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# CITY OF BOISE PRE-CONCEPT REPORT ECKERT ROAD UNDERPASS



**FORSGREN**  
*Associates Inc.*



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## 1.0 Introduction

### 1.1 Project Description

The City of Boise proposes to construct a bicycle/pedestrian underpass at Eckert Road on the North side of the Boise River. The project will allow bicycle and pedestrian Greenbelt users to cross Eckert Road at a separate grade than vehicle traffic.

The West side of the underpass will tie into the existing Greenbelt pathway from Marianne-Williams Park, and the pathway along the West-side of Eckert Road. The East side of the underpass will tie into the future Alta-Harris Ranch Park.

### 1.2 Purpose and Need

**Purpose:** The purpose of the project is to construct a shared-use underpass at Eckert Road.

**Need:** The project is needed to improve access and safety to existing and proposed developments in the area. The area around the site is being residentially developed and it is anticipated that future pedestrian and bicycle users will increase.

### 1.3 Existing Area Conditions

The underpass will be located approximately 450' North of the Eckert Road Bridge across the Boise River.

Existing pedestrian paths intersect at the West-side of the proposed underpass. A roadside gravel parking lot is located along the East side of Eckert Road and South of the project site. The natural ground is generally flat and drains south towards the Boise River.

The existing right-of-way extents were determined to be approximately 35' from the centerline of Eckert Road to both the East and West of the Road.

The Boise River channel is approximately 13' below Eckert Road at the proposed underpass location. Groundwater is expected to be four feet below the natural ground during low-water, approximately 2757'.

Warm Springs Creek is located 0.25 miles to the North-West of the project site and crosses the Greenbelt via a box culvert.

Council Spring Creek travels from the North-East to South-West crossing Eckert Road at the project site through a culvert.



### **1.4 Floodplain Review**

See Appendix A for the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM). The profile of the Boise River channel along with data for the cross section of the floodplain is also included from the Boise River Flood Insurance Study conducted by FEMA. The site is in the FEMA 100-year floodplain but is outside of the 6,500 cfs water line by approximately 100 feet. A floodplain development permit will be required for construction of the underpass.

### **1.5 Existing Utilities**

The alternative exhibits, Appendix D, show the approximate utility locations. The following utilities were contacted: Syringa Networks, Idaho Power, Century Link, Intermountain Gas, Cable One, and United Water. The existing sewer line location was determined using information provided by the City of Boise. Pot-holing should be performed to determine locations and depths of utilities that may be impacted. Utility contact information has been included in Appendix B.

### **1.6 Greenbelt Use**

The future developments of Harris Ranch Subdivision, Marianne-Williams Park, and Alta-Harris Park along with the existing development of Barber Park will increase pedestrian and bicycle traffic in the area. Once built, the underpass will be a part of the main corridor that makes up the Boise Greenbelt. It will also be the only East-West shared-use path for the East Boise area. The use of this path will continue to grow as East Boise is developed and as the City of Boise continues to grow. Eckert Road has an average annual daily traffic count of 4,199 vehicles, Appendix C. The high-use of Eckert Road by vehicles and the high-use of Greenbelt users is the reason why an underpass is suggested to improve the safety and efficiency of the crossing.

## **2.0 Proposed Improvements**

### **2.1 Proposed Layout and Design of Underpass and Approaches**

The underpass will need to be designed to maintain a satisfactory level of safety and adequate efficiency for users. Maintaining safety can be achieved by increasing sight distance while approaching/exiting the underpass and by designing the pathway intersection to the west of the underpass to accommodate all traffic patterns and users. An increase in efficiency can be achieved by maintaining a clear zone width of two feet through the underpass and having proper signing and pavement markings for users of the pathway. The vertical clearance shall be ten feet in the case of emergency vehicles needing to use the underpass.

A pathway is included that runs parallel to the West of Eckert Road and over the underpass. The pathway should be separated from traffic with a rail or crash tested traffic separator. To accommodate this path the underpass is estimated to be approximately 60' in length.

## **2.2 Strategic Goals and Performance Measures**

The strategic goals for this project are to improve safety and efficiency for all transportation modes in the vicinity. The underpass helps meet several Goals and Objectives of Communities in Motion 2040 (CIM 2040), the Regional Long-Range Transportation Plan by separating bike and pedestrian traffic on the greenbelt from crossing Eckert Road.

Goal 1 – Improve safety and security for all transportation modes and users.

Objective 1.1 – Reduce number and severity of incidents, including:

Number of Bike and Pedestrian Crashes

Number of Bike and Pedestrian Fatalities

Number of Bike and Pedestrian Injuries

Goal 2 – Strive for more walkable, bikeable, and livable communities with a strong sense of place and clear community identity and boundaries.

Objective 2.2 – Develop and implement local bike/pedestrian plans

Goal 3 – Promote development and transportation projects that protect and provide all the region’s population with access to open space, natural resources, and trails.

Objective 3.1 – Create a connected network of trails, pathways, and greenways (by increasing):

Miles of Trails and Pathways

Boise River Greenbelt Miles

The Boise greenbelt is commonly used by pedestrians and bicyclists. Design guidelines detailed in the Guide for the Development of Bicycle Facilities by the American Association of State and Highway Transportation Officials (AASHTO) are recommended to safely accommodate pedestrians and bicyclists. Maintenance vehicles and disabled pedestrians will also use the project facilities and need to be accommodated. The following guidelines will improve the safety and efficiency of users while making the underpass functional.

### **Pathway Design Guidelines:**

City of Boise

12’ Wide path

Guide for the Development of Bicycle Facilities, Fourth Edition

Clear Zone of 2’ for both sides of pathway

Max Grade of 5%

Cross slope of 1%

20mph design speed for site (increased from 18mph due to 5% grade)

Minimum Horizontal Curve Radius 74’

Stopping Sight Distance = 125’

Minimum Length of Vertical Curve = 50’

### **2.3 Harris Ranch Subdivision Expansion**

The Harris Ranch Subdivision will expand and will be located to the north of the underpass. The development of the subdivision will consist of an intersection at Eckert Road for access. Location of the intersection with Eckert Road has not been determined. A sewer line has been installed in the area and it is common practice to put the road along the same path of the sewer line. This sewer line is located in the immediate vicinity of the planned location of the underpass. There is potential that an intersection at this location may increase costs, e.g. lengthening the underpass, the need for more retaining walls, or other infrastructure improvements. Contact information has been provided in Appendix B.

The Harris Ranch Subdivision will plan on rerouting Council Spring Creek to have a confluence with Warm Springs Creek at a location north-west of the project site. There is no anticipated need for additional structures to cross creeks or streambeds. Removal of the current Council Spring Creek culvert crossing Eckert Road will be necessary.

The project timing will require coordination with Harris Ranch to determine when the new pathway and park will be constructed on the east side of Eckert Road. If funding becomes available for the underpass, a temporary path may be required to guide the greenbelt users back to Eckert Road.

### **2.4 Alternative Analysis and Feasibility**

Two alternatives were examined for the proposed underpass. Alternative one includes increasing the elevation of Eckert Road to eliminate excavating under Eckert Road. Alternative two includes maintaining the elevation of Eckert Road and lowering the green belt to pass underneath. The underpass opening is estimated to be approximately 46' in length, 10' high, and 16' wide for Alternative 1 and 60' in length, 10' in height, and 16' in width for Alternative 2.

#### **Alternative 1**

Alternative 1 raises Eckert Road. Eckert Road will be raised approximately ten feet and will have approximately 600' of reconstructed roadway. The benefits of raising Eckert Road up and over the existing ground line of the pathway are:

- Reduction in length of structure.
- Minimal impacts to utilities. The overhead power and cable TV will need to be adjusted.
- No retaining walls on greenbelt.
- No sump pump to drain underpass.
- No waterproofing of the underpass.
- No de-watering or coffer dams.

Retaining walls will be needed on Eckert Road to keep the new construction from extending beyond the existing right-of-way.

#### **Alternative 2**

Alternative 2 maintains the grade of Eckert Road and will reconstruct approximately 250' of roadway for the underpass. Increased roadway reconstruction may be necessary depending on utility relocating needs.

For the Greenbelt to meet the 5% grade, required by the Americans with Disabilities Association (ADA), approximately 220' of pathway reconstruction is necessary from the underpass invert to the existing pathway elevation. Construction of the pathway intersection west of the project may be set at a lower grade to decrease the need for easements and the impact on potential wetlands in the area. Appendix D shows the intersection 140' from the underpass. Approximately 1,400' of reconstructed/additional Greenbelt path will be necessary with this alternative.

This alternative puts the invert of the underpass approximately two feet above the Boise River channel bottom making it susceptible to flooding from groundwater and the river during high flows. The groundwater level would be approximately seven feet above the invert of the underpass at low-water. This would require the underpass to be water-tight. Gravity retaining walls, which are higher in cost than MSE walls, will need to be used to keep the water out of the underpass.

Gas, Sewer, and Water utility lines will likely be impacted. These utility lines will need to be rerouted to go underneath or around the pedestrian underpass.

A sump pump will need to be installed in the case of any large storm event or the flooding of the Boise River that causes water to pond at the underpass. This alternative will need a pumping system that will need to be maintained on an annual basis and the pump will need to be replaced approximately every ten years.

Construction of the structure will, at a minimum, involve cofferdams, a pumping system to dewater during construction, over excavation for water removal, and a sediment pond or water-treatment system. These construction elements will add considerable costs and time to the project. The approaches to the structure and the structure itself may need a waterproof membrane around the retaining walls and underpass to keep water out.

This alternative may be investigated as an option during the Concept phase of the project but initial costs were above \$1.5 million because of the groundwater issues and construction complexities.

Alternative 3: A combination of the alternatives 1 and 2 may be investigated during the Concept phase of the project. Lowering the greenbelt slightly may reduce costs of reconstructing part of Eckert, but utility relocation and the introduction of drainage systems may offset the savings.

### **Feasibility**

As the Pre-Concept Report was being prepared, it became clearer that the underpass should be at existing ground level and Eckert Road be raised over the pathway. Besides the raising of Idaho Power's lines (Idaho Power indicated there is talk of the lines going underground), minimal impacts will be seen to the existing water, sewer and gas lines.

Project construction will also be appropriate to coincide with one or more of three future projects in the vicinity of the underpass. First, the Eckert Bridge over the Boise River will be replaced by ACHD, but the project is not yet budgeted or scheduled. Second, a new intersection is planned north of the site to serve

an expansion of the Harris Ranch subdivision. Third, the main route of the Boise River greenbelt will be constructed from the underpass site along through a future city park. As each of these other projects move forward, this Pre-Concept Report for the Eckert Road Underpass will provide vital information to find complementary solutions for the community.

## **2.5 Traffic Control during Construction**

Three main options should be considered while preparing traffic control plans:

Option 1: Complete closure of Eckert and detour around the project site. This would include diverting traffic to Boise Ave, Bown Crossing then Park Center or SH-21 utilizing Surprise Way.

Option 2: Stage construction by building half at a time leaving one lane of traffic open utilizing flaggers and temporary signals.

Option 3: Construct a temporary road to the east of the project. This option would require easements and collaboration with Harris Ranch and will keep traffic moving in the current patterns and reduce construction signing and maintenance costs.

## **2.6 Environmental Scan**

See attached Environmental Scan.

## **2.7 Geotechnical Investigation**

A geotechnical investigation will be needed to determine the footing size for the structure of the underpass. The ITD Phase I-V Materials Reports will apply to the project.

## **2.8 Right of Way**

No right-of-way take is anticipated. Temporary and/or permanent easements may be necessary depending on layout and design. A cost for any easements has been accounted for in the cost estimate.

## **2.9 Recommendations**

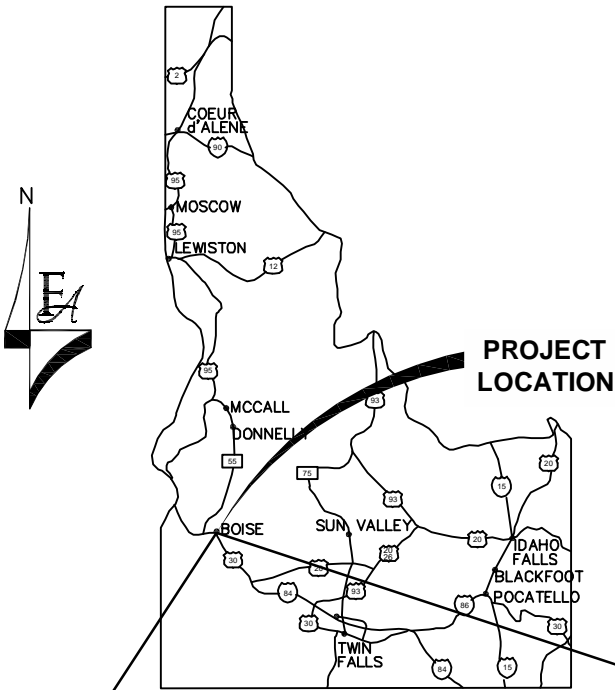
Alternative 1 is recommended for this project due to a lesser cost and increased constructability over alternative 2. Alternative 1 and alternative 2 will cost approximately \$1.35 million and \$1.76 million, respectively. Alternative 1 is more constructible than alternative 2 due to there being a minimal amount of excavation below the groundwater table.

During a meeting with COMPASS, the City of Boise and the Ada County Highway District funding and an alternative layout was discussed. The matching funds from the City of Boise would be too large to proceed with either alternative. Another alternative of moving the underpass to a location next to the Boise River was discussed. This alternative would be constructed along with a new Eckert Road Bridge that crosses the Boise River. Evaluating this alternative for costs and feasibility should also be conducted.

