BRIDGE FEASIBILITY STUDY
PEDESTRIAN CROSSING OF THE HENRY'S FORK OF THE SNAKE RIVER

St. Anthony, ID
July 2019

Prepared by: Western Federal Lands Highway Division (Vancouver, WA)

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To: Project File, FHWA, WFLHD, 7/17/2019

1. INTRODUCTION

The City of St. Anthony, ID and Bureau of Land Management have a shared interest to improve access to recreational activities along the Henry's Fork of the Salmon River near St. Anthony, ID. These activities include hiking, biking, birdwatching, hunting, fishing, and many more.

The ultimate goals of the project are to improve public safety and provide better access and usage of the Henry's Fork Greenway and adjacent public lands. Specifically, this report will focus on options to cross all or portions of the Henry's Fork of the Snake River with a pedestrian bridge(s) downstream of St. Anthony, ID.

2. BACKGROUND

The Henry's Fork Greenway is located on the Henry's Fork River just downstream (southwest) of St. Anthony, ID (see Figure 1). The Greenway is located on the north and the south side of the river, and there are pedestrian trails on both sides of the river. However, there is not a safe and legal way to cross the river. Some people use the railroad bridge at the southwest end of the planning area to cross the river, but it is owned by the Eastern Idaho Railroad (EIRR) and is not currently intended for pedestrian use.

The City of St. Anthony and the BLM applied for funding for a planning study in the 2017 Idaho Federal Lands Access Program (FLAP) Call for Projects. The Henry's Fork Greenway project was selected for funding with the purpose of completing a pedestrian bridge feasibility study to examine bridge crossing options and determine potential funding sources.

Federal Highway Administration-Western Federal Lands Highway Division is providing project management and technical staff to produce this Bridge Feasibility Study and an associated Implementation/Funding Plan.

3. SUMMARY OF OPTIONS

The project team, consisting of staff from City of St. Anthony, BLM and FHWA, performed a site visit of the St. Anthony Greenway Project area September 11th through 13th. The team reviewed both sides of the river from the city of St. Anthony to the area around the existing EIRR bridge (as shown in Figure 1)

One initial project preference was the desire to complete a long loop trail (connecting both sides of the river with trail and a crossing near the existing railroad bridge). However, during the site visit it was noted that this would not likely be immediately feasible due to private land ownership along the southern banks of the Henry's Fork.

During the site visit three main options based on location of the crossing were considered to move forward for further development, these options are summarized below and documented in this report:

- OPTION 1: "Railroad Bridge Option"- Cross the Henry's Fork near the existing railroad bridge, two sub-options were developed for this location:
    - OPTION 1A: Construct a new pedestrian bridge just downstream of the existing railroad bridge. New bridge would consist of a two span, 352 foot long steel truss with concrete pier foundation in the river.

  - OPTION 1B: Acquire the existing railroad bridge and convert to only pedestrian & cyclist access.
- OPTION 2: "Island Hopping Option" – Construct a series of bridges and trails that connect through the braided portion of the Henry's Fork (located approximately midway through the study area). Three bridges would be required: Bridge #1, 352 foot steel truss, Bridge #2, 150 foot steel truss, and Bridge #3, 175 foot steel truss along with two segments of trail or boardwalk on the islands totaling 800 foot in length
- Option 3: "Diversion Crossing Option" – Cross the Henry's Fork near the beginning of the study area at the area adjacent to the existing water diversion weir and boat launch. A 667 foot long, four span steel truss bridge consisting of 175 foot spans would be required to cross the river at this location.

Summary of Advantages

	Option 1A	Option 1B	Option 2	Option 3
Advantages				
Initial cost of construction	4	5	2	1
Operation & Maintenance Costs	5	4	2	1
Fill and ground disturbance	3	5	1	2
Provides access to islands	1	1	5	1
Creates opportunity for loop trail	3	3	5	5
Discourages unsafe use of Rail Bridge	4	5	1	1
ROW acquisition (temp. and perm.)	3	1	3	5
Total Advantage Relative "Score" =	**23**	**24**	**19**	**16**

Note: the options were rated on a scale of 1-5 for each category. A score of "1" indicates that the option scored poorly in that category. A score of "5" indicates that the option scored favorably in that category.

To: Project File, FHWA, WFLHD, 7/17/2019

Figure 1 – Study Area Map

4. DESIGN OPTIONS

The following is a detailed narrative for each of the options.

Option 1A- Construct a new pedestrian bridge on the downstream side of the existing railroad bridge. The proposed bridge would consist of a two span, 352 foot long steel truss with a single concrete pier foundation in the river. A minimum of 8 foot pedestrian walkway width is provided on the proposed bridge. Minimal trail work would be included, only constructing connections at the ends of the bridge.

Design and Materials:

It is recommended to construct the bridge superstructure from weathering steel. This steel does not require painting but rather an oxidized surface forms (patina) that coats and protects the steel from further deterioration or corrosion. The weathering steel produces a rustic and weathered aesthetic that would fit the character of the adjacent historic railroad truss.

Foundation elements are recommended to be constructed with reinforced concrete on spread footings.

The foundation elements and the steel truss superstructure would have an intended design life of 100 years.

A treated timber deck would be an appropriate deck surface and fit the aesthetics of the other boardwalks and trail bridges already constructed on the Henry's Fork Greenway. The timber deck has an anticipated design life of about 50 years in the project's climate and would have to be replaced at some point during the life of the structure (A $50,000 expense in current year dollars).

Future design considerations should include accommodation of ice jams and hydraulic clearances during high water events. A minimum low chord (lowest part of steel truss) should be at approximately 3 to 5 feet higher than the 50 year flood event water surface elevation.

Construction Techniques and Considerations:

Construction access for heavy equipment and materials to the south bank of the Henry's Fork at this crossing location will be simplified through the use of local/county roads that connect right to the south abutment location. There is also a large cleared informal parking area that could be utilized for staging and stockpiling material for the construction of the proposed bridge.

This option proposes to place a single pier in the middle of the Henry's Fork River. To access this pier a temporary bridge will need to be constructed. Cofferdams or other dewatering techniques will need to be utilized to divert the river water from the work area. Given the limited access to the north bank at this crossing location a temporary bridge that spans the entire channel may be required to provide access for materials and equipment to that side of the river. Large cranes will be required to place the steel trusses and the temporary bridge will need to accommodate these heavy loads.

To: Project File, FHWA, WFLHD, 7/17/2019

Operations and Pedestrian Movement:

The existing railroad bridge is currently utilized for illegal and unsafe crossings of the Henry's Fork. Placing a safe crossing directly adjacent to the railroad bridge will allow for safe crossing of the river eliminating conflicts with the active rail line. The location also allows for future expansion or connection to a larger loop (approximately 5 miles) than if the river was crossed closer to St. Anthony.

To provide pedestrian and cyclist access to the north side of the Henry's Fork Greenway Trail a trail connection would be constructed under the existing railroad bridge. This would eliminate or discourage the current practice of illegally crossing the railroad tracks at grade.

Summary of Costs:

Estimate of Construction items only = $1,275,000
Estimate of Engineering Costs only = $380,000
Estimate of total project cost = $1,655,000
Estimated remaining service life = 100 years for the foundation and superstructure; 50 years for the timber deck

Summary of Advantages and Disadvantages:

ADVANTAGES	DISADVANTAGES
Only one pier in the river	Does not (yet) create a loop trail
Discourages unsafe use of existing railroad bridge	Does not provide access to islands within Henry's Fork
Opportunity for future larger loop from St. Anthony	
Opportunity for future expansion and upgrades to the informal parking area on the south bank	
Minimum new bridge structure constructed (limits future maintenance costs and needs)	

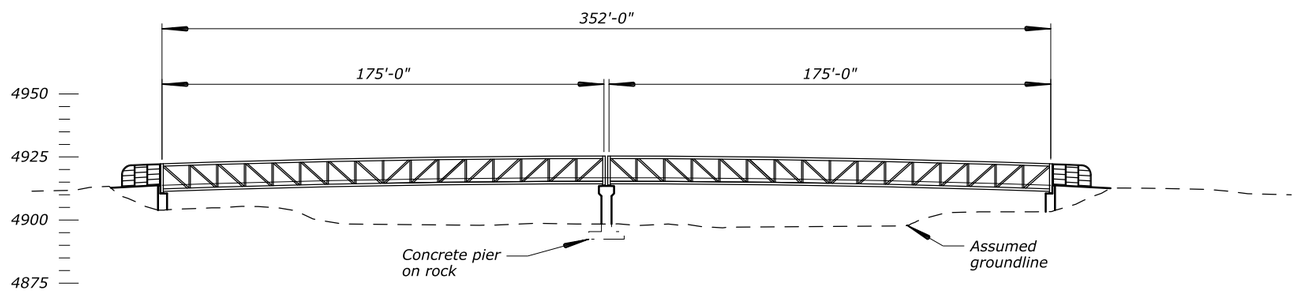
	HENRY'S FORK BRIDGE STUDY	B. Oltmann	11/26/2018	

Construction Cost Estimate

Option #1A: New bridge crossing DS of existing railroad bridge					
Item #	Description	Unit	Quantity	Unit price	Amount
20801 - 0000	Structural Excavation	CUYD	330	$ 25.0	$8,250.0
20815 - 0000	Cofferdams (Pier Construction)	LPSM	1	$ 50,000.0	$50,000.0
55201 - 0200	Structural Concrete A(AE)	CUYD	220	$ 1,000.0	$220,000.0
55401 - 1000	Reinforcing Steel	LB	55000	$ 2.0	$110,000.0
55504 - 0000	Pre-fabricated Steel Bridge (2x175ft)	LPSM	1	$ 400,000.0	$400,000.0
55601 - 0900	Rail, Steel Approach	LNFT	60	$ 225.0	$13,500.0
55700 - 0000	Treated Timber Decking for Truss	MFBM	8	$ 5,000.0	$40,000.0
56202 - 0000	Temporary Work Bridge	LPSM	1	$ 125,000.0	$125,000.0
	Trail and Approach work	LPSM	1	$ 50,000.0	$50,000.0
					$0.0
					$0.0
		Total:			$1,016,750.00
15% Contingency				$152,500.00	
10% Mobilization				$101,675.00	
Area of Bridge to be built		SQFT		2816	
Rounded Estimated Cost of Proposed Bridge				$1,275,000.00	
Cost per SQFT of new bridge		$		$452.77	

Engineering Costs					
	Description				Amount
	Preliminary Engineering (Design) - 15%				$191,250.0
	Construction Engineering - 15%				$191,250.0
Rounded Total Engineering Costs				$380,000.00	
Total Project Construction				$1,655,000.00	

PLAN



ELEVATION

OPTION 1A - NEW BRIDGE D.S. RAILROAD BRIDGE

GEOMETRICS

TYPICAL ROADWAY SECTION

SUPER ROTATED ABOUT _____

STA._____ RATE_____ m/m

STA._____ RATE_____ m/m

CROWN_____ m/m

PROFILE GRADE DIAGRAM

EL. ARE AT _____ GRADE

AT_____

HYDRAULICS

	Q	Vm	WS EL.
Q_2			
Q_{50}			
Q_{100}			
Q			

REMARKS _____

SCOUR

SLOPE PROTECTION TYPE:_____ CLASS:_____ DEPTH:_____

TOP EL.:_____ BOTTOM EL.:_____ SLOPE:_____

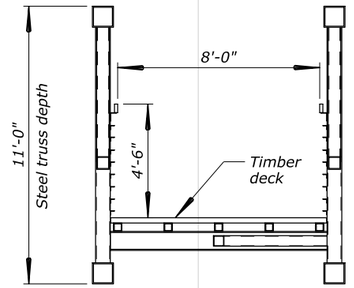
SCOUR _____

REMARKS _____

HYDRAULICS REPORT NO. _____ RECEIVED _____

MATERIALS REPORT NO. _____ RECEIVED _____

DESIGN DATA



TYPICAL BRIDGE SECTION

LIVE LOAD Ped. 90 PSF OVERLOAD_____ SPECIAL LOADS _____

SUPERSTRUCTURE WEATHERING STEEL TRUSS WITH TIMBER DECK

RAIL STEEL PEDESTRIAN RAIL TRANSITION _____

SIDEWALKS N/A DRAINS N/A UTILITIES N/A

REMARKS _____

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
WESTERN FEDERAL LANDS HIGHWAY DIVISION

PRELIMINARY LAYOUT

BRIDGE NAME HENRY'S FORK PEDESTRIAN BRIDGE STREAM NAME HENRY'S FORK OF THE SNAKE RIVER

ROUTE NAME AND NUMBER _____

STATE IDAHO COUNTY _____ FOREST/PARK/OTHER _____

ACCOUNT NO._____

PREPARED BY B. OLTMANN ESTIMATED STRUCTURE COST _____

SCALE: 1:30 DATE: NOVEMBER 2018

Option 1B- Acquire the existing railroad bridge and convert it to only pedestrian and cyclist access. Install new timber decking and pedestrian railing. This approach is similar to many other "rails to trails" projects that have been completed at many other historic railroad bridges (including nearby at the Ashton-Tetonia Trail).

Existing Railroad Bridge:

The existing St. Anthony Pegram Truss Railroad Bridge is listed on the National Register of Historic Places. The bridge was originally fabricated in 1896 and placed in its current location and foundations in 1914. Since that time there have been no major modifications to the structure that would alter its historic significance. The bridge is located on a spur of the old East Belt Branch and is still used periodically by the Eastern Idaho Railroad.

There are some risks associated with converting an older structure for new use. Note that the existing bridge is currently 122 year old, and may have some defects. It is recommended that if this option is pursued that a detailed "hands-on" inspection of all members along with ultra-sonic testing of the pins be completed. The structural loading will be much less with pedestrian use compared to active railroad hauling, but a full structural analysis would also be appropriate. Given the construction date of the bridge it is likely that lead based paint was also used and should be verified if this option is carried forward.

A further evaluation of the existing bridge's single pier in the river and abutments for scour issues would be warranted to ensure the long-term performance of the bridge.

A treated timber deck would be an appropriate deck surface and fit the aesthetics of the other boardwalks and trail bridges already constructed on the Henry's Fork Greenway. The timber deck has an anticipated design life of about 50 years in the project's climate.

Construction Techniques and Considerations:

Construction access for light equipment and materials to the south bank of the Henry's Fork at this crossing location will be simplified through the use of local/county roads that connect right to the south abutment location. There is also a large cleared informal parking area that could be utilized for staging and stockpiling material for the conversion of the existing bridge.

This option would not require any in-water work as all the work would occur on the existing bridge and approach way.

Operations and Pedestrian Movement:

Similar to Option 1A: The existing railroad bridge is currently utilized for illegal and unsafe crossings of the Henry's Fork. Placing a safe crossing on the railroad bridge itself will allow for safe crossing of the river eliminating conflicts with the rail line. The location also allows for future expansion or connection to a larger loop (approximately 5 miles) than if the river was crossed closer to St. Anthony.

To: Project File, FHWA, WFLHD, 7/17/2019

Summary of Costs:

Estimate of Construction items only = $200,000
Estimate of Engineering Costs only = $140,000
Estimate of total project cost = $340,000
Estimated remaining service life = 50 years
(Note that the costs assume existing bridge is acquired at no-cost)

Summary of Advantages and Disadvantages:

ADVANTAGES	DISADVANTAGES
No in-water work or additional clearing	Does not (yet) create a loop trail
Eliminates unsafe use of existing railroad bridge – improves safety of railroad crossing	Risks associated with rehabilitating or changing use of historic steel bridge
Opportunity for future larger loop from St. Anthony	Shortest design life of options
Lowest total project cost	Requires acquisition of railroad bridge, of which feasibility is unknown

Existing Henry's Fork Pegram Truss Railroad Bridge

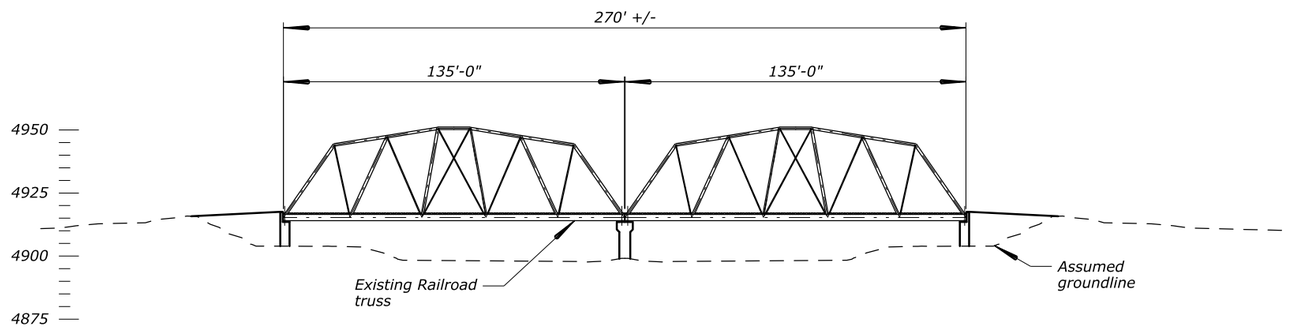
	HENRY'S FORK BRIDGE STUDY	B. Oltmann	11/26/2018	

Construction Cost Estimate

Option #1B: Retrofit Existing Railroad Bridge					
Item #	Description	Unit	Quantity	Unit price	Amount
55700 - 0000	Treated Timber Decking for Truss	MFBM	7	$ 5,000.0	$35,000.0
55700 - 0000	Pedestrian Rail	LNFT	600	$ 125.0	$75,000.0
	Trail and Approach work	LPSM	1	$ 50,000.0	$50,000.0
		Total:			$160,000.00
15% Contingency				$24,000.00	
10% Mobilization				$16,000.00	
Area of Bridge to be built		SQFT		1755	
Rounded Estimated Cost of Proposed Bridge				$200,000.00	
Cost per SQFT of new bridge		$		$113.96	

Engineering Costs					
	Description				Amount
	Detailed bridge inspection (climbing)				$40,000.0
	Preliminary Engineering (Design) - 25%				$50,000.0
	Construction Engineering - 25%				$50,000.0
Rounded Total Engineering Costs				$140,000.00	
Total Project Construction				$340,000.00	

PLAN



ELEVATION

OPTION 1B - RETROFIT RAILROAD BRIDGE - NEW DECK/RAILS

GEOMETRICS

TYPICAL ROADWAY SECTION

SUPER ROTATED ABOUT _____

STA._____ RATE_____ m/m

STA._____ RATE_____ m/m

CROWN_____m/m

PROFILE GRADE DIAGRAM

EL. ARE AT _____ GRADE

AT_____

HYDRAULICS

	Q	Vm	WS EL.
Q_2			
Q_{50}			
Q_{100}			
Q			

REMARKS _____

SCOUR

SLOPE PROTECTION TYPE:_____ CLASS:_____ DEPTH:_____

TOP EL.:_____ BOTTOM EL.:_____ SLOPE:_____

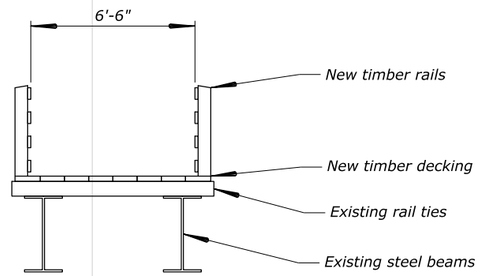
SCOUR _____

REMARKS _____

HYDRAULICS REPORT NO. _____ RECEIVED _____

MATERIALS REPORT NO. _____ RECEIVED _____

DESIGN DATA



TYPICAL BRIDGE SECTION

LIVE LOAD Ped. 90 PSF OVERLOAD_____ SPECIAL LOADS _____

SUPERSTRUCTURE WEATHERING STEEL TRUSS WITH TIMBER DECK

RAIL STEEL PEDESTRIAN RAIL TRANSITION _____

SIDEWALKS N/A DRAINS N/A UTILITIES N/A

REMARKS _____

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
WESTERN FEDERAL LANDS HIGHWAY DIVISION

PRELIMINARY LAYOUT

BRIDGE NAME HENRY'S FORK PEDESTRIAN BRIDGE STREAM NAME HENRY'S FORK OF THE SNAKE RIVER

ROUTE NAME AND NUMBER _____

STATE IDAHO COUNTY _____ FOREST/PARK/OTHER _____

ACCOUNT NO._____

PREPARED BY B. OLTMANN ESTIMATED STRUCTURE COST _____

SCALE: 1:30 DATE: NOVEMBER 2018

Option 2- "Island Hopping Option" – Construct a series of bridges and trails that connect through the braided portion of the Henry's Fork (located approximately midway through the study area). Three bridges would be required: Bridge #1, 352 foot steel truss, Bridge #2, 150 foot steel truss, and Bridge #3, 175 foot steel truss along with two segments of trail or boardwalk on the islands totaling 800 foot in length.

Design and Materials:

It is recommended to construct the bridge superstructures from weathering steel. This steel does not require painting but rather an oxidized surface forms (patina) that coats and protects the steel from further deterioration or corrosion. The weathering steel produces a rustic and weathered aesthetic that would fit the character of the adjacent historic railroad truss.

Foundation elements are recommended to be constructed with reinforced concrete on spread footings. Only one pier is required in the Henry's Fork with this option: at Bridge #1.

The foundation elements and the steel truss superstructure would have an intended design life of 100 years.

A treated timber deck would be an appropriate deck surface and fit the aesthetics of the other boardwalks and trail bridges already constructed on the Henry's Fork Greenway. The timber deck has an anticipated design life of about 50 years in the project's climate, and would have to be replaced at some point during the life of the structure (A $75,000 expense in current year dollars).

The new trail Segment #1 on the island is located in an area that has been previously designated as wetlands. This area may need to be crossed with simple boardwalks of the type already constructed on other portions of the Henry's Fork Greenway.

Future design considerations should include accommodation of ice jams and hydraulic clearances during these events during high water. A minimum low chord (lowest part of steel truss) should be at approximately 3 to 5 feet higher than the 50 year flood event water surface elevation.

Construction Techniques and Considerations:

There is good construction access for heavy equipment and materials to the north bank of the Henry's Fork near the cemetery parking area and can be accessed through the use of local/county roads that connect right to the north abutment location of Bridge #1. There is also medium sized paved parking area that could be utilized for staging and stockpiling material for the construction of the proposed bridges and trails.

Access to the Bridge #3 location will be complicated by the distance along the narrow Greenway trail, private landowner easements and need for large heavy equipment to access both ends of the bridge during construction. A temporary bridge will be required to reach the far abutment of Bridge #3 that is located on an island. This temporary bridge would also be utilized to move material over to the island and then build another temporary bridge adjacent to Bridge #2. These bridges are required to erect the steel trusses and also to move equipment and materials needed to construct the concrete abutments and pier associated with the permanent structures.

