridor alignment option minimizes future right of way acquisitions.
- Allows local roadway connections to frontage road.
- Uses or parallels the Spokane International Railroad and Union Pacific Railroad right of way.
- Facility capacity four to six travel lanes to meet future needs.
- Controlled Access Facility Type V (no access except at interchanges).





- Design speed 70 MPH with a posted speed of 60 MPH minimum.
- Separated pedestrian / bicycle path generally paralleling the west side of the Huetter Corridor facility.
- A facility footprint that would minimize right of way needs and environmental impacts.
- Grade separated facility (approximately 25 feet below the existing ground surface).
- Multi-use corridor for potential land application of treated effluent wastewater to help mitigate noise and visual impacts and provide for dual use of a public facility by agencies.

RIGHT OF WAY NEEDS MAP ANALYSES

This section presents facility assumptions and the analyses performed as part of the Right of Way Needs Map development process. The analyses performed were:

- Facility Connection to Interstate 90.
- Preliminary feasibility of providing a connection to and from Seltice Way.
- Preliminary review of possible interchange types.
- Refinement of alignments.

Collectively and as discussed in this report, the results from these analyses were used to determine the footprint for the Right of Way Needs Map.

Location and Alignment

In accordance with the stated purpose and need of the facility, the Preferred Alternative alignment selected was Option 1d, providing for a future transportation facility that consists of one High-Speed to High-Speed Controlled Access Facility ("Mainline") and one limited access Frontage Road. The facility is generally located between Interstate 90 at the Huetter Rest Area / Port of Entry on the south and US 95 at SH 53 junction on the north. The facility parallels and, in part, occupies the existing Huetter Road right of way and is adjacent to the Spokane International Railroad and Union Pacific Railroad right of way. Should the railroad right of way be abandoned through the Bridging the Valley project, the railroad right of way could be used for the Huetter Corridor facility. The Bridging the Valley project (KMPO, 2004) would combine both the Burlington Northern Santa Fe (BNSF) railroad mainline track with the Union Pacific Railroad mainline track in one rail corridor using the BNSF alignment.

Interstate 90 Access Policy

Access to Interstate 90 will require conformance with all Federal rules and regulations, this policy is applicable to new or revised access points to existing Interstate facilities regardless of the funding of the original construction or regardless of the funding for the new access points. This includes routes incorporated into the Interstate System under the provisions of 23 U.S.C. 139(a) or other legislation. The policy statement was originally issued in the Federal Register on October 22, 1990 (55 FR 42670).

Interchanges

The right of way footprint includes interchanges meeting FHWA spacing requirements for approximately one mile intervals along the facility. These interchanges were assumed to be located at: 1) Interstate 90, 2) east-west arterials from Poleline Avenue to Lancaster Avenue, and 3) the US 95 and SH 53 junction. Based on the completed travel demand model analyses, it was assumed that the design year peak hour volumes would support a fully directional interchange at Interstate 90 and full terminal, grade separated interchanges for the east-west arterials from Poleline to Lancaster. Figure 9 illustrates a typical interchange layout.

Huetter Corridor Mainline

The Mainline (Figure 10) would be a Controlled Access Facility (ITD - Type V) with design speeds of 70 MPH with a posted speed of 60 MPH. Current ITD and AASHTO design standards would be applicable to the Huetter Mainline. Build-out for the Mainline would be flexible and provide a right way width to accommodate a four or six lane roadway section for future capacity needs. Grade separation will be provided for existing intersecting arterial roads and railroad crossings. No changes to the existing Interstate 90 alignment are proposed and connection to the planned Garwood to Sagle U.S. Highway 95 project would be anticipated.

Facility Location

Based upon the study purpose and need and the desire to have a minimized footprint, the facility is proposed to be approximately 25 feet below ground. By providing a sub-grade location, the visual impact of the facility is lessened as well as noise attenuation. Figure 11 shows the typical section below ground.

Huetter Corridor Frontage Road

The relocated Huetter Road as the frontage road would have an Arterial or Collector road functional classification and meet ITD, AASHTO, City, or Associated Highway Districts of Kootenai County current design standards. Build-out would be flexible and provide a right of way width to accommodate a three lane roadway section. At the interchange intersections, the frontage road width could be increased to allow for a five lane section depending on traffic needs. Location of the frontage roadway was reviewed along with the mainline alignment. The west frontage road options (Figure 12) included either the use of the current Huetter Road right of way for the frontage road or using the right of way for the mainline facility and offsetting the frontage road to the west of the existing right of way. The east frontage road options (Figure 13) utilized Huetter Road right of way for the mainline and was either a straight or non-linear alignment. Ultimately, the non-linear alignment (Figure 14) of the mainline facility was selected as a preferred alignment, which generally straddles the existing Huetter Road right of way. The non-linear frontage road to the west of the facility mirrors the offset requirements for intersecting roadways and minimizes the right of way footprint.

Existing Huetter Road

With the Huetter Corridor facility, the existing Huetter Road would remain on its current alignment south of Mullan Avenue. North of Mullan Avenue, the relocated Huetter Road would be on the west side of the Huetter Corridor facility and will continue to approximately .25 mile north of Wyoming Avenue. At that point the roadway would rejoin the existing Huetter Road alignment.







Huetter Corridor Screening of Frontage Road and Diamond Interchange Configuration Options



MAINLINE OFFSET EAST FROM EXISTING HUETTER ROAD WITH STRAIGHT WEST FRONTAGE ROAD



MAINLINE ON HUETTER ROAD RIGHT OF WAY WITH STRAIGHT WEST FRONTAGE ROAD



WEST FRONTAGE ROAD OPTIONS

Huetter Corridor Screening of Frontage Road and Diamond Interchange Configuration Options



MAINLINE ON HUETTER ROAD WITH STRAIGHT EAST FRONTAGE ROAD



MAINLINE ON HUETTER ROAD WITH NON-LINEAR EAST FRONTAGE ROAD



EAST FRONTAGE ROAD OPTIONS


North of Mullan Avenue, existing Huetter Road would either terminate as a public road and become a private road to serve existing residences east of Huetter Road, or remain as a public road, but terminate approximately .5 mile north of Mullan Avenue.

The transition from the current Huetter Road right of way (south of Mullan Avenue) to the new relocated Huetter right of way (west of Huetter Corridor facility) will need to be reviewed for traffic flow and operations. Under the "minimized footprint" for the right of way, the transition of "old" and "new" Huetter Roads is shown with two 90 degree turns at its Mullan Avenue intersections.

Other Facilities

Within the proposed future right of way, a pedestrian / bicycle trail and utility corridor (meeting ITD, City, or Associated Highway Districts of Kootenai County standards) will be provided. Figure 10 illustrates the widest three typical sections anticipated for the Mainline, Frontage Road, utility corridor, and pedestrian / bicycle trail.

The potential for multiple use of the Corridor by public agencies exists. The side slopes of the mainline facility could be used as a location for land application of treated effluent wastewater. The mainline corridor could serve as mitigation for noise attenuation and visual impact mitigation. The Huetter Corridor right of way will be secured with right of way limits fencing, and the areas utilized for land application could serve as a "green corridor" thereby maximizing public lands and resources. In an era of increased public cost of infrastructure maintenance and limited availability for public funds for land acquisition, opportunities for maximizing public funds is critical.

Seltice Way Connection - Preliminary Feasibility Review

Early in the Huetter Corridor study, interest in providing a connection between the Huetter Corridor Mainline and existing Seltice Way was expressed. The review included facility description, facility need, roadway geometric design, constructability, and operability.

Facility Description

Two potential Seltice Way connection scenarios were examined:

- A north-south connection between the Huetter Corridor Mainline and Seltice Way without a direct connection to Interstate 90.
- A north-south connection between the Huetter Corridor Mainline and Seltice Way with an interchange that provides full access from Huetter Road and Seltice Way to Interstate 90.

For the Seltice Way connection to be feasible, the Huetter Corridor Mainline needs to connect with Interstate 90 at the Huetter Rest Area / Port of Entry (Figure 15). The proposed route would continue on the Huetter Corridor alignment south to Seltice Way. At this location, Interstate 90 is a four lane, divided highway and Seltice Way is a four lane, divided roadway intersecting Huetter Road.

The horizontal distance between Interstate 90 and Seltice Way is approximately 1,000 feet with the interstate elevated approximately 100 feet above Seltice Way (Figure 16). The topographic





difference is configured, such that two general benches are formed in the slope. The interstate sits on the higher bench and Seltice Way sits on the lower bench. The soils in the area are a sandy loam. A cemetery and sparsely spaced light industrial businesses exist on the lower bench between the Interstate and Seltice Way. The upper bench has a few single-family homes.

During the feasibility review, it was assumed that no changes to the existing Interstate 90 location and alignment would occur nor changes to the Seltice Way alignment. The Seltice Way connection would need to conform to the Associated Highway Districts of Kootenai County standards, support up to five travel lanes, a pedestrian / bicycle trail, and a drainage / utility corridor. Roadway slopes cannot exceed six percent. It is further assumed that various Interstate 90 to Huetter Mainline interchange types could provide compatibility with the connection, and for the purposes of this review; a fully directional Multi-Level with Two-Stacked Structures interchange is assumed. Figure 17 illustrates the potential interchange types.

Facility Need

In the early stages of the study, land use near the Seltice Way and Huetter Road intersection was anticipated to continue with generally industrial growth and the need for Seltice Way connection to Huetter Corridor Mainline appeared to be warranted. In concept, goods and freight generated from an industrial/commercial area would require direct and easy access to Interstate 90 and the new Huetter Corridor facility.

During the study process, the need for direct Interstate 90 and Huetter Corridor facility access from Seltice Way was not supported. Land use in the area has changed. Light industrial uses exist, but are not growing at the rate anticipated. Instead, these projected industrial uses are being replaced with rapidly growing residential developments or local commercial uses not depending on direct interstate access. In the end, the need for a Seltice Way connection diminished for two reasons:

- The full build-out scenario south of Interstate 90, near Seltice Way does generate new trips but, in most cases, not the type of trips that require direct and easy access to the interstate and the proposed Huetter Corridor facility.
- Alternate accesses are or would be available: Interstate 90 at SH 41, Interstate 90 at Northwest Boulevard, and at the new proposed interchange for the Huetter Corridor mainline at Poleline Avenue.

Roadway Geometric Design

Based on preliminary review of roadway geometrics, the Seltice Way Connection is feasible. A subsurface structure (tunnel) underneath the Huetter Corridor Mainline and Interstate 90 interchange will be required. The depressed roadway will require significant cuts and use of retaining walls as the connection descends to Seltice Way south of Interstate 90. Right of way needs south of the interstate would be at least 550 feet in width. The roadway slope cannot exceed the Associated Highway Districts of Kootenai County standards of six percent. The Seltice Way connection is further complicated by the divided Seltice Way roadway and grade difference between the couplet. The two intersections are approximately 100 feet apart and could create queuing issues unless coordinated signals would be installed at both Seltice Way intersections and the south ramp terminal location at Interstate 90. The Seltice Way connection will also be a low speed entrance to the Huetter Corridor or Interstate 90 due to the six percent



up-slope from vehicle stopped positions followed by a left or right turn to the Huetter facility. Thus, there will be no "running start to make the hill". Conversely, the six percent down-slope may create a higher accident potential in winter conditions.