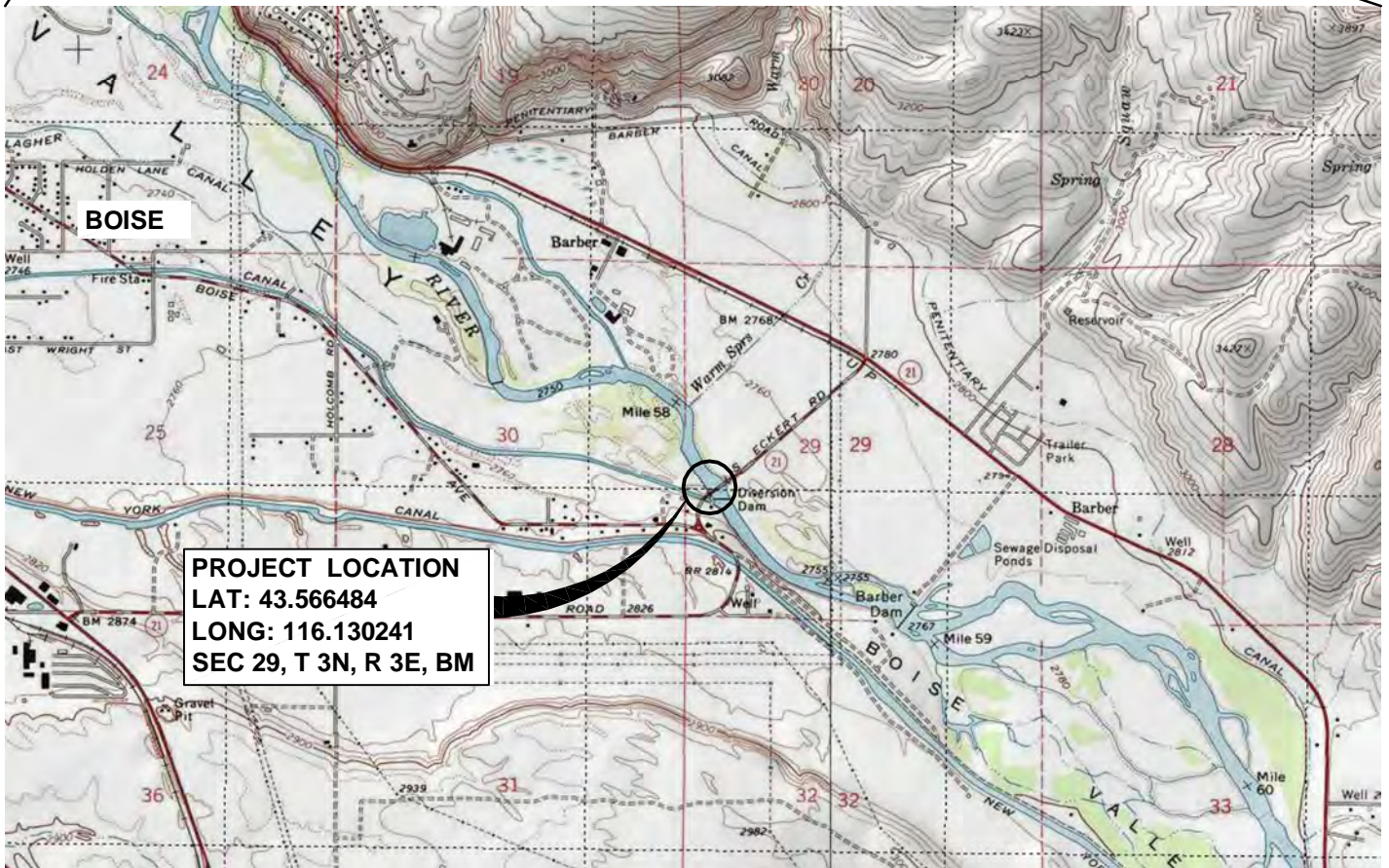


**ECKERT ROAD,  
UNDERPASS  
ADA COUNTY, IDAHO  
PROJECT NO: XXXX**

NW¼ SW¼, SECTION 29  
TOWNSHIP 3, RANGE 3, BM



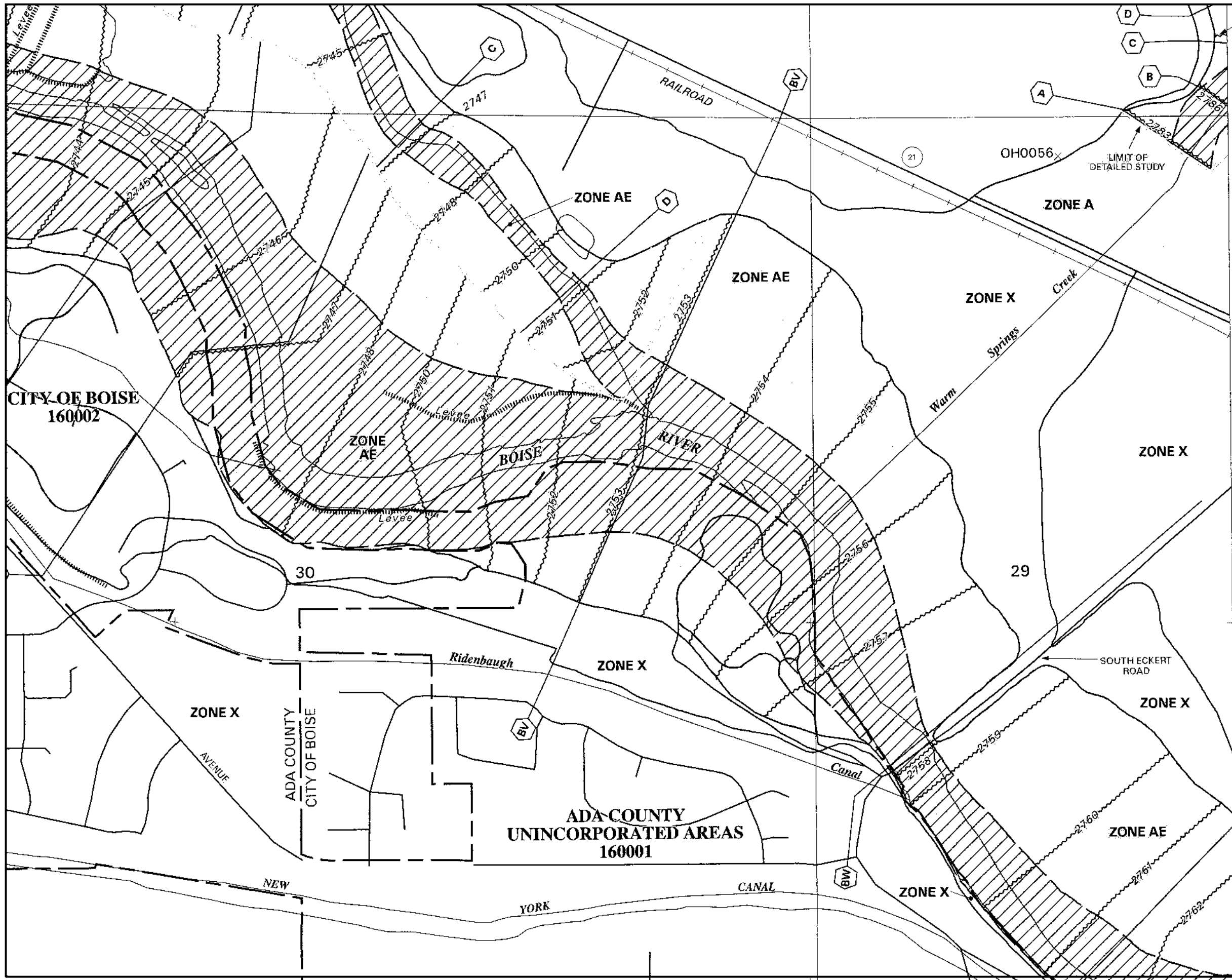
**LOCATION MAP**



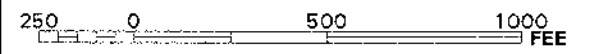
### **3.0 References**

1. Guide for the Development of Bicycle Facilities. Washington, DC, 2012: American Association of State Highway and Transportation Officials

## **Appendix A – FEMA Data**



MAP SCALE 1" = 500'



PANEL 0284 H

**FIRM**  
**FLOOD INSURANCE RATE MAP**  
 ADA COUNTY,  
 IDAHO AND  
 INCORPORATED AREAS

**PANEL 284 OF 875**

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
BOISE, CITY OF	160002	0284	H
ADA COUNTY, UNINCORPORATED AREAS	160001	0284	H

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.



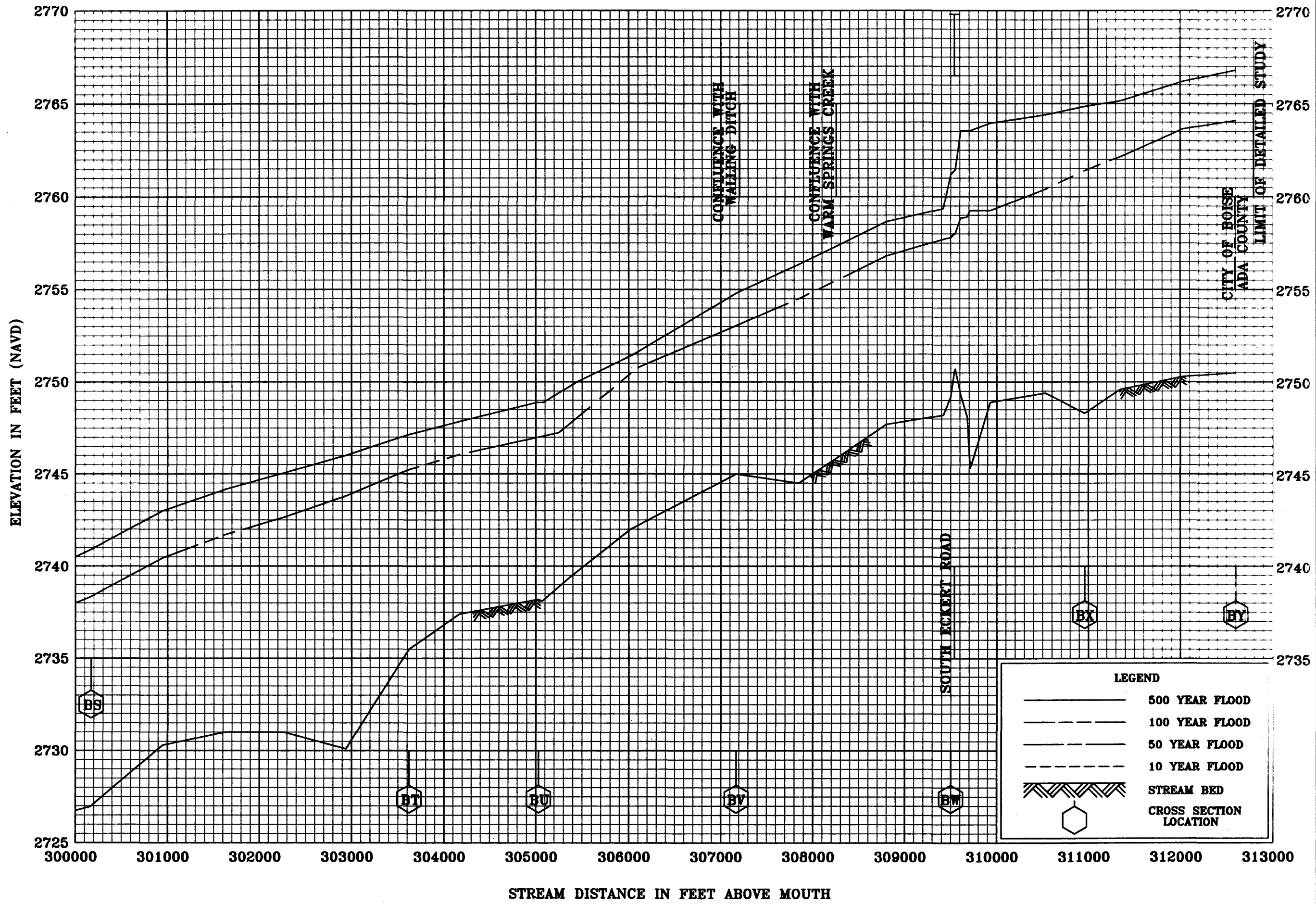
**MAP NUMBER**  
**16001C0284 H**

**MAP REVISED:**  
**FEBRUARY 19, 2003**

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at [www.msc.fema.gov](http://www.msc.fema.gov)





**LEGEND**

	500 YEAR FLOOD
	100 YEAR FLOOD
	50 YEAR FLOOD
	10 YEAR FLOOD
	STREAM BED
	CROSS SECTION LOCATION

FLOOD PROFILES  
BOISE RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY  
ADA COUNTY, ID  
AND INCORPORATED AREAS

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER-SURFACE ELEVATION			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
					(FEET NAVD)			
Boise River (Cont'd)								
AX	265,874	315	2,592	6.4	2,652.8	2,652.8	2,653.4	0.6
AY	267,322	206	1,653	10.0	2,655.4	2,655.4	2,655.7	0.3
AZ	269,657	473	2,303	7.2	2,662.4	2,662.4	2,662.9	0.5
BA	271,949	805	3,757	4.4	2,667.4	2,667.4	2,668.3	0.9
BB	273,744	300	3,565	4.7	2,670.6	2,670.6	2,671.0	0.4
BC	273,244	310	2,220	7.5	2,671.9	2,671.9	2,672.2	0.3
BD	274,038	475	3,205	5.2	2,672.7	2,672.7	2,673.2	0.5
BE	275,798	275	1,804	9.2	2,676.2	2,676.2	2,676.3	0.1
BF	278,303	272	2,067	8.0	2,684.6	2,684.6	2,685.3	0.7
BG	279,773	305	3,199	5.2	2,689.1	2,689.1	2,689.7	0.6
BH	283,152	294	2,621	6.3	2,696.4	2,696.4	2,696.8	0.4
BI	284,107	270	2,342	7.1	2,697.7	2,697.7	2,698.2	0.5
BJ	284,692	370	2,730	6.1	2,699.9	2,699.9	2,700.2	0.3
BK	285,660	181	1,516	10.5	2,702.6	2,702.6	2,702.7	0.1
BL	286,550	330	2,552	6.2	2,705.5	2,705.5	2,705.5	0.0
BM	288,965	343	2,414	6.7	2,711.7	2,711.7	2,712.6	0.9
BN	291,185	292	2,258	7.3	2,718.0	2,718.0	2,718.6	0.6
BO	292,875	600	2,516	8.3	2,720.4	2,720.4	2,721.2	0.8
BP	294,940	1,115	4,365	5.5	2,725.7	2,725.7	2,726.4	0.7
BQ	296,810	377	2,684	7.1	2,732.0	2,732.0	2,732.0	0.0
BR	298,477	557	3,384	7.5	2,734.8	2,734.8	2,735.2	0.4
BS	300,172	433	2,665	6.2	2,738.4	2,738.4	2,739.0	0.6
BT	303,622	801	2,887	5.1	2,745.3	2,745.3	2,745.8	0.5
BU	305,032	1,244	2,361	6.1	2,747.3	2,747.3	2,748.3	1.0
BV	307,172	827	3,004	5.5	2,753.1	2,753.1	2,753.4	0.3
BW	309,497	289	2,341	7.1	2,757.8	2,757.8	2,758.6	0.8
BX	310,954	408	2,257	7.4	2,761.4	2,761.4	2,761.9	0.5
BY	312,604	476	4,938	3.4	2,764.1	2,764.1	2,764.7	0.6

<sup>1</sup>Feet above mouth

T A B L E  3	FEDERAL EMERGENCY MANAGEMENT AGENCY	<b>FLOODWAY DATA</b>
	<b>ADA COUNTY ID AND INCORPORATED AREAS</b>	<b>BOISE RIVER</b>

## **Appendix B – Utility Contacts**

## Project Contacts

Company	Contact	Contact Information	Description
Syringa Networks, LLC	Chad Parr	(208) 229-6100 cparr@syringanetworks.net	Contacted on 8-24-15. There are no Syringa utilities in the area. Closest utilities are at I-84 or Broadway Avenue.
Idaho Power	Ed Kosydar	(208) 388-2747 ekosydar@idahopower.com	Contacted 9-1-15. Overhead power lines are the only utilities in the area. As of now there is no construction of moving the overhead power lines to underground. If there are plans to do so they are still in the preliminary phases.
Century Link	Tenille Sorenson	(208) 385-2440 tenille.sorenson@centurylink.com	
Intermountain Gas	Dave Drake	(208) 377-6835 dave.drake@intgas.com	Contacted 8-31-15. There is a 4" steel critical line in the area that serves the entire Harris Ranch area development. The depth is unknown but has a 30" minimum cover. It is suggested that pot-holing be done during survey to verify location and depth of the line.
CableOne	Eric Hodge	(208) 472-8394 eric.hodge@cableone.biz	Contacted 8-25-15. Utilities run along the Idaho Power utility poles. There is a plan in place to put the Idaho Power utilities underground. CableOne will put their utilities in the same duct bank as Idaho Power. As of now the CableOne utilities consist of a 48-count fiber optic cable system.
United Water	Robert Jensen	(208) 362-7355	
Harris Ranch Subdivision Representative	Sarah Martz	(208) 344-1131	Contacted 8-24-15. The abandoned Eckert Road and pathway running parallel to it will be removed. All other paths will not be removed due to any subdivision development. Sarah had no other thoughts or concerns of the project other than it will be great to have an underpass at Eckert Road in this area.