A total of three temporary bridge are anticipated to be constructed to facilitate the construction of the three permanent bridges. These temporary bridges will allow equipment and material to access the islands. The temporary bridges would be removed once the permanent bridges are installed.

This option also proposes to place a single pier in the middle of the Henry's Fork River. Cofferdams or other dewatering techniques will need to be utilized to divert the river water from the work area. Given the limited access to the southern abutment located on an in-channel island at this crossing location a temporary bridge that spans the entire channel may be required.

Operations and Pedestrian Movement:

Option 2 would allow for a medium loop route to be completed from St. Anthony along both the north and south banks of the Henry's Fork. This loop would be approximately 3 miles in length.

This option does not address the concerns associated with the current use of the existing railroad bridge. It would still be utilized for illegal and unsafe crossings of the Henry's Fork. The proposed crossing is too far away from the existing railroad bridge and it is unlikely that people who want to cross in the area of the existing bridge would walk to the new bridge to cross.

Summary of Costs:

Estimate of Construction items only = $2,910,000
Estimate of Engineering Costs only = $900,000
Estimate of total project cost = $3,810,000
Estimated remaining service life = 100 years for the foundation and superstructures; 50 years for the timber decks

Summary of Advantages and Disadvantages:

ADVANTAGES	DISADVANTAGES
Only one pier in the river	Does not discourage unsafe use of the existing railroad bridge
Creates a loop trail	Constructs trail and bridges in areas previously designated/mapped as wetlands
Provides island viewing recreational opportunities	Large quantity of new bridge constructed (higher maintenance costs)
	Highest total project cost

	HENRY'S FORK BRIDGE STUDY	B. Oltmann	11/26/2018	

Construction Cost Estimate

Option #2: New bridges crossing thru Islands					
Item #	Description	Unit	Quantity	Unit price	Amount
20801 - 0000	Structural Excavation	CUYD	800	$ 25.0	$20,000.0
20815 - 0000	Cofferdams (Pier Construction)	LPSM	1	$ 50,000.0	$50,000.0
55201 - 0200	Structural Concrete A(AE)	CUYD	525	$ 1,000.0	$525,000.0
55401 - 1000	Reinforcing Steel	LB	131250	$ 2.0	$262,500.0
55504 - 0000	Pre-fabricated Steel Bridge (3x175ft, 1x150ft)	LPSM	1	$ 775,000.0	$775,000.0
55601 - 0900	Rail, Steel Approach	LNFT	180	$ 225.0	$40,500.0
55700 - 0000	Treated Timber Decking for Truss	MFBM	15	$ 5,000.0	$75,000.0
56202 - 0000	Temporary Work Bridges	LPSM	1	$ 300,000.0	$300,000.0
	Trail and Approach work	LPSM	1	$ 275,000.0	$275,000.0
		Total:			$2,323,000.00
15% Contingency				$348,400.00	
10% Mobilization				$232,300.00	
Area of Bridge to be built		SQFT		5400	
Rounded Estimated Cost of Proposed Bridge				$2,910,000.00	
Cost per SQFT of new bridge		$		$538.89	

Engineering Costs					
	Description				Amount
	Preliminary Engineering (Design) - 15%				$450,000.0
	Construction Engineering - 15%				$450,000.0
Rounded Total Engineering Costs				$900,000.00	
Total Project Construction				$3,810,000.00	

OPTION 2 - ISLAND HOPPING

ROUTE NAME AND NUMBER _____

STATE IDAHO COUNTY _____

ACCOUNT NO. _____

PREPARED BY B. OLTMANN

FOREST/PARK/OTHER CITY OF ST. ANTHONY AND BLM

STREAM NAME HENRY'S FORK SNAKE RIVER

ESTIMATED STRUCTURE COST _____

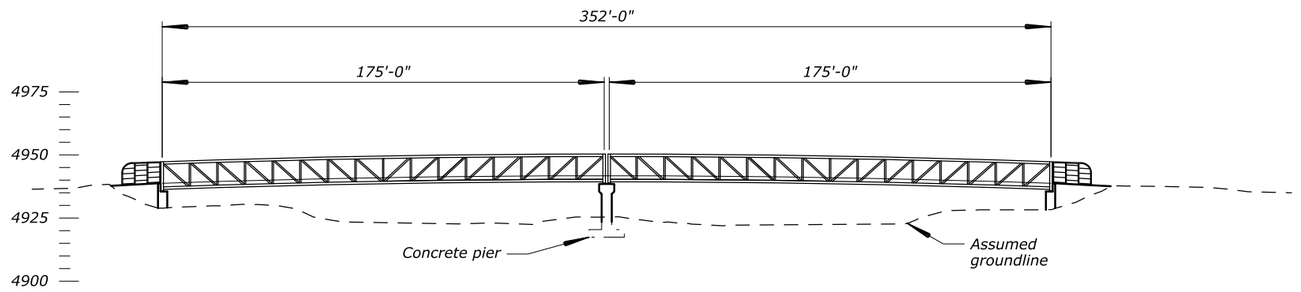
SCALE: 1:50 DATE: NOVEMBER 2018

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
WESTERN FEDERAL LANDS HIGHWAY DIVISION

BRIDGE NAME HENRY'S FORK BRIDGE #1, #2, #3

PRELIMINARY LAYOUT

PLAN



ELEVATION BRIDGE #1

OPTION 2 - ISLAND HOPPING

GEOMETRICS

TYPICAL ROADWAY SECTION

SUPER ROTATED ABOUT _____

STA._____ RATE_____ m/m

STA._____ RATE_____ m/m

CROWN_____m/m

PROFILE GRADE DIAGRAM

EL. ARE AT _____ GRADE

AT_____

HYDRAULICS

	Q	Vm	WS EL.
Q_2			
Q_{50}			
Q_{100}			
Q			

REMARKS _____

SCOUR

SLOPE PROTECTION TYPE:_____ CLASS:_____ DEPTH:_____

TOP EL.:_____ BOTTOM EL.:_____ SLOPE:_____

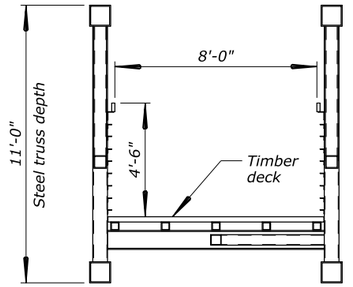
SCOUR _____

REMARKS _____

HYDRAULICS REPORT NO. _____ RECEIVED _____

MATERIALS REPORT NO. _____ RECEIVED _____

DESIGN DATA



TYPICAL BRIDGE SECTION

LIVE LOAD Ped. 90 PSF OVERLOAD_____ SPECIAL LOADS _____

SUPERSTRUCTURE WEATHERING STEEL TRUSS WITH TIMBER DECK

RAIL STEEL PEDESTRIAN RAIL TRANSITION _____

SIDEWALKS N/A DRAINS N/A UTILITIES N/A

REMARKS _____

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
WESTERN FEDERAL LANDS HIGHWAY DIVISION

PRELIMINARY LAYOUT

BRIDGE NAME HENRY'S FORK PEDESTRIAN BRIDGES STREAM NAME HENRY'S FORK OF THE SNAKE RIVER

ROUTE NAME AND NUMBER _____

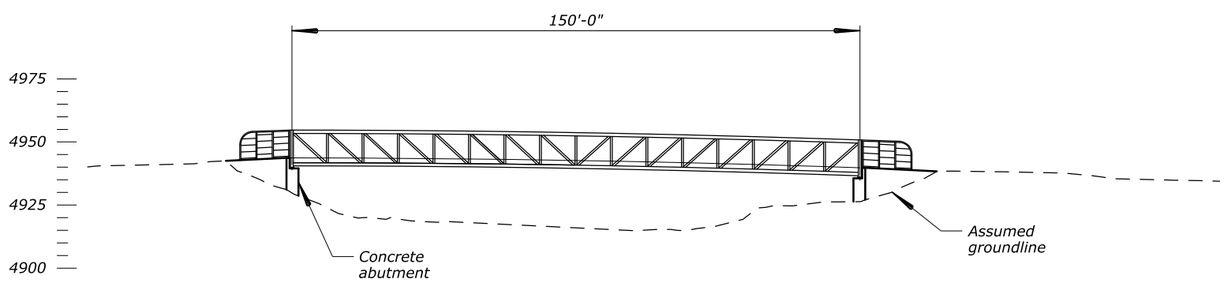
STATE IDAHO COUNTY _____ FOREST/PARK/OTHER _____

ACCOUNT NO._____

PREPARED BY B. OLTMANN ESTIMATED STRUCTURE COST _____

SCALE: 1:30 DATE: NOVEMBER 2018

PLAN



ELEVATION BRIDGE #2

OPTION 2 - ISLAND HOPPING

GEOMETRICS

TYPICAL ROADWAY SECTION
SUPER ROTATED ABOUT _____
STA._____ RATE_____ m/m
STA._____ RATE_____ m/m

CROWN_____ m/m

PROFILE GRADE DIAGRAM
EL. ARE AT _____ GRADE
AT_____

HYDRAULICS

	Q	Vm	WS EL.
Q_2			
Q_{50}			
Q_{100}			
Q			

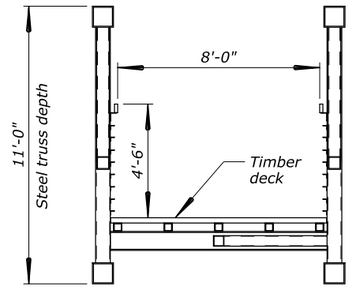
REMARKS _____

SCOUR

SLOPE PROTECTION TYPE:_____ CLASS:_____ DEPTH:_____
TOP EL.:_____ BOTTOM EL.:_____ SLOPE:_____
SCOUR _____
REMARKS _____

HYDRAULICS REPORT NO. _____ RECEIVED _____
MATERIALS REPORT NO. _____ RECEIVED _____

DESIGN DATA



TYPICAL BRIDGE SECTION

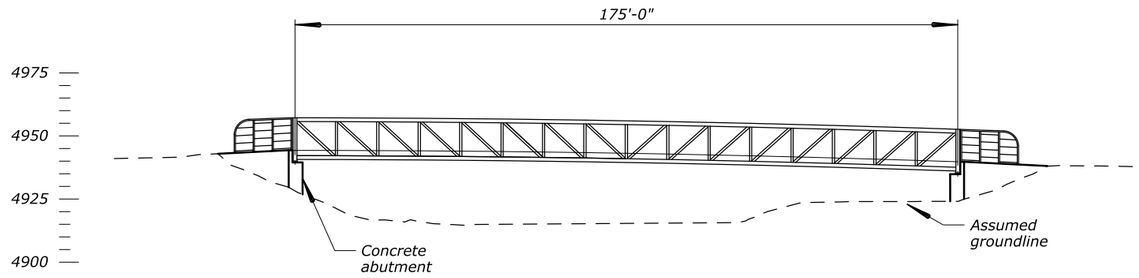
LIVE LOAD Ped. 90 PSF OVERLOAD_____ SPECIAL LOADS _____
SUPERSTRUCTURE WEATHERING STEEL TRUSS WITH TIMBER DECK
RAIL STEEL PEDESTRIAN RAIL TRANSITION _____
SIDEWALKS N/A DRAINS N/A UTILITIES N/A
REMARKS _____

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
WESTERN FEDERAL LANDS HIGHWAY DIVISION

PRELIMINARY LAYOUT

BRIDGE NAME HENRY'S FORK PEDESTRIAN BRIDGES STREAM NAME HENRY'S FORK OF THE SNAKE RIVER
ROUTE NAME AND NUMBER _____
STATE IDAHO COUNTY _____ FOREST/PARK/OTHER _____
ACCOUNT NO._____
PREPARED BY B. OLTMANN ESTIMATED STRUCTURE COST _____
SCALE: 1:20 DATE: NOVEMBER 2018

PLAN



ELEVATION BRIDGE #3

OPTION 2 - ISLAND HOPPING

GEOMETRICS

TYPICAL ROADWAY SECTION

SUPER ROTATED ABOUT _____

STA._____ RATE_____ m/m

STA._____ RATE_____ m/m

CROWN_____m/m

PROFILE GRADE DIAGRAM

EL. ARE AT _____ GRADE

AT_____

HYDRAULICS

	Q	Vm	WS EL.
Q_2			
Q_{50}			
Q_{100}			
Q			

REMARKS _____

SCOUR

SLOPE PROTECTION TYPE:_____ CLASS:_____ DEPTH:_____

TOP EL.:_____ BOTTOM EL.:_____ SLOPE:_____

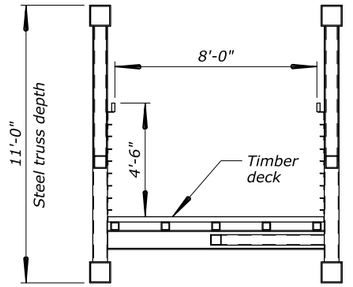
SCOUR _____

REMARKS _____

HYDRAULICS REPORT NO. _____ RECEIVED _____

MATERIALS REPORT NO. _____ RECEIVED _____

DESIGN DATA



TYPICAL BRIDGE SECTION

LIVE LOAD Ped. 90 PSF OVERLOAD_____ SPECIAL LOADS _____

SUPERSTRUCTURE WEATHERING STEEL TRUSS WITH TIMBER DECK

RAIL STEEL PEDESTRIAN RAIL TRANSITION _____

SIDEWALKS N/A DRAINS N/A UTILITIES N/A

REMARKS _____

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
WESTERN FEDERAL LANDS HIGHWAY DIVISION

PRELIMINARY LAYOUT

BRIDGE NAME HENRY'S FORK PEDESTRIAN BRIDGES STREAM NAME HENRY'S FORK OF THE SNAKE RIVER

ROUTE NAME AND NUMBER _____

STATE IDAHO COUNTY _____ FOREST/PARK/OTHER _____

ACCOUNT NO._____

PREPARED BY B. OLTMANN ESTIMATED STRUCTURE COST _____

SCALE: 1:20 DATE: NOVEMBER 2018

To: Project File, FHWA, WFLHD, 7/17/2019

As an additional opportunity the Option 2, Bridge #3 could be added to other options as a way to improve access to the islands in the braided section of the Henry's Fork. This crossing location is the only upland island (non-wetland) noted in previous wetland identifications.

Cost of Option 2, Bridge #3 only:
Estimate of Construction items only = $875,000
Estimate of Engineering Costs only = $260,000
Estimate of total project cost = $1,135,000
Estimated remaining service life = 100 years for the foundation and superstructure; 50 years for the timber deck

Approximate crossing location of Bridge #3

	HENRY'S FORK BRIDGE STUDY	B. Oltmann	11/26/2018	

Construction Cost Estimate

Option #2, Bridge #3 ONLY: New bridge to one island					
Item #	Description	Unit	Quantity	Unit price	Amount
20801 - 0000	Structural Excavation	CUYD	220	$ 25.0	$5,500.0
20815 - 0000	Cofferdams (Pier Construction)	LPSM	1	$ 50,000.0	$50,000.0
55201 - 0200	Structural Concrete A(AE)	CUYD	155	$ 1,000.0	$155,000.0
55401 - 1000	Reinforcing Steel	LB	38750	$ 2.0	$77,500.0
55504 - 0000	Pre-fabricated Steel Bridge (3x175ft, 1x150ft)	LPSM	1	$ 200,000.0	$200,000.0
55601 - 0900	Rail, Steel Approach	LNFT	60	$ 225.0	$13,500.0
55700 - 0000	Treated Timber Decking for Truss	MFBM	5	$ 5,000.0	$25,000.0
56202 - 0000	Temporary Work Bridges	LPSM	1	$ 125,000.0	$125,000.0
	Trail and Approach work	LPSM	1	$ 50,000.0	$50,000.0
		Total:			$701,500.00
15% Contingency				$105,200.00	
10% Mobilization				$70,150.00	
Area of Bridge to be built		SQFT		5400	
Rounded Estimated Cost of Proposed Bridge				$875,000.00	
Cost per SQFT of new bridge		$		$162.04	

Engineering Costs					
	Description				Amount
	Preliminary Engineering (Design) - 15%				$131,250.0
	Construction Engineering - 15%				$131,250.0
Rounded Total Engineering Costs				$260,000.00	
Total Project Construction				$1,135,000.00	

Option 3- Construct a new pedestrian bridge on the upstream side of the existing irrigation diversion and weir at the northern end of the study area. The proposed bridge would consist of a four span, 667 foot long steel truss with three concrete pier foundations in the river. A minimum of 8 foot pedestrian walkway width would be provided on the proposed bridge. Minimal trail work would be included, only constructing connections at the ends of the bridge to existing trail on the south end and the existing boat launch on the north end.

Design and Materials:

It is recommended to construct the bridge superstructures from weathering steel. This steel does not require painting but rather an oxidized surface forms (patina) that coats and protects the steel from further deterioration or corrosion. The weathering steel produces a rustic and weathered aesthetic that would fit the character of the adjacent historic railroad truss.

Foundation elements are recommended to be constructed with reinforced concrete on spread footings.

The foundation elements and the steel truss superstructure would have an intended design life of 100 years.

A treated timber deck would be an appropriate deck surface and fit the aesthetics of the other boardwalks and trail bridges already constructed on the Henry's Fork Greenway. The timber deck has an anticipated design life of about 50 years in the project's climate, and would have to be replaced at some point during the life of the structure (A $150,000 estimated cost in current year dollars).

Future design considerations should include accommodation of ice jams and hydraulic clearances during high water events. A minimum low chord (lowest part of steel truss) should be at approximately 3 to 5 feet higher than the 50 year flood event water surface elevation.

Construction Techniques and Considerations:

Construction access for heavy equipment and materials to the north bank of the Henry's Fork at this crossing location will be simplified through the use of local/county roads that connect to an area near the north abutment location. The south abutment location could be accessed with moderate difficulty down the existing Greenway trail corridor. A staging area would need to be cleared at the south abutment location.

This option proposes to place three piers in the middle of the Henry's Fork River. To access these piers a temporary bridge will need to be constructed. Cofferdams or other dewatering techniques will need to be utilized to divert the river water from the work areas. Given the limited access to the south bank at this crossing location a temporary bridge that spans the entire channel may be required to provide access for materials and equipment to that side of the river. Large cranes will be required to place the steel trusses and the temporary bridge will need to accommodate these heavy loads.

Operations and Pedestrian Movement:

Option 3 would allow for a medium loop route to be completed from St. Anthony along both the north and south banks of the Henry's Fork. This loop would be approximately 2.5 miles in length.

This option does not address the concerns associated with the current use of the existing railroad bridge. It would still be utilized for illegal and unsafe crossings of the Henry's Fork. The proposed crossing is too far away from the existing railroad bridge and it is unlikely that people who want to cross in the area of the existing bridge would walk to the new bridge to cross.

Summary of Costs:

Estimate of Construction items only = $2,665,000
Estimate of Engineering Costs only = $800,000
Estimate of total project cost = $3,465,000
Estimated remaining service life = 100 years for the foundation and superstructure; 50 years for the timber deck

Summary of Advantages and Disadvantages:

ADVANTAGES	DISADVANTAGES
Creates a loop trail	Three piers in the river creates additional in-water work and impacts to environment
Crosses the Henry's Fork at a location where there is already infrastructure in the channel (at the diversion weir)	Does not discourage unsafe use of the existing railroad bridge
Least Right of Way acquisition	Does not provide opportunity for future long loop route around the railroad bridge
	Does not provide "island hopping" experience or access to islands within the braided section of the Henry's Fork
	Large amount of new bridge constructed (highest maintenance costs)
	High total project cost

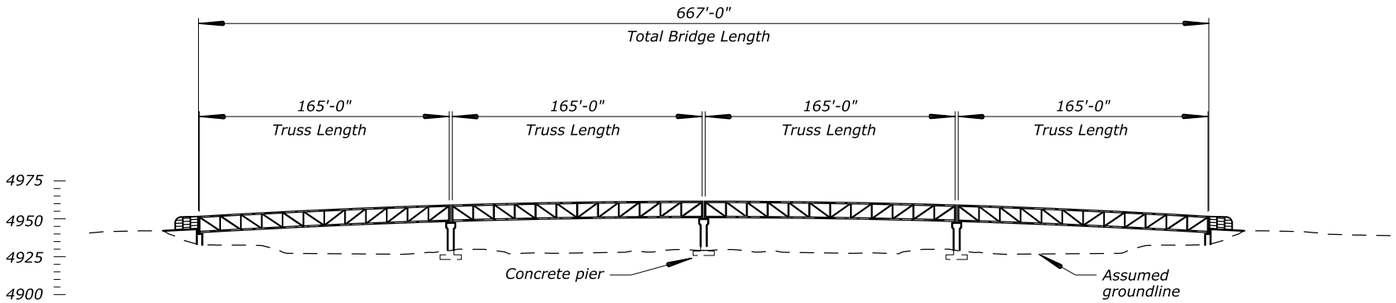
	HENRY'S FORK BRIDGE STUDY	B. Oltmann	11/26/2018	

Construction Cost Estimate

Option #3: New bridge crossing US of existing diversion/wier					
Item #	Description	Unit	Quantity	Unit price	Amount
20801 - 0000	Structural Excavation	CUYD	375	$ 25.0	$9,375.0
20815 - 0000	Cofferdams (Pier Construction)	LPSM	1	$ 125,000.0	$125,000.0
55201 - 0200	Structural Concrete A(AE)	CUYD	360	$ 1,000.0	$360,000.0
55401 - 1000	Reinforcing Steel	LB	90000	$ 2.0	$180,000.0
55504 - 0000	Pre-fabricated Steel Bridge (4x175ft)	LPSM	1	$ 800,000.0	$800,000.0
55601 - 0900	Rail, Steel Approach	LNFT	60	$ 225.0	$13,500.0
55700 - 0000	Treated Timber Decking for Truss	MFBM	28	$ 5,000.0	$140,000.0
56202 - 0000	Temporary Work Bridges	LPSM	1	$ 350,000.0	$350,000.0
	Trail and Approach work	LPSM	1	$ 150,000.0	$150,000.0
					$0.0
					$0.0
			Total:		$2,127,875.00
15% Contingency				$319,100.00	
10% Mobilization				$212,787.50	
Area of Bridge to be built		SQFT		5336	
Rounded Estimated Cost of Proposed Bridge				$2,665,000.00	
Cost per SQFT of new bridge		$		$499.44	

Engineering Costs					
	Description				Amount
	Preliminary Engineering (Design) - 15%				$400,000.0
	Construction Engineering - 15%				$400,000.0
Rounded Total Engineering Costs				$800,000.00	
Total Project Construction				$3,465,000.00	

PLAN



ELEVATION

OPTION 3 - DIVERSION CROSSING

GEOMETRICS

TYPICAL ROADWAY SECTION

SUPER ROTATED ABOUT _____

STA._____ RATE_____ m/m

STA._____ RATE_____ m/m

CROWN_____m/m

PROFILE GRADE DIAGRAM

EL. ARE AT _____ GRADE

AT_____

HYDRAULICS

	Q	Vm	WS EL.
Q_2			
Q_{50}			
Q_{100}			
Q			

REMARKS _____

SCOUR

SLOPE PROTECTION TYPE:_____ CLASS:_____ DEPTH:_____

TOP EL.:_____ BOTTOM EL.:_____ SLOPE:_____

SCOUR _____

REMARKS _____

HYDRAULICS REPORT NO. _____ RECEIVED _____

MATERIALS REPORT NO. _____ RECEIVED _____

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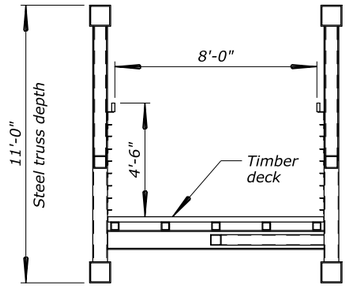

TYPICAL BRIDGE SECTION

LIVE LOAD Ped. 90 PSF OVERLOAD_____ SPECIAL LOADS _____

SUPERSTRUCTURE WEATHERING STEEL TRUSS WITH TIMBER DECK

RAIL STEEL PEDESTRIAN RAIL TRANSITION _____

SIDEWALKS N/A DRAINS N/A UTILITIES N/A

REMARKS _____

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
WESTERN FEDERAL LANDS HIGHWAY DIVISION

PRELIMINARY LAYOUT

BRIDGE NAME HENRY'S FORK PEDESTRIAN BRIDGES STREAM NAME HENRY'S FORK OF THE SNAKE RIVER

ROUTE NAME AND NUMBER _____

STATE IDAHO COUNTY _____ FOREST/PARK/OTHER _____

ACCOUNT NO._____

PREPARED BY B. OLTMANN ESTIMATED STRUCTURE COST _____

SCALE: 1:30 DATE: NOVEMBER 2018

Approximate location of Option 3 Crossing

Appendix A through C of this report contain additional information on Environmental, Geotechnical and Hydraulic information regarding the various options.