The addition of an Interstate 90 direct access is also feasible from the standpoint of roadway geometrics. A conventional tight diamond interchange with ramp offsets from Interstate 90 of approximately 80 feet is feasible. The ramps north of the interstate are at one to two percent grade and are approximately 850 to 1,200 feet in length. For ramps south of the interstate, catch points with the Seltice Way connection are slope sensitive. Connection slopes less than six percent are not recommended. With lesser slopes, the ramps become longer. Assuming that the ramps south of the interstate are at a six percent grade, the eastbound exit ramp would be approximately 1,200 feet in length and the westbound on ramp would be approximately 3,500 feet in length. To achieve the required ramp length at the above mentioned slopes, the footprint of the ramp pairs south of Interstate 90 would be nearly 5,000 feet.

Constructability

The existing Seltice Way intersections and the Seltice Way connection and Interstate 90 interchange are both constructable. Due to soil types in the area, multiple standard pile structure supports are likely. Large *lay-backs* or temporary shoring will be required for excavations. All ramps will require multiple, low percent battered retaining walls. To minimize right of way impacts, retaining walls would likely be required for the Seltice Way connection south of Interstate 90. A cut and cover tunnel is likely for the connection tunnel under the interstate interchange. Thus, staged construction that includes temporary re-alignment and detour of Interstate 90 will be required.

Operability

Operational items of concern include alignment compatibility with the existing Seltice Way intersections and potentially low Huetter Corridor facility entrance speeds. Maintenance items of concern revolve around providing adequate consideration for winter conditions, snow storage, and drainage.

The existing Huetter Road / Seltice Way intersection will require improvement and realignment. In its current configuration, the existing intersection has higher speed limits (45 MPH) and skewed intersection angles. Potential improvements could include signalization or construction of a roundabout and increased roadway lighting.

From a driver's standpoint, low Huetter Corridor facility entrance speeds may be observed. The most likely configuration will have northbound traffic from Interstate 90 entering the Huetter Corridor Mainline in the right lane. Entrance speeds (i.e. for trucks) may be low due to the upslope and an extended merge distance would be required. Low speed entrances are not desirable.

Similarly, the Interstate 90 westbound on-ramp from the Huetter Corridor facility will also be long (approximately 3,500 feet). This will likely provide low merge speeds for truck traffic entering the highway. Currently, this condition exists for the SH 41 and Interstate 90 eastbound on-ramp. On-going studies on Interstate 90 are finding this condition is not desirable.

Winter safety and maintenance considerations will be an issue if the Seltice Way connection is built. Some of the Seltice Way connection and ramps could be shaded during the winter months.

Anti-icing and snow removal for the facility will need to be anticipated in the design or require specialized maintenance equipment.

Seltice Way Recommendations

The Seltice Way connection and combined Seltice Way connection and Interstate 90 interchange can be designed, constructed, and remain functional given the existing topgraphic conditions and design constraints. However, based on the preliminary feasibility review performed, implementation of the Seltice Way connection and combined Seltice Way connection and Interstate 90 interchange is not recommended without re-examination of the need. Other routes to access the Huetter Corridor facility would be available and resolution of the operational and maintenance concerns needs to be completed.

Interchange Preliminary Review

A review of the mainline preliminary interchanges for the Preferred Alternative was performed to:

- Determine appropriate range of interchange types for analysis.
- Identify interchange general parameters (limiting and non-limiting).
- Provide interchange(s) footprints that are included in the Right of Way Needs Map development process.

Interchanges were analyzed at the following locations:

- Interstate 90.
- Major east-west intersecting arterials at Poleline Avenue, Prairie Avenue, Hayden Avenue, Wyoming Avenue, and Lancaster Avenue).
- Junction of US Highway 95 and State Highway 53.

Interstate 90 Interchange

As determined by the Preferred Alignment, the Interstate 90 interchange would be located near the ITD Huetter Rest Area and Port of Entry. The interchange configuration would include three-legs providing east-west Interstate 90 access and a north-south route based on the existing and forecast travel demand model for Kootenai County. Five major movements (east to north, south to west, east to west, west to east, and west to north) and one minor movement (south to east) would be provided. Based on design year peak hour volumes provided by the regional travel demand model, each movement is assumed to require single-lane ramps.

Additional Interchanges to the Interstate System Policy

Any new or revised access to Interstate 90 requires the completion and acceptance of an Access Point Decision Report under the Federal Highway Administration guidelines. It is in the national interest to maintain the Interstate System to provide the highest level of service in terms of safety and mobility. Adequate control of access is critical to providing such service. Therefore, new or revised access points to the existing Interstate System should meet the following requirements:

1. The existing interchanges and/or local roads and streets in the corridor can neither provide the necessary access nor be improved to satisfactorily accommodate the design-year traffic demands while at the same time providing the access intended by the proposal.

- 2. All reasonable alternatives for design options, location and transportation system management type improvements (such as ramp metering, mass transit, and HOV facilities) have been assessed and provided for if currently justified, or provisions are included for accommodating such facilities if a future need is identified.
- 3. The proposed access point does not have a significant adverse impact on the safety and operation of the Interstate facility based on an analysis of current and future traffic. The operational analysis for existing conditions shall, particularly in urbanized areas, include an analysis of sections of Interstate to and including at least the first adjacent existing or proposed interchange on either side. Crossroads and other roads and streets shall be included in the analysis to the extent necessary to assure their ability to collect and distribute traffic to and from the interchange with new or revised access points.
- 4. The proposed access connects to a public road only and will provide for all traffic movements. Less than "full interchanges" for special purpose access for transit vehicles, for High Occupancy Vehicles (HOVs), or into park and ride lots may be considered on a case-by-case basis. The proposed access will be designed to meet or exceed current standards for Federal-aid projects on the Interstate System.
- 5. The proposal considers and is consistent with local and regional land use and transportation plans. Prior to final approval, all requests for new or revised access must be consistent with the metropolitan and/or statewide transportation plan, as appropriate, the applicable provisions of 23 CFR part 450 and the transportation conformity requirements of 40 CFR parts 51 and 93.
- 6. In areas where the potential exists for future multiple interchange additions, all requests for new or revised access are supported by a comprehensive Interstate network study with recommendations that address all proposed and desired access within the context of a long-term plan.
- 7. The request for a new or revised access generated by new or expanded development demonstrates appropriate coordination between the development and related or otherwise required transportation system improvements.
- 8. The request for new or revised access contains information relative to the planning requirements and the status of the environmental processing of the proposal.

Application

This policy is applicable to new or revised access points to existing Interstate facilities regardless of the funding of the original construction or regardless of the funding for the new access points. This includes routes incorporated into the Interstate System under the provisions of 23 U.S.C. 139(a) or other legislation.

Routes approved as a future part of the Interstate system under 23 U.S.C. 139(b) represent a special case because they are not yet a part of the Interstate system and the policy contained herein does not apply. However, since the intention to add the route to the Interstate system has been formalized by agreement, any proposed access points, regardless of funding, must be coordinated with the FHWA Division Office. This policy is not applicable to toll roads incorporated into the Interstate System, except for segments where Federal funds have been expended, or where the toll road section has been added to the Interstate System under the provisions of 23 U.S.C. 139(a).

For the purpose of applying this policy, each entrance or exit point, including "locked gate" access, to the mainline is considered to be an access point. For example, a diamond interchange configuration has four access points.

Generally, revised access is considered to be a change in the interchange configuration even though the number of actual points of access may not change. For example, replacing one of the direct ramps of a diamond interchange with a loop, or changing a cloverleaf interchange into a fully directional interchange would be considered revised access for the purpose of applying this policy.

All requests for new or revised access points on completed Interstate highways must be closely coordinated with the planning and environmental processes. The FHWA approval constitutes a Federal action, and as such, requires that the National Environmental Policy Act (NEPA) procedures are followed. The NEPA procedures will be accomplished as part of the normal project development process and as a condition of the access approval. This means the final approval of access cannot precede the completion of the NEPA process. To offer maximum flexibility, however, any proposed access points can be submitted in accordance with the delegation of authority for a determination of engineering and operational acceptability prior to completion of the NEPA process. In this manner, the State highway agency can determine if a proposal is acceptable for inclusion as an alternative in the environmental process. This policy in no way alters the current NEPA implementing procedures as contained in 23 CFR part 771.

The FHWA policy is provided in the Appendices of this report.

The future interchange and its' associated roadway transitions between Interstate 90 and the Huetter Corridor mainline needs to provide a layout that:

- Provides fully directional access.
- Minimizes impacts to private property and accesses.
- Does not change the current alignment of Interstate 90.

Following a review of a wide range of interchange types, three interchange structures, were determined to be most appropriate for application (see Figure 17): Multi-Leveled with Two-Stacked Structures, Three-Offset Structures, and a Trumpet (one multi-lane) Structure. Two Multi-Level with Two-Stacked Structure configurations fit the overall layout for the Interstate 90 and Huetter Corridor Mainline interchange while providing the smallest footprint.

The Multi-Level with Two-Stacked Structures (both configurations) retains the existing eastbound and westbound at/or very near existing grade with 70 MPH design speed for Interstate 90. The structures provide three right hand exit ramps, west to north, east to north, and south to west. The remaining ramps are subsurface or can be elevated above grade.

The Three-Offset Structures retain the existing eastbound and westbound at/or very near existing grade with 70 MPH design speed for Interstate 90. A left hand exit, crossing two structures or a single structure with an at-grade ramp, is established for the south to east movements. A second left hand exit, crossing a single structure with an at-grade ramp or a single subsurface structure with an at-grade ramp, is established for the south to east movement. The west to north and

south to east ramps can have ramp design speeds ranging from 40 to 50 MPH. North to west movements are accommodated by at-grade, right hand exiting ramp with 50 to 60 MPH design speeds.

The Trumpet (one multi-lane) Structure also retains the existing eastbound and westbound at/or very near existing grade with 70 MPH design speed for Interstate 90. The west to north movement is a right hand exiting ramp on a single-shared bridge structure or a single-shared structure below Interstate 90. Design speed for this movement is up to 50 MPH. The south to east movement is a left hand exiting ramp onto or under the single-shared structure followed by a southwest quadrant tight loop ramp. Design speeds for the loop ramp do not exceed 35 MPH. The south to west and west to north movements are established by right hand, at-grade exiting ramps with 50 to 60 MPH design speeds.