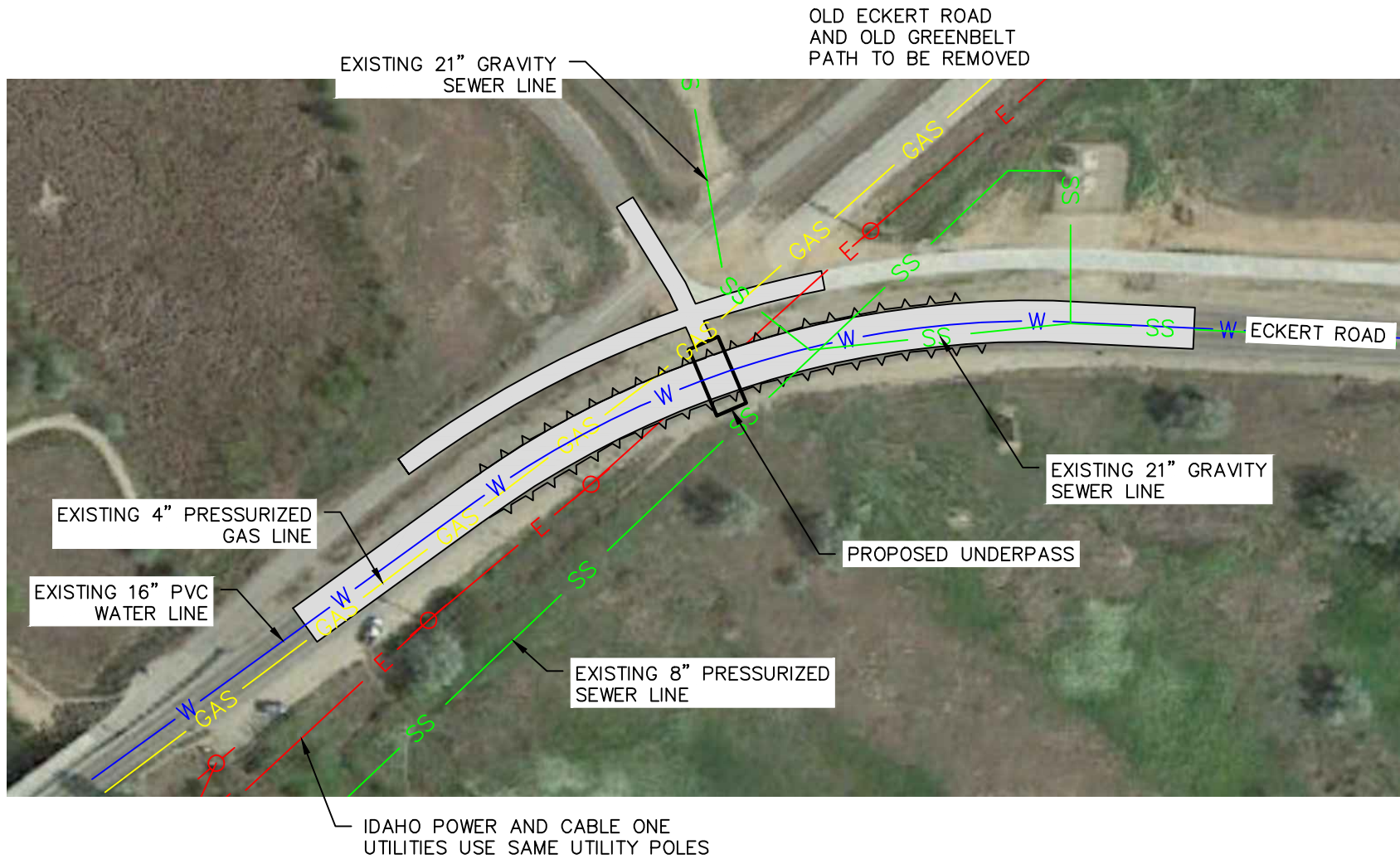
## **Appendix C – ACHD and ITD Traffic Counts**

STREET	LOCATION / COMMENT	CITY	DATE	COUNT	DIRECTION	AM PEAK	PM PEAK
EARLE ST	NORTH OF UNIVERSITY DR APPROACH & TOTAL	BOISE	5/20/2009	1,499	NB	131	61
			Wednesday		SB	26	32
EASTGATE DR <i>7 DAY COUNT</i>	EAST OF MIMOSA WY CLASSIFICATION		6/11/2013	1,001	EB	7	55
			Tuesday		WB	49	39
<i>7 DAY COUNT</i>	EAST OF TIGER LILY DR CLASSIFICATION		7/30/2015	2,160	EB	42	122
			Thursday		WB	103	74
EASTMAN ST	EAST OF 13TH ST VOLUME		01/30/96	639	EB	13	47
			Tuesday		WB	20	38
			5/14/03	545	EB	6	26
	EAST OF 15TH ST APPROACH & TOTAL		Wednesday		WB	7	22
	WEST OF 15TH ST APPROACH & TOTAL		5/14/03	361	EB	4	15
			Wednesday		WB	8	18
EASY JET DR <i>7 DAY COUNT</i>	EAST OF JEBLAR WY CLASSIFICATION	MERIDIAN	3/12/2015	582	EB	7	32
			Thursday		WB	26	30
	WEST OF EAGLE RD APPROACH & TOTAL		1/22/2015	1,967	EB	141	55
			Thursday		WB	38	126
ECHOHAWK WY <i>7 DAY COUNT</i>	SOUTH OF FLOATING FEAT CLASSIFICATION	EAGLE	5/27/2014	706	NB	32	28
			Tuesday		SB	8	40
ECKERT RD <i>AADT</i>	BOISE RIVER ITD COUNT	BOISE	12/31/2014	4,199	NB	179	208
			Wednesday		SB	194	190
EDELWEISS ST	NORTH OF GINGER CREEK APPROACH & TOTAL		1/8/02	85	NB	3	3
			Tuesday		SB	1	3
EDENBURGH WY <i>7 DAY COUNT</i>	NORTH OF TROWBRIDGE S CLASSIFICATION		10/15/2013	546	NB	13	41
			Tuesday		SB	22	19
EDGESTONE ST <i>7 DAY COUNT</i>	EAST OF FRUITHILL PL CLASSIFICATION	ADA COUNTY	6/13/2013	108	EB	2	5
			Thursday		WB	6	5
EDGEWOOD LN	NORTH OF STATE ST APPROACH & TOTAL	EAGLE	10/23/2014	3,924	NB	72	242
			Thursday		SB	157	192
			3/15/2012	1,340	NB	25	95
	SOUTH OF FLOATING FEAT APPROACH & TOTAL		Thursday		SB	26	74
	SOUTH OF STATE ST APPROACH & TOTAL		9/24/2014	11,986	NB	234	520
			Wednesday		SB	372	704
EDGEWOOD RD	SOUTH OF BEACON LIGHT CLASSIFICATION		5/15/2012	147	NB	3	7
			Tuesday		SB	1	9
EDGEWOOD WAY	SOUTH OF SH 44 APPROACH & TOTAL		6/15/2011	1,412	NB	25	142
			Wednesday		SB	3	9
EDNA DR	WEST OF CLOVERDALE RD CLASSIFICATION	BOISE	9/23/2009	572	EB	42	27
			Wednesday		WB	9	40
EDNA ST <i>7 DAY COUNT</i>	WEST OF ALLIANCE ST APPROACH & TOTAL		10/23/2013	2,206	EB	37	127
			Wednesday		WB	106	92
<i>7 DAY COUNT</i>	WEST OF ELGIN WY CLASSIFICATION		3/6/2014	4,509	EB	72	199
			Thursday		WB	30	242
<i>7 DAY COUNT</i>	WEST OF LENA AVE CLASSIFICATION		3/6/2014	3,982	EB	10	175
			Thursday		WB	20	160

## **Appendix D – Alternative Exhibits and Typical Sections**

**LEGEND**

- NEW/RECONSTRUCTED PATH/ ROAD
- RETAINING WALL



SCALE: NOT TO SCALE

P:\215105 - COMPASS\CADD\Design\Pr - Alt 1 Layout.dwg 10/8/2015 2:23 PM RBLAZICEVICH



**GREENBELT UNDERPASS AT ECKERT ROAD**


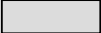


**ALTERNATIVE 1**

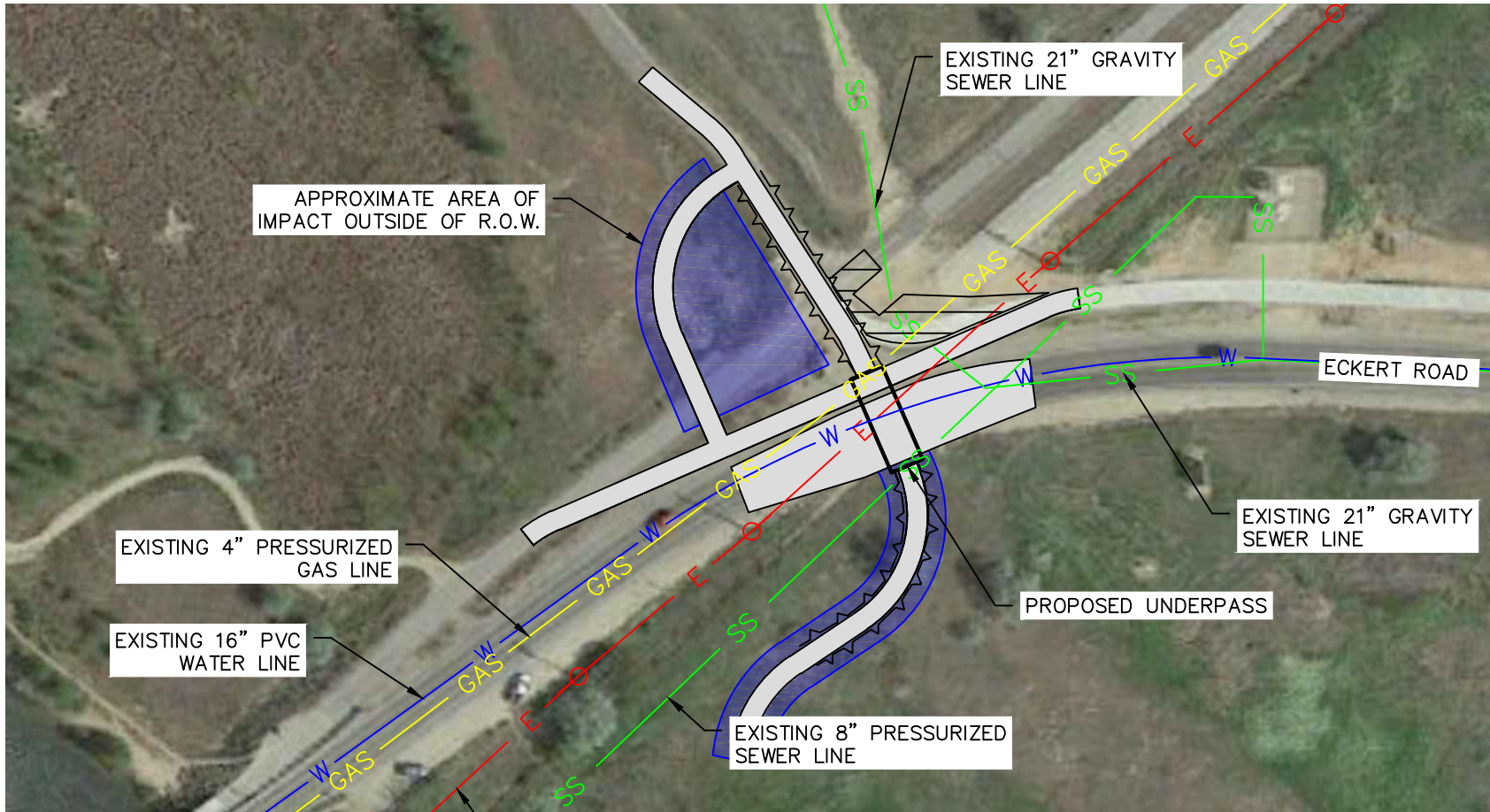
PROJECT NO.:  
215105

SHEET NO.



**LEGEND**

-  ROW IMPACT
-  NEW/RECONSTRUCTED PATH/ ROAD
-  PATH/ROAD TO BE REMOVED
-  RETAINING WALL



SCALE: NOT TO SCALE

IDAHO POWER AND CABLE ONE UTILITIES USE SAME UTILITY POLES

NOTES:  
UTILITY LOCATIONS ARE APPROXIMATE.

P:\215105 - COMPASS\CADD\Design\Proposed Layout Alt.2.dwg 10/8/2015 2:21 PM ABASS



**GREENBELT UNDERPASS AT ECKERT ROAD**

**ALTERNATIVE 2**

PROJECT NO.:  
215105  
SHEET NO.