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APPENDIX A

ENVIRONMENTAL

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U.S. Department of Transportation
Federal Highway Administration

Memorandum

Western Federal Lands Highway Division
610 E. Fifth Street
Vancouver, WA 98661-3801

TO: Project Files

FROM: Seth English-Young, WFLHD

DATE: June 27, 2019

SUBJECT: Environmental Considerations for the Henry's Fork Bridge Feasibility Study – ID STANTH T 2017(1)

Summary
The purpose of this memo is to present a preliminary environmental overview of the Henry's Fork Bridge Feasibility Study project – ID STANTH T 2017(1). This document outlines environmental considerations for possible future construction projects based on the proposed options described in the Henry's Fork Bridge Feasibility Study document. The options presented in the Study vary in level of impact to the environment, and any future construction project would need a NEPA analysis to be completed that will fully describe impacts from the range of options and mitigation measures to minimize those impacts. The two issues in this memo that pose the greatest risk to the scope, schedule or budget of a future construction project are:

- For any option that requires property acquisition, there is the potential that the inability to gain access would make that option a nonstarter.
- If part of the project area becomes critical habitat for the ESA threatened yellow-billed cuckoo, that could increase the ESA consultation required to build in the protected area.

Below is an overview and summary of relevant environmental categories:

NEPA
The NEPA analysis and documentation depends on the scope, funding source, and lead federal agency of the future construction project. It is likely that the NEPA document would be a Categorical Exclusion or Environmental Assessment, which have shorter timelines than Environmental Impact Statements. Since the project would likely occur at least partially on BLM land, they would determine which type of NEPA document would meet their needs. BLM often produces Environmental Assessments on construction projects. However, if FHWA is involved, the project could potentially fall under the FHWA categorical exclusions described in 23.CFR.771.117. BLM would need to determine if they could use FHWA's categorical exclusion to satisfy their NEPA requirements. Attached is a template of the FHWA categorical exclusion document (see Attachment A).

Land Use
The land in the study area is designated as Open Space in the City of St. Anthony Comprehensive Plan. Per the City Zoning Ordinance, the Open Space Zone is for lands "that are desired to be maintained as natural, undeveloped open space or used for recreational uses." Public Parks, and "other uses approved by the planning and zoning commission which are similar to the above-listed

uses and in harmony with the objectives and characteristics of this zone" such as public trails and structures, are allowed or conditionally allowed in the Open Space Zone.

According to BLM's 2008 Snake River Activity/Operations Plan Revision, the area near the railroad bridge is designated as land that can be used for recreational purposes.

Traffic
Since the proposal is for a pedestrian bridge, substantial permanent traffic impacts are unlikely. There may be some induced traffic on adjoining roads if the bridge and paths draw more users than they do today. Depending on which construction option is chosen, parking facilities may be needed to be built or expanded. There would be some temporary traffic impacts on adjacent roads during construction.

Visual Quality
There is potential for visual impacts, varying depending on the option chosen. The option near the existing railroad bridge would have less visual impact than one located in a more remote area of the study area. Since the project would be a pedestrian bridge and have a relatively small footprint, major visual quality impacts are not expected.

Air Quality
The study area is not in a non-attainment air quality area and the project is not expected to have more than marginal air quality impacts.

Environmental Justice
The project would be open to all and would likely not impact any environmental justice communities disproportionately. Any ROW acquisitions required from private owners would not likely disproportionately impact low-income or other protected classes.

Floodplains
The area was mapped by FEMA in 1991 and the project area is within a Zone A flood hazard area inundated by the 100-year flood (see Attachment B). Either a "no-rise" certification will be required (information here: https://www.fema.gov/no-rise-certification-floodways), or a Conditional Letter of Map Revision (CLOMR information here: https://www.fema.gov/conditional-letter-map-revision). One of the options proposes "island-hopping" with a series of bridges and trails on islands within the braided section of the river. The islands within the river may shift, increasing the risk of damage to the bridges and trails. This issue is described in further detail in the Hydraulic Memo.

Hazardous Materials
The Idaho DEQ Waste Remediation Facilities Mapper (http://www.deq.idaho.gov/waste-mgmt-remediation/remediation-activities/facility-mapper/) shows some sites near the project area that generate or manage wastes or have released wastes into the environment and require remediation (see Attachment C).

As noted in the Water Quality section below, the Henry's Fork River is not on the state 303(d) list of impaired waters, so it is unlikely that any hazardous materials sites are causing substantial pollution to the river.

Noise
Since the proposed project is a pedestrian bridge and there are not noise-sensitive receivers nearby, noise impacts are not expected to be noteworthy. There will be some temporary construction noise.

Cultural, Historic and Recreational Resources
During the planning and design phase of the construction project, project partners should complete a database search and pedestrian survey for cultural resources. The federal project lead will coordinate with the State Historic Preservation Office to ensure that the project complies with Section 106 of the National Historic Preservation Act. Preliminary information from BLM indicates that there are not known cultural resources in the project area. Prior to construction, additional cultural resource investigation and consultation will be required.

Biological Resources
Two species on the Endangered Species List have potential to occur within the project area: yellow-billed cuckoo, and Ute ladies'-tresses, a flowering plant, both listed as *Threatened.* Additionally, yellow-billed cuckoo critical habitat is proposed near the project area. The existing proposed critical habitat does not overlap with the project area, however BLM indicates that the proposed critical habitat may be expanded to include the project area. The yellow-billed cuckoo is a BLM-Designated Sensitive Species and may occur is very low densities in the project area.

The project partners will need to go through consultation with the USFWS regarding impacts to listed species and critical habitats. The consultation will probably require completing a biological survey and producing a Biological Assessment (BA) which indicates the effects that the project will have on listed species/critical habitats and mitigation measures to reduce the impacts. USFWS will use the BA to produce a Biological Opinion or concurrence with the BLM effect determination.

The Henry's Fork is a popular recreational sport fishery, largely comprised of non-native rainbow trout and brown trout. Within the project area, fish populations are dominated by brown trout, rainbow trout and mountain whitefish. The Henry's Fork is occupied habitat for the Yellowstone Cutthroat Trout, a BLM-Designated Sensitive Species. Yellowstone Cutthroat Trout occur in very low densities in the mainstream Henry's Fork, mostly occupying tributaries. The IDFG has established recommended in-stream work windows for the lower Henrys Fork to limit potential impacts to sensitive life stages of fish or habitat use, such as spawning. The recommended in-stream work window for the lower Henry's Fork is July 15 - September 15 (*BMP Handbook, Best Management Practices for Idaho Rural Road Maintenance, August 2005).* Flows during this time frame may not be feasible for equipment access or construction. Exemptions may be granted but coordination with IDFG regarding the work window and project construction timing would need to be conducted.

Vegetation removal would be required for the any of the options, to varying degrees, and should be minimized to the extent possible. Vegetation removal would be described in the NEPA and ESA-consultation process to determine impacts to biological resources and potential measures to mitigate impacts.

Wild and Scenic Rivers
The Henry's Fork is not a designated Wild and Scenic River.

Wetlands and Waters of the US
According to National Wetland Inventory mapping (see Attachment E), there are wetlands and waters of the US in the project area. Preliminary visual assessment from the site visit corroborates that there are wetlands in the area. Any construction of a new bridge will likely have permanent and temporary wetland/waters impacts and will need to be permitted through the US Army Corps of Engineers (USACE) 404 permitting process. Project partners would need to complete a wetland/waters delineation according to USACE requirements and advance design far enough to calculate impacts to wetlands/waters in order to apply for the permits.

The type and effect of 404 permit process depends on the amount of permanent impacts to wetlands/waters. Generally, if the project has less than 0.1 acre of permanent impacts, the project will fall under a nationwide permit and compensatory mitigation is not required. If the project has between 0.1 and 0.5 acres of permanent impact, the project will fall under a nationwide permit and compensatory mitigation is required. According to USACE regulations, there are three mechanisms for providing compensatory mitigation (listed in order of preference as established by the regulations): mitigation banks, in-lieu fee programs, and permittee-responsible mitigation (https://www.epa.gov/cwa-404/compensatory-mitigation). If the project has over 0.5 acres of permanent wetland impacts a 404 Individual Permit is necessary. An Individual Permit has a longer timeframe, more in-depth permit analysis, and greater mitigation requirements.

The project lead will likely submit a Joint Application for Permit, which covers the USACE 404 permit, Idaho Department of Water Resources Stream Alteration Permit, and the 401 water quality certification or waiver for impacts to waters within the State of Idaho. (http://www.nww.usace.army.mil/Business-With-Us/Regulatory-Division/Joint-Application-for-Permit/)

Water Quality
The stretch of the Henry's Fork River in the project area is not on the state 303(d) list of impaired waters (http://www.deq.idaho.gov/water-quality/surface-water/monitoring-assessment/integrated-report.aspx). The project is not expected to permanently impact water quality.

Contract requirements in the construction contract will minimize temporary water quality impacts. The project lead will likely need to get permits for temporary turbidity increases due to construction. The Idaho Department of Environmental Quality (DEQ) administers the 401 Certification process to comply with Section 401 of the Clean Water Act (http://www.deq.idaho.gov/water-quality/surface-water/standards/401-certification/). The construction project will need to obtain a 401 Certification, which is usually applied for in conjunction with the USACE 404 permit with the Joint Application.

Navigable Waterways
All of the Henry's Fork is considered navigable under the authority of the state (https://www.idl.idaho.gov/lakes-rivers/list-navigable-lakes-rivers.pdf). The USCG has made a determination that the Snake River is navigable to the Guffy Dam Site between Murphy and Melba, Idaho(https://www.pacificarea.uscg.mil/Portals/8/District_13/dpw/docs/Navigability_Determination_for_the_13th_Coast_Guard_District.pdf?ver=2017-06-20-135946-777). Because of the location of the dam far downstream from the project area, and that determination, it is unlikely that the stretch of the Henry's Fork in the project area is under USCG jurisdiction with regard to bridge permitting.

Regardless, due to usage of the river by boats it is advisable to accommodate the existing and potential users of the river when determining the height of any proposed bridges. The proposed bridge would likely accommodate all users if it matches the clearance provided by the downstream railroad bridge.

Property Acquisition
Some construction options would require acquisition of property or easements, but would not require obtaining structures or displacing residents. Any property acquisitions would need to comply with the Uniform Act of 1970. Property or easement acquisitions could increase the pre-construction timeline. Some of the options require property acquisition from the Eastern Idaho Railroad. If property cannot be acquired from the railroad, it would cause those options to not be feasible.

Section 4(f) of the Department of Transportation Act
If FHWA is involved in the construction project, it will need to comply with Section 4(f) of the Department of Transportation Act, which "stipulates that FHWA and other DOT agencies cannot approve the use of land from publicly owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historical sites unless the following conditions apply:

- There is no feasible and prudent avoidance alternative to the use of land; and the action includes all possible planning to minimize harm to the property resulting from such use;

OR

- The Administration determines that the use of the property will have a de minimis impact."

(https://www.environment.fhwa.dot.gov/legislation/section4f.aspx)

FHWA will need to determine if 4(f) properties exist in the project area, then determine if the project will "use" those 4(f) properties. If the "4(f) use" is *de minimis,* meaning "for parks, recreation areas, and wildlife and waterfowl refuges, a de minimis impact is one that will not adversely affect the features, attributes, or activities qualifying the property for protection under Section 4(f)" then it will be noted in the file and project can proceed. If the "4(f) use" is determined to be greater than *de minimis,* then a written evaluation must be prepared that describes the use and evaluates the alternatives, and proposes mitigation and minimization measures.

While it is likely that the project will use 4(f) resources, it is also likely that the impact will be *de minimis* or that one of the designated exceptions to the law will apply, making it unlikely that the 4(f) process will delay the project.

Section 6(f) of the Land and Water Conservation Act
Section 6(f) applies when a project is converting lands or facilities acquired with Land and Water Conservation Funds (LWCF) Act. BLM acquired a parcel of land on the south side of the river with LWCF monies in 2001. Once an option is chosen, project partners would be advised to avoid 6(f) lands. However, if it is necessary to impact Section 6(f) land, then the project lead will need to determine if the project would convert Section 6(f) lands to a use other than public outdoor recreation use. If it is determined that the project converts Section 6(f) lands, then a replacement property will need to be found that is of reasonably equivalent usefulness and location as that being converted. (https://www.environment.fhwa.dot.gov/env_topics/other.aspx#6f).

Tribal Coordination
BLM will discuss this planning project in their quarterly meetings with the Shoshone-Bannock Tribe. Government-to-government coordination will be undertaken during the planning process for the construction project.

Public Involvement
There will be a public comment period and public meeting after release of the draft Bridge Feasibility Report. The public, and tribes, landowners, land management agencies, resource agencies, and other stakeholders will be invited to comment on the proposed construction options. It is likely that another public meeting and comment period will be held during the NEPA process.

Federal Land Management Agency Consistency Determination
Since the project will likely be on federal land, BLM will need to provide a determination that the project is consistent with its policies and plans. The determination may be in the form of a BLM NEPA document, or it could be a separate document.

Cumulative and Indirect Impacts
If an environmental assessment is prepared, cumulative and indirect impacts will need to be addressed. Cumulative impacts are defined as:
"…impact on the environment, which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. (40 CFR § 1508.7)"

Other "past, present, and reasonably foreseeable future actions" that could be included in the cumulative impacts analysis are: the railroad bridge, the weir and diversion for irrigation, the existing and future trail system, and future improvements to nearby parking lots.

Indirect impacts are defined as:
…caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems. (40 CFR § 1508.8)"
(https://www.environment.fhwa.dot.gov/nepa/QAimpact.aspx)

Indirect impacts that could be "reasonably foreseeable" are: an increase in usage of the trail system and in adjacent natural areas, increased parking demand, and increased usage of the Henry's Fork by recreationists and guides.

Construction Impacts
During construction there are possible temporary impacts to: traffic in the project area, water quality, biological resources, and recreational usage. Materials, staging, and disposal sites, if known, will need to be included in the NEPA analysis.

List "D" (documented) Categorical Exclusion (23 CFR 117[d])

Project Name	
Project Number (FLH Accounts Table)	**Project Manager**
Project Description (Briefly describe the project including need, purpose, location (Township Range and Section; Latitude and Longitude for beginning and end), limits, right-of-way requirements, and activities involved in this box. Attach map.)	

List “D” (documented) Categorical Exclusion (23 CFR 117[d])

Section 1: Type of List "D" (documented) Categorical Exclusion (23 CFR 117[d]):

A. Use the information in this section to determine the applicable "D" list activity for this project.

B. Independent Utility and Logical Termini

☐ The project complies with NEPA requirements related to connected actions and segmentation (i.e. the project must have independent utility, connect logical termini when applicable, be usable and be a reasonable expenditure even if no additional transportation improvements in the area are made and not restrict further consideration of alternatives for other reasonably foreseeable transportation improvements). (FHWA Final Rule, "Background," Federal Register Vol. 79, No. 8, January 13, 2014.)

C. Categorical Exclusions Defined (23 CFR 771.117[a])

FHWA regulation 23 CFR 771.117(a) defines categorical exclusions as actions which:

- do not induce significant impacts to planned growth or land use for the area;
- do not require the relocation of significant numbers of people;
- do not have a significant impact on any natural, cultural, recreational, historic or other resources;
- do not involve significant air, noise, or water quality impacts;
- do not have significant impacts on travel patterns; or
- do not otherwise, either individually or cumulatively, have any significant environmental impacts.

☐ Checking this box certifies that the project meets the above definition for a Categorical Exclusion.

D. Exceptions to Categorical Exclusions/Unusual Circumstances (23 CFR 771.117[b])

FHWA regulation 23 CFR 771.117(b) provides that any action which normally would be classified as a CE but could involve unusual circumstances requires the Department to conduct appropriate environmental studies to determine if the CE classification is proper. Unusual circumstances include actions that involve:

- Significant environmental impacts;
- Substantial controversy on environmental grounds;
- Significant impact on properties protected by section 4(f) of the DOT Act or section 106 of the National Historic Preservation Act; or
- Inconsistencies with any Federal, State, or local law, requirement or administrative determination relating to the environmental aspects of the action.

All of the above unusual circumstances have been considered in conjunction with this project. (Please select one.)

☐ Checking this box certifies that none of the above conditions apply and that the project qualifies for a Categorical Exclusion.

☐ Checking this box certifies that unusual circumstances are involved. However, the appropriate studies/analysis have been completed, and it has been determined that the CE classification is still appropriate.

E. Required Federal Agency Consultation Processes

*Please provide the **anticipated** results of the required federal consultation processes below if this project is determined to be a Categorical Exclusion prior to completing these processes. Confirmation of the results will be documented in Section 2 of this form.*

☐ **Proceed to Section F if all federal processes are complete.**

a.) Cultural Resources

Anticipated Section 106 finding:

☐ Screened Undertaking
☐ No Historic Properties Affected
☐ No Adverse Effect
☐ Adverse Effect
☐ Programmatic Agreement; PA date and stipulation _____

b.) Endangered Species Act

Anticipated Endangered Species Act finding (effect determination):

☐ No section 7 Needed
☐ No Effect
☐ Not Likely to Adversely Affect
☐ Likely to Adversely Affect
☐ Programmatic BO held by Partner Agency:

c.) Section 4(f) Transportation Act (23 CFR 774)

☐ Section 4(f) does not apply

☐ Section 4(f) exception:

☐ De Minimis

☐ Programmatic:

☐ Individual

F. Required Environmental Analysis for Documented Exclusions: *These projects may be categorical exclusions under 23 CFR § 771.177(d), but require additional documentation demonstrating that the specific conditions or criteria for the CEs are satisfied and that significant effects will not result. These questions need to be answered in order to categorize a project as a CE under list D.*

1.) Land Use

☐ Not Applicable - project is located wholly within federally owned lands

If applicable, attach a map or describe project location and surrounding land uses. Briefly describe the existing zoning of the project area and indicate whether the proposed project is consistent. Describe the community (geographic, demographic, economic, and population characteristics) in the vicinity of the project.

2.) Traffic

☐ Low volume road with little to no traffic impacts resulting from the transportation improvements.

If applicable, describe potential traffic and parking impacts, including whether the existing roadways have adequate capacity to handle increased vehicular traffic. Include a map or diagram if the project will modify existing roadway configurations. Describe connectivity to other transportation facilities and modes.

3.) Temporary Traffic

Is there construction of temporary access, or the closure of existing road, bridge, or ramps, that would result in major traffic disruptions? ☐ No ☐ Yes

If yes, describe.

4.) Visual Quality

a) Will the project have an adverse effect on a designated scenic area or scenic byway? ☐ No ☐ Yes

If yes, describe.

b) Will the project substantially degrade the existing visual character or quality of the site or its surrounding? ☐ No ☐ Yes

If yes, describe.

5.) Air Quality

a) Does the project have the potential to adversely impact air quality? ☐ No ☐ Yes

If yes, describe.

b) Is the project located in an Environmental Protection Agency (EPA) - designated non-attainment or maintenance area? ☐ No ☐ Yes

If yes, indicate the criteria pollutant (example: carbon monoxide, ozone, particulate matter (PM))

c) If the non-attainment area is also in a metropolitan area, is the project included in the MPO's Transportation Improvement Program (TIP) air quality conformity analysis? ☐ No ☐ Yes

If yes, date of USDOT conformity finding

6.) Coastal Zone

Is the proposed project located in a designated coastal zone management area? ☐ No ☐ Yes

If yes, describe coordination with the State regarding consistency with the coastal zone management plan and attach the State finding, if available.

7.) Environmental Justice

☐ No Environmental Justice populations are affected by the project

☐ Environmental Justice populations are potentially affected by the project.

Indicate whether the project will have disproportionately high or adverse impacts on minority or low-income populations. Describe any potential adverse effects. Describe outreach efforts specifically at minority or low-income populations.

8.) Floodplains

Is the proposed project located within the Federal Emergency Management Agency (FEMA) 100-year floodplain? ☐ No ☐ Yes

If yes, describe potential impacts and include the FEMA map with project location identified.

9.) Hazardous Materials

Is there any known or potential contamination at the project site? ☐ No ☐ Yes

If NO, describe steps taken to determine whether hazardous materials are present on the site.

If YES, note mitigation and clean-up measures that will be taken to remove hazardous materials from the project site.

10.) Navigable Waterways

Does the proposed project cross or have the potential to impact a navigable waterway? ☐ No ☐ Yes

If yes, describe potential impacts and any coordination with the US Coast Guard.