Based on the study of existing right of way and topography near the interchange location, two highly suitable interchange sites were found. For the purposes of this report, the sites are referenced as Sub-Options to the Preferred Alternative (Option 1d) and are designated as "*ITD Right of Way Sub-Option*" and "*Ravine Sub-Option*" (Figure 18).

The *ITD Right of Way Sub-Option* locates the Interstate 90 interchange within the area of the existing ITD Huetter Rest Area / Port of Entry / Centennial Trail. This site includes a large

amount of ITD right of way that generally conforms to the layout of all interchange types The area also has analyzed. some native trees, which may have planted as part of Ladybird Johnson's program for highway beautification or other federally funded beautification projects. The right of way in the vicinity has a scenic easement on the titles of the adjoining properties which, governs the type of advertising and structures which allowed within are the easement. A future interchange at



Interstate 90 proposed interchange location just east of the Huetter Rest Area and Port of Entry

Interstate 90 should be designed with landscaping that retains the existing scenic quality. The State owns a block of land directly south of the rest area that has the Pioneer Cemetery on it. The Centennial Trail location will also be a consideration in the siting and construction of an interchange. The trees and trail are potential candidates to be a 4(f) resource (park property, historic, or cultural resource) as defined by the FHWA. If this site is used, it is assumed that the ITD Huetter Rest Area (including both sides of Interstate 90), the Port of Entry, and the trail will require removal and/or relocation, and a "use" of 4(f) resources may be encountered and require mitigation. Due to proximity of the existing westbound rest stop off ramp, an interchange at this location may require grade separated ramp braiding (non-intersecting ramp crossing) in order to maintain free flow ramp operations.



The second option, *Ravine Sub-Option*, is located approximately 2,000 feet to the east of the *ITD Right of Way Sub-Option* site. This site has exceptionally favorable topographic characteristics. At this location, Interstate 90 crosses a ravine at an approximate 90 degree angle with the ravine carrying up-slope immediately north of the interstate. Although this site does not have adequate existing right of way, the ravine is not viewed as desirable property to develop. Therefore, if this site is used, it is assumed that acquisition of right of way within and potentially adjacent to the ravine will be required. Due to the proximity of the existing west bound rest stop off ramp, an interchange at this location may require some ramp braiding in order to maintain free flow ramp operations.

As summarized in Table 5, nine evaluating criteria were used to analyze the three interchange types.

- Interstate 90 Impact Minimization. As determined early in the Right of Way Needs Map development process, the selected interchange type must retain the existing eastbound and westbound interstate 70 MPH design speed at/or very near the existing grade. With this understanding, this criterion is defined as "significant" in terms of analyzing the interchanges.
- **Major Movement Connection Speed.** Providing a High-Speed to High-Speed facility interchange that is operationally efficient is also considered "significant" in terms of analyzing interchanges. Because it is assumed that the design year peak hour volumes are sufficiently provided for via single-lane ramps, ramp design speed is this criteria's controlling factor.
- Minor Movement Connection Speed. Similar to the Major Movement Connection Speed, this criteria hinges upon ramp design speed. However, because the interchange only supports one minor movement, this criterion is dissimilar in the fact that it is considered "non-defining" in terms of analyzing interchanges.
- **Right Hand Exits.** As outlined by AASHTO, right hand exits are desirable (but not required) for high-speed to high-speed, controlled access facilities of this type. Thus, this criterion is considered "moderately" defining in terms of analyzing interchanges.
- **Right of Way Footprint Minimization.** This criterion is the third criterion considered "significant" in terms of analyzing interchanges. Interchange size relates directly to the costs required to acquire right of way. In the case of the ITD Right of Way site, the goal is to minimize the need for additional right of way outside the existing ITD Huetter Rest Areas and Port of Entry and the interstate right of ways. In the case of the Ravine site, the goal is to minimize right of way needs outside of the existing interstate right of way.
- Huetter Rest Area / Port of Entry Impact. The criterion appears to not hinder the implementation of structures for the Ravine Sub-Option. Conversely, the criterion appears to work against all structures analyzed for the ITD Right of Way Sub-Option because if the Sub-Option is implemented, the Huetter Rest Area and Port of Entry will need to be relocated. However, due to projected growth and changes in the interstate use, long-range plans (20+ years) for the rest areas and port of entry are uncertain and may include relocation or removal, regardless of the new interchange impact.
- 4(f) Trees and Trail Impact. If the ITD Huetter Rest Area / Port of Entry site is used, it is assumed that a "use" of these 4(f) resources will be encountered and mitigation may be

required. Thus, this criterion is considered "non-defining" in terms of analyzing interchanges.

- Seltice Way Connection Compatibility. This criterion is considered "moderately" defining in terms of analyzing interchanges based on the recommendation to not include a Seltice Way connection. The criterion is only applicable for the *ITD Right of Way Sub-Option*.
- **Relative Cost.** Project cost, at this early stage, relates directly to the overall cost of construction (i.e. number of structures) and costs associated with acquiring additional right of way. The Relative Cost criterion is considered "moderately" defining in terms of analyzing interchanges because costs associated with acquiring additional right of way is included within the Footprint Minimization criterion.

Using these criteria to rank the two sub-options: ITD Right of Way and the Ravine, there are three rankings for the three interchange structure (two-stacked, three offset, and trumpet) types:

Significantly Defining Criteria indicates that using the structure for this sub-option is favorable.

Moderately Defining Criteria indicates that the criteria is desirable, but not required for an interchange type.

Non-defining Criteria indicates that the criteria does not impact the choice of structural types for the interchange.

The analyses utilized a + and - rating method for judging each criterion. A + indicates that implementing the structure under the criterion is favorable; and, a - indicates that implementation under the criterion is not favorable. Using Relative Cost as an example, a + indicates that the interchange type is the most cost effective to implement, a +/- indicates less cost effective, and a - indicates least cost effective to implement.

Table 5. Interstate 90 Interchange Analysis Summary						
Criteria		Interchange Type				
		Stacked Structures	Three Offset	Structures	Ē	ıadııınıt
			Sub O	ptions		
		Ravine	ITD R/W	Ravine	ITD R/W	Ravine
Interstate 90 Impact Minimizing	+	+	+	+	+	+
Major Movement Connection Speed	+	+	+	+	+	+
Minor Movement Connection Speed	+	+	+	+	_	_
Right Hand Exit(s)	+/	+/	+/	+/	+	+
Right of Way Footprint Minimizing ¹	+	+	+/	+/	+/	+/
Huetter Rest Area / Port of Entry Impact	_	+	_	+	_	+
4(f) Tree and Trail Impact (near rest area)	_	+/	_	+/	_	+/
Seltice Way Connection Compatibility ¹	+	N/A	+/	N/A	+/	N/A
Relative Cost (number of structures)	-	-	+/	+/	+	+
N/A = Not applicable for this location.		Significa Moderat Non-Det	antly Defin ely Defini fining Crit	ning Criter ng Criteria eria	ia a	

All three interchange types provide minimal impact to Interstate 90. Major and Minor Movement Speeds are best supported by the Multi-Level with Two-Stacked Structures interchange type. The Trumpet interchange provides the lowest Minor Movement Speed due to its inclusion of a tight loop ramp for the minor movement. The Three-Offset Structure interchange type provided the least number of right hand exits. The most expensive to least expensive interchange types are the Two-Stacked Structures, then the Three-Offset Structure, followed by the Trumpet Structure.

If the *ITD Right of Way Sub-Option* is implemented, all three interchanges require the relocation of the ITD Huetter Rest Area / Port of Entry and potentially impact the adjacent 4(f) resources. Although all interchange types are compatible with the Seltice Way connection (if implemented), the Multi-Level with Two-Stacked Structures is preferred due to the long crossing ramps provided by the dual flyover configuration.

If the *Ravine Sub-Option* is implemented, relocation of the ITD Huetter Rest Area and Port of Entry is not required and the 4(f) resource may not be impacted. The Seltice Way connection cannot be constructed if the *Ravine Sub-Option* is implemented. The Sub-Option may require some ramp braiding with the westbound Interstate 90 ramps.

Based on the preliminary review of interchange types for the Huetter Mainline at Interstate 90, the following are recommended for the *ITD Right of Way Sub-Option*:

- If Seltice Way connection is <u>not</u> implemented, then the Trumpet interchange type is recommended. The Trumpet provides the most cost effective configuration, minimizes impacts to the interstate, maintains acceptable operational speeds for all major movements, and provides a smaller right of way footprint.
- *If the Seltice Way Connection <u>is</u> implemented*, then the Multi-Level with Two-Stacked Structures interchange type is recommended. Although this is the most expensive interchange type, it provides the most compatibility with a Seltice Way connection, minimizes impacts to Interstate 90, maintains high operational speeds for all movements, and provides a smaller right of way footprint.

Also, based on the preliminary review of interchange types for the Huetter mainline at Interstate 90, the Trumpet interchange type is recommended for the *Ravine Sub-Option*. The Trumpet provides the most cost effective configuration, minimizes impacts to the interstate, maintains acceptable operational speeds for all major movements, and provides a smaller footprint that fits with the topography. The Multi-Level with Two-Stacked structures interchange type is not required for the *Ravine Sub-Option*.

The West Huetter Sub-Option is a later alignment refinement to the recommended Ravine Sub-Option. The West Huetter Sub-Option was identified by the local jurisdictions based on current approved developments proximal to Poleline Avenue. This sub-option minimizes impacts to those approved residential developments and would be more cost effective for future right of way acquisitions based on the urban densities of the developments.

East-West Arterial Interchanges

For the east-west arterials from Poleline to Lancaster Avenues, four-leg interchanges are required to provide full movement access between the Huetter Mainline and the arterials. Arterial intersections are at approximate one mile spacing and located at Poleline, Prairie, Hayden, Wyoming, and Lancaster Avenues.

Growth along the Huetter Corridor is occurring rapidly. Land values are currently high and are projected to continue to increase. The existing rural, large acre lots and agricultural uses are giving way to smaller lot subdivisions. As such, minimizing right of way impacts is a single evaluation criteria utilized during the review of east-west arterial interchange types.

Following a review of a wide range of interchange types, the four-leg conventional Tight Diamond interchanges were determined to be most appropriate in their application for all east-west arterials, with the exception of Lancaster Avenue. The Tight Diamond provides a small footprint thereby minimizing the need for additional right of way.

North of Lancaster Avenue, the Huetter Mainline changes its north-south alignment along Huetter Road and begins a parallel northeast-southwest alignment along the Spokane International and Union Pacific Railroad right of way. With this change of alignment, a modified Tight Diamond is recommended. The interchange would include modified tight diamond ramps off of the Huetter mainline and a sub-surface crossing Spokane International and Union Pacific Railroad right of way. In the event of the Bridging the Valley (BTV) project implementation, the crossing may not be required and the Huetter facility could use the abandoned rail right of way. If the BTV project is not implemented the facility will parallel the rail right of way on the north side from Lancaster Avenue to SH 53.