## **Appendix E – ITD 1150 Forms and Backup**



# Project Cost Summary Sheet

ITD 1150 (Rev. 09-13)  
itd.idaho.gov

Round Estimates to Nearest \$1,000

Key Number	Project Number Eckert Road Underpass - Alternative 1	Date 12/16/2015
Location Eckert Road and Greenbelt		District
Segment Code	Begin Mile Post	End Mile Post
Length in Miles		

	Previous ITD 1150	Initial or Revise To
1a. Preliminary Engineering (PE)		
1b. Preliminary Engineering by Consultant (PEC)		\$250,000
2. Right-of-Way: Number of Parcels 1 (Easem) Number of Relocations		\$4,000
3. Utility Adjustments: <input type="checkbox"/> Work <input type="checkbox"/> Materials <input type="checkbox"/> By State <input type="checkbox"/> By Others		
4. Earthwork		\$100,000
5. Drainage and Minor Structures		\$10,000
6. Pavement and Base		\$122,000
7. Railroad Crossing: Grade/Separation Structure _____ At-Grade Signals <input type="checkbox"/> Yes <input type="checkbox"/> No		
8. Bridges/Grade Separation Structures: <input checked="" type="checkbox"/> New Structure Length/Width <u>46' x 16'</u> Location <u>Greenbelt at Eckert Road</u> <input type="checkbox"/> Repair/Widening/Rehabilitation Length/Width _____ Location _____		\$160,000.00
9. Traffic Items (Delineators, Signing, Channelization, Lighting, and Signals)		\$5,000
10. Construction Traffic Control (Sign, Pavement Markings, Flagging, and Traffic Separation)		\$100,000
11. Detours		
12. Landscaping		\$5,000
13. Mitigation Measures		\$20,000
14. Other Items (Roadside Development, Guardrail, Fencing, Sidewalks, Curb and Gutter, C.S.S. Items)		\$310,000
15. Cost of Constructions (Items 3 through 14)		\$832,000
16. Mobilization 10 % of Item 15		\$83,000
17. Construction Engineer and Contingencies 20 % of Items 15 and 16		\$183,000
18. Total Construction Cost (15 + 16 + 17)		\$1,098,000
19. Total Project Cost ( 1 + 2 + 18)		\$1,352,000
20. Project Cost Per Mile		

Prepared By:

## Estimate

Estimated Cost:\$744,430.00

Contingency: 20.00%

**Estimated Total: \$893,316.00**

Eckert Underpass Alternative 1

**Base Date: 08/31/15**

Spec Year: 01

Unit System: E

Work Type:

Highway Type:

Urban/Rural Type:

Season:

County:

Latitude of Midpoint: 0

Longitude of Midpoint: 0

District:

Federal/State Project Number:

*Prepared by System Administrator*



Alternative 1: Eckert Road up, Greenbelt at Grade

Approximate length of Road Reconstruction 600 feet, 300 feet each side

Areas off Typical Section (See Attached)

$$\text{Asphalt: } 600\text{ft} \times 28\text{ft} \times \frac{3}{12}\text{ft} = 4,200\text{ft}^3 \times \frac{145\text{ lbs}}{\text{ft}^3} \times \frac{1\text{ ton}}{2000\text{ lbs}} = 305\text{ tons}$$

$$\text{Base: } 600\text{ft} \times 30\text{ft} \times \frac{6}{12}\text{ft} = 9,000\text{ft}^3 \times \frac{140\text{ lbs}}{\text{ft}^3} \times \frac{1\text{ ton}}{2000\text{ lbs}} = 630\text{ tons}$$

$$\text{Subbase: } 600\text{ft} \times 36\text{ft} \times \frac{20}{12}\text{ft} = 36,000\text{ft}^3 \times \frac{135\text{ lbs}}{\text{ft}^3} \times \frac{1\text{ ton}}{2000\text{ lbs}} = 2430\text{ tons}$$

Granular Borrow: From Typical Section:

$$460\text{ SF}/2 - \text{From 0 to 10ft, 460 is at 10ft (minus Structural Section)} = 230\text{ SF}$$

$$230\text{ SF} \times 600\text{ft} = 138,000\text{ft}^3 \approx 5,115\text{ CY}$$

$$\text{Removal of Asphalt: } 600 \times 28 = 16,800\text{ft}^2 \approx 1,870\text{ SY}$$

$$\text{Underpass Structure: } 46 \times 18 \times \$190/\text{SF} \approx \$160,000 \text{ (18' is out to out)}$$

$$\text{Guardrail: } 600' \times 4 = 2400\text{ LF}$$

Type III Terminal Sections: 4 each

Green Belt

Concrete Class 40 for Path:

$$400\text{ft} \times 12\text{ft} \times \frac{5}{12}\text{ft} = 2000\text{ft}^3 = 75\text{ CY}$$

$$\text{Base: } 400\text{ft} \times 12\text{ft} \times \frac{4}{12}\text{ft} = 1600\text{ft}^3 \times \frac{140\text{ lbs}}{\text{ft}^3} \times \frac{1\text{ ton}}{2000\text{ lbs}} = 112\text{ tons}$$

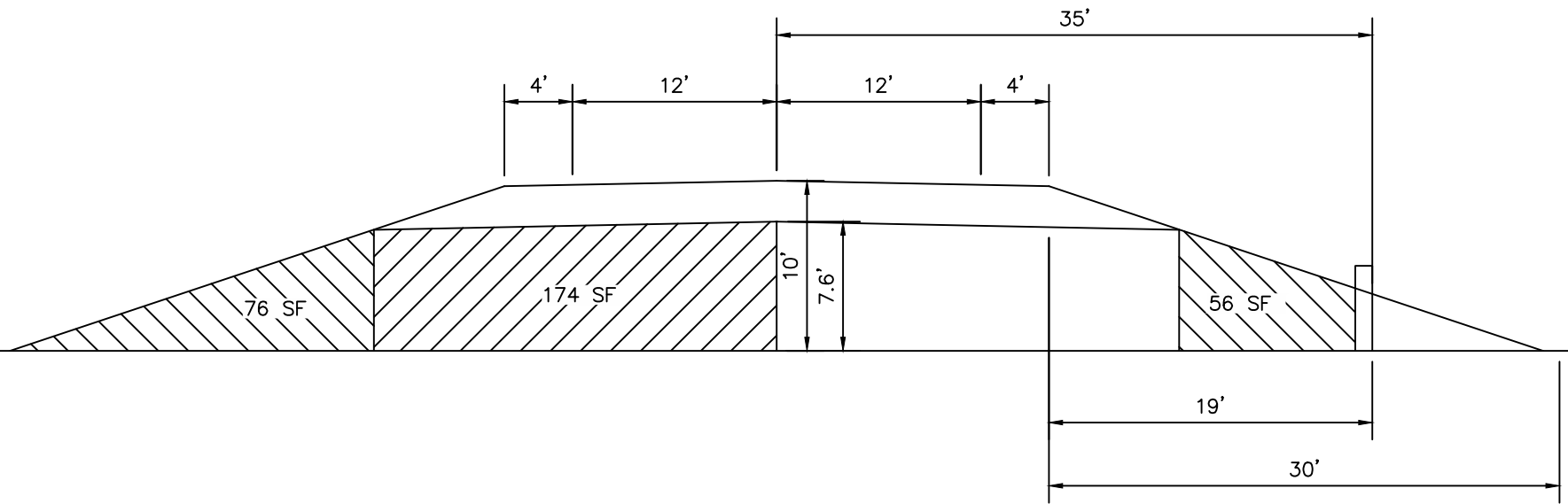
$$\text{Subbase: } 400\text{ft} \times 12\text{ft} \times \frac{8}{12}\text{ft} = 3200\text{ft}^3 \times \frac{135\text{ lbs}}{\text{ft}^3} \times \frac{1\text{ ton}}{2000\text{ lbs}} = 216\text{ tons}$$

Retaining walls on Eckert:

Assume 5' walls half the length

$$\frac{600}{2} \times 5 \times 4 = 6,000\text{ SF}$$

P:\215105 - COMPASS\CADD\Design\Pr - Alt 1 Quantities.dwg 10/9/2015 2:28 PM RBLAZICEVICH



**FORSGREN**  
*Associates Inc.*

GREENBELT UNDERPASS AT ECKERT ROAD

ALTERNATIVE 1 - CROSS SECTION QUANTITIES

PROJECT NO.:  
215105

SHEET NO.



# Project Cost Summary Sheet

ITD 1150 (Rev. 09-13)  
itd.idaho.gov

Round Estimates to Nearest \$1,000

Key Number	Project Number Eckert Road Underpass - Alternative 2	Date 12/16/2015
Location Eckert Road and Greenbelt		District
Segment Code	Begin Mile Post	End Mile Post
Length in Miles		

	Previous ITD 1150	Initial or Revise To
1a. Preliminary Engineering (PE)		
1b. Preliminary Engineering by Consultant (PEC)		\$250,000
2. Right-of-Way: Number of Parcels 1 (Ease) Number of Relocations		\$4,000
3. Utility Adjustments: <input type="checkbox"/> Work <input type="checkbox"/> Materials <input type="checkbox"/> By State <input type="checkbox"/> By Others		
4. Earthwork		\$49,000
5. Drainage and Minor Structures		\$353,000
6. Pavement and Base		\$324,000
7. Railroad Crossing: Grade/Separation Structure _____ At-Grade Signals <input type="checkbox"/> Yes <input type="checkbox"/> No		
8. Bridges/Grade Separation Structures: <input checked="" type="checkbox"/> New Structure Length/Width <u>60' x 16'</u> Location <u>Greenbelt at Eckert Road</u> <input type="checkbox"/> Repair/Widening/Rehabilitation Length/Width _____ Location _____		\$206,000.00
9. Traffic Items (Delineators, Signing, Channelization, Lighting, and Signals)		
10. Construction Traffic Control (Sign, Pavement Markings, Flagging, and Traffic Separation)		\$100,000
11. Detours		
12. Landscaping		\$5,000
13. Mitigation Measures		\$90,000
14. Other Items (Roadside Development, Guardrail, Fencing, Sidewalks, Curb and Gutter, C.S.S. Items)		\$13,000
15. Cost of Constructions (Items 3 through 14)		\$1,140,000
16. Mobilization 10 % of Item 15		\$114,000
17. Construction Engineer and Contingencies 20 % of Items 15 and 16		\$251,000
18. Total Construction Cost (15 + 16 + 17)		\$1,505,000
19. Total Project Cost ( 1 + 2 + 18)		\$1,759,000
20. Project Cost Per Mile		

Prepared By:

## Estimate

Estimated Cost:\$1,065,125.00

Contingency: 20.00%

**Estimated Total: \$1,278,150.00**

Eckert Underpass Alternative 2

**Base Date: 08/31/15**

Spec Year: 01

Unit System: E

Work Type:

Highway Type:

Urban/Rural Type:

Season:

County:

Latitude of Midpoint: 0

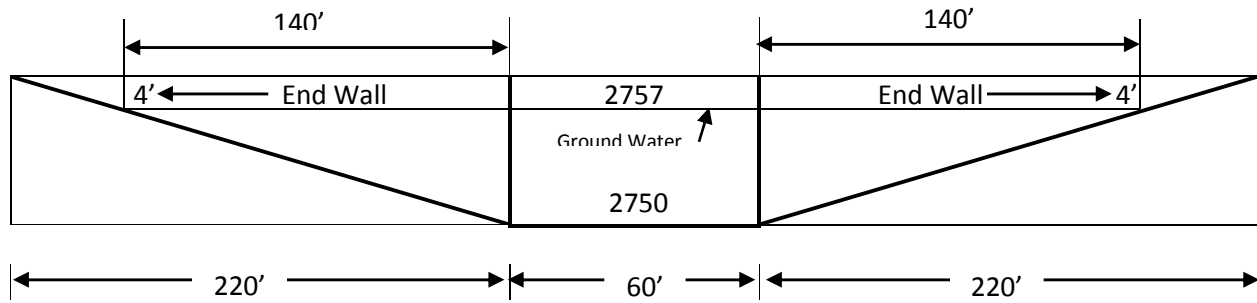
Longitude of Midpoint: 0

District:

Federal/State Project Number:

*Prepared by System Administrator*

Alternative 2:



Road Reconstruction: 100ft each side total 200ft

$$\text{Asphalt: } 200 \times 28 \times \frac{3}{12} = 1400\text{ft}^3 \times \frac{145 \text{ lbs}}{\text{ft}^3} \times \frac{1 \text{ ton}}{2000 \text{ lbs}} = 102 \text{ tons}$$

$$\text{Base: } 200 \times 28 \times \frac{6}{12} = 2800\text{ft}^3 \times \frac{140 \text{ lbs}}{\text{ft}^3} \times \frac{1 \text{ ton}}{2000 \text{ lbs}} = 196 \text{ tons}$$

$$\text{Subbase: } 200 \times 28 \times \frac{20}{12} = 9333\text{ft}^3 \times \frac{135 \text{ lbs}}{\text{ft}^3} \times \frac{1 \text{ ton}}{2000 \text{ lbs}} = 630 \text{ tons}$$

Excavation:

$$220 \times 11 \times 20 \times \frac{1}{2} \times 2\text{sides} + 11 \times 60 \times 20 = 61,600\text{ft}^3 = 2285 \text{ CY (20 = extra exc for coffer Dam)}$$

Removal of Asphalt:

$$200 \times 28 = 5600 \text{ SF} = 625 \text{ SY}$$

Underpass Structure:

$$60' \times 18' \times \$190/\text{SF} = \$205,000 \text{ (18' is out to out)}$$

Retaining Walls:

$$1 \text{ wall area} = \left(\frac{7+4}{2}\right)140 = 770 \times 4 \text{ walls} = 3,080 \text{ SF}$$

Path Assume:  $220' + 220' + 400' + 200' = 1040 \text{ ft}$

$$\text{Concrete Class 40: } 1040\text{ft} \times 12\text{ft} \times \frac{5}{12} = 5200\text{ft}^3 = 195 \text{ CY}$$

$$\text{Base: } 1040 \times 12 \times \frac{4}{12} = 4160\text{ft}^3 \times \frac{140 \text{ lbs}}{\text{ft}^3} \times \frac{1 \text{ ton}}{2000 \text{ lbs}} = 292 \text{ tons}$$

$$\text{Subbase: } 1040 \times 12 \times \frac{8}{12} = 8320\text{ft}^3 \times \frac{135 \text{ lbs}}{\text{ft}^3} \times \frac{1 \text{ ton}}{2000 \text{ lbs}} = 562 \text{ tons}$$

Dewatering foundation:

$$\text{Area: } (7 \times 60 + 7 \times 140)2 = 1400\text{ft}^2$$

Seal Concrete:

$$(140 + 60 + 140) \times 18' = 6120 \times \frac{2}{3}(7) = \frac{28,560}{2.5}\text{ft}^3 = 11,424\text{ft}^3 \text{ concrete}$$

2<sup>nd</sup> way to determine: 3' at bottom

$$3 \times 60 \times 18 + 2 \times 18 \times 280 = 13,320\text{ft}^3 = 494 \text{ CY use 500 CY}$$



## **Appendix F – ITD 2435 Form**

# Local Federal-Aid Project Request



## Instructions

- Under Character of Proposed Work, mark appropriate boxes when work includes Bridge Approaches in addition to a Bridge.
- Attach a Vicinity Map showing the extent of the project limits.
- Attach an ITD 1150, Project Cost Summary Sheet.
- Signature of an appropriate local official is the only kind recognized.

**Note:** In Applying for a Federal-Aid Project, You are Agreeing to Follow all of the Federal Requirements Which Can Add Substantial Time and Costs to the Development of the Project.