11.) Noise

Does the project have the potential to increase noise? Does the project increase number of lanes, change the vertical or horizontal alignment, etc? ☐ No ☐ Yes
(Reference: http://www.fhwa.dot.gov/environment/noise/regulations_and_guidance/)

If yes, describe resource and impacts and any noise studies that were completed.

12.) Cultural, Historic and Recreational Resources

Does the project have the potential to impact any cultural resources? ☐ No ☐ Yes

If yes, describe resource and impacts, including any coordination with Tribes and state SHPO offices.

Does the project have the potential to impact historic resources? ☐ No ☐ Yes

If yes, describe.

Does the project have the potential to impact 4(f) recreational or wildlife refuge resources? ☐ No ☐ Yes
(Reference: http://www.environment.fhwa.dot.gov/4f/index.asp)

If yes, describe the recreational resource and potential impacts.

13.) Biological Resources: *Obtain a list of threatened and endangered species in the project area from the US Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration-Fisheries (NOAA-Fisheries). Attach a current species map (within six (6) months).*

Are there listed species in the project area? ☐ No ☐ Yes

If yes, describe potential impacts, including any critical habitat, essential fish habitat or other ecologically sensitive areas.

14.) Water Quality

Does the project have the potential to impact water quality, including during construction? ☐ No ☐ Yes

If yes, describe potential impacts.

Will there be an increase in impervious surface? ☐ No ☐ Yes

If yes, describe potential impacts and proposed treatment for storm water runoff.

Is the project located in the vicinity of an EPA-designated sole source aquifer? ☐ No ☐ Yes

If yes, describe potential impacts and include a map of the sole source aquifer with project location identified.

15.) Wetlands and Waters

Does the proposal temporarily or permanently impact wetlands or require alterations to streams or waterways? ☐ No ☐ Yes

If yes, describe potential impacts

16.) Cumulative and Indirect Impacts

Are cumulative and/or indirect impacts likely? ☐ No ☐ Yes

If yes, describe the reasonably foreseeable:

a) Cumulative impacts: Result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

b) Indirect Impacts: Caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect impacts may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density rate, and related effects on air, water and other natural systems, including ecosystems.

17.) Property Acquisition

Will there be property acquired for this project? ☐ No ☐ Yes

If yes, please describe property acquisitions and indicate whether acquisition will result in relocation of businesses or individuals.

18.) Public Notification - *Public outreach activities are not required for all projects. However, there may be specific conditions that require public outreach.*

☐ No public outreach activities were conducted for this project.

☐ Public activities were or will be conducted for this project.

Describe public outreach efforts undertaken on behalf of the project. Indicate opportunities for public hearings, (board meetings, open houses, special hearings, etc.). Indicate any significant concerns expressed by agencies or the public regarding the project.

19.) Federal Land Management Agency (FLMA) Consistency Determination.

Is the project consistent with applicable federal land management policies and/or plans?

☐ Not Applicable

☐ Yes - if applicable, attach the consistency statement from the FLMA (letter or email)

☐ No - Describe the coordination and any information from the FLMA that allows the project to move forward.

20.) Construction Impacts

Are there additional construction impacts not described in this document? ☐ No ☐ Yes

If yes, please describe any potential impacts not described elsewhere.

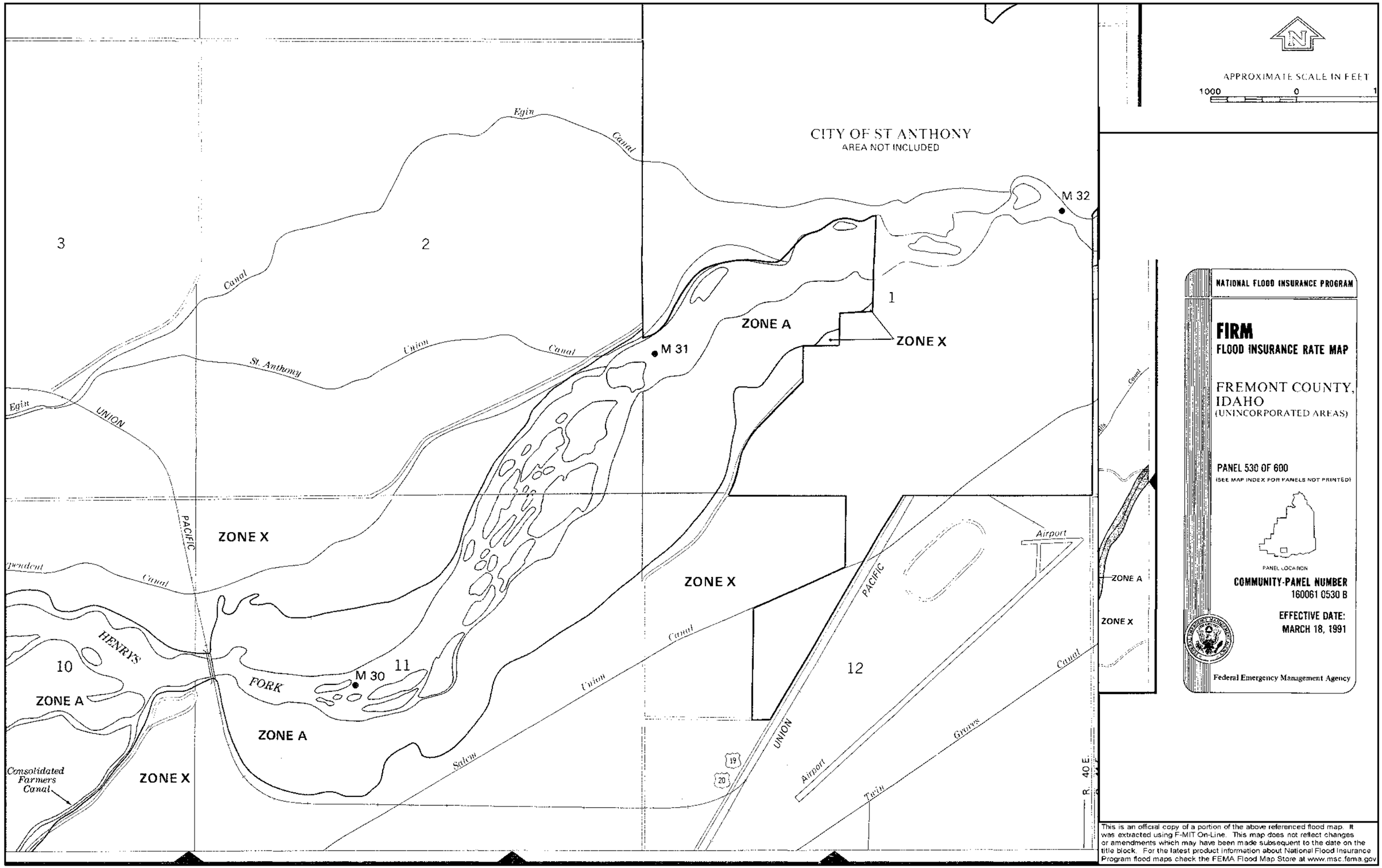
G. Certification Based on project proposal and known information, the project is determined to be a Categorical Exclusion pursuant to the National Environmental Act listed in 23 CFR 771.117(d)

Prepared By: _____ (Print Name) **Signature:** _____

Approved By: _____ (Print Name) **Title:** Environmental Manager

Signature: _____

Attachment B: FEMA Floodplain Firmette



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

CITY OF ST ANTHONY
AREA NOT INCLUDED

APPROXIMATE SCALE IN FEET
1000 0 1

Egin Canal
Canal
Union Canal
St. Anthony
Egin
UNION
PACIFIC
Dependent Canal
HENRYS FORK
Consolidated Farmers Canal
Salem
Twin
Airport
Grapes
Canal

M 31
M 32
M 30

3
2
1
10
11
12

ZONE A
ZONE X
ZONE X
ZONE A
ZONE A
ZONE X
ZONE X

19
20

R. 40 E.

LEGEND

SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD

- ZONE A — No base flood elevations determined.
- ZONE AE — Base flood elevations determined.
- ZONE AH — Flood depths of 1 to 3 feet [usually areas of ponding]; base flood elevations determined.
- ZONE AO — Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE A99 — To be protected from 100-year flood by Federal flood protection system under construction; no base elevations determined.
- ZONE V — Coastal flood with velocity hazard (wave action); no base flood elevations determined.
- ZONE VE — Coastal flood with velocity hazard (wave action); base flood elevations determined.

FLOODWAY AREAS IN ZONE AE

OTHER FLOOD AREAS

- ZONE X — Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.

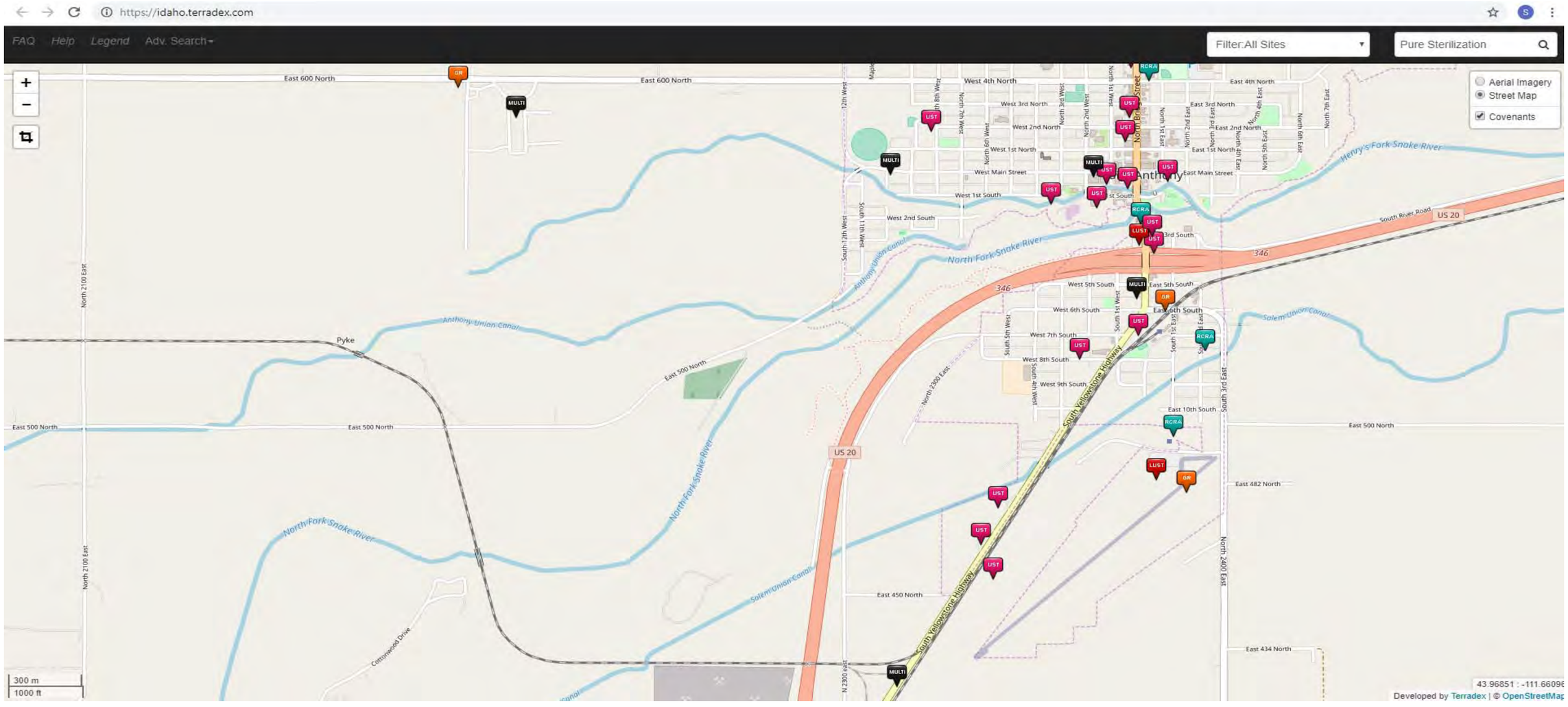
OTHER AREAS

- ZONE X — Areas determined to be outside 500-year flood plain.
- ZONE D — Areas in which flood hazards are undetermined.

- Flood Boundary
- Floodway Boundary
- Zone D Boundary
- Boundary Dividing Special Flood Hazard Zones, and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones.
- 513 — Base Flood Elevation Line; Elevation in Feet*
- D — D — Cross Section Line
- (EL 987) — Base Flood Elevation in Feet Where Uniform Within Zone*
- BM7 X — Elevation Reference Mark

*Referenced to the National Geodetic Vertical Datum of 1929

RM 5


https://idaho.terradex.com
FAQ
Help
Legend
Adv. Search
Filter:All Sites
Pure Sterilization
Aerial Imagery
Street Map
Covenants
East 600 North
West 4th North
East 4th North
West 3rd North
East 3rd North
West 2nd North
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West 1st North
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West Main Street
East Main Street
Anthony
West 1st South
West 2nd South
South 12th West
South 11th West
North 12th West
North 8th West
North 7th West
North 6th West
North 4th West
North 3rd West
North 2nd West
North 1st West
North Bridge Street
North 1st East
North 2nd East
North 3rd East
North 4th East
North 5th East
North 6th East
North 7th East
Henry's Fork Snake River
South River Road
US 20
346
North Fork Snake River
Anthony Union Canal
West 5th South
East 5th South
West 6th South
East 6th South
West 7th South
West 8th South
West 9th South
East 10th South
South 1st West
South 1st East
South 5th West
South 3rd East
North 2200 East
South Yellowstone Highway
Salem Union Canal
Pyke
East 500 North
North 2100 East
East 482 North
East 450 North
East 434 North
North 2400 East
N 2300 East
Cottonwood Drive
300 m
1000 ft
43.96851 : -111.66096
Developed by Terradex | © OpenStreetMap

IPaC **U.S. Fish & Wildlife Service**

Attachment D: USFWS Environmental Resource List

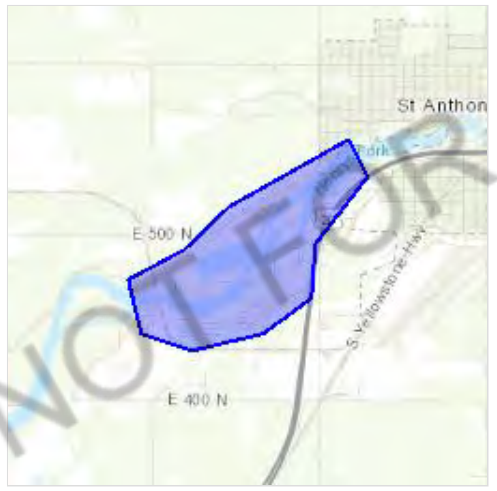
IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly aected by activities in the project area. However, determining the likelihood and extent of eects a project may have on trust resources typically requires gathering additional site-specic (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS oce(s) with jurisdiction in the dened project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Fremont County, Idaho



Local office

Idaho Fish And Wildlife Office

(208) 378-5243
(208) 378-5262

1387 South Vinnell Way, Suite 368
Boise, ID 83709-1657

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of inuence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water ow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS

Grizzly Bear Ursus arctos horribilis No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/7642	Threatened

Flowering Plants

NAME	STATUS
Ute Ladies'-tresses Spiranthes diluvialis No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2159	Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general

public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in o. shore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Dec 1 to Aug 31
Golden Eagle *Aquila chrysaetos* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/1680	Breeds Dec 1 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

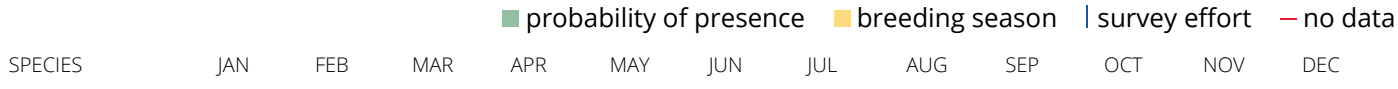
Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

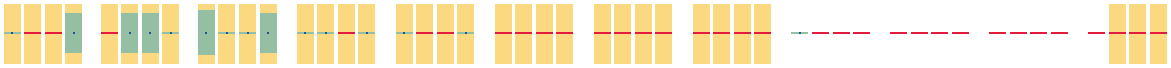
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

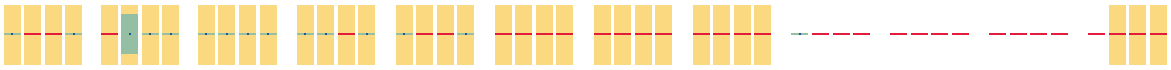
Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Bald Eagle
Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)



Golden Eagle
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the E-bird Explore Data Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ “What does IPaC use to generate the migratory birds potentially occurring in my specified location”. Please be aware this report provides the “probability of presence” of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the “no data” indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting

point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

Wildlife refuges and fish hatcheries

REFUGE AND FISH HATCHERY INFORMATION IS NOT AVAILABLE AT THIS TIME

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND

- PEM1C

FRESHWATER FORESTED/SHRUB WETLAND

- PFO1C
- PSS1/FO1C

FRESHWATER POND

- PUBK
- PUBFx

RIVERINE

- R3UBH
- R2UBHx
- R5UBFx
- R5UBH

A full description for each wetland code can be found at the National Wetlands Inventory website

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

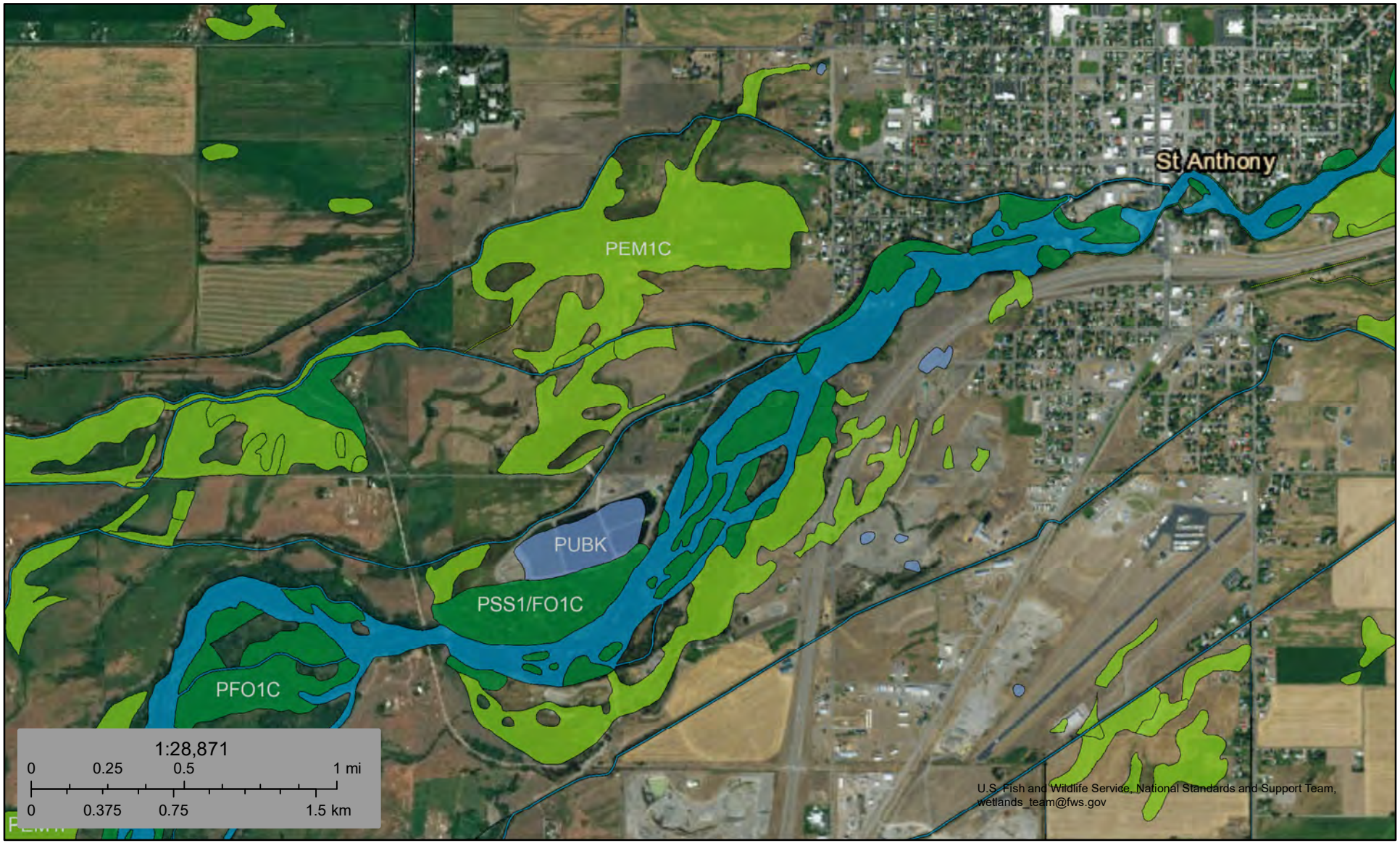
Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid 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.

U.S. Fish and Wildlife Service
National Wetlands Inventory

Attachment E: NWI Map
Henry's Fork Wetlands



October 18, 2018

Wetlands

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

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.

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To: Project File, FHWA, WFLHD, 7/17/2019

APPENDIX B

HYDRAULICS

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U.S. Department of Transportation
Federal Highway Administration

Memorandum

Western Federal Lands Highway Division
610 E. Fifth Street
Vancouver, WA 98661-3801

Draft Hydraulic Bridge Feasibility Study

To: Seth English-Young, WFLHD Project Manager
From: James Neighorn, P.E., WFLHD Hydraulics Engineer
Date: November 15, 2018
Project: Henry's Fork Pedestrian Bridge Crossing Feasibility Study

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Introduction

The City of St. Anthony and Bureau of Land Management, in Fremont County, Idaho, are studying the feasibility of constructing a trail bridge to improve greenway access and connectivity of trail segments within the Henry's Fork Greenway. Proposed improvements begin approximately 1.5 miles west of US 20 milepost 344 and ends approximately 0.25 miles north of the US 20 milepost 346. Western Federal Lands Highway Division (WFLHD) has developed three river crossing alternatives (See Vicinity Map, Figure 1).

Summary of Options

The project team conducted a site reconnaissance of the project area in October. The team developed three bridge crossing options for consideration which are summarized below and illustrated in Figure 2:

Option 1: "Railroad Bridge Option" – Cross the Henry's Fork near the existing railroad bridge. Two sub-options were developed for this location:

> Option 1A: Construct a new pedestrian bridge immediately downstream of the existing railroad bridge. The new bridge would consist of a two-span, 352-foot long steel truss with concrete pier foundation in the river. The pier foundation would be placed in-line with the existing railroad bridge pier.
>
> Option 1B: Acquire the existing railroad bridge from Eastern Idaho Railroad and convert it for pedestrian and bicycle use.