Using the minimization of right of way impacts as the dominant evaluation criteria, the following are recommended:

- A four-leg Tight Diamond interchange type is recommended for all east-west arterial interchanges, excluding Lancaster Avenue.
- A modified Tight Diamond interchange is recommended for Lancaster Avenue.

US Highway 95 / State Highway 53 Interchange

The US 95 / SH 53 interchange provides, at this time, the most uncertainty. As currently outlined with the ITD Garwood to Sagle project, US 95 north of SH 53 will become a four lane, divided median, High-Speed facility with Type V access control. The connection of SH 53 to US 95 and the use of existing US 95 right of way south of SH 53 are currently being determined by this and other projects (i.e. Bridging the Valley project which includes portions of SH 53 near US 95, or the expansion of US 95 south of SH 53 to a four lane facility). To this end, a few assumptions are made based on what is known to date. These assumptions include the following:

- The Huetter Corridor Mainline connects to US 95 just north of the SH 53 junction maintaining a through north-south, four lane, divided, High-Speed roadway with Type V access control continuity.
- A fully directional and/or semi directional, single-lane ramp interchange for connection to the Huetter Corridor Mainline and US 95 north of SH 53 and connection with the SH 53 eastern terminus remaining near its current location along US 95.
- US 95 south of SH 53 becomes a "business loop" requiring a semi-directional or terminal, single-lane ramp interchange.

No analysis was completed through the Right of Way Needs Map development effort for the US 95 and SH 53 interchange. The assumptions above are to be carried forward as recommendations for the US 95 and SH 53 interchange.

The recommendation is for a fully directional Huetter Corridor Mainline from Interstate 90 to SH 53 with a US 95 / SH 53 interchange, and a fully directional interchange to US 95 north and a US 95 business loop from SH 53 to Interstate 90.

Alignment Refinement

Utilizing the Preferred "Option 1d" alignment, the Poleline Avenue to Lancaster Avenue segment was analyzed. A range of alignment options with the advantage and disadvantages identified was developed to determine a Preferred Refined Alignment.

Parameters

Three major alignment parameters factors were found that aided in the Preferred Refined Alignment determination:

- Facility cross-sectional width
- Frontage Road location
- ITD Type V Access Control Huetter Mainline to Frontage Road offset

As summarized in Table 6, facility element widths vary depending on location on the alignment. The widths are generated from the typical sections to meet horizontal and vertical clearance requirements for similar facilities. For the portion in which the refinement of the mainline alignment was performed, the facility predominantly consists of a mainline, frontage road, utility corridor, and a Pedestrian / bicycle trail. Given that certain intersections may require more travel lanes, the width of the footprint is given at a minimum width. Each jurisdiction may require a larger footprint for the local access roadway to accommodate local traffic needs.

TABLE 6. Facility Cross-sectional Minimum Dimension Summary			
Facility	Width in Feet ¹		
Mainline including Side Slopes	350		
Mainline and Trail	370		
Mainline, Frontage Road (60 - 80 feet minimum at interchange), and Trail	430 - 450		
Mainline Right of Way Separation from Local Access Roadway	300		
Interchange Ramp and Required Facility Separation	80		
Mainline over/under Local Road or Railroad	350		
Tight Diamond Interchange	400		
Tight Diamond Interchange, Frontage Road, and Pedestrian / Bicycle Trail800			
¹ Typical width of each section. Frontage road can vary at interchanges.			

Based on the facility need, a Frontage Road will be provided paralleling the Huetter Corridor Mainline. The location of the Frontage Road with respect to the mainline is significant in terms of reducing impacts to right of way and avoiding potential impact mitigation with existing and planned developments. The existing Huetter Road would be relocated from Mullan Avenue north to approximately 0.25 miles north of Wyoming Avenue where the road would resume its' current alignment. Existing properties west of Huetter Road would have access to the relocated Huetter Road. Existing properties on the east side of Huetter Road would be accessed off the current Huetter Road alignment, which would terminate approximately 0.5 miles north of Mullan Avenue. Other properties on the east side of the facility would be served by new roads as part of development or through access easements to the utility substations. Due to access needs from

the south on Seltice Way for the Mainline facility at Mullan Avenue, intersection improvements will be required at Seltice Way and Huetter Road intersection. These improvements would include signalization or roundabout, and lighting. Huetter Road from Seltice Way to Mullan Avenue would further require roadway widening and intersection improvements at Mullan Avenue / Huetter Road and at Mullan Avenue / Relocated Huetter Road.

At the interchanges, ITD policy for Type V, Full Access Control is applicable. The policy prescribes that a separation of at least 300 feet between the freeway facility ramp and intersection with a frontage road. Therefore, the facility's widest point is at the arterial interchanges where the full section includes a Tight Diamond Interchange, the Frontage Road, and Trail with a minimum width of 800 feet, depending on the width of the frontage road.

Obstructions

Obstructions were identified within the Huetter Corridor study area. The major obstructions include areas of development, existing power substations, pipelines, electrical transmission lines, and effluent pipelines. Areas of development were identified by interviews with local jurisdictions, property owners, and developers. Areas of development included existing and planned, large and small lot subdivisions. Construction of the Huetter Corridor facility will need to address these issues. Future land uses within the Corridor footprint should be reviewed and designed to be compatible with the future facility and help preserve the right of way.

Preferred Huetter Corridor Alignment

Minimization of impacts to right of way and maintaining existing Huetter Road accesses were considered the two primary criteria for refining the facility alignment. Avoidance of identified obstructions was utilized as a secondary criterion. Collectively, the three criterions guided the refinement and selection of the Preferred Alignment.

The Preferred Alignment is the non-linear Frontage Road located west of the Huetter Mainline. This alignment provides the least impact to existing Huetter Road accesses and has the smallest overall right of way footprint.

The Huetter Corridor Summary is provided in the Appendices of this report.

IV. ENVIRONMENTAL SCAN

PREPARED BY: POWER ENGINEERS

INTRODUCTION

The Huetter Corridor is located in Kootenai County, Idaho. For this environmental scan, the Corridor is the (800 feet wide) right of way that would be required for a proposed high-speed route, frontage road, and pedestrian/bicycle trail in the vicinity of existing Huetter Road. The Corridor study area is generally defined as land within 0.5 mile east and west of Huetter Road from a proposed interchange at Interstate 90 to Lancaster Road, then paralleling the Spokane International Railroad and Union Pacific Railroad right of way north to a proposed interchange/intersection with U.S. Highway 95 (US 95) and State Highway 53 (SH 53). The length of the Corridor is approximately 10.5 miles. The general project vicinity near the study area includes unincorporated Kootenai County and the cities of Post Falls to the west and south, Coeur d'Alene and Hayden to the east, and Rathdrum to the north and west. Major transportation corridors within the study area include SH 41, SH 53, US 95, Interstate 90, and the Union Pacific Railroad mainline. Additionally, the Coeur d'Alene Airport is located between Hayden Avenue and Lancaster Road east of the Corridor.

The Kootenai Metropolitan Planning Organization (KMPO) has adopted the Corridor study as a step in preserving needed roadway right of way and planning possible future improvements in the Huetter Corridor study area. The purpose of this environmental scan is to conduct an inventory of existing information on land use, wetlands, cultural resources, biological resources, and other factors to identify key elements that may be critical to future transportation and land use planning within the study Corridor.

The environmental issues addressed below have been identified as important to the siting of the Huetter Corridor. In some cases, specific resources could potentially offer constraints that may preclude the construction of a project in a specific location. In other cases, the presence of a resource may not preclude development but may be an important consideration in weighing the pros and cons of project alternatives.

CURRENT LAND USE / ZONING

The Huetter Corridor study area includes portions of the cities of Coeur d'Alene, Post Falls, and Hayden, is adjacent to the eastern city limits of Rathdrum, and includes unincorporated portions of Kootenai County. Currently, segments of Huetter Road separates Coeur d'Alene's western city boundary and Post Falls' eastern city boundary and subsequent Areas of City Impact, but much of the land along Huetter Road is unincorporated. Hayden is growing farther west into the study area, and Rathdrum is growing south and east into the study area. The existing land uses for these municipalities can be used to anticipate trends in current development, growth, and future development plans that may affect the proposed project.

Existing development along Seltice Way, west of Huetter Road and south of Interstate 90 is largely industrial and commercial, with sand and gravel mining, landscape and construction company operations, a printing press, commercial storage units, and the Post Falls Highway District Operations complex. Farther south of Seltice Way is a mixed land use area of residential and industrial/commercial uses. Within and adjacent to the right of way for the proposed Huetter Corridor eastbound ramps along Interstate 90, is a small cluster of stick-built and mobile home residences. North of Interstate 90, land use along Huetter Road consists primarily of agricultural operations with rural large lot residential developments outside of the city limits. However, residential developments with increased densities within the city limits of Coeur d'Alene and Post Falls are expanding towards Huetter Road. The Corridor's northern terminus at US 95 currently is adjacent to large sand and gravel mining operations. Figure 19 shows the current land use and Table 7 details the zoning designations within the study area, their allowed uses, and their allowed densities. The Coeur d'Alene Airport further restricts the land use allowed within the Corridor with height and use limitations for flight paths.

Table 7. Land Use and Zoning within the Project Corridor			
Municipality	Zone Designation	Allowed Use	Density
Kootenai County	Agricultural	Agricultural, Residential, CU	>5 acres
	Agricultural Suburban	Agricultural, Residential, CU	1 du / 2 acres
	Rural-Residential	Residential, CU	5 du / 1 acre
	Commercial	Commercial, Retail, Institutions, CU	N/A
	Light Industrial	Industrial, Airport, Storage, CU	N/A
	Mineral	Mining, Batch plant	>5 acres
Coeur d'Alene	Residential R-3	Residential, SU	3 du / 1 acre
	Residential R-S	Residential, SU	8 du / 1 acre
	Residential R-17	Residential, SU	17 du / 1 acre
	Light Commercial	Commercial, Mixed-Use, SU	17 du / 1 acre
Post Falls	Residential R-1	Residential, SU	5 du / 1 acre
	Heavy Industrial	Industrial (existing uses only), Warehouse, Manufacturing	N/A
Hayden	Agriculture	Agricultural, Residential, CU	1 du / 5acres
Source: Kootenai Co Note: DU/acre= De CU/SU= Con	unty, Coeur d'Alene, Post Falls, a nsity of dwelling units per acre ditional / Special Use Permit allo	nd Hayden Zoning Ordinances wed in zoning district, requires a public hearing	



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The transportation network in the Huetter Corridor study area consists of federal, state, highway district, and city roadways. Interstate 90 is an east-west four-lane divided interstate highway that serves as the northern most coast-to-coast and longest interstate (at 3,099 miles) in the United States, offering access from Seattle, Washington to Boston, Massachusetts. Rest stops are located on the north and south sides of the interstate facility. The eastbound rest stop also includes the Idaho Port of Entry (POE) for interstate truck traffic. Interstate access to and from the Huetter Corridor will occur adjacent to and generally east of the rest stops. Two highways in the Corridor study area are maintained by the Idaho Transportation Department (ITD): SH 53 and US 95. Currently, the two highways intersect at the northern terminus of the proposed Corridor. Post Falls Highway District and Lakes Highway District control and maintain the local roadways outside of incorporated cities within the study area.