Sponsor (City, County, Highway District, State/Federal Agency) City of Boise			Date 10-08-2015
Project Title (Name of Street or Road) Eckert Road Underpass	F.A. Route Number	Project Length	Bridge Length

Project Limits (Local Landmarks at Each End of the Project)

Character of Proposed Work (Mark Appropriate Items)

<input checked="" type="checkbox"/> Excavation	<input checked="" type="checkbox"/> Bicycle Facilities	<input checked="" type="checkbox"/> Utilities	<input type="checkbox"/> Sidewalk
<input checked="" type="checkbox"/> Drainage	<input checked="" type="checkbox"/> Traffic Control	<input type="checkbox"/> Landscaping	<input type="checkbox"/> Seal Coat
<input checked="" type="checkbox"/> Base	<input checked="" type="checkbox"/> Bridge(s)	<input checked="" type="checkbox"/> Guardrail	<input checked="" type="checkbox"/> Shared-Use Pathway
<input checked="" type="checkbox"/> Bit. Surface	<input type="checkbox"/> Curb & Gutter	<input type="checkbox"/> Lighting	

Estimated Costs (Attach ITD 1150, Project Cost Summary Sheet)

Preliminary Engineering (ITD 1150, Line 1)	\$ _____
Right-of-Way (ITD 1150, Line 2)	\$ _____
Construction (ITD 1150, Line 18)	\$ _____

Preliminary Engineering By:  Sponsor Forces  Consultant

Checklist (Provide Names, Locations, and Type of Facilities)

Railroad Crossing	
Within 2 miles of an Airport	
Parks (City, County, State or Federal)	
Environmentally Sensitive Areas	
Federal Lands (Indian, BLM, etc.)	
Historical Sites	
Schools	
Other	

Additional Right-of-Way Required:  None  Minor (1-3 Parcels)  Extensive (4 or More Parcels)

Will any Person or Business be Displaced:  Yes  No  Possibly

Standards	Existing	Proposed	Standards	Existing	Proposed
Number of Lanes	2	2	Roadway Width (Shoulder to Shoulder)	28 ft	36 ft
Pavement Type	Asphalt	Asphalt	Right-of-Way Width	65 ft	65 ft

Sponsor's Signature	Title
---------------------	-------

### Additional Information to be Furnished by the District

Functional Classification	Terrain Type	20	ADT/DHV
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## **Appendix G – Environmental Scan**

# **ENVIRONMENTAL SCAN**

**Eckert Road Underpass,  
Boise, Idaho  
COMPASS Project No. 2045-XX**

*Prepared by*  
**Bionomics Environmental, Inc.  
1045 E Winding Creek Drive  
Eagle, Idaho 83616**

September 18, 2015

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# 1 Introduction

The Community Planning Association of Southwest Idaho has tasked Forsgren Associates to prepare a pre-concept report for construction of a Class I bicycle/pedestrian concrete underpass at Eckert Road on the north side of the Boise River in Ada County, Idaho (see Appendix A, Figure 1). As part of the pre-concept report, the following environmental scan will identify environmental resources within the study boundary that may be impacted by the proposed project and identify any red flag issues. The scan will also identify environmental permits that may be required during future design and construction phases.

# 2 Project Description

The City of Boise proposes to construct a bicycle/pedestrian underpass at Eckert Road on the North side of the Boise River. The project will allow bicycle and pedestrian Greenbelt users to cross Eckert Road separately from vehicle traffic. The west side of the underpass will tie into the existing Greenbelt from the Boise River, Marianne Williams Park, and the North side of Eckert Road. The East side of the underpass will tie into the future Alta Harris Ranch Park (see Appendix A, Figure 2).

# 3 Methods

This technical document utilized existing documentation and studies available from various regulatory agencies, including:

- Archaeological and Historical Site Atlas
- National Register of Historic Places (NRHP)
- US Fish and Wildlife Service (USFWS) National Wetlands Inventory Maps
- Soil Survey Maps, US Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS)
- Idaho Conservation Data Center (CDC) informational request
- USFWS Information for Planning Conservation (IPaC)
- Noise Guidance from Federal Highway Administration, June 2010, Highway Traffic Noise: Analysis and Abatement Guidance
- Air Quality Division, Idaho Department of Environmental Quality (DEQ)
- Underground Storage Tanks/Leaking Underground Storage Tanks Database, DEQ
- Envirofacts Database, Environmental Protection Agency (EPA)
- Emergency Response Database, National Response Center
- Water Quality Division, DEQ
- Well Inventory Database, Idaho Department of Water Resources (DWR)
- County List of Funds Granted, State Land and Water Conservation Funds (LWCF)



## 4 Environmental Scan

### 4.1 Cultural Resources

A record search (#15352) was conducted at the Idaho State Historic Preservation Office (SHPO) on August 24, 2015. A total of 18 surveys have been previously conducted and nine sites have been previously recorded within one-half mile of the project area. Table 1 represents the previous studies within one-half mile of the study area, and Table 2 represents the previously recorded historic sites within one-half mile of the study area. A review of aerial maps indicates there is not a presence of historic properties within the proposed project area.

**Table 1. Summary of Previous Studies Within One-Half Mile of the Project Area.**

Report No.	Author	Title	Results	Proximity to APE
2015/50	USFWS	U.S. Fish and Wildlife Service: Cultural Resources Annual Report FY 2010	Not available at Idaho SHPO	Not available at Idaho SHPO
2014/268	Gray, D.	Lucky Harris 13, East Boise, Idaho	No cultural resources identified within 0.5 mile of the project area	0.3 mile east/northeast of the project area
2006/237	Chatters, J. and D. Ferguson	Idaho Power Company Transmission Lines 906 and 912 - Boise Bench to Midpoint Substation. Applied Paleoscience, Richland, WA.	Not available at Idaho SHPO	Not available at Idaho SHPO
2006/242	Gross, L. and C. Wildt	Idaho Power Company Transmission Line 904 Between Brownlee Dam & Boise Bench Substation. SAIC, Boise, ID.	Not available at Idaho SHPO	Not available at Idaho SHPO
2006/243	Gross, L. and C. Wildt	Idaho Power Company Transmission Line 911 Between Brownlee Dam & Boise Bench Substation. SAIC, Boise, ID.	Not available at Idaho SHPO	Not available at Idaho SHPO
2005/804	Theisen, J.	Eckert Pathway Extension II. Bionomics, Boise, ID	One cultural resource identified within 0.5 mile of the project area	At its closest point: 0.18 mile south/southwest of the project area
2003/773	Gross, L. and C. Wildt	IPC Transmission Line 902 Between Boise Bench Substation & Midpoint Substation FERC No. 1971. Prepared by SAIC, Boise, for Idaho Power, Boise	Not available at Idaho SHPO	Not available at Idaho SHPO
2000/708	Petersen, N.	Eckert Pathway Extension. Idaho Transportation Department	Two cultural resources identified within 0.5 mile of the project area	0.15 mile southwest of the project area
1999/567	ITD	Oregon Trail Reserve Park Pathway and Trail Complex Cultural Resource Report, Ada County, Idaho. Dames & Moore	Archived Report – Not available at Idaho SHPO	Archived Report – Not available at Idaho SHPO

<b>Report No.</b>	<b>Author</b>	<b>Title</b>	<b>Results</b>	<b>Proximity to APE</b>
1999/734	SAIC	Historical Investigations at Barber Mill and the Penitentiary Canal, City of Boise, Ada County, Idaho. SAIC, Boise, Idaho	Archived Report – Not available at Idaho SHPO	Archived Report – Not available at Idaho SHPO
1998/916	Juell, K.	Cultural Resources Inventory of the Proposed FTV Western Fiber Build, Part 2: Idaho. Addendum: Signal Regeneration Station Surveys. BLM, Idaho Falls District	Archived Report – Not available at Idaho SHPO	Archived Report – Not available at Idaho SHPO
1996/905	Science Applications International Corporation	Harris Ranch Cultural Resources Survey City of Boise Ada County, Idaho. Science Applications International Corporation	Two cultural resources identified within 0.5 mile of the project area	Within the project area
1995/458	Gross, L. S.	Cultural Resources Survey of Area Adjacent to Surprise Valley Development. Science Applications International Corporation	No cultural resources identified within 0.5 mile of the project area	0.39 mile south of the project area
1995/934	Petersen, N.	Eckert Road Bike Pat, Warm Springs to Barber Park. Idaho Transportation Dept.	Archived Report – Not available at Idaho SHPO	Archived Report – Not available at Idaho SHPO
1992/666	Petersen, N.	Barber Park and Wood Duck Island Subdivision Land Exchange, Cultural Resource Inventory. Ecological Design, Inc.	Archived Report – Not available at Idaho SHPO	Archived Report – Not available at Idaho SHPO
1989/1996	Gaston, J.	Annual Report of Archaeological Investigations, 1985. Idaho Transportation Dept. Boise, Idaho	Archived Report – Not available at Idaho SHPO	Archived Report – Not available at Idaho SHPO
1989/4937	Moe, J., et. al.	Southwestern Idaho Transmission Line Heritage Resources Survey. University of Idaho Anthropological Research Manuscript Services No. 58	Archived Report – Not available at Idaho SHPO	Archived Report – Not available at Idaho SHPO
1989/5175	Ostrogorsky, M.	Boise River Drainage Archaeological Survey, Progress Reports 1-10. Idaho State Historical Society	Archived Report – Not available at Idaho SHPO	Archived Report – Not available at Idaho SHPO

### Previously Recorded Sites Within One-Half Mile.

While no archaeological or historic sites are located within the proposed project area, within one-half mile are several sites including eligible waterways, an eligible immigrant trail, and a National Register (NR) Listed Historical Archaeological Site.

**Table 2. Previously Recorded Archaeological and Historic Sites Within One-Half Mile of the Project Area (See Figure 3).**

Site No.	Name/Type of Site	NRHP Eligibility	Proximity to APE
10AA121/ 01-2627	Oregon Trail, Goodale's Cutoff, Kelton Road	Eligible	At its closest point – 0.35 mile southwest of the project area
10AA437	remains of horse barn, garbage dump; glass, metal, nails, bone, ceramics, leather, wire, cans, wood	Not Eligible	0.45 mile east/northeast of the project area
10AA439/ 01-2629	Barber Lumber Mill; concrete foundation, 2 concrete standing structures; bricks, wire, iron, concrete	Listed	0.45 mile southeast of the project area
10AA575/ 01-19865	Ridenbaugh Canal	Eligible	At its closest point – 0.16 mile southwest of the project area
10AA613	historic debris and excavated pit; cow bone, cans, ceramics, glass	Not Eligible	0.28 mile south/southwest of the project area
01-955	New York Canal	Eligible	At its closest point – 0.24 mile southwest of the project area
01-15999	South 9th St Bridge	Unknown	0.31 miles south of the project area
01-18119	Barber Saw Mill site/Hwy 21 - Corral and Outbuildings	Not Eligible	0.45 mile east/northeast of the project area
01-18120	Ridenbaugh Canal diversion dam and headgates	Unknown	0.16 mile southwest of the project area

The previous studies and surveys outlined above were all identified because they are located within one-half mile of the current project area for the Eckert Road Underpass. These previous surveys provide useful information to the types of cultural resources that have the potential to be encountered during the proposed ground disturbing activities. While none of the previously recorded sites are within the project area and additionally, a review of aerial photos did not indicate the presence of historic properties within the project area, the town of Boise (specifically) and Treasure Valley (generally) has been used as far back as 14,000 years. If this project proceeds to a formal Section 106 evaluation, any resources discovered within the project area will need to be formally recorded and eligibility determinations will be made. Prior to construction, it is recommended that all known historic sites within the project area be assessed for NRHP eligibility.

## 4.2 Waters of the US, including Wetlands

Review of topographic maps, aerial photographs, and state and Federal databases does not reveal mapped surface waters in the project area. However, according to the “Wetland Analysis, Existing Situation and Proposed Future Situation for Harris Ranch” dated November 2006, a ditch/ephemeral

drainage flows parallel to an abandoned road section of Eckert Road (see Appendix A, Figure 2). The ditch flows southwest under Eckert Road within the project area and continues southwest to the Boise River. After the ditch flows under Eckert Road, the report indicates the ditch is classified as ephemeral. The report also indicates a proposed wetland mitigation site and riverfront park west of the project but outside of the project limits (see Appendix A, Figure 2, Harris Ranch Wetland Mitigation Site).

Review of the U.S. Fish and Wildlife Service National Wetland Inventory Maps for the project area and the above mentioned previous wetland report indicates no mapped wetlands within the project area (see Figure 4 in Appendix A). Further, review of the U.S. Department of Agricultural Natural Resource Conservation Service soil survey data indicates the project area is comprised of Notus-LesBois complex 0 to 1% slopes. This soil complex is considered hydric. Although existing data sources do not reveal wetlands within the project area, a presence/absence survey should be conducted to verify.

The unnamed irrigation ditch is likely considered under the jurisdiction of the U.S. Army Corps of Engineers (USACE) due to its' hydrological connection to the Boise River and ultimately, the Snake River, a traditional navigable water. Any wetland associated with this irrigation ditch is also likely considered under the jurisdiction of the USACE. As such, a waters of the U.S. including wetland delineation should be conducted to identify any additional smaller irrigation features within the project area, as well as presence or absence of wetlands. Any purposed construction activity in or near these features could potentially require a permit from the USACE.

### 4.3 Threatened, Endangered, and Sensitive Species

The USFWS list of endangered, threatened, and candidate species under the Endangered Species Act (ESA) which may occur in the project area can be found in Table 3. No field investigations were made to determine the presence of these species or habitat in the project area. The USFWS Information for Planning Conservation (IPaC) project list can be found in Appendix A.

**Table 3. List of endangered, threatened, and candidate species for the Project Area (USFWS IPaC list derived on September 1, 2015)**

Species	Scientific Name	Federal Status
Yellow-billed cuckoo	<i>Coccyzus americanus</i>	Threatened
Slickspot peppergrass	<i>Lepidium papilliferum</i>	Proposed

To determine the species of concern for the area, an information request was submitted to the Idaho Fish and Wildlife Information Systems (IFWIS) through the Idaho Department of Fish and Game (IDFG) on September 9, 2014. The agency listed the following species of concern that have known occurrences within one mile of the project area (see Table 4 below). Ranks for each species are presented below, including ones for IDFG, U.S. Forest Service (USFS), and the Bureau of Land Management (BLM). No field investigations were made to determine the presence of these species or habitat in the project area.

**Table 4. IDFG IFWIS List of Sensitive Species Occurrences within a Mile of Project Area.**

Common Name	Scientific Name	Global Rank <sup>1</sup>	State Rank <sup>1</sup>	USFS Region 1 <sup>1</sup>	BLM Type <sup>1</sup>
American Avocet	<i>Recurvirostra americana</i>	G5	S5B		
Bald Eagle	<i>Haliaeetus leucocephalus</i>	G4	S3B,S4N	Sensitive	2
Black-necked Stilt	<i>Himantopus mexicanus</i>	G5	S3B		
Bohemian Waxwing	<i>Bombycilla garrulus</i>	G5	S1B,S3N		
California Gull	<i>Larus californicus</i>	G5	S2B,S3N		
Cassin's Finch	<i>Carpodacus cassinii</i>	G5	S5		2

Common Name	Scientific Name	Global Rank <sup>1</sup>	State Rank <sup>1</sup>	USFS Region 1 <sup>1</sup>	BLM Type <sup>1</sup>
Double-crested Cormorant	Phalacrocorax auritus	G5	S2B		
Eurasian Wigeon	Anas penelope	G5	S1N		
Ferruginous Hawk	Buteo regalis	G4	S3B		2
Golden Eagle	Aquila chrysaetos	G5	S4B,S4N		2
Great Egret	Ardea alba	G5	S1B		
Green-tailed Towhee	Pipilo chlorurus	G5	S5B		2
Hooded Merganser	Lophodytes cucullatus	G5	S2B,S3N		
Lesser Goldfinch	Carduelis psaltria	G5	S2B		
Lesser Scaup	Aythya affinis	G5	S3		
Lewis' Woodpecker	Melanerpes lewis	G4	S3B		2
Merlin	Falco columbarius	G5	S2B,S2N		
Northern Goshawk	Accipiter gentilis	G5	S3	Sensitive	2
Northern Leopard Frog	Lithobates pipiens	G5	S2		
Northern Pintail	Anas acuta	G5	S5B,S2N		
Northern Pygmy-Owl	Glaucidium gnoma	G5	S3		
Northern Saw-whet Owl	Aegolius acadicus	G5	S3		
Northern Shoveler	Anas clypeata	G5	S5B,S2N		
Olive-sided Flycatcher	Contopus cooperi	G4	S3B		2
Peregrine Falcon	Falco peregrinus	G4T4	S2B	Sensitive	
Ring-billed Gull	Larus delawarensis	G5	S3B,S3N		
Ring-necked Duck	Aythya collaris	G5	S3B,S3N		
Slickspot peppergrass	<i>Lepidium papilliferum</i>	G2	S2	Proposed	1
Swainson's Hawk	Buteo swainsoni	G5	S3B		
Trumpeter Swan	Cygnus buccinator	G4	S1B,S2N	Sensitive	2
Tundra Swan	Cygnus columbianus	G5	S3N		
Turkey Vulture	Cathartes aura	G5	S3B		
Western Grebe	Aechmophorus occidentalis	G5	S2B		
Western Toad	Anaxyrus boreas	G4	S3		2
Willow Flycatcher	Empidonax traillii	G5	S5B	Endangered	2
Wilson's Phalarope	Phalaropus tricolor	G5	S3B		

<sup>1</sup> S: State Rank; G: Global Rank. 1: Critically imperiled; S2: Imperiled; S3: Vulnerable; S4: Apparently secure; S5: Secure (see Appendix C).