Option 2: Island Hopping Option" – Construct a series of three bridges, with connecting trail segments, that cross the braided portion of the Henry's Fork. The bridges would consist of a 352-foot, 150-foot, and 175-foot steel truss bridges which would connect the islands across the braided river. Approximately 800-feet of boardwalk would be constructed on the islands to connect the bridges.

Option 3: "Diversion Crossing Option" – Construct a 667-foot long four span steel truss bridge upstream of the diversion weir and boat launch.

Table 1. Summary of Hydraulic Advantages

	Option 1A	Option 1B	Option 2	Option 3
Advantages				
Reduces risk of scour	High	Highest	Lowest	Low
Reduce ice jam potential	Higher	Highest	Lower	Lowest
Minimize fill within flood zone	Higher	Highest	Lowest	Low
Allows for natural channel migration	Highest	Highest	Lowest	High
Reduce post-flood maintenance	Higher	Highest	Lowest	High

General Basin and Site Conditions

Drainage in Fremont County flows south and west beginning at the Continental Divide. Fremont County is drained by the Henry's Fork of the Snake River and its tributaries. Henry's Fork begins at Henry's Lake and flows from north to south, dividing Fremont County. The Henrys Fork watershed is supplied by four major subbasins: upper Henrys Fork, lower Henrys Fork, Fall River, and Teton River. The basin flows are dominated by groundwater that originates as snowmelt from the Yellowstone Plateau. This snowmelt moves through geologic rhyolite layers and emerge as springs in the lower watershed reaches. Residence times and attenuation in these rhyolite aquifers are great, resulting in very stable and high baseflows in the Henry's Fork.

Flows within the Henry's Fork are altered by the operation of Henrys Lake Dam, Grassy Lake Dam, and Island Park Dam which provide water storage for irrigation. In general, Henrys Lake Dam and Island Park Dam are operated so that winter flows are captured and the reservoirs are close to full during the spring. This results in low outflows from the dams during the winter. Irrigation has been heavily developed within the basin and the Henry's Fork supplies water to approximately 15,000 acres in small blocks of land. Additionally, several large land areas are sub-irrigated within the basin.

Within the study area, the Henry's Fork is braided with multiple channels and islands. For much of the study area, the wetlands and the floodplain extend several hundred feet beyond the river channels. The topography of the vicinity is relatively flat with terraces immediately beyond the floodplain. These terraces are approximately 15 to 20 feet higher than the river level. Bedrock is exposed along the banks and river bed. Where bedrock is not exposed, it is expected that it can be found near the surface or within 15 feet below the cover layer of cobbly gravel and sand alluvium.

A weir extends across the Henry's Fork at the northeast end of the study area. This weir diverts flow into the Independent Canal. A boat launch is located at the Independent Canal diversion on the north river bank. A two-span Pegram through truss bridge crosses over Henry's Fork on the west end of the study area. The bridge is owned by the Eastern Idaho Railroad and crosses at a narrow point in the river channel where bedrock formations constrict flow.

Hydrology

Peak discharges for Henry's Fork are taken from a USGS streamgage located upstream from the bridge on Main Street of St. Anthony. The basin area consists of 1770 square miles with a mean basin elevation of

6670 feet and mean annual precipitation of 33-inches. St. Anthony receives an average of 43-inches annual snowfall. Peak discharges estimates are presented in Table 2.

Table 2.

Peak Flood (cfs)					
2-yr	**10-yr**	**25-yr**	**50-yr**	**100-yr**	**500-yr**
5,930	9,210	10,600	11,600	12,500	14,300

The diversion intakes of the Egin, Saint Anthony Union, and Independent Canals area located between the streamgage station and the study area. These canals divert flows away from the river. Therefore, flows listed in Table 1 are conservatively higher since the canals likely act to reduce flows within the river channel.

Floodplain and Flood-rise

Federal Emergency Management Agency (FEMA) flood inundation map 160061 0530B (See Figure 3) was reviewed to determine what mapped floodplains occur within the project study area. Each of the three crossing alternatives are mapped within a Zone A floodplain designation. Zone A are areas of 100-year flood with base flood elevations and flood hazards factors not determined. Detailed mapping and study has not been completed in this zone.

Bridge and trail alternatives that are constructed within the flood zone will require a detailed flood study to determine the 100-year flood elevations and any impacts to flooding. Alternatives will need to be designed to cause no rise in the 100-year flood profile. This will be particularly important since private properties with insurable buildings are found in the low-lying floodplain area immediately south of the study area.

A no-rise certification (https://www.fema.gov/no-rise-certification-floodways), or a Conditional Letter of Map Revision (CLOMR https://www.fema.gov/conditional-letter-map-revision) will need to be submitted to the local floodplain manager. If a flood-rise results from a proposed improvement, further site investigation may need to be conducted to determine upstream impacts and necessary mitigation.

Water Quality

The primary potential pollutant in stormwater runoff, caused by bridge and trail improvements is sediment/total suspended solids originating from soils exposed onsite during the construction process. Sediment may be entrained in stormwater runoff from cut/fill slope areas that are excavated and graded for the trail and bridge approaches. Concentrations of petroleum products, suspended and dissolved metals, and other pollutants normally found in runoff from roadways will not be a concern since trail use will be limited to pedestrian and bicycle use.

Stormwater best management practices (BMPs) will need to be implemented during construction to prevent soil erosion and sediment transport. These should be sufficient at preventing sediment from entering the Henry's Fork and adjacent wetlands.

Navigable Waterway

Henry's Fork River is listed as a navigable river under the authority of Idaho State, with a 15-horsepower maximum from the Fun Farm diversion dams to the Independent Canal Diversion Dam, east of the St. Anthony Cemetery. A boat put-in is located along the north bank of the Henry's Fork near the beginning (east side) of the study area. Bridge crossing alternatives will need to consider providing sufficient clearance to accommodate river traffic. Matching the clearance provided by the existing railroad bridge, at the downstream (west side) of the study area will likely provide sufficient height for current river users.

Flooding History

Flooding in Fremont County has been mostly due to a rain-on-snow condition or a very warm temperature snowmelt. Major flooding on Henry's Fork has generally been due to warm temperature snowmelt conditions. The largest recorded flood to hit the Henry's Fork drainage (excluding the Teton Dam failure) occurred in May 1984. Very warm temperatures combined with above average snowpack at low elevations caused overbank flooding on Henry's Fork. The Henry's Fork gage at St. Anthony recorded a flow of 13,200 cfs, which is just above a 100- year event.

Three reservoirs in the Henry's Fork Basin provide some 221,800 acre-feet of storage. They are Henry's Lake and Island Park on upper Henry's Fork and Grassy Lake on the headwaters of Falls River. There is also a run-of-river power dam on Henry's Fork near Ashton but its usable storage is negligible. All three reservoirs are used for irrigation, with flood control being only incidental. Even though they were not constructed as flood protection measures, and formal agreements do not exist for their use as such, the numerous irrigation canals do provide some limited flood protection by diverting river flows, primarily from Henry's Fork, generally during peak flow times. Without the canals, natural peak flows would be higher.

Ice is a major problem on Henry's Fork, downstream of St. Anthony. Ice jam flooding has historically exceeded free-flow flooding conditions. Ice jams are caused by the accumulation of frazil ice beneath and upstream of the sheet ice cover which forms on the river. As more frazil arrives, ice jams grow and cause the river just upstream to rise in stage and slow in velocity. Flooding caused by ice jams is similar to flash flooding. Ice jam formation causes a rapid rise of water at the jam and extends upstream. Failure or release of the jam causes sudden flooding downstream. The formation of ice jams depends on the weather and physical conditions in river channels. Ice jams are most likely to occur where the channel slope naturally decreases, where culverts freeze solid, at headwaters of reservoirs, at natural channel constrictions such as bends and bridges, and along shallows where channels may freeze solid. Ice jam floods can occur during fall freeze-up, during midwinter periods when stream channels freeze solid to form anchor ice, and during spring break-up when rising water levels from snowmelt or rainfall break the existing ice cover into large floating masses that lodge at bridges and other constrictions. Damage from ice jam flooding usually exceeds that caused by open water flooding. Flood elevations are usually higher than predicted for free-flow conditions (1 to 4 feet higher than the 100-year), and water levels may change rapidly. Additional physical damage may also be caused by the force of ice striking buildings and other structures.

Ice jam flooding is a chronic problem for the lower 4 miles of the Henry's Fork in Fremont County. In the early 2000's, an ice jam severely damaged the Salem Road bridge over the Henry's Fork approximately 3.5 miles west of the study area. According to the Fremont County *Multi-Jurisdiction All Hazard Mitigation Plan*, there is a high probability of annual flooding along the Henry's Fork. Significant flooding occurs annually between St. Anthony and Parker in the riparian areas within the FEMA FIRM designated floodplain.

Proposed bridge structures need to be designed to accommodate ice jam conditions and meet requirements by the Fremont County Emergency Management coordinator and the Floodplain Administrator. The bridges and associated trails must also demonstrate that they will not aggravate ice jam formation and flooding conditions.

Scour

A scour analysis has not been performed as part of this initial feasibility study. Final foundation types still need to be determined following a geotechnical investigation as project development continues. Due to the expected near surface bedrock within the area, shallow foundations are considered feasible for the bridge site alternatives. Once foundation types have been identified, a scour analysis will need to be performed for each bridge. Where practical, bridge foundations will need to be extended to sound bedrock to eliminate potential undermining due to scour.

Hydraulic Design Considerations

The following discusses key hydraulic design considerations for each of the options:

Option 1A - Construct a new pedestrian bridge on the downstream side of the existing railroad bridge. The proposed bridge would consist of a two span, 352-foot long steel truss with a single concrete pier foundation in the river. A minimum of 8-foot pedestrian walkway width is provided on the proposed bridge. Minimal trail work would be included, only constructing connections at the ends of the bridge.

This option takes advantage of the natural river constriction at the existing railroad bridge. Bridge abutments would extend outside of the floodplain and would likely be founded in the bedrock which is visible along the channel banks. This would likely eliminate scour concerns for the abutments. However, the single concrete pier foundation will need to be analyzed for scour unless the foundation can be extended into bedrock.

Extending the abutments outside the floodplain will avoid impacting the flood zone, will not restrict river migration, and prevent ice jams from impacting the abutments. The single concrete pier should be located so that it aligns with the existing railroad bridge's pier. This will ensure that the new pier will not further constrict the channel and will likely not cause a rise in flood levels. The existing pier will also act to protected the new pier from debris and ice jams. A hydraulic analysis will need to be performed to verify that the pier does not cause a flood rise.

The new bridge structure should be elevated to match the clearance provided by the existing railroad bridge. The existing railroad bridge has not historically been affected by ice jams or debris and provides sufficient clearance for river boat users. Providing similar clearance will eliminate concerns for ice jam and debris damage, and will avoid restricting current boat use. Maintenance of the new structure would be limited, with little to no additional maintenance resulting from hydraulic conditions.

Option 1B - Acquire the existing railroad bridge and convert it to only pedestrian and cyclist access. Install new timber decking and pedestrian railing. This approach is similar to many other "rails to trails" projects that have been completed at many other historic railroad bridges.

A full review of the existing bridge structure and foundation conditions will need to be conducted to ensure that the abutments and the pier are founded in sound bedrock and are not susceptible to undermining due to scour.

No work would be required within the waterway or floodplain. This avoids impacts to flood levels, restriction of natural channel migration, and ice jam concerns.

Option 2 - "Island Hopping Option" – Construct a series of three bridges, with connecting trail segments, that cross the braided portion of the Henry's Fork. The bridges would consist of a 352-foot, 150-foot, and

175-foot steel truss bridges which would connect the islands across the braided river. Approximately 800-feet of boardwalk would be constructed on the islands to connect the bridges.

The abutment and pier foundations will need to be analyzed for scour. Foundation designs will need to be adjusted to account for scour or will need to extend into competent bedrock.

Bridge structures will need to be elevated to allow for flood, debris, ice jam, and boat access. This will likely require elevating the bridges well above the normal water surface level to a similar clearance as the existing downstream railroad bridge. The elevated bridges will require construction of significant approach embankments if they are designed to meet ADA access requirements. Trail approach embankments within the flood zone will likely need to have countermeasures, such as riprap, installed to prevent scour and erosion. The ability to construct boardwalks along the natural floodplain elevation within the islands will be significantly reduced due to the need to construct the approach embankments for ADA access.

A flood rise analysis will need to be performed. Due to the extensive amount of abutment and embankment construction within the floodway, this option has a high probability of increasing flood levels within the flood zone and of being impacted by ice jams. The fixed abutments and approach trail embankments within the floodplain will also limit natural channel migration within this braided segment of the Henry's Fork.

With the increased number of piers, abutments, and trail constructed within the floodway, there will be a greater amount of maintenance required to address scour, debris, ice damage, and embankment erosion. Regular flooding over the proposed boardwalk may require increased debris removal and possible boardwalk repair.

Option 3 - Construct a new pedestrian bridge on the upstream side of the existing irrigation diversion and weir at the northern end of the study area. The proposed bridge would consist of a four span, 667-foot long steel truss with three concrete pier foundations in the river. A minimum of 8-foot pedestrian walkway width is provided on the proposed bridge.

The abutment and pier foundations will need to be analyzed for scour. Foundation designs will need to be adjusted to account for scour or will need to extend into competent bedrock.

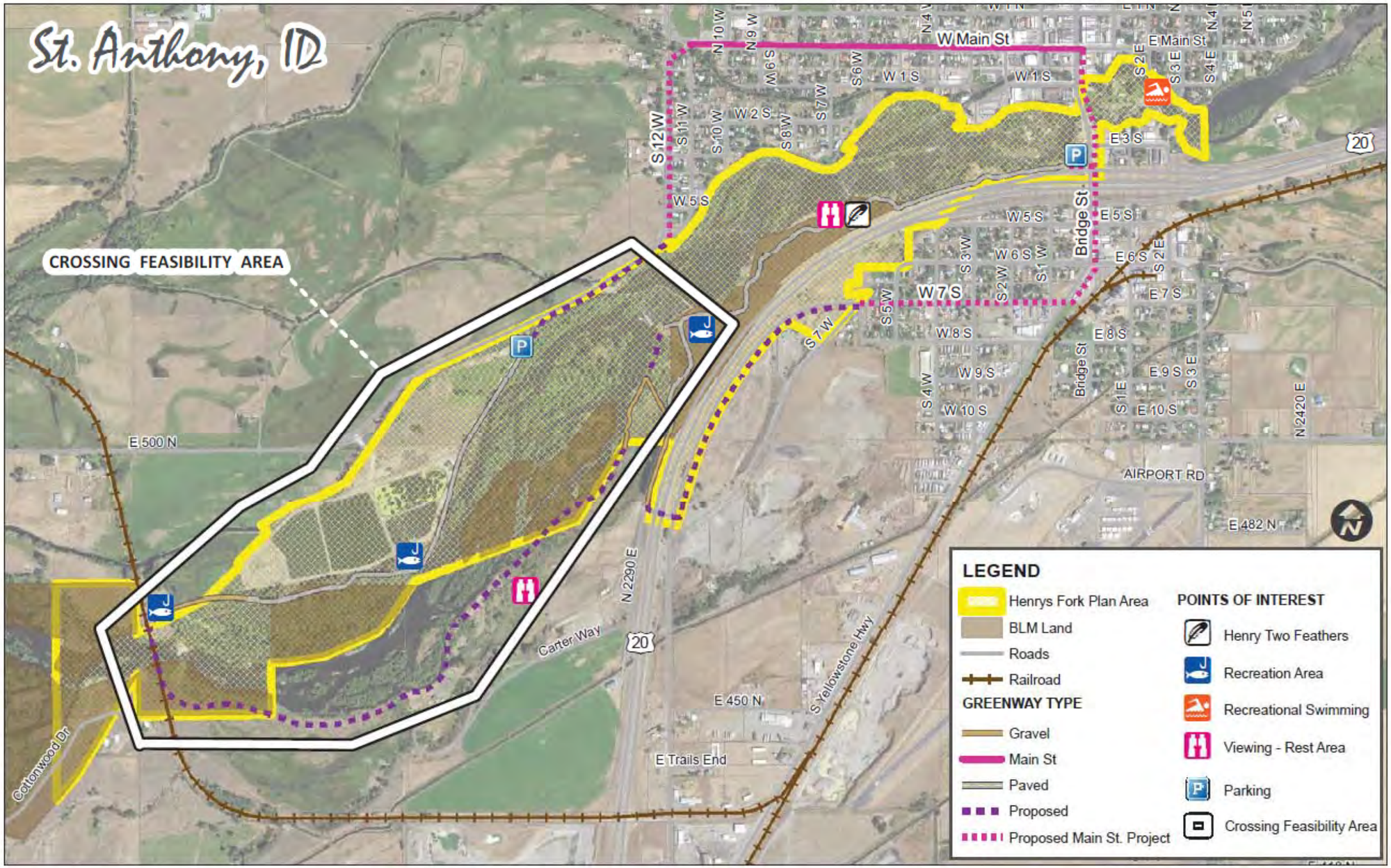
The bridge will need to be elevated to allow for flood, debris, ice jam, and boat access. This will likely require elevating the bridge above the normal water surface level to a similar clearance as the existing downstream railroad bridge. Some trail work, needed for ADA grade requirements, would be included to connect the bridge to the existing trail on the south end and the existing boat launch on the north end.

A flood rise analysis will need to be performed to verify that the added piers within the floodway do not result in a flood rise. Construction of the abutments outside of the flood zone significantly reduces the potential for a flood rise and allows for natural channel migration. Impacts due to ice jams will still be a concern for this option due to the number of piers located in the channel and the bridge location upstream of the weir.

With the longer bridge and increased number of piers within the waterway there may be an increase in the amount of maintenance required to address scour, debris, and ice damage.

Attachments: Figure 1 – Study Area Map; Figure 2 – Bridge Options; Figure 3 – FEMA Flood Map
Photos

Figure 1 – Study Area Map



STATE	PROJECT	SHEET NUMBER
ID	Fremont County	Fig 2

St. Anthony

St Anthony Union Canal

Boat launch

Henry's Fork

Option 3: Diversion Crossing
New bridge upstream of diversion weir

Diversion weir

Option 2: Island Hopping
Three bridges with connecting trail segments

Riverview Cemetery

E 500 N

Eastern Idaho Railroad

Independent Canal

Treatment Plant

Option 1B: Railroad Bridge
Convert the Existing Railroad Bridge

Existing Eastern Idaho Railroad
Two-span Pegram truss bridge

Option 1A: Railroad Bridge
New Bridge downstream of railroad bridge

Henry's Fork

Diversion weir

Channel constricted by bedrock along banks

Farmers Canal

Cottonwood Dr

Carter Way

N 2290 E

HWY 20

Salem Union Canal

N

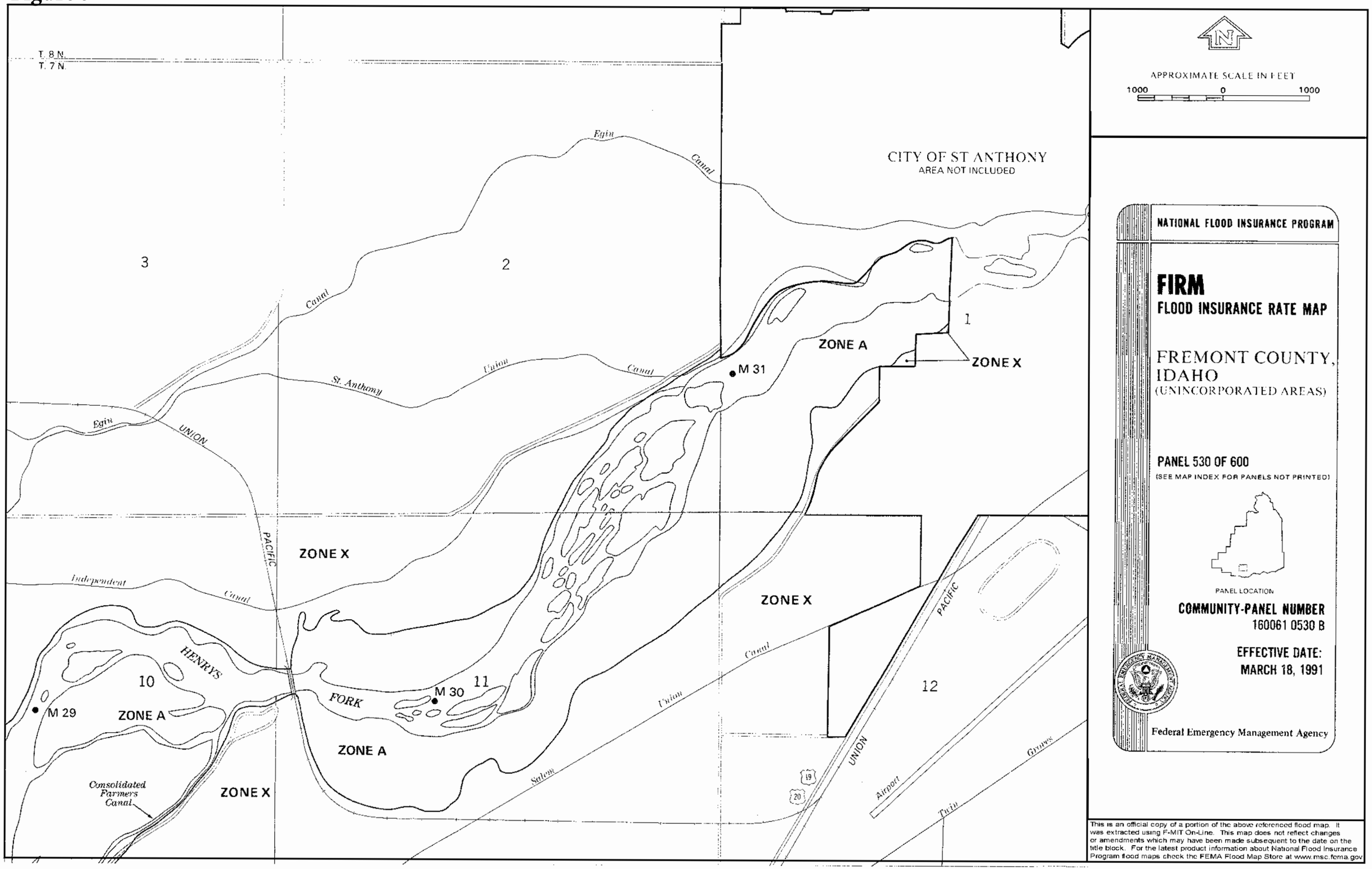
SCALE IN FEET

600 300 0 600 1200

FIGURE 2 - HENRY'S FORK PEDESTRIAN BRIDGE OPTIONS

$PATH$ | Designed by: $DATE$ | Checked by: J.Neighorn | --/---

Figure 3


T. 8 N.
T. 7 N.
3
2
1
10
11
12
Egin Canal
St. Anthony Union Canal
Egin UNION
PACIFIC
Independent Canal
HENRYS FORK
Consolidated Farmers Canal
Salem Union Canal
UNION PACIFIC
Airport
Twin Groves
CITY OF ST ANTHONY
AREA NOT INCLUDED
ZONE A
ZONE X
M 31
M 30
M 29
19
20
APPROXIMATE SCALE IN FEET
1000 0 1000
NATIONAL FLOOD INSURANCE PROGRAM
FIRM
FLOOD INSURANCE RATE MAP
FREMONT COUNTY, IDAHO
(UNINCORPORATED AREAS)
PANEL 530 OF 600
(SEE MAP INDEX FOR PANELS NOT PRINTED)
PANEL LOCATION
COMMUNITY-PANEL NUMBER
160061 0530 B
EFFECTIVE DATE:
MARCH 18, 1991
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

Historic Pegram Two-Span Truss Railroad Bridge

Braided River Channel and Islands

Braided River Channel and Islands

Diversion Weir at Northeast End of Study Area

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To: Project File, FHWA, WFLHD, 7/17/2019

APPENDIX C

GEOTECHNICAL

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U.S. Department of Transportation
Federal Highway Administration

MEMORANDUM

Western Federal Lands Highway Division
610 E. Fifth Street
Vancouver, WA 98661

DATE: December 17, 2018

TO: Seth English-Young, Project Manager
Benn Oltmann, Structures Functional Manager

FROM: Evan Garich, PE
Geotechnical Engineer

SUBJECT: **Geotechnical Memo 39-18**
Henry's Fork Bridge Geotechnical Feasibility Memo
ID STANTH T 2017(1) – Henry's Fork Greenway
Bridge Feasibility Study
St. Anthony, ID

EXECUTIVE SUMMARY

Shallow foundations are considered feasible for the bridge site alternatives being considered under the current study. Final foundation types should be determined following a geotechnical investigation as project development continues. A geotechnical investigation should be performed during the preliminary engineering phase at the selected crossing location. A geotechnical investigation may not be required if the crossing occurs on an existing structure. Final recommended foundation types will be based on project requirements including bridge loading, soil/rock properties, scour requirements, and other geotechnical considerations.