Major interchanges are proposed to occur at approximately one mile intervals north of Interstate 90 beginning at Poleline Avenue about 1.5 miles north of Interstate 90. The Corridor right of way footprint allows for interchanges at the intersecting east-west roads of Poleline Avenue, Prairie Avenue, Hayden Avenue, Wyoming Avenue, and Lancaster Road. From Lancaster Road to the proposed interchange of Huetter Corridor at the junction of SH 53 and US 95, no direct access to the Huetter Corridor is proposed for any current or future planned roadways. Since the proposed Huetter Corridor project will be approximately 25 feet below grade, interchanges will be at-grade and other minor crossroads could use overpasses without any access to the facility. Figure 20 illustrates the roads that will provide access to the Huetter Corridor facility.

In the northern portion of the study area, Spokane International and Union Pacific Railroad tracks run through the Corridor study area in a northeasterly direction. Near the northern terminus of the Corridor study area, the railroad turns north along the west side of US 95. The proposed Huetter Corridor will parallel the railroad from where Huetter Road and the railroad currently intersect to the northern terminus of the Corridor. The proposed alignment of the new route will not relocate the tracks.

The Coeur d'Alene Airport is east of the Corridor. Federal Aviation Administration (FAA) regulations (Part 77, Section 77.13), Notice of Proposed Construction or Alteration, state that the agency must be notified prior to any construction or alteration of greater height than an imaginary surface extending outward and upward at a slope of 100 to 1 for a runway longer than 3,200 feet within 20,000 feet (3.8 miles) of the runway.

For the longer (7,400 x 100 feet) runway at the Coeur d'Alene Airport, structure height requiring FAA notification would be greater than 18 feet along the edge of the study area and greater than 33 feet next to Huetter Corridor. For the shorter (5,400 x 70 feet) southern runway, structure height requiring notification would be 94 feet at the edge of the study area and more than 137 feet next to Huetter Corridor.

Mobile structures taller than 15 feet also require FAA notice. The proposed Huetter Corridor would be 25 feet below grade. Interchanges with grade separations and overpasses would serve existing crossroads and would be at-grade. It is assumed that future mobile structure height on these crossroads would likely be the same as today or a few feet higher than the existing ground surface.



There are two electrical substations currently accessed from Huetter Road: the Avista - Huetter substation and the Kootenai Electric Cooperative - Hayden substation. A 115 kV electrical transmission line that enters and exits the Avista - Huetter substation runs along the east side of Huetter Road.

Additional linear infrastructure in the Huetter Corridor study area includes two pipelines and a wastewater effluent line. A Williams Pipeline natural gas line and a Yellowstone Pipeline petroleum line both cross under Huetter Road approximately 0.5 mile south of Poleline Avenue. A City of Hayden effluent pipeline runs along the east edge of Huetter Road starting south of Wyoming Avenue and continuing north outside the Corridor study area to a land application site located east of Huetter Road and south of Boekel Road. The Hayden Area Regional Wastewater Treatment Plant is located on the south side of the airport outside of the Corridor study area. There are currently plans to extend the pipeline south along Huetter Road to Seltice Way and then to the Spokane River.

Future development that occurs along Huetter Road would require greater separation from Huetter Road than is required by the existing right of way to allow for the construction of the proposed freeway and interchanges. KMPO has asked the affected municipalities and agencies to adopt specific land use policies that would protect the Huetter Corridor right of way. This will be accomplished through setbacks and zoning requirements. Right of way dedication through annexation, rezone actions, and property acquisitions may be used to secure additional right of way in the future. Table 8 lists current land uses and specific structures in the Huetter Corridor that should be considered in siting future road improvements.

Table 8. Major Land Uses within the Corridor Study Area		
Development	Land Use Description / Location to Corridor	
Hawk's Nest	Residential subdivision: 302 acres, 867 dwelling units in 9 phases. 100 feet east of the Huetter Road right of way.	
The Landings at Waterford	Residential, mixed-use subdivision: 944 dwelling units in 9 phases. 50 feet east of the Huetter Road right of way.	
Big Sky Estates	Large lot residential and agricultural subdivision: 260 acres, 52 dwelling units. 50 feet west of Huetter Road centerline.	
Brickert Country Estates	Residential and agricultural subdivision: 180 acres, 32 dwelling units. 10 feet west of the Huetter Road right of way.	
Avista - Huetter Substation	Electrical substation: 50 feet east of the Huetter Road right of way.	
Kootenai Electric Cooperative - Hayden Substation	Electrical substation: 250 feet east of the Huetter Road right of way.	
Hawk Haven Airstrip	Private grass runway for Agricultural use, approximately .5 mile west of Huetter Road on Orchard Avenue.	
Coeur d'Alene Airport	Municipal airport with industrial sites. There is no influence area or land use restrictions associated with the airport other than height of structures. Located approximately .5 mile from Huetter Road.	
Ranch Aero Airport	Private airport for Agricultural and personal use. Located .7 mile from northern end of the Corridor.	

Table 8. (continued) Major Land Uses within the Corridor Study Area		
Development	Land Use Description / Location to Corridor	
Mikelson Canal	Surface water canal believed to be out of operation or inactive (J. Karpenko, personal communication, 2008). Crosses Corridor three times between Poleline and Hayden Avenues.	
Union Pacific Railroad	Union Pacific Spokane Railway. Crosses Corridor in the vicinity of Lancaster Avenue.	
Avista Transmission Line	115 kV transmission line partially in Huetter Road right of way.	
Hayden Lake Sewer District Pipeline	14 inch effluent pipeline east side of Huetter Road right of way.	
Williams Pipeline	Natural gas pipeline crosses under Huetter Road south of Poleline Avenue.	
Yellowstone Pipeline	Petroleum pipeline crosses under Huetter Road south of Poleline Avenue.	
Kootenai County Refuse Station	Municipal refuse and recycle transfer station north of SH 53.	
Interstate 90 Westbound Rest Stop	Rest stop on north side of Interstate 90.	
Interstate 90 Eastbound Rest Stop	Rest stop and weigh station on south side of Interstate 90 and Centennial Trail rest stop.	
Source: Kootenai County, Coeur d'Alene, US DOT.		

ENVIRONMENTAL JUSTICE

Executive Order (E.O.) 12898 requires Federal agencies and federally funded projects to address disproportionately high and adverse human health and environmental effects of their actions, programs, and policies on minority and low-income populations. The first step in this assessment is to determine the geographic distribution of low-income and minority populations.

Information on the ethnic background and income of the Corridor study area's population is presented in Tables 9 and 10. These data were obtained from the U.S. Census Bureau, using local census tract, city, county, and state populations. It should be noted that census tract boundaries do not correspond to the boundaries of the Corridor study area and extend into nearby city boundaries.

Census data indicate that approximately four percent of the population of Kootenai County as a whole is non-white, which is 0.5 percent less than the proportion within the study area's census tracts. Census tracts with the highest non-white populations are located along the southern portion of the study area, near the population centers of Post Falls and Coeur d'Alene. Overall, it is not anticipated that changes to Huetter Corridor would disproportionately affect minority populations.

According to poverty statistics for the year 2000, the low-income population was approximately 11.5 percent of the total state population, while Kootenai County had a low-income population of 10.3 percent of the total county population. Within the study area's census tracts, the percentage of the population defined as low-income is 10.2 percent, nearly the same as that for the County as a whole. Therefore, changes to Huetter Road would not disproportionately affect low-income populations.

Table 9. Minority Population in the Project Vicinity			
Area	Total Population	Non-Wh	ite Population
State-County-Tract			
16-55-2	7,214	212	2.9%
16-55-6	9,102	295	3.2%
16-55-7	7,049	283	4.0%
16-55-8	4,428	180	4.3%
Total	27,593	970	3.5%
Coeur d'Alene	34,514	1,450	4.2%
Post Falls	17,247	668	3.8%
Hayden	9,159	358	3.9%
Kootenai County	108,685	4,517	4.2%
State of Idaho	1,293,953	92,840	7.2%
Source: U.S. Census Bureau 2000.			

Note: Census tract boundaries do not correspond to Corridor study area boundary.

Table 10. Low Income Population in the Project Vicinity			
Area	Total Population	Populatio Poverty	n Below Level
State-County-Tract			
16-55-2	7,214	850	11.8%
16-55-6	9,102	912	10.1%
16-55-7	7,049	760	10.7%
16-55-8	4,428	298	6.7%
Total	27,593	2,820	10.2%
Coeur d'Alene	34,514	4,313	12.4%
Post Falls	17,247	1,602	9.3%
Hayden	9,159	856	9.3%
Kootenai County	108,685	11,229	10.3%
Idaho	1,293,953	148,732	11.5%
Source: U.S. Census Bureau 2000. Note: Census tract boundaries do not correspond to Corridor study area boundary.			

BIOLOGICAL RESOURCES

Biological resources include plant and wildlife species, and the ecological communities within which they occur. Considerations for project planning include legally protected or sensitive species and critical habitat, as well as game species that have the potential to present a collision risk to vehicle traffic. Species of concern include those listed under the Endangered Species Act (ESA), as well as species tracked by the Natural Heritage Program, and the Idaho Department of Fish and Game's (IDFG) Conservation Data Center (CDC). Data presented below was obtained from the U.S. Fish and Wildlife Service (USFWS) and state sources to determine species and habitats.

The Corridor study area is located in the Rathdrum Prairie, a relatively level plain of glacial washout extending from the Spokane River northward to Lake Pend Oreille and Hoodoo Valley. Within the study area, natural ecological communities have undergone nearly complete conversion to agricultural and urban land uses. Little native vegetation exists; no sensitive ecological communities are present. Some minor patches of forest habitat were identified, but these represent small occurrences of tree re-growth in an extensive matrix of agricultural land. Although the Corridor study area and much of the surrounding lands are under nearly complete use or development, Kootenai County as a whole supports a broad diversity of montane¹ forested and wetland habitats with concomitant species diversity. Wildlife and plant species listed under the ESA for Kootenai County are identified in Table 11. The Federal list of species protected under the ESA is under periodic revision. During future project planning, the most current list should be obtained and updated every 90 days.