BLM Type 1: Threatened, endangered, proposed or candidate species listed under the Endangered Species Act by USFWS; Type 2: Rangewide/Globally Imperiled; Type 3: Regional/State Imperiled; Type 4: Peripheral species that are generally rare in Idaho; Type 5: Watch List species, not considered BLM sensitive; USFS Sensitive: species identified for which population viability is a concern.

#### 4.4 Noise

For all federally funded projects, noise analysis is required if the project is a Type I project. Type I projects are projects that involve construction of a highway on a new location, substantially change the horizontal or vertical alignment of an existing highway, and/or increase the number of through traffic lanes on an existing highway (FHWA 2010).

The proposed project is not considered a Type I project; therefore a noise analysis would not be warranted. However, potential construction noise should be addressed due to the potential disturbance of wildlife during construction activities.

#### **4.5 Air Quality**

The project area is located in northern Ada County, which is a Maintenance Area for PM<sub>10</sub> and CO and an Area of Concern for PM<sub>2.5</sub> and O<sub>3</sub>. (Idaho DEQ, 2015). However, according air quality screening, this project has been identified as being exempt from air quality analysis in accordance with 40 CFR 93.126. It is therefore concluded that the project will have no significant adverse impact on air quality.

#### **4.6 Hazardous Materials**

All available databases were searched to determine whether the site location or any neighboring properties were listed. The search radius used for each database was taken from the American Society for Testing and Materials (ASTM) Standard E 1527-05.

Search results of agency databases identified one general remediation record within the ASTM required search radius (see Appendix A, Hazardous Materials Review and Figure 5). The record was listed on the Idaho DEQ website and identified as the Ada County Highway District Harris Ranch ROW. The records indicate that a subsurface petroleum spill was identified in the area of an old sawmill. Affected soils were removed and transported to an offsite commercial land farm. A risk assessment was completed and determined that the remediation work is complete. No other records from local, state and federal agencies identified additional sites within the ASTM search radius.

#### **4.7 Minority and Low Income Populations/Environmental Justice**

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, signed by the President on February 11, 1994, directs Federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of Federal projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law.

A minority or low-income population is described in the December 2, 1998, FHWA memo called FHWA Actions to Address Environmental Justice in Minority and Low Income Populations: any readily identifiable group of minority or low-income persons who live in geographic proximity and, if circumstances warrant, geographically dispersed/transient persons who would be similarly affected by a proposed FHWA program, policy or activity.

Census 2000 information for Census Tract 7.02, Block Group 1 confirmed a minority population of 213 persons (6.7%) and Census Tract 101, Block Group 1 confirmed a minority population of 366 persons (6.2%) compared to a citywide minority population of 22,680 persons (11.0%). *The ethnic population in these block groups is lower than the city average, the project will not relocate or displace any residences, thus there will be no disproportionate or adverse effect on individual residents in the area.*

Census 2000 information for Census Tract 7.02, Block Group 1 revealed 67 persons (3.7%) living in poverty and Census Tract 101, Block Group 1 revealed 161 persons (7.7%) living in poverty, compared to 15,310 persons (8.4%) living in poverty citywide. *The population living in poverty in these block groups is lower than the city average, the project will not relocate or displace any residences, thus there will be no disproportionate or adverse effect on individual residents in the area.*



## **4.8 Hydrology**

### **Wells**

A search of the IDWR well database indicates 19 domestic, four irrigation, three municipal, and two test records within a ½ mile search radius of the project (see Appendix A, Figure 6). However, none of these records were identified within the project area.

### **Groundwater**

Review of existing studies in the vicinity of the project indicates the depth to groundwater is very shallow in the project area. Groundwater levels are influenced by the Boise River and will fluctuate during irrigation season. Depth to groundwater will need to be considered during project design.

### **Sole Source Aquifer**

No sole source aquifer is located in the vicinity of the project area. The closest sole source aquifer, the Eastern Snake River Plain Aquifer, is located in eastern Idaho (Idaho DEQ, 2012).

### **Impaired Waters**

No water quality impaired waterbodies were identified in the project area.

### **Floodplains**

The FEMA Flood Insurance Rate Map (FIRM) dated February 19, 2003 identifies the Boise River 100-year and 500-year floodplain extending into the project area. The 100-year floodplain base flood elevations within the project area are 2,759 feet. According to IDWR, a Floodplain Development Permit would be required from the local jurisdiction for work conducted in the mapped 100-year floodplain. See FEMA map in Appendix A.

### **Navigable Waters**

Navigable waters are those waters of the United States that are subject to tidal action shoreward to mean high water, or are used, have been used, or are susceptible to use in interstate or foreign commerce. According to the ITD's Online Environmental Manual, navigable waters in Idaho include Bear Lake, Clear Fork River, Clearwater River, North Fork Clearwater River, Kootenai River, Pack River, Pend Oreille Lake, Pend Oreille River, and Snake River. None of the water bodies identified in the vicinity of the project area are listed as navigable waters.

### **National Pollutant Discharge Elimination System (NPDES)**

Another source of surface water in the project area is stormwater runoff from existing roads. The roadway creates an impervious surface, which allows stormwater to carry pollutants to roadside ditches. If ground disturbance will be greater than one acre and stormwater will be discharged to waters of the U.S., an NPDES stormwater permit and stormwater pollution prevention plan (SWPPP) in accordance with Federal and State requirements would be required prior to project implementation.

## **4.9 Section 4(f) of the Department of Transportation Act of 1966**

Section 4(f) of the Department of Transportation Act of 1966 applies to the use of land from publicly owned parks, recreation sites, wildlife and waterfowl refuges, and public or private historic sites for Federal highway projects.

The city and county comprehensive plans, as well as park and recreation information, were reviewed to identify potential Section 4(f) resources. The NRHP was also reviewed to identify known listed historic sites. Section 4(f) resources will be identified as potential until a Section 4(f) evaluation is completed. The following potential Section 4(f) resources were identified (see Appendix A, Figure 2):

- Barber Park Greenbelt

- Boise River Greenbelt
- Future Alta Harris Ranch Park

#### **4.10 Section 6(f) Land and Water Conservation Funds**

Passed by Congress in 1965, the Recreation Coordination and Development Act established the Land and Water Conservation Fund (LWCF), a matching assistance program that provides grants, which pay half the acquisition and development cost of outdoor recreation sites and facilities. Section 6(f) of the act prohibits the conversion of property acquired or developed with these grants to a non-recreational purpose without the approval of the US Department of the Interior's (USDO I) National Park Service.

A search of grants funded for Ada County indicates no projects funded through the LWCF program in the project area.

#### **4.11 Prime Farmland**

The Farmlands Protection Policy Act (FPPA) of 1981 intended to minimize the impact Federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. It assures that to the extent possible federal programs are administered to be compatible with state, local units of government, and private programs and policies to protect farmland. For the purpose of FPPA, farmland includes prime farmland, unique farmland, and land of statewide or local importance. Farmland subject to FPPA requirements do not have to be currently used for cropland. These lands can be forest land, pastureland, cropland, or other land, but not water or urban and built-up land (developed areas).

Review of the Ada County soil survey for the project area identified Notus-LesBois complex 0 to 1% slopes soil complex (see Appendix A, Figure 8). This soil complex is considered prime farmland if irrigated and drained. However, according to topographic maps, the

Depending on the layout of the project, there is a potential to impact prime farmlands. If determined to be impacted, consultation with the NRCS and completion of the NRCS Prime Farmland Conversion Form AD-1006 would need to be completed.

### **5 Conclusions**

The environmental scan report has identified existing conditions for the Eckert Road Underpass project based on a desktop review of available information. This document does not serve as the environmental document for any proposed future design phases; it should be used only as a guide to identify potential resources of concern within the area. No site visits were conducted as part of this scan. The environmental scan of the Eckert Road Underpass project revealed the following information:

- Nine known previously recorded cultural resource sites were identified within a ½ mile of the project area. However, no sites were identified in the project area.
- An unnamed irrigation ditch was identified in a previous wetland delineation conducted in 2006. The irrigation ditch is considered a waters of the U.S. and likely under the jurisdiction of the USACE due to its hydrologic connection to the Boise River and ultimately, the Snake River, a traditional navigable waterway. Any associated wetlands would also be considered under the jurisdiction of the USACE.
- The USFWS IPaC list identifies yellow-billed cuckoo and slickspot peppergrass as potentially occurring in the project area. However, a field survey should be conducted to determine presence or absence.
- Thirty-six species of concern with documented occurrences within a mile of the project have been documented by IDFG.

- The project area is located in northern Ada County, which is a Maintenance Area for PM<sub>10</sub> and CO and an Area of Concern for PM<sub>2.5</sub> and O<sub>3</sub>. The project is exempt from an air quality analysis in accordance with 40 CFR 93.126, and, therefore, it can be concluded that the project would have no significant adverse impact on air quality.
- One hazardous material record was identified with the ASTM search radius. The general remediation site was deemed clean-up complete by DEQ.
- Census information did not reveal low-income or minority populations in the project area.
- No natural drainages were identified in the project area; therefore, no water quality impaired drainages were identified. Further, no navigable waters were identified.
- Groundwater levels in the area are shallow and will need to be considered during design. Numerous wells were identified within a 1/2mile of the project. No sole source aquifer is located in the project.
- The Boise River floodplain extends into the project area. Coordination with IDWR and the local floodplain administrator should be conducted to determine potential impacts.
- No Section 6(f) resources were identified.
- Potential Section 4(f) resources were identified in the project area which consists of existing and future pedestrian/bike trails and the Alta Harris Park.
- Prime farmlands were identified along the project area. If determined that prime farmlands are to be impacted, consultation with the NRCS and completion of the NRCS Prime Farmland Conversion Form AD-1006 would need to be completed.

The following technical studies may require completion and approval prior to any construction activity, if federal funds are utilized.

- A categorical exclusion would be required in compliance with NEPA.
- Archaeological and Historic Survey Report, in accordance with Section 106 of the National Historic Preservation Act.
- Waters of the U.S. and Wetland Delineation Report in accordance with Section 404 of the Clean Water Act.
- Biological Evaluation in accordance with Section 7 of the Endangered Species Act, as well as Idaho Species of Concern Report.
- Hazardous Materials Assessment (project specific).
- Section 4(f) Evaluation.

The following approvals may be necessary, given the resources on or in proximity to the project. This list is not meant to be all inclusive, as additional approval and permits may be necessary based on project specifics.

- Joint Permit Application (to place fill in or dredge waters of the US, including wetlands; to obtain a Section 401 Water Quality Certification; and/or to obtain a state stream alteration permit)
- Floodplain Development Permit
- NPDES Stormwater Permit
- Prime Farmland Conversion

## 6 References

- Federal Emergency Management Agency, Department of Homeland Security. FIRM Map Community Panel 284, Map Number 16001C0284 dated February 19, 2003.
- Federal Highway Administration. June 2010. Highway Traffic Noise: Analysis and Abatement Guidance
- Idaho Fish & Game. 2015. Idaho Fish and Wildlife Information Systems. Available at <https://fishandgame.idaho.gov/ifwis/portal/form/obtain-information>
- Idaho Department of Environmental Quality. 2015. Attainment Areas in Idaho. Available at [http://www.deq.idaho.gov/media/662796-nonattainment\\_map.pdf](http://www.deq.idaho.gov/media/662796-nonattainment_map.pdf)
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- Idaho Transportation Department Online Manual. Available at [http://itd.idaho.gov/manuals/Online\\_Manuals/Environmental/index.htm](http://itd.idaho.gov/manuals/Online_Manuals/Environmental/index.htm).
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- United States Army Corps of Engineers Wetland Delineation Manual. 1987. Available at [http://www.nww.usace.army.mil/Portals/28/docs/regulatory/Wetlands/Regional\\_Supplement\\_Arid%20West.pdf](http://www.nww.usace.army.mil/Portals/28/docs/regulatory/Wetlands/Regional_Supplement_Arid%20West.pdf).
- US Department of the Interior, US Fish and Wildlife Service, National Wetlands Inventory Wetland Mapper. Available at <http://wetlandsfws.er.usgs.gov/wtlns/launch.html>
- US Environmental Protection Agency. Envirofacts database, Available at <http://www.epa.gov/enviro/>.
- US Fish and Wildlife Service, IPaC Trust Report. Generated on August 25, 2015.

## **7 Preparers**

**Nicole Parks** has 12 years of experience in the environmental and natural resources field with emphasis in program and project management. She specializes in field survey, sampling, and report preparation in accordance with state and federal environmental regulations. She has experience and expertise in NEPA compliance regulations and environmental permitting for transportation projects, land development, and infrastructure projects. She has prepared NEPA categorical exclusions and environmental evaluations and assessments. As part of the permitting and assessment process, she performs extensive coordination and consultation with federal, state, and local agencies.

**Niki Nickoloff** holds a Masters of Applied Anthropology degree and has five years of professional experience in intensive and reconnaissance field surveys for cultural resource investigations, prehistoric and historic site excavation, site recordation that includes mapping and photography, and artifact recordation and preservation. Her experience also includes preparation of site forms for historical sites, background/pre-field research with several agencies including the Idaho SHPO and county offices, and preparation of cultural resource reports according to Section 106 of the National Historic Preservation Act of 1966.