INTRODUCTION

This memo has been developed to provide general geotechnical considerations to support the Henry's Fork Greenway Bridge Feasibility Study (Project). The information presented in this memo was developed from a site visit performed on September 11 and 12, 2018 as well as desktop studies. Geotechnical investigations have not been performed for this project.

PROJECT DESCRIPTION

The project is in the Henry's Fork Greenway, near the city of St. Anthony, ID along the Henry's Fork of the Snake River. The project begins approximately 1.5 miles west of US 20 milepost (MP) 344 and ends at approximately 0.25 miles north of US 20 MP 346.The project involves developing up to three river crossing alternatives within the Henry's Fork Greenway. The site vicinity is shown in Figure 1.

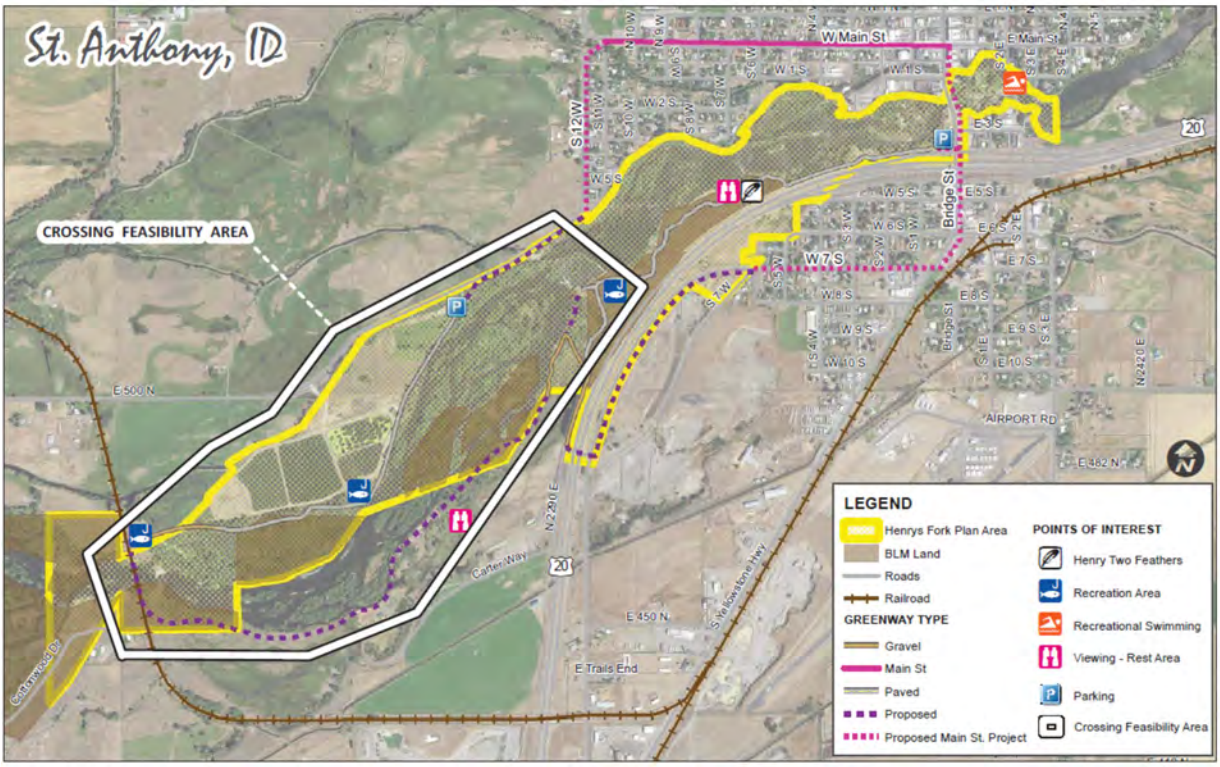

Figure 1. Project site area.

SITE CONDITIONS

The project site is located along the Henry's Fork of the Snake River. The river is confined to one channel at each end of the project area. However, the river splits into several channels, separated by low lying islands through most of the project area. The Henry's Fork ranges from approximately 225 feet to 1,350 feet wide in the project area. At several locations along the Henry's Fork wetlands and the floodplain extend several hundred feet beyond the river channels. The topography of the vicinity is relatively flat. Terraces immediately beyond the floodplain are up to approximately 20 feet higher than the river level. Attachment 1 contains photographs taken during the site visit.

GEOLOGY AND SEISMICITY

The project site is located within the Snake River Plain physiographic province. The province consists of large volumes of rhyolite overlain with basalt (Alt and Hyndman, 1989). Alluvium (Qa) is found along the Henry's Fork River in the project area. The alluvium is mapped as sandy gravel with cobbles and rare basalt boulders with localized humic silt present in some sloughs (Phillips, 2012). The alluvium is mapped as generally less than 10 to 15 feet thick. The mapped geology appears consistent with observations during the field visit. Unless manmade fill, the soil within the floodplain, on the low islands, and low terrace is alluvium. Approximately 15 to 20 feet above the existing river level and flood plain is terrace alluvium (Qt_1, Qt_2) consisting of cobbley gravel and sand which is similar to the alluvium (Phillips, 2012).

Basalt of St. Anthony (Qbsa) is exposed along much of the Henry's Fork in the project area. In locations where the bedrock is not exposed, it is expected to be located beneath 0 to approximately 15 feet of alluvium. The depth to rock may be more in locations where manmade fill and embankments have been placed. Figure 2 displays the mapped geology of the project vicinity.

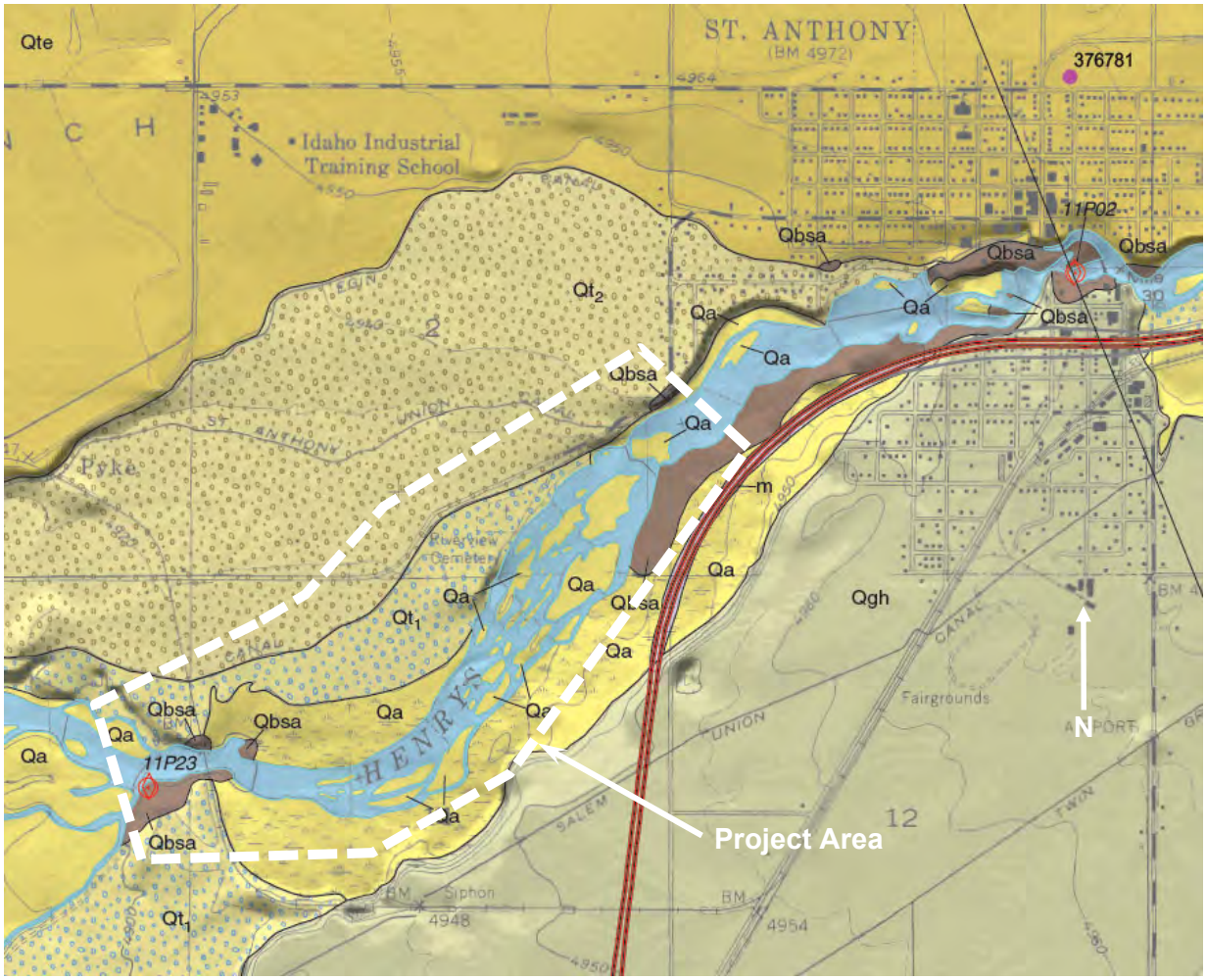

Figure 2. Geologic Map of project area. (Phillips, 2012)

The project site is located within a seismically active area vulnerable to shallow crustal earthquakes. The closest known major earthquake is the magnitude 7.3 Hebgen Lake, Montana earthquake which occurred in 1959, approximately 80 miles from the project site.

There are no known active faults within the project area. Three potentially active faults have been mapped within 50 miles of the project site. These include the Centennial, Teton, and Madison faults (USGS, 2014).

- Centennial Fault: A east-west trending fault located approximately 40 miles north of the project site. The total length of the fault is estimated to be 40 miles. Portions of the fault may have displaced in the last 15,000 years.

- Teton Fault: A north-south trending fault located approximately 45 miles east of the project site. The total length of the fault is estimated to be 40 miles. Portions of the fault may have displaced in the last 2,000 years.
- Madison Fault: A north-south trending fault located approximately 50 miles north of the project site. The total length of the fault is estimated to be 70 miles. Portions of the fault may have displaced in the last 5,000 years.

Preliminary Seismic Parameters

Earthquakes from unmapped faults and the above faults could result in ground shaking. Ground shaking is responsible for generating high inertial forces and excessive dynamic movements that can impart unacceptable damage to structures. Design ground motions at the site have been developed following AASHTO Load and Resistance Factor Design (LRFD) guidelines and United States Geologic Survey (USGS) seismic mapping. Table 1 presents ground motion parameters that have been developed based on a preliminary assessment of the site (USGS, 2018).

Table 1. Summary of Seismic Parameters (7% PE in 75 years) - General Procedure.

Site Class (by Soil Type and Profile)	**B**
Horizontal Peak Ground Acceleration (PGA)	0.14g
Horizontal Response Spectral Acceleration at Period of 0.2 sec (S_s)	0.33g
Horizontal Response Spectral Acceleration at Period of 1.0 sec (S_1)	0.12g
Site Factor for Zero-Period on Acceleration Spectrum (F_{pga})	1.00
Site Factor for Short-Period Spectral Acceleration (F_a)	1.00
Site Factor for Long-Period Spectral Acceleration (F_v)	1.00
Modified Horizontal Peak Ground Acceleration ($\mathbf{A_s}$)	**0.14g**
Modified Horizontal Response Spectral Acceleration at Period of 0.2 sec ($\mathbf{S_{DS}}$)	**0.33g**
Modified Horizontal Response Spectral Acceleration at Period of 1.0 sec ($\mathbf{S_{D1}}$)	**0.12g**
Seismic Zone	**1**

Site Class B was selected based on the expected shallow depth to and outcropping of bedrock in the project vicinity. Recommended seismic design parameters may change during subsequent project phases based on site conditions. Performing geotechnical borings and obtaining soil samples via the Standard Penetration Test method at the bridge pier locations will provide the necessary information required for the seismic characterization during the design phase. Geophysical measurement of the soil shear wave velocity may be used to supplement information gathered from the borings.

PRELIMINARY FOUNDATION CONCEPTS

Due to the shallow and outcropping bedrock in the project area, shallow foundations are considered feasible for bridges at the site. However, deep foundations may be required if bedrock is deeper than anticipated, lateral sliding forces cannot be resisted by footings, or if overturning moments exceed footing capacities.

Shallow foundation systems, such as spread footings, are likely acceptable for bridge locations being considered for this study. Shallow foundation systems will need to be designed for appropriate bearing capacity, settlement, overturning, and sliding capacity. Foundations placed near the river level or on islands will require dewatering. Scour protection must be provided as determined by the hydraulic requirements.

In additional to spread footings, a type of shallow foundation system that could be appropriate at an abutment is a Geosynthetic Reinforced Soil – Integrated Bridge System (GRS-IBS). GRS-IBS abutments consist of closely spaced layers of geosynthetic reinforcement and compacted granular fill with a segmental retaining wall facing unit (SRWU) to create an abutment and integrated approach for the bridge. A reinforced soil foundation is typically constructed as a base, the geosynthetic reinforced soil and block facing is constructed on the reinforce soil foundation, and the bridge deck is supported directly on a bearing bed atop the GRS structure. A typical cross-section through a GRS-IBS abutment is shown in Figure 3. The system is easy to design and inexpensive to construct. It can be quickly built in variable weather conditions with semi-skilled labor and equipment and can easily be modified in the field. GRS-IBS is more flexible compared to other foundation alternatives during seismic events. It may be determined that GRS-IBS abutments are not appropriate during subsequent phases of the project.

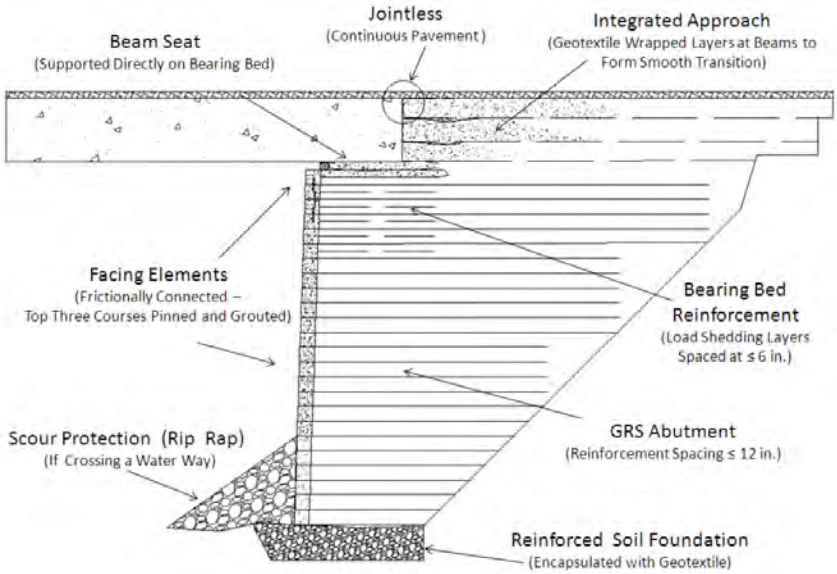

Figure 3. Typical GRS-IBS Cross Section (Adams and Nicks, 2018).

If shallow foundations are not suitable a deep foundation will be required. Due to the shallow bedrock observed in the project area, rock socketed piles are considered feasible. It is expected the relatively modest loading will not warrant traditional drilled shafts. It is unlikely driven piles will penetrate into rock enough to provide the required lateral and scour resistance without drilling a rock socket. A concrete filled rock socket of ten feet depth or less should allow for the piles to be loaded to the structural capacity of the section. Steel H piles or pipe piles are considered feasible. Foundation types will be based on the results of a future geotechnical investigation.

REFERENCES

Adams, M. and Nicks, J., 2018, Design and Construction Guidelines for Geosynthetic Reinforced Soil Abutments and Integrated Bridge Systems, Federal Highway Administration, Report No. FHWA-HRT-17-080, June 2018.

Alt, D. and Hyndman, D.W., 1989, Roadside Geology of Idaho.

Phillips, W.M., 2012, Geologic Map of the St. Anthony Quadrangle, Fremont and Madison Counties, Idaho, Idaho Geologic Survey, Digital Web Map 145.

USGS, 2014, 2014 National Seismic Hazard Maps – Source Parameters, https://earthquake.usgs.gov/cfusion/hazfaults_2014_search/query_results.cfm (accessed 10/25/2018).

USGS, 2018, U.S. Seismic Design Maps application, https://earthquake.usgs.gov/designmaps/us/application.php (accessed 10/25/2018)

CLOSING

Please contact Evan Garich at (360) 619-7224 or Evan.Garich@dot.gov with any questions regarding this memorandum.

INITIALS
CC: Geotechnical File

Attachments:
Attachment 1 – Site Photographs

Picture 1. Looking across river at weir location from south bank.

Picture 2. Looking across river at weir locations from north bank.

Picture 3. Bedrock outcropping and river along south bank.

Picture 4. Facing downstream from south bank, several islands present in background.

Picture 5. Gravel and cobbley alluvium.

Picture 6. Typical channel and islands in project area.

Picture 7. Bank stabilization performed ~10 years ago consisting of riprap placement and revegetation.

Picture 8. Looking south across river channel toward islands from north bank near sewer lagoons.

Picture 9. View of existing rail bridge from north bank.

Picture 10. Facing upstream from north bank near existing rail bridge.

Picture 11. Facing south bank from downstream of existing rail bridge.

Picture 12. View of existing rail bridge from south bank.

Picture 13. Basalt outcrop, upstream of existing rail bridge on south bank.

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To: Project File, FHWA, WFLHD, 7/17/2019

APPENDIX D

PUBLIC INVOLVEMENT

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U.S. Department of Transportation
Federal Highway Administration

Memorandum

Western Federal Lands Highway Division
610 E. Fifth Street
Vancouver, WA 98661-3801

TO: Project Files

FROM: Seth English-Young, WFLHD

DATE: July 1, 2019

SUBJECT: Public Involvement Summary for the Henry's Fork Bridge Feasibility Study – ID STANTH T 2017(1)

The purpose of this memo is to describe the public involvement for the Henry's Fork Bridge Feasibility Study project – ID STANTH T 2017(1).

FHWA completed the draft Bridge Feasibility Study and Implementation and Funding Plan in March 2019 and the public comment period was March 21 to May 6, 2019.

Project partners held an open house on April 16, 2019. The City advertised the meeting by placing a public notice in the *Rexburg Standard-Journal* newspaper, sending emails to interested parties, posting signs in town and at the project site, sending an informational flyer out with a utility bill, and placing information on the City marquee. The FS sent out an email to their interested party list as well. FHWA place the documents on a website (https://flh.fhwa.dot.gov/projects/id/henrys-fork/).

FHWA, City, and BLM staff attended the meeting and gave information and answered questions. Open house materials are attached to this memo and included six large information boards, an informational handout, a comment sheet with a questionnaire, and a slideshow of computer-generated images of the bridge options. On April 23, 2019, the Rexburg Standard Journal ran an article about the project and open house (attached).

Sixteen people signed into the open house. The project partners received 17 written comments, either in person at the meeting, by mail, or by email. The comments are attached to this memo. Ten people provided comments on the questionnaire handed out at the meeting and six people provided comments in another form. The questionnaire asked the following questions, with summarized results.