^[1] Montane is a biogeographic term which refers to highland areas located below the subalpine zone. Montane regions generally have cooler temperatures and often have higher rainfall than the adjacent lowland regions, and are frequently home to distinct communities of plants and animals. Areas above the tree line are known as alpine regions.

Table 11. Species for Kootenai County Federally Listed under theEndangered Species Act			
Common Name	Scientific Name	Federal/State Status	Comment
Gray Wolf	Canis lupis	Federally Listed Endangered	Delisted in March for Idaho.
Lynx	Lynx canadensis	Federally Listed Threatened	No records from Rathdrum Prairie near study area.
Bull Trout	Salvelinus confluentus	Federally Listed Threatened	No appropriate streams near project area.
Yellow-billed Cuckoo	Coccyzu americanus	Federal Candidate	Recent record to southeast of project study area.
Spalding's Catchfly	Silene spaldingii	Federally Listed Threatened	No records from Rathdrum Prairie near study area.
Water Howellia	Howellia aquatilis	Federally Listed Threatened	No records from Rathdrum Prairie near study area.
Source: CDC; USFWS			



In addition to species afforded protection under the ESA, the State of Idaho tracks species at risk through the Natural Heritage Program and IDFG's CDC database. These species are classified as "Species of Greatest Conservation Need" and are included in the State's "Comprehensive Wildlife Conservation Strategy." Coordination with the CDC would be required for future project planning. Although the Corridor study area provides little wildlife habitat, state tracked species records were obtained for the periphery of the analysis area. These records included a pygmy nuthatch from the Forest Service nursery, a yellow-billed cuckoo from the Coeur d'Alene Public Golf Club, a great grey owl near the air terminal, and a Merriam's shrew from a wetland area to the northeast (see Figure 21). It should be noted that the Spokane River corridor provides important habitat for the yellow-billed cuckoo, a species tied to high quality riparian forest. A complete list of state tracked species for Kootenai County is provided in Table 12. No state tracked species are documented within the Corridor study area.

Table 12. Additional Species for Kootenai County with Special State Protection Status			
(Species of Greatest Conservation Need)			
Common Name	Scientific Name	State Status	Comment
American White Pelican	Pelecanus erythrorhynchos	S1-Critically Imperiled	
Black Tern	Chlidonias niger	S1-Critically Imperiled	
Common Loon	Gavia immer	S1-Critically Imperiled	
Forster's Tern	Sterna forsteri	S1-Critically Imperiled	
Harlequin Duck	Histrionicus histrionicus	S1-Critically Imperiled	
Peregrine Falcon	Falco peregrinus	S1-Critically Imperiled	
Pygmy Nuthatch	Sitta pygmaea	S1-Critically Imperiled	Record outside study area to the east.
Trumpeter Swan	Cygnus buccinator	S1-Critically Imperiled	
Upland Sandpiper	Bartramia longicauda	S1-Critically Imperiled	
Canadian Lynx	Lynx canadensis	S1-Critically Imperiled	Federal listing takes precedence over state ranking for project planning purposes.
Fisher	Martes pennanti	S1-Critically Imperiled	
Coeur d'Alene Salamander	Plethodon idahoensis	S2-Imperiled	
American Three-toed Woodpecker	Picoides dorsalis	S2-Imperiled	

Table 12. (continued) Additional Species for Kootenal County with Special State Protection Status (Species of Greatest Conservation Need)			
Common Name	Scientific Name	State Status	Comment
California Gull	Larus californicus	S2-Imperiled	
Caspian Tern	Hydroprogne caspia	S2-Imperiled	
Hooded Merganser	Lophodytes cucullatus	S2-Imperiled	
Lesser Goldfinch	Carduelis psaltria	S2-Imperiled	
Merlin	Falco columbarius	S2-Imperiled	
Northern Pintail	Anas acuta	S2-Imperiled	
Red-necked Grebe	Podiceps grisegena	S2-Imperiled	
Western Grebe	Aechmophorus occidentalis	S2-Imperiled	
Yellow-billed Cuckoo	Coccyzus americanus	S2-Imperiled	Federal listing takes precedence over state ranking for project planning purposes.
Fringed Myotis	Myotis thysanodes	S2-Imperiled	
Merriam's Shrew	Sorex merriami	S2-Imperiled	Occurrence record northeast of the study area.
Wolverine	Gulo gulo	S2-Imperiled	
Northern Alligator Lizard	Elgaria coerulea	S2-Imperiled	
Columbia Spotted Frog	Rana luteiventris	S3-Vulnerable	
Western Toad	Bufo boreas	S3-Vulnerable	
Black-backed Woodpecker	Picoides arcticus	S3-Vulnerable	
Great Gray Owl	Strix nebulosa	S3-Vulnerable	Record east of study area near airport.
Northern Goshawk	Accipiter gentilis	S3-Vulnerable	
Northern Pygmy-Owl	Glaucidium gnoma	S3-Vulnerable	

Status (Species of Greatest Conservation Need)			
Common Name	Scientific Name	State Status	Comment
Wilson's Phalarope	Phalaropus tricolor	S3-Vulnerable	
Long-legged Myotis	Myotis volans	S3-Vulnerable	
Red-tailed Chipmunk	Neotamias ruficaudus	S3-Vulnerable	
Townsend's Big- eared Bat	Corynorhinus townsendii	S3-Vulnerable	
Common Gartersnake	Thamnophis sirtalis	S3-Vulnerable	
Striate Mountainsnail	Oreohelix strigosa goniogyra	S1-Critically Imperiled	Invertebrate species. Records in mountains to the northwest of study area.
Fir Pinwheel	Radiodiscus abietum	S2-Imperiled	Invertebrate species.
Humped Coin	Polygyrella polygyrella	S2-Imperiled	Invertebrate species.
Pale Jumping-slug	Hemphillia camelus	S2-Imperiled	Invertebrate species.
Pygmy Slug	Kootenaia burkei	S2-Imperiled	Invertebrate species.
Sheathed Slug	Zacoleus idahoensis	S2-Imperiled	Invertebrate species.
Smoky Taildropper	Prophysaon humile	S2-Imperiled	Invertebrate species.
Western Ridged Mussel	Gonidea angulata	S2-Imperiled	Invertebrate species.
Lesser Scaup	Aythya affinis	S3-Vulnerable	Invertebrate species.
Western Pearlshell	Margaritifera falcata	S3-Vulnerable	Invertebrate species.
Kingston Oregonian	Cryptomastix sanburni	Historic Records Only	Invertebrate species. Records in mountains to the northwest of study area.
Oregonian	Cryptomastix mullani blandi	Not ranked	Invertebrate species.
Note: No State tracked species records were identified from within study area.			

 Table 12. (continued) Additional Species for Kootenai County with Special State Protection

Because of the movement of game animals between agricultural field feeding areas and forested cover habitats to the east of the Corridor, portions of US 95 currently have an elevated risk of wildlife/vehicle collisions. Figure 21 indicates a wildlife linkage area identified by IDFG located just south of the proposed intersection of Huetter Road and US 95. A wildlife linkage area is a specific area between two habitats through which wildlife tend to move. Because the Huetter Corridor is located in a relatively continuous landscape of agricultural land with very little cover habitat, wildlife/vehicle collisions are unlikely to be a significant issue along Huetter Road or within the Huetter Corridor study area.

WETLANDS AND WATER RESOURCES

Surface Waters

Surface waters include streams, rivers, ponds, lakes, reservoirs, and wetlands. In Idaho, information on water resources may be obtained through the Idaho Department of Water Resources (IDWR).

Waters of the United States, including wetlands, are subject to U.S. Army Corps of Engineers jurisdiction under Section 404 of the Clean Water Act (CWA). A Section 404 permit is required for the discharge of dredged or fill material into Waters of the U.S., pursuant to Section 401 of the CWA and state water quality standards, and the Idaho Department of Environmental Quality (IDEQ) determines if a proposed project would violate applicable water quality standards. Construction activities must comply with the National Pollutant Discharge Elimination System (NPDES) for discharges of storm water runoff associated with construction activity.

Wetland data for the Huetter Corridor study area were obtained from the National Wetland Inventory (NWI) at <u>http://www.fws.gov/nwi/</u>. NWI maps are based in part on aerial photographs; however, the boundaries and other characteristics of wetlands would need to be verified in the field during planning for a specific project. Two small areas northeast of the northern terminus of the Corridor were identified as wetlands, based upon NWI data. These areas consist of two ponds located east of US 95 on a bench above the Rathdrum Prairie (Figure 21). The proposed project is unlikely to impact these two areas.

Although the Corridor study area has the Spokane River corridor to the south and lies approximately 3.0 miles west of the Hayden Lake watershed, no surface drainages cross the study area. The lack of natural surface waters is owed to the deposition of deep, coarse glacial material and the highly permeable nature of subsurface sediments.

Groundwater

The Huetter Corridor study area overlies the eastern portion of the Rathdrum Prairie Aquifer, a unique hydro-geologic feature providing the sole source of drinking water for communities from Coeur d'Alene westward to Spokane, Washington. The Rathdrum Prairie Aquifer resides among layers of deep coarse-grained sediments (sand, gravel, cobble, and boulders) deposited near the end of the last Ice Age through a series of cataclysmic discharges from ancient glacial Lake Missoula. Water flows within the aquifer southward from Pend O'reille Lake, Spirit Lake, and the Hoodoo Valleys. The aquifer is recharged along its margins from runoff from bedrock of surrounding hillsides as well as peripheral waters including Hayden Lake, Coeur d'Alene Lake, and the Spokane River. Because of the permeable nature of sediments, surface recharge from the Rathdrum Prairie is significant. The top of the aquifer is at an elevation of approximately 2,000 feet and is at a depth of approximately 250 feet within the study Corridor. Both surface contamination and increases in impermeable surfaces are a concern within the study Corridor. The Panhandle Health District leads regional efforts to protect the Rathdrum Prairie Aquifer from contamination and significant changes in the balance between withdrawal and recharge.

CULTURAL RESOURCES

Cultural resources are districts, sites, buildings, structures, or objects considered to be important to a culture, subculture, or community for scientific, traditional, religious, or other reasons. Cultural resources can be divided into three major categories: archaeological resources, architectural resources, and traditional cultural properties (TCPs). Archaeological resources are locations where human activity has measurably altered the earth or left deposits of physical remains (e.g., stone tools, house foundations, bottles, cans). The built environment includes standing buildings (e.g., houses, barns, outbuildings, schools, churches) or intact structures (e.g., dams, canals, bridges). TCPs are resources that are important to a community's traditional practices and beliefs, and for maintaining the community's cultural identity. It is expected that most TCPs in northern Idaho would be associated with Native American cultures.

A records search conducted through the Idaho State Historic Preservation Office (SHPO) indicated that seven historic archaeological resources and five architectural resources have been previously documented within the study area (Table 13). Because the locations of cultural resources are considered confidential information, they are not mapped in this report.