## **APPENDIX A: Supporting Documentation**

- Figure 1. Vicinity Map for Eckert Road Underpass Project
- Figure 2. Site Map for Eckert Road Underpass Project
- Figure 3. Previously Recorded Sites within ½ Mile of the Eckert Road Underpass Project
- Figure 4. USFWS National Wetland Inventory Map for the Eckert Rd Underpass Project
- Hazardous Materials Review for Eckert Road Underpass
- Figure 5. Hazardous Materials Records within ASTM Specified Search Radius for the Eckert Road Underpass Project
- USFWS IPaC Trust Resource Report for the Project Area (September 1, 2015)
- Figure 6. Well Records within 1/2 Mile of the Eckert Road Underpass Project
- Figure 7. Floodplain Map for the Eckert Road Underpass Project Area
- Figure 8. Prime Farmlands in the Eckert Road Underpass Project Area



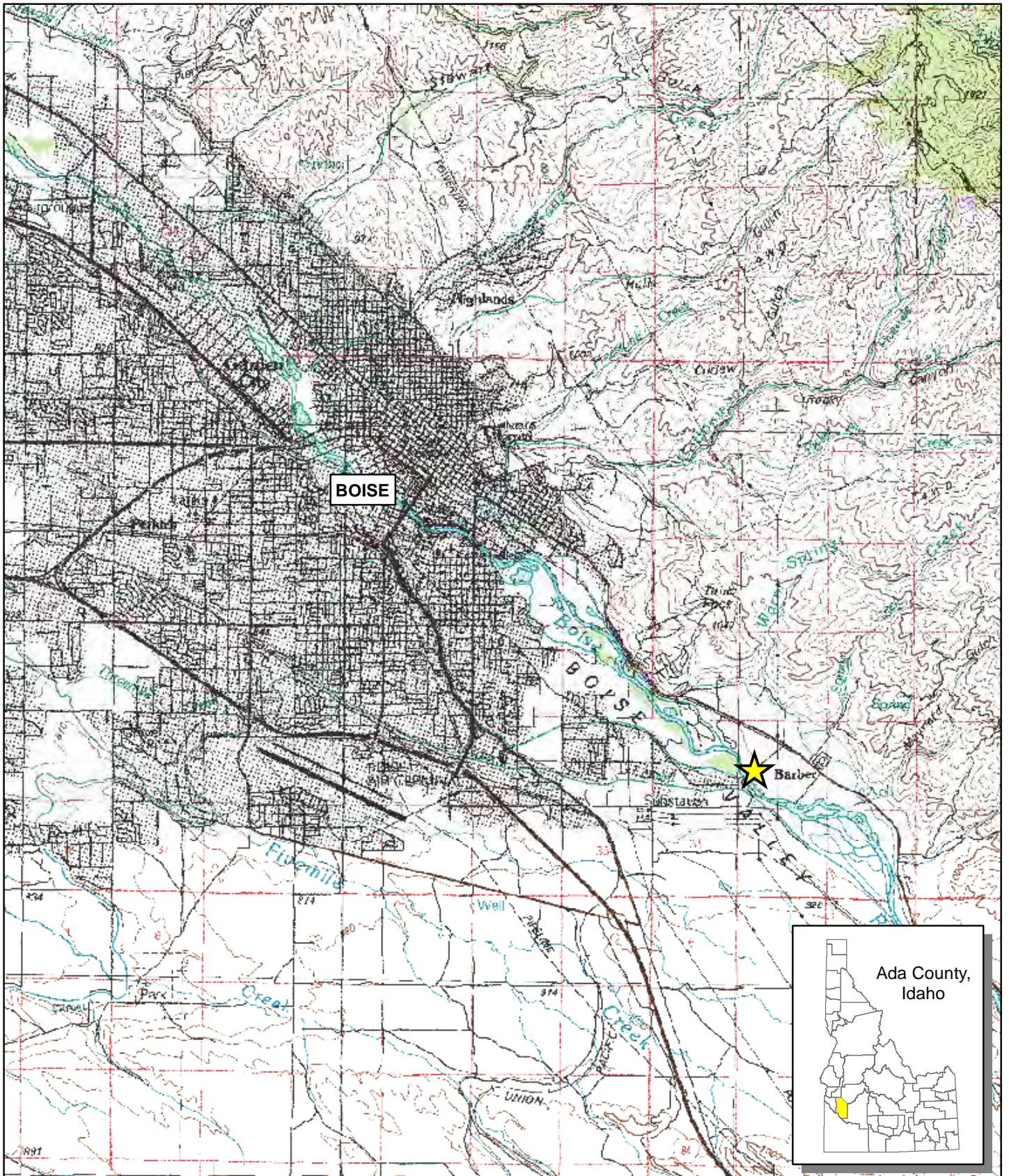


Figure 1. Vicinity Map for Eckert Road Underpass Project.

**Legend**

 Project Area

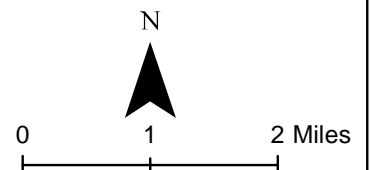


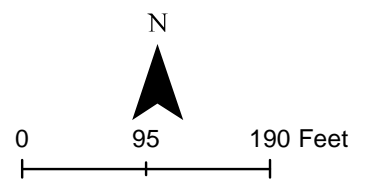




Figure 2. Site Map for Eckert Road Underpass Project.

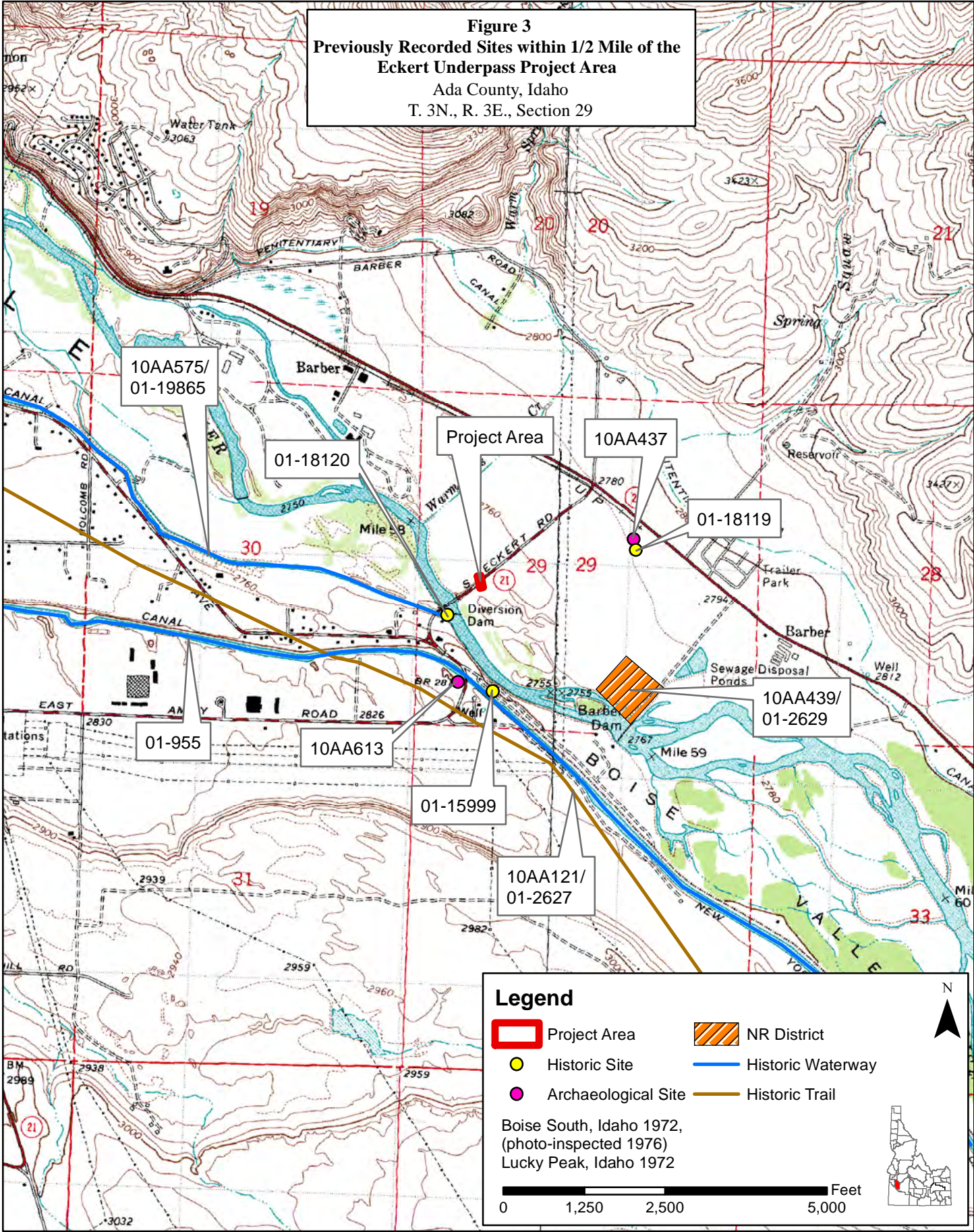
**Legend**

- Project Area
- Bicycle/Pedestrian Paths
- Roads
- Waters





**Figure 3**  
**Previously Recorded Sites within 1/2 Mile of the**  
**Eckert Underpass Project Area**  
 Ada County, Idaho  
 T. 3N., R. 3E., Section 29







# U.S. Fish and Wildlife Service National Wetlands Inventory

Aug 5, 2015



## Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

Figure 4. USFWS National Wetland Inventory Map for the Eckert Rd Underpass Project.

**Hazardous Materials Review for  
Eckert Road Underpass, Boise, Idaho  
September 8, 2015**

Areas of Concern (ASTM Approximate Minimum Search Distance)		
<b>Federal Lists:</b>		
<b>NPL/Superfund Sites:</b> No sites identified within one mile of project.		
<b>Delisted NPL Sites:</b> No sites identified within a ½ mile of project.		
<b>CERCLIS:</b> No sites identified within a ½ mile of project.		
<b>CERCLIS NFRAP:</b> No sites identified within a ½ mile of project.		
<b>RCRA CORRACTS TSD Facilities:</b> No sites identified within one mile of project.		
<b>RCRA non-CORRACTS TSD Facilities:</b> No sites identified within one mile of project.		
<b>RCRA Generators List:</b> No sites identified adjacent or adjoining the project.		
<b>ERNS:</b> No sites identified adjacent or adjoining the project.		
<b>State and Local Lists:</b>		
<b>Hazardous Waste/Contaminated Sites (Listed by Idaho DEQ):</b> 1 site identified within a ½ mile.		
Name	Location	Comment
Ada County Hwy District Harris Ranch	43 34 20.71N, 116 08 14.09W, Harris Ranch Development, Boise, Idaho	A subsurface petroleum spill was identified in the area of an old sawmill. Affected soils were removed and transported to an offsite commercial land farm. A risk assessment was completed and determined that the remediation work is complete.
<b>Registered LUST:</b> No sites identified within ½ mile of the project.		
<b>Registered UST:</b> No sites identified within ¼ mile of project.		
<b>Landfill and/or Solid Waste Disposal Sites:</b> No sites identified within a ½ mile of project.		





# Eckert Road Underpass

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## *IPaC Trust Resource Report*

Generated September 01, 2015 01:56 PM MDT





US Fish & Wildlife Service

# IPaC Trust Resource Report



## Project Description

NAME

Eckert Road Underpass

PROJECT CODE

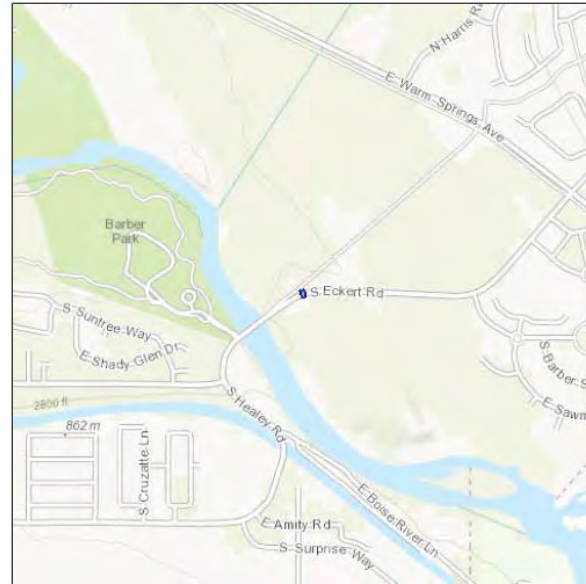
IS4IT-UGATN-FZZJJ-CYGAQ-L5EEOQ

LOCATION

Ada County, Idaho

DESCRIPTION

Construct a cement bicycle and pedestrian underpass beneath Eckert Road.



## U.S. Fish & Wildlife Contact Information

Species in this report are managed by:

### Idaho Fish And Wildlife Office

1387 South Vinnell Way, Suite 368

Boise, ID 83709-1657

(208) 378-5243

## Endangered Species

Proposed, candidate, threatened, and endangered species that are managed by the [Endangered Species Program](#) and should be considered as part of an effect analysis for this project.

This unofficial species list is for informational purposes only and does not fulfill the requirements under [Section 7](#) of the Endangered Species Act, which states that Federal agencies are required to "request of the Secretary of Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action." This requirement applies to projects which are conducted, permitted or licensed by any Federal agency.

A letter from the local office and a species list which fulfills this requirement can be obtained by returning to this project on the IPaC website and requesting an Official Species List from the regulatory documents section.

### Birds

#### **Yellow-billed Cuckoo** *Coccyzus americanus*

**Threatened**

##### CRITICAL HABITAT

There is **proposed** critical habitat designated for this species.

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B06R>

### Flowering Plants

#### **Slickspot Peppergrass** *Lepidium papilliferum*

**Proposed Endangered**

##### CRITICAL HABITAT

There is **proposed** critical habitat designated for this species.

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=Q34X>

### Critical Habitats

Potential effects to critical habitat(s) within the project area must be analyzed along with the endangered species themselves.

There is no critical habitat within this project area

# Migratory Birds

Birds are protected by the [Migratory Bird Treaty Act](#) and the Bald and Golden Eagle Protection Act.

Any activity which results in the take of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service ([1](#)). There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

You are responsible for complying with the appropriate regulations for the protection of birds as part of this project. This involves analyzing potential impacts and implementing appropriate conservation measures for all project activities.

<b>Bald Eagle</b> <i>Haliaeetus leucocephalus</i> Season: Wintering <a href="https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=B008">https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=B008</a>	<b>Bird of conservation concern</b>
<b>Brewer's Sparrow</b> <i>Spizella breweri</i> Season: Breeding <a href="https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=B0HA">https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=B0HA</a>	<b>Bird of conservation concern</b>
<b>Calliope Hummingbird</b> <i>Stellula calliope</i> Season: Breeding	<b>Bird of conservation concern</b>
<b>Cassin's Finch</b> <i>Carpodacus cassinii</i> Year-round	<b>Bird of conservation concern</b>
<b>Eared Grebe</b> <i>Podiceps nigricollis</i> Season: Breeding	<b>Bird of conservation concern</b>
<b>Ferruginous Hawk</b> <i>Buteo regalis</i> Year-round <a href="https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=B06X">https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=B06X</a>	<b>Bird of conservation concern</b>
<b>Fox Sparrow</b> <i>Passerella iliaca</i> Season: Breeding	<b>Bird of conservation concern</b>
<b>Greater Sage-grouse</b> <i>Centrocercus urophasianus</i> Year-round <a href="https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=B06W">https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=B06W</a>	<b>Bird of conservation concern</b>
<b>Green-tailed Towhee</b> <i>Pipilo chlorurus</i> Season: Breeding	<b>Bird of conservation concern</b>
<b>Lewis's Woodpecker</b> <i>Melanerpes lewis</i> Season: Breeding	<b>Bird of conservation concern</b>
<b>Loggerhead Shrike</b> <i>Lanius ludovicianus</i> Season: Breeding <a href="https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=B0FY">https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=B0FY</a>	<b>Bird of conservation concern</b>
<b>Long-billed Curlew</b> <i>Numenius americanus</i> Season: Breeding <a href="https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=B06S">https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=B06S</a>	<b>Bird of conservation concern</b>
<b>Peregrine Falcon</b> <i>Falco peregrinus</i> Season: Breeding <a href="https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=B0FU">https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=B0FU</a>	<b>Bird of conservation concern</b>

**Rufous Hummingbird** *selasphorus rufus*

Season: Breeding

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0F1>

**Bird of conservation concern**

**Sage Thrasher** *Oreoscoptes montanus*

Season: Breeding

**Bird of conservation concern**

**Short-eared Owl** *Asio flammeus*

Year-round

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0HD>

**Bird of conservation concern**

**Swainson's Hawk** *Buteo swainsoni*

Season: Breeding

<https://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B070>

**Bird of conservation concern**

## Refuges

Any activity proposed on [National Wildlife Refuge](#) lands must undergo a 'Compatibility Determination' conducted by the Refuge. If your project overlaps or otherwise impacts a Refuge, please contact that Refuge to discuss the authorization process.