1. **What is your relationship to the Henry's Fork Greenway?**
   Visitor: 1
   Adjacent property owner/resident: 0
   Fremont County resident: 10
   Other: *(multiple answers)*

2. **On average, how many times a year do you visit the Henry's Fork Greenway?**
   0: 0
   1-2: 1
   3-5: 1
   6-12: 2
   More than 12: 6

3. **What type of activities do you do when visiting the Henry's Fork Greenway?**
   Hiking/walking: 10
   Biking: 5
   Fishing: 4
   Hunting: 1
   Other: *(multiple answers)*

4. **Which option presented do you prefer?**
   (The totals in this section include all comments (both in the questionnaire or other form of written comment) indicating a preferred option, including some people who checked multiple preferred options.)
   Option 1A: 7
   Option 1B: 9
   Option 2: 5
   Option 3: 0
   I prefer none of these: 1

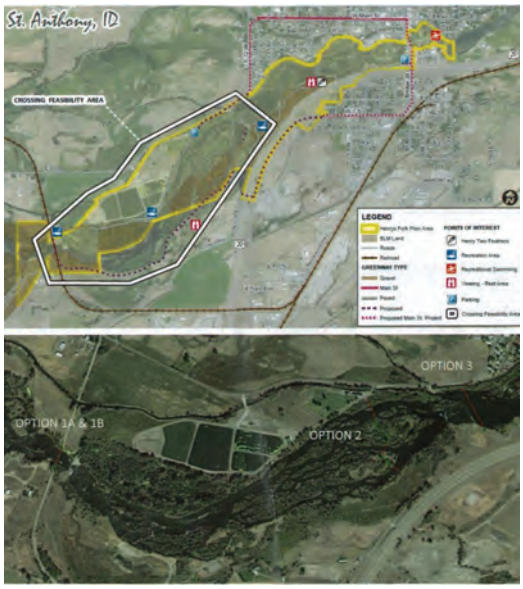
General Comments
(*Summarized from all 17 written comments)*

- Wants any option to provide a loop (7)
- Cost of bridges excessive (7)
- Certain options don't create loop (4)
- Concern about disturbing wildlife (3)
- Loop would be too long (2)
- Concern about overlap of hunting and hiking/bird watching (2)
- Concern about high and low-water (2)
- Concern about maintenance costs for Option 1B
- Prefers Option 2 because it is at a parking area
- Would like partners to consider moving Henry's Fork Pratt Truss Bridge (AKA Fun Farm Bridge) to the study area
- Concern about the visual impact of new bridges (Option 2 and 3)

https://www.rexburgstandardjournal.com/the-henry-s-fork-greenway-pedestrian-bridge-feasibility-study-is/article_da4ab642-a606-58fd-a072-ce3baf582037.html

The Henry's Fork Greenway Pedestrian Bridge Feasibility Study is open for public comment.

By Victoria Varnedoe vvarnedoe@uvsj.com 21 hrs ago



The map depicted at the top shows the crossing feasibility area. The bottom map shows where Option 1A & 1B would be loca as well Option 2 and Option 3.

Courtesy Photo/The Federal Highway Administration

ST. ANTHONY − The Federal Highway Administration (FHA) held an open house on April 16, to inform the public about a bridge feasibility study. They are currently accepting public comment and will do so until May 6.

“We’re looking at a few options on how to cross the henry’s fork within the greenway and getting feedback from the public on what they like and answering any questions [they have],” said Seth English-Young, with the Federal Highway Administration.

The open house was an opportunity to inform the public and for the FHA to take comments and address questions.

“The city of St. Anthony and BLM applied for funding for this study and were awarded funding under the Federal Lands Access Program and that paid for this study,” English-Young said. “We work to gather information from locals and from existing conditions and determine what are feasible options for crossing the river.”

The study is currently in draft form and includes four different project options.

“We’ll take any comments and make revisions as necessary and once we have a final draft then that’s where the project ends for the time being,” English-Young said. “Then BLM and the City will determine how they want to move forward [and obtain funding].”

Those looking to submit public comment have several venues to do so.

They can call in at 360-619-7803.

They can send an email with their public comment to seth.english-young@dot.gov

Or send their public comment by postal mail to:

Western Federal Lands Highway Division

Attn: Seth English-Young

610 east 5th Street Vancouver, WA, 98661

For more information, visit the FHA website at flh.fhwa.dot.gov/projects/ID/henrys-fork

Name	E-mail address
Curt Neppl	neps1@hotmail.com
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Donald Powell	dpowell@cityofstanthony.org
Patty Parkinson	cclerk@cityofstanthony.org
DAVE STODDARD	dKSTODDARD@GMAIL.COM
Cody Atkinson	codya2414@Gmail.com
[illegible]	Scottie859@gmail.com
SARAH WALKER	SARAHCASSIDY420@GMAIL.COM
Krystal Zohner	vacondios@hotmail.com
Joyce Edlefsen	j.edlefsen@gmail.com
JIM HOBBS	
Victoria Varnedoe	VVarnedoe@VRSS.com.
Kent Daniels	Kentdaniels@msn.com
Angie Fadness	onebadfad@hotmail.com
Lynda Reilly	Lynda_Reilly@hotmail.com
ROY - FORMER MAYOR	

HENRY'S FORK PEDESTRIAN BRIDGE FEASIBILITY STUDY
APRIL 16, 2019 OPEN HOUSE PUBLIC QUESTIONNAIRE

1. What is your relationship to the Henry's Fork Greenway? *(Mark all that apply)*

   ☐ Visitor ☐ Adjacent property owner/resident ☒ Fremont County resident
   ☐ Other: _____

2. On average, how many times a year do you visit the Henry's Fork Greenway?

   ☐ 0 ☐ 1-2 ☐ 3-5 ☐ 6-12 ☒ More than 12

3. What type of activities do you do when visiting the Henry's Fork Greenway? (*Mark all that apply*)

   ☒ Hiking/walking ☒ Biking ☒ Fishing ☐ Hunting
   ☐ Other: _____

4. Which option presented do you prefer?

   ☒ Option 1A ☒ Option 1B ☐ Option 2 ☐ Option 3 ☐ I prefer none of these

5. Are there any problems that you feel this project does not address?

   try & Option 1B First
   Option 1A Next
   Option 2: LAST

GENERAL COMMENTS

MAKe Sure the Pedestrian Bridge Connects to the Ft. Cument Henry's Fork Greenway Biking And Walking Path.

Contact Information - OPTIONAL

Name: DAVid Stoddard
Street address: 448 E main St
City: Saint Anthony State: Id ZIP: 83445
Telephone number: 480 399 7433
Email: dkstoddard@gmail.com

For more information: https://flh.fhwa.dot.gov/projects/id/henrys-fork/
Contact: Seth English-Young, FHWA, 360-619-7803, seth.english-young@dot.gov

HENRY'S FORK PEDESTRIAN BRIDGE FEASIBILITY STUDY
APRIL 16, 2019 OPEN HOUSE PUBLIC QUESTIONNAIRE

1. What is your relationship to the Henry's Fork Greenway? *(Mark all that apply)*

   ☐ Visitor ☐ Adjacent property owner/resident ☒ Fremont County resident
   ☐ Other: _____

2. On average, how many times a year do you visit the Henry's Fork Greenway?

   ☐ 0 ☐ 1-2 ☐ 3-5 ☐ 6-12 ☒ More than 12

3. What type of activities do you do when visiting the Henry's Fork Greenway? (*Mark all that apply*)

   ☒ Hiking/walking ☒ Biking ☒ Fishing ☐ Hunting
   ☐ Other: _____

4. Which option presented do you prefer?

   ☒ Option 1A ☐ Option 1B ☐ Option 2 ☐ Option 3 ☐ I prefer none of these

5. Are there any problems that you feel this project does not address?

Any one of these optins will provde better recreation opportunities for the public.

GENERAL COMMENTS

Utilizing Optin 1A or Option 1B would give the public more public access. These optins would also allow people parking at the cemetary a longer walk and more access to fishing / hunting.

Contact Information - OPTIONAL

Name: Curt Neppl
Street address: 238 North 5th East
City: St Anthony State: ID ZIP: 83445
Telephone number: 307-620-0189
Email: neps1@hotmail.com

For more information: https://flh.fhwa.dot.gov/projects/id/henrys-fork/
Contact: Seth English-Young, FHWA, 360-619-7803, seth.english-young@dot.gov

HENRY'S FORK PEDESTRIAN BRIDGE FEASIBILITY STUDY
APRIL 16, 2019 OPEN HOUSE PUBLIC QUESTIONNAIRE

1. What is your relationship to the Henry's Fork Greenway? *(Mark all that apply)*

   ☐ Visitor ☐ Adjacent property owner/resident ☑ Fremont County resident
   ☐ Other: _____

2. On average, how many times a year do you visit the Henry's Fork Greenway?

   ☐ 0 ☐ 1-2 ☐ 3-5 ☐ 6-12 ☑ More than 12

3. What type of activities do you do when visiting the Henry's Fork Greenway? (*Mark all that apply*)

   ☑ Hiking/walking ☐ Biking ☐ Fishing ☐ Hunting
   ☐ Other: _____

4. Which option presented do you prefer?

   ☐ Option 1A ☐ Option 1B ☑ Option 2 ☐ Option 3 ☐ I prefer none of these

5. Are there any problems that you feel this project does not address?

I like Option 2 Because of the extra access to the river. A shorter loop. Option 1A using the Rail road bridge seems most feasible because it would appear to be less expensive.

GENERAL COMMENTS

Contact Information - OPTIONAL

Name: Coleen Atkinson
Street address: 2414 E 434 N
City: St Anthony State: ID ZIP: 83445
Telephone number: 208-624-7453
Email: codya2414@gmail.com

For more information: https://flh.fhwa.dot.gov/projects/id/henrys-fork/
Contact: Seth English-Young, FHWA, 360-619-7803, seth.english-young@dot.gov

HENRY'S FORK PEDESTRIAN BRIDGE FEASIBILITY STUDY
APRIL 16, 2019 OPEN HOUSE PUBLIC QUESTIONNAIRE

1. What is your relationship to the Henry's Fork Greenway? *(Mark all that apply)*

   ☐ Visitor ☐ Adjacent property owner/resident ☒ Fremont County resident
   ☒ Other: City Council Member

2. On average, how many times a year do you visit the Henry's Fork Greenway?

   ☐ 0 ☐ 1-2 ☐ 3-5 ☒ 6-12 ☐ More than 12

3. What type of activities do you do when visiting the Henry's Fork Greenway? (*Mark all that apply*)

   ☒ Hiking/walking ☒ Biking ☐ Fishing ☐ Hunting
   ☐ Other: _____

4. Which option presented do you prefer?

   ☒ Option 1A ☐ Option 1B ☒ Option 2 ☐ Option 3 ☐ I prefer none of these

5. Are there any problems that you feel this project does not address?

   What will the ongoing maintenance costs be for the bridge in Option 1B? The fun fram bridge has been expensive to maintain for the county.

GENERAL COMMENTS

What are the flood risks in Option 2?

Contact Information - OPTIONAL

Name: Chad Quayle
Street address: 338 W 7th. S
City: St. Anthony State: ID ZIP: 83445
Telephone number: 208-761-1168
Email: cquayle@cityofstanthony.org

For more information: https://flh.fhwa.dot.gov/projects/id/henrys-fork/
Contact: Seth English-Young, FHWA, 360-619-7803, seth.english-young@dot.gov

HENRY'S FORK PEDESTRIAN BRIDGE FEASIBILITY STUDY
APRIL 16, 2019 OPEN HOUSE PUBLIC QUESTIONNAIRE

1. What is your relationship to the Henry's Fork Greenway? *(Mark all that apply)*

   ☐ Visitor ☐ Adjacent property owner/resident ☒ Fremont County resident
   ☐ Other: _____

2. On average, how many times a year do you visit the Henry's Fork Greenway?

   ☐ 0 ☐ 1-2 ☐ 3-5 ☐ 6-12 ☒ More than 12

3. What type of activities do you do when visiting the Henry's Fork Greenway? (*Mark all that apply*)

   ☒ Hiking/walking ☐ Biking ☒ Fishing ☐ Hunting
   ☐ Other: _____

4. Which option presented do you prefer?

   ☒ Option 1A ☒ Option 1B ☒ Option 2 ☐ Option 3 ☐ I prefer none of these

5. Are there any problems that you feel this project does not address?

GENERAL COMMENTS

I LIKE THE IDEA OF HOW THE BRIDGE AT THE RAILROAD MAKES A LOOP. BUT IF NOT POSSIBLE I ALSO LIKE OPTION 2. EITHER OPTION 1A OR 1B ARE GOOD OPTIONS. BUT I WOULD BE HAPPY WITH OPTION C TOO.

Contact Information - OPTIONAL

Name: SARAH WALKER
Street address: 115 & 1ST S
City: TYTON State: ID ZIP: 83451
Telephone number: 208-881-1314
Email: SARAHCASSIDY420@GMAIL.COM

For more information: https://flh.fhwa.dot.gov/projects/id/henrys-fork/
Contact: Seth English-Young, FHWA, 360-619-7803, seth.english-young@dot.gov

HENRY'S FORK PEDESTRIAN BRIDGE FEASIBILITY STUDY
APRIL 16, 2019 OPEN HOUSE PUBLIC QUESTIONNAIRE

1. What is your relationship to the Henry's Fork Greenway? *(Mark all that apply)*

   ☐ Visitor ☐ Adjacent property owner/resident ☒ Fremont County resident
   ☐ Other: _____

2. On average, how many times a year do you visit the Henry's Fork Greenway?

   ☐ 0 ☐ 1-2 ☐ 3-5 ☐ 6-12 ☒ More than 12

3. What type of activities do you do when visiting the Henry's Fork Greenway? (*Mark all that apply*)

   ☒ Hiking/walking ☐ Biking ☒ Fishing ☐ Hunting
   ☒ Other: kids adventures :)

4. Which option presented do you prefer?

   ☒ Option 1A ☒ Option 1B ☐ Option 2 ☐ Option 3 ☐ I prefer none of these

5. Are there any problems that you feel this project does not address?

   Private land blocking loop

GENERAL COMMENTS

I think I like the idea of the railroad area if it can be a loop eventually. It doesn't matter to me if it's by acquiring the existing bridge or building another.

If there isn't a feasible possibility of an eventual loop, I would rather see option 2 as opposed to option 3. I don't really like option 3 at all.

Contact Information - OPTIONAL

Name: Krystal Zohner
Street address: 118 W 4th N.
City: St. Anthony State: ID ZIP: 83445
Telephone number: 406-660-0823
Email: vacondios@hotmail.com

For more information: https://flh.fhwa.dot.gov/projects/id/henrys-fork/
Contact: Seth English-Young, FHWA, 360-619-7803, seth.english-young@dot.gov

HENRY'S FORK PEDESTRIAN BRIDGE FEASIBILITY STUDY
APRIL 16, 2019 OPEN HOUSE PUBLIC QUESTIONNAIRE

1. What is your relationship to the Henry's Fork Greenway? *(Mark all that apply)*

   ☒ Visitor ☐ Adjacent property owner/resident ☒ Fremont County resident
   ☐ Other: I helped build & design both sides of the greenway from the beginning

2. On average, how many times a year do you visit the Henry's Fork Greenway?

   ☐ 0 ☐ 1-2 ☐ 3-5 ☐ 6-12 ☒ More than 12 - at least once a week or more

3. What type of activities do you do when visiting the Henry's Fork Greenway? *(Mark all that apply)*

   ☒ Hiking/walking ☐ Biking ☐ Fishing ☐ Hunting
   ☐ Other: Bird & wild life watching, training

4. Which option presented do you prefer?

   ☐ Option 1A ☒ Option 1B ☐ Option 2 ☐ Option 3 ☐ I prefer none of these

5. Are there any problems that you feel this project does not address?

With all but options 1A & B, the connectivity of the 2 paths isn't achieved very well. Two would disrupt what every wildlife hides out there on islands & provides little chance for full use of either side of the greenway - likewise 3 would be disruptive to all the swans & winter waterfowl that congregate & provide myriad new access.

GENERAL COMMENTS

Until the city can provide true connectivity between the 2 greenways with paths through town, these bridge efforts seem to be providing access only to anglers & hunters. It seems to me hunting is not allowed inside the city, and should be discouraged in an area with walking paths. As a pathway user I have witnessed bad shooting practices on the trail already. I'm not sure why the city would be interested in a project to provide hunting access downstream of the railroad bridge as it's outside the city's impact area. Even a proposal floated by a private landowner would be more problematic than providing a solution.

Contact Information - OPTIONAL

Name: Joyce Edlefsen
Street address: 306 S. 1st E
City: St. Anthony State: ID ZIP: 83445
Telephone number: 208-390-6191
Email: j.edlefsen

For more information: https://flh.fhwa.dot.gov/projects/id/henrys-fork/
Contact: Seth English-Young, FHWA, 360-619-7803, seth.english-young@dot.gov

HENRY'S FORK PEDESTRIAN BRIDGE FEASIBILITY STUDY
APRIL 16, 2019 OPEN HOUSE PUBLIC QUESTIONNAIRE

1. What is your relationship to the Henry's Fork Greenway? *(Mark all that apply)*

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   ☐ Other: _____

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3. What type of activities do you do when visiting the Henry's Fork Greenway? (*Mark all that apply*)

   ☒ Hiking/walking ☐ Biking ☐ Fishing ☐ Hunting
   ☐ Other: _____

4. Which option presented do you prefer?

   ☐ Option 1A ☒ Option 1B ☐ Option 2 ☐ Option 3 ☐ I prefer none of these

5. Are there any problems that you feel this project does not address?

   The cost for the bridges seems to be excessive

GENERAL COMMENTS

I don't believe that hiking & bird watching go together with hunting & shooting.

Contact Information - OPTIONAL

Name: _____

Street address: _____

City: _____ State: _____ ZIP: _____

Telephone number: _____

Email: _____

For more information: https://flh.fhwa.dot.gov/projects/id/henrys-fork/
Contact: Seth English-Young, FHWA, 360-619-7803, seth.english-young@dot.gov

HENRY'S FORK PEDESTRIAN BRIDGE FEASIBILITY STUDY
APRIL 16, 2019 OPEN HOUSE PUBLIC QUESTIONNAIRE

1. What is your relationship to the Henry's Fork Greenway? *(Mark all that apply)*

   ☐ Visitor ☐ Adjacent property owner/resident ☒ Fremont County resident
   ☐ Other: _____

2. On average, how many times a year do you visit the Henry's Fork Greenway?

   ☐ 0 ☐ 1-2 ☒ 3-5 ☐ 6-12 ☐ More than 12

3. What type of activities do you do when visiting the Henry's Fork Greenway? (*Mark all that apply*)

   ☒ Hiking/walking ☒ Biking ☐ Fishing ☐ Hunting
   ☐ Other: _____

4. Which option presented do you prefer?

   ☐ Option 1A ☐ Option 1B ☐ Option 2 ☐ Option 3 ☒ I prefer none of these

5. Are there any problems that you feel this project does not address?

Disturbance of existing wildlife
Distance between beginning point of "loop" and ending point — very inconvenient. Would require a shuttle.

GENERAL COMMENTS

Options 1A, 2, & 3 would be cost prohibitive

Contact Information - OPTIONAL

Name: _____

Street address: _____

City: _____ State: _____ ZIP: _____

Telephone number: _____

Email: _____

For more information: https://flh.fhwa.dot.gov/projects/id/henrys-fork/
Contact: Seth English-Young, FHWA, 360-619-7803, seth.english-young@dot.gov

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1. What is your relationship to the Henry's Fork Greenway? *(Mark all that apply)*

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   ☐ Other: _____

4. Which option presented do you prefer?

   ☒ Option 1A ☐ Option 1B ☐ Option 2 ☐ Option 3 ☐ I prefer none of these

5. Are there any problems that you feel this project does not address?

_____

_____

_____

_____

GENERAL COMMENTS

Does option 2 or 3 address high & low water issues?
The cost would be very high for option 1B 2, or 3
The footprint would be a step too far-

Contact Information - OPTIONAL

Name: _____

Street address: _____

City: _____ State: _____ ZIP: _____

Telephone number: _____

Email: _____

For more information: https://flh.fhwa.dot.gov/projects/id/henrys-fork/
Contact: Seth English-Young, FHWA, 360-619-7803, seth.english-young@dot.gov

April 24, 2019

Henry's Fork Greenway Pedestrian Bridges
Western Federal Lands Highway Division
Atten: Seth English-Young

To Whom It May Concern:

I would like to submit the following thoughts about possible river crossings for the St. Anthony Henry's Fork Pedestrian Bridges Feasibility Study:

1. The option for 'island hopping' along and within the river channel is a romantic and exciting idea and would be a first-choice if the cost of this option was feasible. It seems this would be a very expensive option and is likely to prevent a move forward to any option, because of it's expense.
2. Creating a new bridge lower to the surface of the river is a good option as it is one structure for which to seeking funding.
3. Using the existing Eastern Idaho Railroad Bridge currently in place seems to be to be the best and most affordable option. Even if there was some monetary exchange with EIRR to obtain the bridge, it seems it would be much less than building new. And, perhaps the bridge would be gifted from EIRR. This bridge is on the national historical register and should be preserved and improved. The bridge very nearly connects to the existing Greenway Path; making is yet a more affordable option.

Thank you for your time and expertise in conducting this Study and helping the St. Anthony Greenway expand.

Respectfully submitted

James C. Hobbs

James C. Hobbs
PO Box 34
St. Anthony, ID 834345
208.390.3801

May 1, 2019

Henry's Fork Greenway Pedestrian Bridges
Western Federal Lands Highway Division
Atten: Seth English-Young

To Whom It May Concern:

I would like to submit the following thoughts about possible river crossings for the St. Anthony Henry's Fork Pedestrian Bridges Feasibility Study:

1. The option for 'island hopping' along and within the river channel is a romantic and exciting idea and would be a first-choice if the cost of this option was feasible. It seems this would be a very expensive option and is likely to prevent a move forward to any option, because of it's expense.
2. Creating a new bridge lower to the surface of the river is a good option as it is one structure for which to seeking funding.
3. Using the existing Eastern Idaho Railroad Bridge currently in place seems to be to be the best and most affordable option. Even if there was some monetary exchange with EIRR to obtain the bridge, it seems it would be much less than building new. And, perhaps the bridge would be gifted from EIRR. This bridge is on the national historical register and should be preserved and improved. The bridge very nearly connects to the existing Greenway Path; making is yet a more affordable option.

Thank you for your time and expertise in conducting this Study and helping the St. Anthony Greenway expand.

Respectfully submitted

Judith L. Hobbs

Judith L. Hobbs
PO Box 34
St. Anthony, ID 834345
208.390.8787

From:	Lisa O. Kyser
To:	English-Young, Seth (FHWA)
Subject:	Option 2, "The Island Hop Trail"
Date:	Saturday, May 4, 2019 5:14:45 PM

Good afternoon,

My name is Lisa Kyser O'Shaughnessy and I live at 7 S. 3rd E. St. Anthony, and I would love to talk about the feasibility choices for bridges to get constructed for linking both sides of the river as one large loop. I have your material in front of me and looking at the choices and studying the paperwork, I can tell you will not to many people here in St Anthony who will fill them out, but we are now growing and growing fast, and the idea of a linking walking paths is something no one else has within their local cities and would give us a big jump on a wonderful place to live.
I have lived here for 4 years now, and own a home, and love it. I also run a dear Abnb just up from the Sandbar Park. This little town caught my attention because of the ''river.'' I am an avid on top kayaker and love this area to do this in. And have many that would like to see more entrances for this reason, including a path to the river through the Boys Park. Yet when this new idea came up it sounded even better and I am excited to see something of this type here connecting the islands together.