None of the resources have been evaluated for eligibility to the National Register of Historic Places (National Register) and no National Register listed properties are located within the study area. The historic Kootenai County Cemetery is also located within the study area. It was established in 1937 and contains 48 documented burials interred between 1939 and 1943.

A total of 24 cultural resource investigations have been previously conducted within the study area. These investigations include linear and block acreage surveys and historic properties evaluations (Table 14). Depending on the source of funding for future project development, a cultural resource survey of the proposed Corridor may be required under Section 106 of the National Historic Preservation Act (NHPA).

Table 13. Archeological Resources in the Project Vicinity		
Site Number	Age	Site Description
10KA591	Historic	Abandoned quarry associated with construction of US 95
10KA594	Historic	Trash scatter
10KA392	Historic	Coeur d'Alene Spokane Electric Interurban Railway
10KA360	Historic	Spokane International Railway
10KA393	Historic	Spokane International Railroad - Coeur d'Alene branch
10KA379	Historic	US Highway 95
10KA411	Historic	Idaho Highway 53
55 - 76884	Architectural	Prairie School II
55 - 18255	Architectural	Huetter School
55 - 18326	Architectural	Idaho Highway 53 - Union Pacific Railroad Bridge
55 - 18373	Architectural	Shawna Nagel House
55 - 18374	Architectural	John Daum House
Source: Idaho State	Historic Preservation	Office

Table 14. Idaho Archeological Surveys in the Project Vicinity			
Report Number	Title	Author	Year
1989 / 2156	PSR, US 95 Passing Lanes, Coeur d'Alene to Sandpoint.	Gaston, J.	1988
1989 / 4043	Archaeological Survey of Proposed Coeur d'Alene Wastewater Facilities.	Mattson, D.	1980
1989 / 6974	US Sprint Fiber Optic Cable Project - Spokane, Washington to Fargo, North Dakota. Washington and Idaho Cultural Resources Technical Report.	Wessen, G.	1988
1990 / 201	Class I and Class III Cultural Resource Inventories of AT &T, Spokane to Billings - Fiber Optic Facilities in Idaho.	Jepson, D.L., J. Anderson, and C. Zier	1989
1992 / 1203	Report on the Archaeological Survey and Salvage Activities on Pacific Northwest Natural Gas Distribution System in Washington and Idaho.	Pacific Northwest Pipeline Corporation	1958
1994 / 718	Kootenai Electric Cooperative - Project 42.1 Part of KEC's 1994 - 1995 Construction Work Plan and Borrower's Environmental Report.	Hudson, L.	1994
1995 / 802	LTA – 17	Sisson, D.	1995
1996 / 147	Garwood Road - UPRR Crossing	Gaston, J.	1996
1996 / 800	Post Falls Pump Site	Sisson, D.	1996
2000 / 690	Hayden Gravel Source Expansion	Hudson, L.	2000
2000 / 693	Twin Lakes Road Turn Bays	Sappington, R.	2000
2000 / 699	Poe / Conmat KT - 12c	Sappington, R. and S. Schuknecht	2000
2001 / 861	Kootenai Electric Cooperative - Project 203	Sims, C.	2001
2002 / 524	Boekel Road, north of Hayden	Hudson, L. and S. Carbonneau Kincaid	2001
2003 / 569	Prairie Avenue, Huetter Road to Ramsey Road	Mauser, L. and J. Pepalis	2003
2004 / 13	Kootenai Electric Cooperative - Projects 210, 211, 212, 401	Sims, C.	2003
2004 / 384	Kootenai Electric Cooperative - Project 363	Sappington, R.	2004
2006 / 235	Technical Report for the Spokane River Hydroelectric Relicensing Project	Hicks, B. J., Cziesla, M. Montgomery, and K. Demuth	2005
2006 / 432	Wyoming Avenue to Ohio Match Road	Harding, W.	2006
2006 / 439	US 95 Garwood to Sagle	Miss, C.	2005
2007 / 8	Section 106 Historic Properties Evaluation Technical Report. Spokane River Project.	Hicks B., et.al.	2006
2008 / 542	ID Ramsey Alternative 6	Stipe, F.	2008
2008 / 763	Carrington Meadows Underground Service System	Hudson, L.	2008
2008 / 788	Proposed Atlas Road Bike Path Extension.	Emerson, S.	2008

Source: Idaho State Historic Preservation Office

SECTION 4(f) PROPERTIES

Section 4(f) of the Department of Transportation Act (DOT Act) of 1966 stipulates that the Federal Highway Administration (FHWA) and other DOT agencies cannot approve the use of land from publicly owned parks, recreational areas, wildlife and waterfowl refuges, or public and privately owned historical sites unless the following conditions apply:

There is no feasible and prudent alternative to the use of the land, and The action includes all possible planning to minimize harm to the property resulting from the proposed transportation project.

Parks

No public parks are crossed by the Huetter Corridor.

Highway Beautification Programs

The area has some native trees, which may have planted as part of Ladybird Johnson's program for highway beautification or other federally funded beautification projects. The interstate right of way in the vicinity has a scenic easement on the titles of the adjoining properties which, governs the type of advertising and structures, that are allowed within the easement. A future interchange at Interstate 90 should be designed with landscaping that retains the existing scenic quality. The State owns a block of land directly south of the rest area that has the Pioneer Cemetery on it. The Centennial Trail location will also be a consideration in the siting and construction of an interchange. The trees and trail are potential candidates to be a 4(f) resource (park property, historic, or cultural resource) as defined by the FHWA. If this site is used and a "use" of 4(f) resources is encountered and requires mitigation, then it is assumed that the ITD Huetter Rest Area (including both sides of Interstate 90), Port of Entry, and trail will require removal, relocation, or replacement.

Recreational Areas

Two recreation trails are crossed by the proposed Huetter Corridor: the North Idaho Centennial Trail and the Prairie Trail. The North Idaho Centennial Trail extends 24 miles from the Washington/Idaho border to Higgins Point on Coeur d'Alene Lake. The trail consists of primarily Class I separated and paved trails with numerous rest areas, scenic overlooks, and interpretive signs along the route. The Prairie Trail is the second addition to the North Idaho Centennial Trail. It extends from the Seltice Way/Interstate 90 bridges northwesterly to Huetter Road on a former rail line right of way. Sections of this trail are four feet wider than the original segments to accommodate increased visitor capacity due to easy accessibility to the trail.

Wildlife and Waterfowl Refuges

No wildlife or waterfowl refuges are crossed by the proposed Corridor.

Historic Properties

Three conditions must exist to consider historic properties Section 4(f) issues. A portion of the property must be permanently incorporated into the proposed transportation project; the property must be listed in, or determined eligible to, the National Register; and the project must have an adverse effect on the historic property, as defined by Section 106 of the NHPA. If the project will not have an adverse effect on the historic property, it is considered a *de minimus* 4(f) issue and the project may proceed as planned.
Twelve historic properties (seven archaeological and five architectural resources) have been documented within 0.5 mile of the Corridor. Of these, only four are crossed by the Corridor and could therefore be considered potential Section 4(f) issues:

- 10KA360, Spokane International Railway
- 10KA393, Spokane International Railroad, Coeur d'Alene Branch
- 10KA411, State Highway 53
- 55-18326, Highway 53 Union Pacific Railroad Bridge

None of these historic properties is listed in the National Register; however, an eligibility determination and effects assessment will be necessary to determine if these properties pose Section 4(f) issues. Further, future cultural resources surveys to comply with Section 106 of the NHPA may identify additional cultural resources that may be 4(f) properties.

NOISE

Noise is defined as unwanted sound. The unit used to describe the intensity of sound is the decibel (dB). The A-weight scale, or dB(A), approximates the range of human hearing by filtering out low frequency noises and correlates well with human perceptions of the annoying aspects of noise. Other related scales (e.g., L_{dn} , L_{eq} , L_{10}) are also used in traffic noise analysis.

For a rural environment, background noise is typically about 40 dB(A) during the day and 30 dB(A) at night (BLM 2005). An automobile at 50 feet can reach 60 to 90 dB(A) and average street traffic is about 70 to 80 dB(A). As a comparison, conversational speech is about 60 dB(A) and a jet aircraft taking off can reach 120 dB(A).

A 3 dB increase in noise is considered barely noticeable to humans, a 5 dB increase would typically result in a noticeable community response, and a 10 dB increase is considered a doubling of the sound level. Noise levels above 45 dB(A) at night can result in the onset of sleep disturbance (EPA 1971), and at 70 dB(A) sleep interference becomes considerable.

The FHWA has guidelines for addressing traffic noise impacts. A traffic noise impact occurs when the predicted noise levels substantially exceed the existing noise level or approach or exceed FHWA noise abatement criteria (Table 15).

Table 15. FHWA Noise Abatement Criteria					
Activity Category	${L_{eq}}^{(h)}$	L ₁₀ ^(h)	Description of Activity Category		
А	57 (Exterior)	60 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.		
В	67 (Exterior)	70 (Exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.		
С	72 (Exterior)	75 (Exterior)	Developed lands, properties, or activities not included in Categories A or B above.		
D			Undeveloped lands.		
Е	52 (Interior)	55 (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.		
$L_{eq}^{(h)}$ is the hourly value of the equivalent steady-state sound level, which contains the same acoustic energy as a time- varying sound level during the same time					

 $L_{10}^{(h)}$ is the hourly value of the sound level that is exceeded 10 percent of the time for the period under consideration.

To protect public health and welfare, the EPA has developed guidelines on recommended maximum noise levels, and the Occupational Safety and Health Administration (OSHA) has established regulations to safeguard the hearing of workers. EPA guidelines recommend a day-night average sound level (L_{dn}) of 55 dB(A) in typically quiet outdoor and residential areas. For protection against hearing loss, the EPA guidelines recommend a sound pressure level less than 70 dB(A) over a 24-hour period; however, these levels are recommendations, not requirements.

Noise sensitive resources include residences, churches, schools, cemeteries, hospitals, and parks. Table 16 lists the number of these resources, other than residences, located within the study area.

Table 16. Selected Noise Sensitive Resources in the Corridor Study Area							
Resource	Unincorporated Kootenai County	City of Coeur d'Alene	City of Post Falls	City of Hayden	City of Rathdrum		
Churches	0	0	0	0	0		
Hospitals	0	0	0	0	0		
Schools	0	0	0	0	0		
Cemeteries	1	0	0	0	0		
Parks	0	0	0	0	0		

Source: Field survey and data research, Power Engineers, December, 2008 and January, 2009.

Location of the Corridor facility approximately 25 feet below the ground level will help to reduce potential traffic noise impacts, if any, on adjacent land uses.

HAZARDOUS MATERIALS AND WASTE

Hazardous materials and waste sites include those areas that because of previous or on-going land uses possess contaminated soil, contaminated water, underground storage tanks (USTs), or leaking underground storage tanks (LUSTs). These sites are administered through a variety of Federal and State programs and regulated by various laws including the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response Compensation and Liability Act (CERCLA).