There are no refuges within this project area

## Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats from your project may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal Statutes.

Project proponents should discuss the relationship of these requirements to their project with the Regulatory Program of the appropriate [U.S. Army Corps of Engineers District](#).

### DATA LIMITATIONS

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

### DATA EXCLUSIONS

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

### DATA PRECAUTIONS

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

There are no wetlands identified in this project area

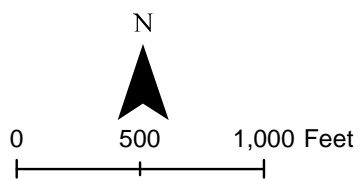




Figure 6. Well Records Within 1/2 Mile of the Eckert Road Underpass Project.

**Legend**

- Project Area
- Wells
- Roads
- 1/2 Mile Radius





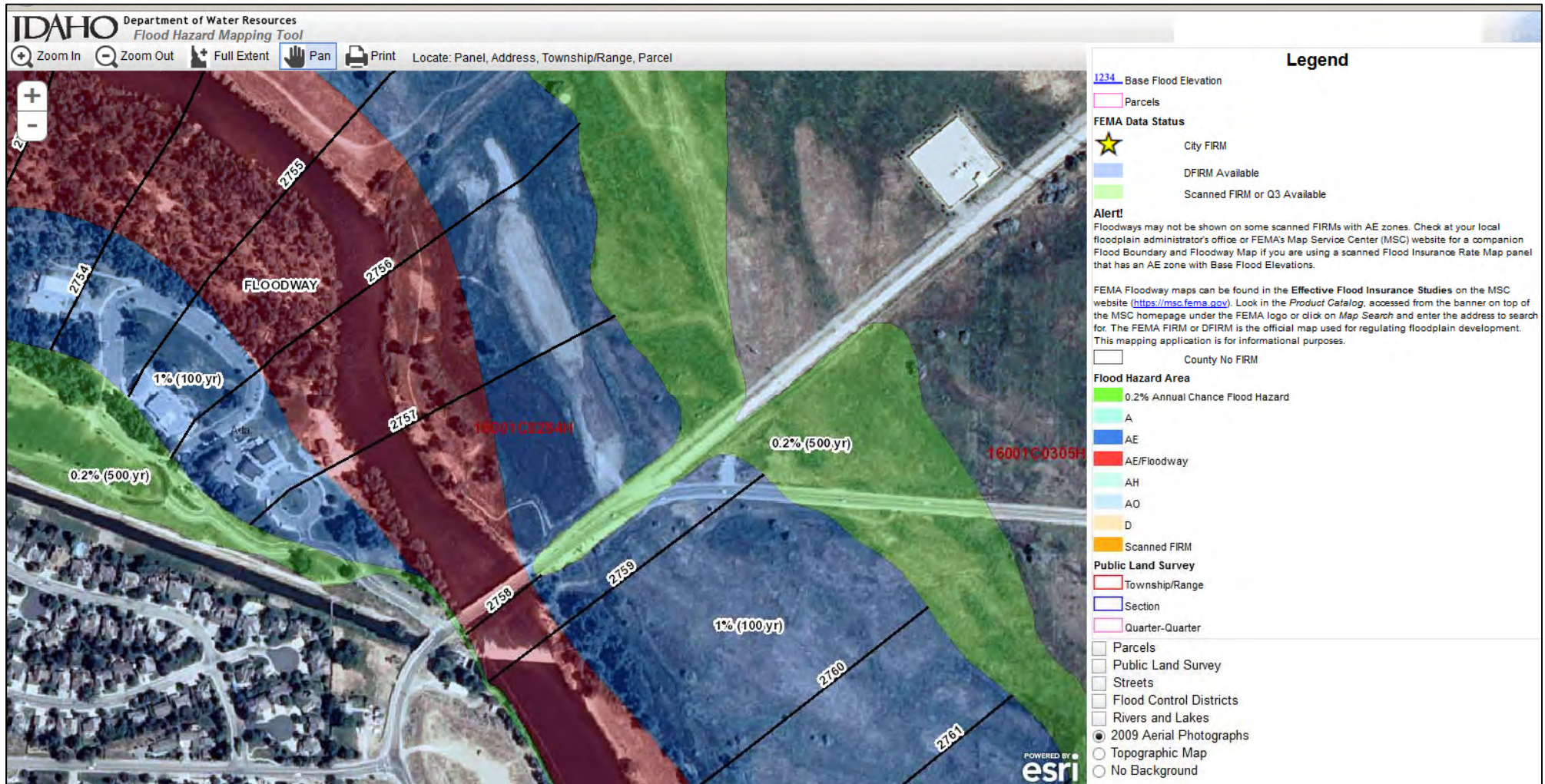
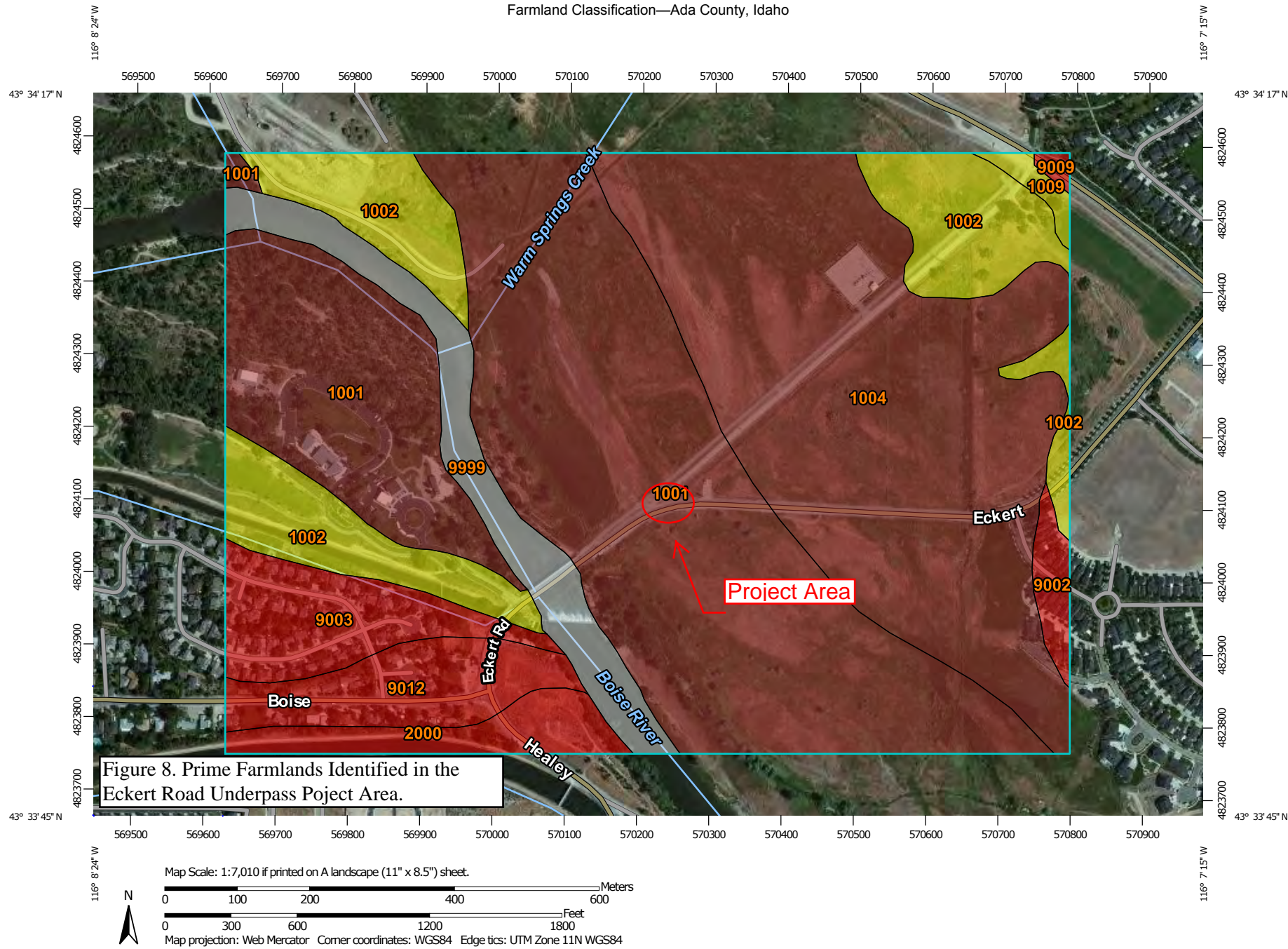
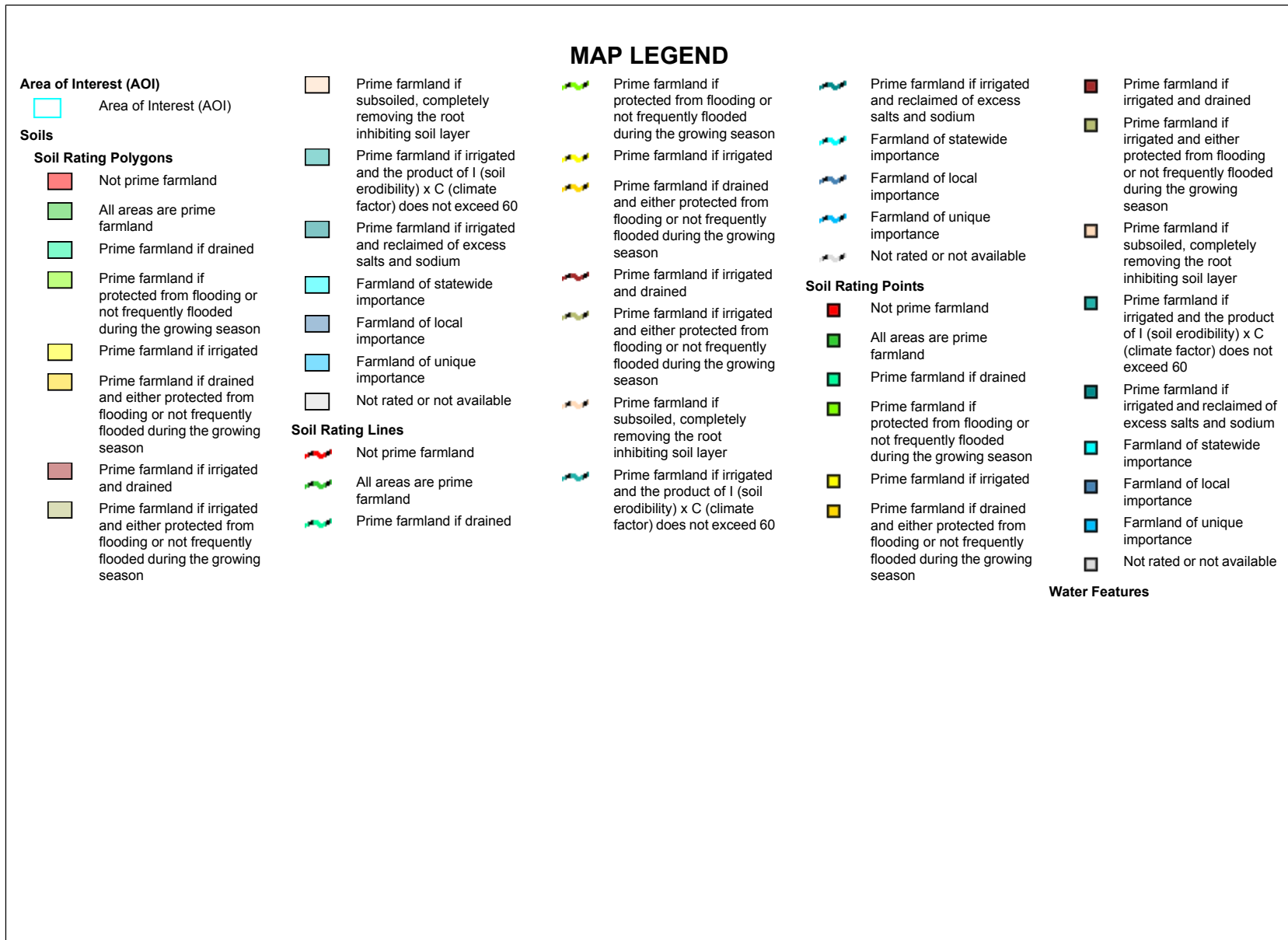


Figure 7. Floodplain Map for the Eckert Road Underpass Project Area.








Source: IDWR Flood Hazard Mapping Tool







## MAP INFORMATION

-  Streams and Canals
- Transportation**
-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads
- Background**
-  Aerial Photography

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>  
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Ada County, Idaho  
Survey Area Data: Version 3, Sep 8, 2014

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 10, 2011—Aug 23, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Farmland Classification

Farmland Classification— Summary by Map Unit — Ada County, Idaho (ID001)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
1001	Notus-LesBois complex, 0 to 1 percent slopes	Prime farmland if irrigated and drained	95.4	39.7%
1002	Ballentine-Eagle complex, 0 to 1 percent slopes	Prime farmland if irrigated	29.4	12.2%
1004	Moulton-Notus complex, 0 to 1 percent slopes	Prime farmland if irrigated and drained	70.0	29.2%
1009	Bissell loam, 2 to 4 percent slopes	Prime farmland if irrigated	1.2	0.5%
2000	Xeric Haplargids, 8 to 35 percent slopes	Not prime farmland	6.6	2.8%
9002	Urban land-Ballentine complex, 0 to 1 percent slopes	Not prime farmland	2.4	1.0%
9003	Urban land-Cleman complex, 0 to 1 percent slopes	Not prime farmland	10.9	4.5%
9009	Urban land-Bissell complex, 2 to 4 percent slopes	Not prime farmland	0.4	0.2%
9012	Urban land-Emerson complex, 1 to 3 percent slopes	Not prime farmland	10.4	4.3%
9999	Water		13.3	5.6%
<b>Totals for Area of Interest</b>			<b>240.0</b>	<b>100.0%</b>

### Description

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

### Rating Options

*Aggregation Method:* No Aggregation Necessary

*Tie-break Rule:* Lower