Hazardous substance and waste sites are tracked by IDEQ through its Waste Management and Remediation Program (accessed March 2009 at <u>http://www.deq.idaho.gov/waste/data_reports.cfm</u>). Within the Huetter Corridor study area, IDEQ tracks six hazardous sites, including one RCRA site and five sites identified as USTs or LUSTs (Table 17). No superfund (CERCLA) sites were identified within the study area. The locations of hazardous sites are mapped on Figure 22.

Table 17. Hazardous Sites in Huetter Corridor							
IDEQ ID #	Facility Name	Description	Status				
1-280663	Bob Turnipseed	UST - 1 diesel tank	Tank removed from ground in 1994.				
1-280118	Post Falls Highway District	LUSTs - 1 diesel, 2 gasoline tanks	Cleanup complete; tanks removed from ground in 1990.				
5101	Jim Peters Property	RCRA - release of petroleum products	Cleanup complete in 2005.				
1-280637	Jim Peters	USTs - 3 gasoline tanks	Tanks probably removed before 1986.				
1-280127	Hauser Lake Lumber, Inc.	USTs - 1 diesel, 2 gasoline tanks	Tanks removed from ground in 1988.				
1-280657	Century Publishing	UST - 1 diesel tank	Tank removed from ground in 1993.				
Source: http://www.deq.idaho.gov/waste/data_reports.cfm							

Environmental scan references are provided in the Appendices of this report.



ENVIRONMENTAL CONCLUSIONS

Summary

The Huetter Corridor study area includes portions of the cities of Coeur d'Alene, Post Falls, and Hayden, is adjacent to the city limits of Rathdrum, and includes unincorporated portions of Kootenai County. Existing development along Huetter Road south of Interstate 90 is largely industrial and commercial with some residences. North of Interstate 90, land use along the Corridor is primarily agricultural with rural large lot developments on the west and urban density residential development from Poleline Avenue to Prairie Avenue. Areas north of Prairie Avenue are primarily rural in nature with agriculture being the predominant use. In addition to highway district roads and state and federal highways, other features in the vicinity include the Union Pacific Railroad tracks, the Coeur d'Alene Airport, electrical substations, a wastewater effluent pipeline, natural gas and petroleum pipelines, and utility corridors.

The environmental scan revealed the following information about the Corridor study area:

- Census data indicate no disproportionate numbers of minority or low-income populations.
- Natural ecological communities have undergone nearly complete conversion to agricultural and urban land uses. Some sensitive plant and animal species have been documented in the periphery of the study area.
- No surface drainages cross the study area. NWI maps show that the only wetlands in the vicinity are two small wetlands northeast of the northern terminus of the Corridor and east of US 95.
- Idaho SHPO files indicate that five archaeological sites and seven architectural resources have been previously recorded in the study area. None have been evaluated for eligibility to the National Register, and most of the study area has not been inventoried for cultural resources.
- The only known potential Section 4(f) properties in the study area are the North Idaho Centennial Trail, the Prairie Trail, and four cultural resources. Trees planted along Interstate 90 which may have been funded under a federal highway beautification act, may be a potential Section 4(f) property.
- In addition to residences, the only noise sensitive resource in the Corridor study area is the Kootenai County Cemetery.
- IDEQ reports that six hazardous materials sites exist within the study area. Five documented USTs and LUSTs have been removed, and one petroleum spill has been remediated.

Recommendations

There are no known environmental constraints within the Huetter Corridor study area that would preclude development of a high-speed route, frontage roadway, and pedestrian/bicycle trail. For most resources, some additional data collection and documentation would be necessary to confirm that impacts would be low or easily mitigated. These studies should proceed as required by federal and state regulations.

Next Environmental Steps

The next steps in the environmental process would depend on the source of funding for future development of the Huetter Corridor. Likely federal funds will be used for the project, compliance with several laws will be required, including, but not limited to:

- National Environmental Policy Act (NEPA), which would entail preparation of a categorical exclusion, environmental assessment, or environmental impact statement.
- Section 7 of the Endangered Species Act, which would require some level of informal or formal consultation with the United States Fish and Wildlife Service.
- Section 106 of the National Historic Preservation Act, which may require a cultural resources survey of the right of way, as well as implementing measures to avoid or mitigate impacts to National Register-eligible cultural resources.
- The Migratory Bird Treaty Act, which would require implementing measures to avoid harming migratory birds during construction.
- Federal Highway Administration regulations regarding predicting traffic noise impacts.
- Notification of Proposed Construction or Alteration to the Federal Aviation Administration.
- Coordinating with the Army Corps of Engineers regarding any need for filling in waters of the U.S. or wetlands, as required by Sections 401 and 404 of the Clean Water Act.
- Obtaining a general permit and, if necessary, preparing a Storm Water Pollution and Prevention Plan (SWPPP).
- Working with County and State authorities regarding noxious weeds, crossing of easements, land use permits, and modifications to existing highway district roads.

V. RIGHT OF WAY NEEDS MAP IMPLEMENTATION

This section presents the adopted Right of Way Needs Map and the implementation process for right of way preservation. As previously stated, the purpose of the Right of Way Needs Map work is to identify the future transportation facility right of way needs along the Preferred Alignment as determined by the project's purpose and need.

Figure 23 provides the adopted Right of Way Needs Map. Kootenai Metropolitan Planning Organization adopted the map on August 2, 2007. The map is also included in the Kootenai County Metropolitan Transportation Plan 2007 – 2030 (KMPO, October 2007). The Corridor route follows and occupies the existing Huetter Road right of way and parallels the Spokane International and Union Pacific Railroad right of way connecting Interstate 90 to US Highway 95 at State Highway 53. The right of way footprint provides for a High-Speed, Type V, grade-separated facility with a parallel Frontage Road and pedestrian and bicycle trail. Interchanges are located at Interstate 90, at each major intersecting arterial between Poleline and Lancaster Avenues, and at the State Highway 53 and US Highway 95 junction.

It is anticipated that the expressway portion of the Corridor will be developed as a sub-grade facility, approximately 25 feet below the existing ground surface. The intent of the sub-grade facility is to provide for noise attenuation, to lessen the visual impacts of the facility, and to minimize changes to the vertical alignments of existing cross streets.

Huetter Road would serve as the north and south local access frontage road with generally three travel lanes except at the intersecting arterials where the footprint would include up to five lanes. All intersecting arterials are planned as five lane roadways.

RIGHT OF WAY PRESERVATION PROCESS

It is anticipated that a combination of building setback requirements, zoning requirements, access requirements, right of way dedication through annexation and site development or redevelopment, and property acquisition will be needed to secure the Corridor for the future. Approval and adoption of the right of way needs map by the Kootenai Metropolitan Planning Organization, Highway Districts, Kootenai County, and cities (Post Falls, Rathdrum, Hayden, and Coeur d'Alene) assures its place in the planning process. At a minimum, the map can be used in an advisory capacity for local jurisdictions when working with developers. It is recommended, however, that local agencies adopt the map as part of the jurisdiction's planning documents, in order to require that developers set aside land to meet future transportation facility needs.

The following land use proposals should trigger a right of way preservation action by local jurisdictions:

- Annexation
- Subdivision
- Planned Unit Developments
- Commercial or Industrial Development
- Zone Change



Dedication of right of way or granting of a permanent right of way easement is recommended as a condition of each of the above proposals.

Jurisdictions may wish to allow property within the Corridor right of way footprint to be used as interim open space for a subdivision development and designated as an easement until needed for roadway improvements. When the Corridor improvement project moves forward, the easement area could be dedicated as right of way at that time. This would allow the easement area to remain under the care of the underlying property owner until the Corridor project would be constructed.

Jurisdictions may wish to consider the provision of bonus densities, other incentives (setback variances, variances on uses), or a reduction in property value for tax purposes to offset perceived impacts of the dedication or easement.

Properties that develop or redevelop should be reviewed for corridor facility orientation, location of streets and accesses that may impact the facility footprint, and appropriate setbacks based on the proposed right of way footprint. Consideration should also be given to the location of pedestrian and bicycle facilities so that connections to the future Huetter pedestrian and bicycle trail are anticipated.

HUETTER CORRIDOR - NEXT STEPS

Preserving the right of way for transportation facilities is addressing future infrastructure needs and assuring that those projects can be constructed through careful coordination of both existing and future land uses. By a coordinated approach, public costs are lessened, the study and project steps are in compliance with state and federal requirements, the project becomes eligible for public funding, and the general public is well served through coordinated efforts.

Adoption of the Report and Right of Preservation Map by the Agencies

Following adoption by the jurisdictions (Cities of Rathdrum, Post Falls, Coeur d'Alene, and Hayden; Post Falls and Lakes Highway Districts, Kootenai County, and the Idaho Transportation Department), the study and map would be appended to their existing planning or transportation documents. Jurisdictions may also adopt the document as a standalone document.

Right of Way Preservation

Upon adoption, jurisdictions can then require dedication of right of way or permanent easement associated with land use or permitting actions as a condition of approval or requirement.

Alternatives and Environmental Analyses

Through an iterative process, design considerations and environmental impacts will be used to refine the facility design and any subsequent mitigation of the project.

- Preliminary Environmental Evaluations Performance of cursory environment evaluations to:
 - Examine potential individual and cumulative project impacts to the environment.
 - Aid in determining environmental documentation type.
 - Complete environmental evaluations for inclusion into the determined environmental document(s).

- Alternatives Analysis As required by NEPA, analyze probable alternatives and select a
 preferred alternative. The analysis of alternatives completed through previous Purpose
 and Need and right of way preservation work efforts can serve as a "pre-screening" of
 alternatives and be used to establish the basis of probable alternatives to be analyzed.
- Environmental Document Determination, Preparation, and Approval Following NEPA, FHWA, and ITD protocol, completion of an Environmental Evaluation, Environmental Assessment, or Environmental Impact Statement and receipt of the respective regulatory Categorical Exclusion, Finding of No Significant Impact, or Record of Decision approval.

Access Point Decision Report

Complete the required analyses and requirements for the FHWA process to achieve approval for the new facility connection to Interstate 90.

Right of Way Acquisition

Not all of the required right of way may be acquired prior to construction of the project. In these cases, right of way would need to be acquired to meet the facility needs. In advance of project preliminary and final design and environmental clearances, property may be acquired under protective acquisition or hardship buys.

Design

By phase, complete conceptual, preliminary, and final design; prepare construction documents; and solicit bids from construction contractors.

Funding and Phasing

- Evaluation, selection, and secure funding to implement the project.
- Achieving a balance between need, available funds, and project phasing.

Construction

By phase, construct the project.

The complete text of the Huetter Corridor Right of Way Preservation Implementation Policy is in the Appendices of this report.