"And that is where I make my choice." I would go with the trail to the railroad bridge, but with private property in the way, and I know just by human nature owners will not deal for a public trail on private land. SO I CHOOSE OPTION 2. The idea of having islands to explore and fish off, is just a win-win situation the rest can wait for another time. I love to fish as well, and if you notice people that love to fish need space. So having connections from island to island is a great answer!
Everything these days is expensive, but if you have a tourist trade, and you have a wonderful lifestyle to enjoy the rivers for swimming and recreation, growth will come, and done right we could out do Rexburg for the place to live as a bedroom community! I don't mind growth, I know many people fight growth with all their might, but once the growth starts, they all of a sudden realize it's not as bad as it sounds.

We are on the gateway to Yellowstone, and not even Yellowstone has

what we have, and that is 'No grizzly Bears'. Our trails can be used year around even for cross country skiers on an afternoon. Their will always be hazards like Moose, snow, and water, but we all live around them, and learn they have their place and respect.

Please put me down for 'Option 2', 'THE ISLAND HOP TRAIL.' And thanks for asking and trying to get us to participate. I am hoping to make it to this next meeting. Please continue to keep us informed through Facebook. And, I would still like to take a tour of entry and exit of bridges for 'Island Hop Trail' and get a feel for them and their options. Thanks so much. Lisa Kyser

Any question for me, my number is 208-403-6154

From: Randall Marrett
To: English-Young, Seth (FHWA)
Subject: St Anthony bridge
Date: Thursday, April 25, 2019 7:29:50 PM

I prefer option 2, because it is at one of the parking areas.

English-Young, Seth (FHWA)

From: Mike Webster <webstermikeandsally@gmail.com>
Sent: Tuesday, April 23, 2019 7:12 AM
To: English-Young, Seth (FHWA)
Subject: Fwd: Delivery Status Notification (Failure)

---------- Forwarded message ---------
From: Mail Delivery Subsystem <mailer-daemon@googlemail.com>
Date: Tue, Apr 23, 2019 at 8:10 AM
Subject: Delivery Status Notification (Failure)
To: <webstermikeandsally@gmail.com>

Address not found

Your message wasn't delivered to **english-young@dot.gov** because the address couldn't be found, or is unable to receive mail.

The response from the remote server was:

```
550 #5.1.0 Address rejected.
```

---------- Forwarded message ----------
From: Mike Webster <webstermikeandsally@gmail.com>
To: "english-young@dot.gov" <english-young@dot.gov>
Cc:
Bcc:

Date: Tue, 23 Apr 2019 08:09:45 -0600
Subject: Bridge for St. Anthony Henry's Fork Greenway
Plans are currently underway to replace the old Fun Farm bridge that is located approximately 3 miles east of St. Anthony. This is a historic bridge that is over 100 years old and efforts need to be made to preserve the bridge. It is a Pratt Truss Bridge and would easily accommodate foot traffic as well as preserve a piece of history.

A study was done for the I.D.O.T in 2018 by Preservation Solutions LLC that cataloged the few remaining steel bridges in the State of Idaho. The Henry's Fork Pratt Truss Bridge (AKA Fun Farm Bridge) was part of that study. The loss of these historic bridges has already begun in this area with the destruction of the old Del Rio Bridge. Efforts need to be put in place for their preservation.

If this bridge would be suitable for the area in question, we would encourage that option be explored further.

Thank you.

Michael and Sally Webster
webstermikeandsally@gmail.com

English-Young, Seth (FHWA)

From: kim ragotzkie <kragotzkie@gmail.com>
Sent: Monday, May 6, 2019 4:39 PM
To: English-Young, Seth (FHWA)
Subject: Henrys Fork Greenway Pedestrian Feasibility Study

Follow Up Flag: Follow up
Flag Status: Flagged

Seth, I missed the open house for this potential project but wish to add my comments if it isn't too late.

I'm a Fremont County resident, and visit the HF Greenway on a regular basis to walk, enjoy the sounds of the river, and watch birds and other wildlife. I also occasionally fly-fish in this area, using the pedestrian trail to gain access. Although I am a hunter, I do not hunt in this area as there are too many people and homes near the river for me to feel comfortable hunting in this area.

I most strongly support Alt. 1B if you could gain rights to the existing railroad bridge and convert it to a pedestrian trail. However, if that is not possible, I also support Alt. 1A. Both of these offer the potential for a loop trail if the trail on the southside can somehow be connected between the Carter property and the RR ROW.

I am very much opposed to Alt. 2 and Alt. 3 for these reasons:
1). The cost is ridiculous and in no way could be justified when so many more pressing trail and recreational facilities go unfunded.
2). The bridges will significantly mess up the visual aesthetic of this area.
3). The islands are currently havens for wildlife, with few human disturbances other than the occasional fisherman or possibly duck or deer hunter when the water is low and the river can be waded. Constructing a bridge to two islands will pretty much destroy the value of these islands for wildlife.
4). There is a Great Blue Heron rookery in the vicinity, additional construction and human disturbance could negatively impact this rookery. There are really no other places for this nesting area to move to due to the widespread human activity in the lower Henry's Fork area.
5). The bridges really don't create a loop trail. The bridge proposed in Alt. 3 doesn't even connect to the trail on the north side of the river. The 'loop' is mostly St. Anthony city streets, not the reason most people use the greenway trail. The bridge proposed in Alt. 2 connects to the north side trail where it has barely gone past the cemetery and is still adjacent to the sewer ponds. It may make a loop, but again completely misses the nicest part of the trail on both sides, but especially on the north side.

Thank you for considering my comments.
Kim E. Ragotzkie
P.O. Box 325
Ashton, ID 83420

4-26-19

Dear Seth English-Young;

Reference the Henry's Fork Greenway.

I was one of several original members of the Henry's Fork Greeway committee starting in 1997 and stayed very active for about 10 years.

Four or five of us marked out the actual path routes for construction; the south route 4-6-02 and the north later.

Other more active members I recall were Jim Hobbs, Alta Remington, Joyce Edlefsen, Cathy Koon and myself. Others, my nearly 84 year memory forgot. Many stayed briefly.

From the begining; we wanted the rail road bridge for its historic value as a connector for the north and south trails. (1997). The railroad was not interested then.

The railroad recently contacted the

county about thier desire to remove that branch line. It would cost the railroad more to remove the historic than any salvage value of the steel. I'm sure they would donate or sell the bridge for scrap value to the green belt.

My thoughts on building a new foot bridge are best left unsaid. Grant money isn't really free. Forget the expensive foot bridge. Contact the railroad and save the historic bridge. They would likely donate it.

Sincerely: Lee Wenger
525 S. 1st W.
St. Anthony 83445

Note: I have a file full of related news paper articles, some maps, ect. if anyone wanted to view or copy them.

MINUTES

HENRY'S FORK GREENWAY COMMITTEE MEETING

April 22, 1997

Persons Attending:

Sally Sheridan, Richard Housley, Joyce Edlefsen, Alda Remington, Karen Parker, Rocky Palmer, Steve Smart, Deon Davenport, Eunice Olsen, Jon Lang, Cathy Koon, Adair Mali, Jan Brown, Lee Winegar, Gary DiCarlo

Remained active for years.

Agenda:

Sally discussed the agenda and the committee agreed to it.

Vision Statement:

Jon discussed the draft versions of the vision statement. He and Cathy Koon used the criteria developed in the last meeting to formulate the drafts. Two versions of the vision statement were shown and feedback from the committee was solicited. Sally suggested the vision statement should focus on the trail, not the committee. It was suggested "trail" is too narrow a concept. Sally suggested using "greenway."

The following was suggested as better wording of the vision statement:

> The Henry's Fork Greenway will provide a year-round recreational experience along the Henry's Fork of the Snake River for people of all ages and abilities while protecting the natural environment, ensuring solitude and peaceful enjoyment, providing an educational experience and protecting the rights of neighboring property owners. The trail will be a source of community price that reflects the area's identity and history, and an inspiration for future development of a regional greenway system and complements regional development goals.

Mission Statement:

The following was adopted as a draft version of the mission statement:

The mission of the Henry's Fork Greenway Committee is to work diligently in a spirit of commitment, cooperation, collaboration and consensus building to:

- Development community and landowner support for a greenway along the Henry's Fork

2543 E. YELLOWSTONE • ST. ANTHONY, IDAHO 83445

Where nature and people meet

March 28, 2002

Hi all,

I got a chance to walk the Phase 1 and start of Phase 2 of the Greenway this week. Looks like the moose have also enjoyed the trail this winter. And I could have sworn that I heard a pair of sandhill cranes discussing the weather! There was 0-12 inches of snow on the phase 1 section. But it looks like spring is on it way.

Trail Walk and Marking Day- April 6th.
It looks like we are on for April 6th to walk the trails. Cathy, Monica, Joyce, Jim, and I are available that I know of so far. Let's meet at 930am at the Park Entrance. We will walk over the bridge to the Texaco and start of the Phase 2 trail. Jim offered to get flagging and stakes for marking the trail route. I would also like to look at Phase 1 to determine what can be done and what supplies are needed for the Clean-Up Day. Bring a lunch and we will picnic at the park! Be dressed for walking in snow or mud. I will bring some drinks to share. If you are interested in attending, please RSVP to Kyle_Babbitt@hotmail.com or me at 745-0750 so that I know whom to contact if there are any changes.

Greenway Clean-Up Day – May 18th.
Hold the date! I hear that Neil Kunz and crews will be available on May 18th to help with trail cleanup and construction. All are welcome to attend. More information will be sent around on this soon.

First Meeting – February 25th.
It was a small but productive meeting. We got a chance to say goodbye to Charlie Sperry and thank him for all his hard work on the trail. The meeting minutes and updates follow this letter.

I am glad to send out the information to whoever wants an update on the Greenway happenings. But if you would like to be removed from the mailing list or have address corrections, please send a note to **Alda Remington** at the address listed at the top of this letter. Hope to see you soon.

Sincerely, Kyle M. Babbitt

Kyle M Babbitt
Consultant with the Henry's Fork Foundation

THE HENRY'S FORK FOUNDATION, INC.

Mailing Address
P.O. Box 550
Ashton, ID 83420

phone 208-652-3567
fax 208-652-3568
email hff@henrysfork.com

Headquarters
606 Main Street
Ashton, ID 83420

Field Office
(summer only)
208-558-9041
3412 Hwy 20
Island Park, ID 83429

Watershed Center
604 Main Street
Ashton, ID 83420

March 17, 2000

Greetings Everyone!

I hope you all had a nice winter and that you are enjoying the first signs of spring.

It has been a while since we had a greenway meeting and I want to update you on what has happened over the winter. We also need to make plans for this year's trail work! I have scheduled a meeting for the 23rd of March (Thursday), 7:00 p.m., at Me N Stans Restaurant. Those of you who want to join Curt and I for supper can come around 6 p.m.

In case you did not get a chance to walk the greenway last fall, the first section of trail was built and is now open to the public! It starts at the cemetery parking lot and goes along the river for about ¾ of a mile. You will notice a nice entrance gate at the trailhead, courteous of Joyce and Lee Edlefsen, Lee Winegar, and a couple of their friends. Further down the trail you will find a boardwalk through the wetlands. You can thank Wally Bunnel for designing the boardwalk and helping to organize the St. Anthony Work Camp crew. Lastly, The Henry's Fork Foundation's Kate Giese, with help from Joyce Edelfeson and Ted Whitmoyer, designed 10 interpretive signs for the greenway. As soon as the snow melts we will get them posted along the trail.

The future looks bright as well. Jerry Carter generously donated a conservation easement on his property. The committee and the city now need to work with Jerry on the design of the trail. This is something we will discuss at the upcoming meeting. The Bell family is still interested in helping out the greenway project and we hope to have some good news before too long.

Curt Royer and I talked some about other sections of the trail. Curt hopes to finish the in-town portion of the trail this summer. As you may recall, Utah Power granted us money for landscaping and we need to follow up on that this spring. We are looking for a few "green thumbs" to help out. We also need to add a few amenities to the lower trail, like a trail head sign, park benches, and trail markers.

Folks, we are at the "fun stage" of the greenway, the part where we get to enjoy the fruits of our labor. There is still plenty of work to do but I hope it is the kind of work we can enjoy. I hope to see you all at the next meeting.

Thanks,

Charlie Sperry
Greenway Committee Advisor
HFF Stewardship Director

Greenway wins one ally, but railroad nixes proposal

By BRIAN DAVIDSON
Staff writer

The first phase of the Henry's Fork Greenway has cleared one hurdle only to become tangled in another.

Greenway planners have come to an agreement with Quentin Bagley, who owns property on the southern end of phase one of the proposed greenway.

"At first he was pretty negative, but has since said he will do what his neighbors do," said greenway planner Jon Lang.

Jerry Carter, one of Bagley's neighbors, flagged off a short section of the proposed trail with other greenway planners on Carter's property Aug. 26.

Officials of the Eastern Idaho Railroad, however, have denied the planners' request to use the railroad bridge at Eagle Nest Ford as the greenway's river crossing.

"The railroad was pretty adamant that there be no public access to their bridge or railroad right of way," Lang said. "It's unlikely we'll get cooperation with the railroad unless we can find some incentives for them."

The rail company runs one train a week to Egin on the tracks.

Still, planners are optimistic they can get serviceable trails in place.

The most likely option, according to Lang, will be to make two loop trails, one on either side of the river. Each loop will feature hard-surfaced and natural dirt trails, picnic areas and wildlife viewing stations.

"The advantage of going with two loops is of course the cost," Lang said. Building pedestrian bridges — either in one span or several spans crossing island channels — would be a major expense, according to Lang.

The trails could also be linked over the railroad bridge if the rail company changed its mind in the future, Lang said.

Planners are optimistic about grant opportunities for greenway construction.

The state Parks and Recreation Department, according to Lang, is a good source for "generous" grants for greenways. Rexburg, for instance, received $125,000 for its greenway. Twin Falls has received $225,000 for a similar project.

State grants to require a 20 percent local matching fund, but that can be made up of in-kind donations, which the Henry's Fork Greenway pretty much has, according to Lang.

The city of St. Anthony and Fremont County have agreed to donate use of heavy equipment for greenway construction, and help in procuring construction materials, Lang said.

Coming up with hard-cost figures is the next task for planners. "We have to make a decision pretty soon on how much we want to bite off for the first phase," said planner Dave Higginson.

Planners hope to have official siting of the greenway, costs, a budget and an implementation plan in place before grant applications come due on Jan. 1, 1998.

Musical fireside planned for new Taylor Building

A musical fireside featuring a new pipe organ will be held Sunday, Sept. 20, at 7 p.m. in the John Taylor Building on the Ricks College campus.

Idaho Falls organist Rebecca Parkinson, a member of the Ricks College music faculty for 10 years, will perform several pieces that will highlight the organ's tone. The Ricks College Collegiate Singers under the direction of Kevin Brower also will perform.

The new organ is unique because it is both a pipe and electric organ. It features three keyboards and has a large memory capacity. The organ has a wide variety of tone colors and stops and was built by the Rodger Organ Co. in Portland, Ore.

Darwin Wolford, director of organ studies at Ricks, says the

Beaver Dick to host lab for star gazers

All star gazers, young and old, are invited to Beaver Dick Park [illegible] Monday, Sept. 9

Ashton budget is approved

The Ashton City Council adopted the city budget for the fiscal 1997-98 year at a hearing Sept. 4, says Elaine Olson, city clerk.

The budget of $1,701,736 was approved. It's an increase of $278,601 over this year's budget of [illegible] Olson says $247,438 is

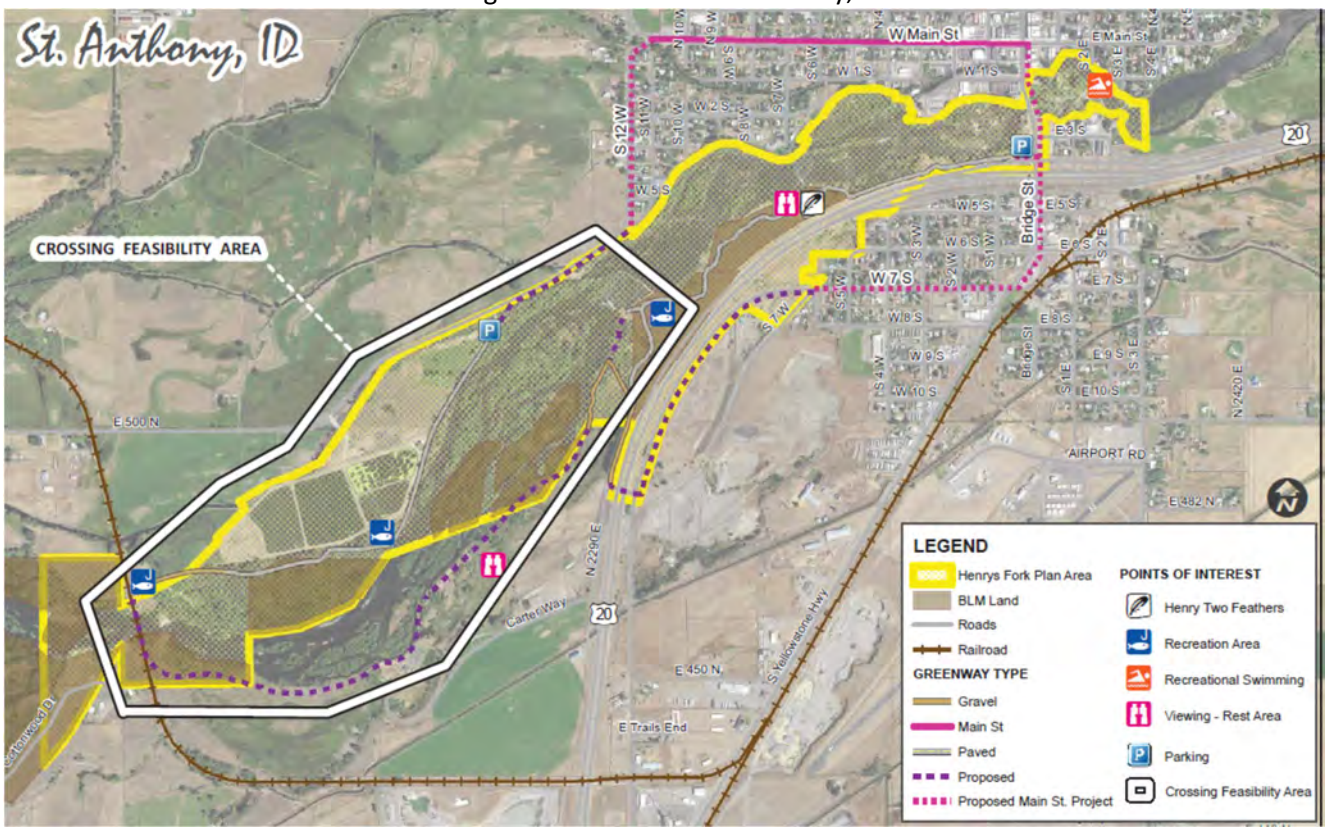
HENRY'S FORK GREENWAY PEDESTRIAN BRIDGE FEASIBILITY STUDY

Project Information Sheet

Open House • Tuesday, April 16, 2019 • 4:30 pm to 7:00 pm • St. Anthony, Idaho

Introduction

The Federal Highway Administration, in partnership with the City of St. Anthony and Bureau of Land Management, is conducting a feasibility study for a pedestrian bridge crossing of the Henry's Fork River, in the Henry's Fork Greenway. The ultimate goals of the project are to improve public safety and provide better access to the Henry's Fork Greenway and adjacent public lands. Specifically, this project focuses on options to cross the Henry's Fork River with a pedestrian bridge downstream of St. Anthony, ID.



For more information: https://flh.fhwa.dot.gov/projects/id/henrys-fork/

Contact: Seth English-Young, FHWA, 360-619-7803, seth.english-young@dot.gov

Option 1A

Construct a new pedestrian bridge just downstream of the existing railroad bridge. New bridge would consist of a two-span, 352-foot long steel truss with concrete pier foundation in the river.

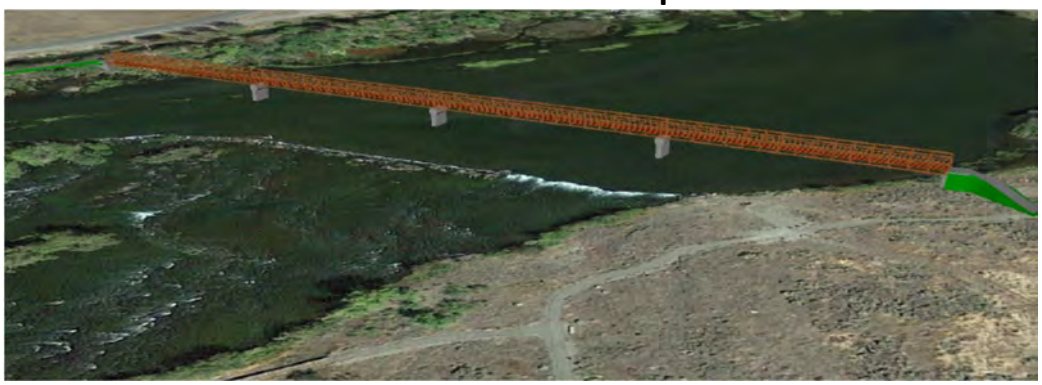
Option 1B

Acquire the existing railroad bridge and convert to only pedestrian & cyclist access.

Option 2

"Island Hopping Option" – Construct a series of bridges and trails that connect through the braided portion of the Henry's Fork. Three bridges would be required: a 352-foot steel truss, a 150-foot steel truss, and a 175-foot steel truss along with two segments of trail or boardwalk on the islands totaling 800 feet in length

Option 3



Cross the Henry's Fork adjacent to the existing water diversion weir and boat launch. A 667-foot long, four-span steel truss bridge consisting of 175-foot spans would be required to cross the river at this location.

HENRY'S FORK PEDESTRIAN BRIDGE FEASIBILITY STUDY
APRIL 16, 2019 OPEN HOUSE PUBLIC QUESTIONNAIRE

1. What is your relationship to the Henry's Fork Greenway? *(Mark all that apply)*

   ☐ Visitor ☐ Adjacent property owner/resident ☐ Fremont County resident
   ☐ Other: _____

2. On average, how many times a year do you visit the Henry's Fork Greenway?

   ☐ 0 ☐ 1-2 ☐ 3-5 ☐ 6-12 ☐ More than 12

3. What type of activities do you do when visiting the Henry's Fork Greenway? (*Mark all that apply*)

   ☐ Hiking/walking ☐ Biking ☐ Fishing ☐ Hunting
   ☐ Other: _____

4. Which option presented do you prefer?

   ☐ Option 1A ☐ Option 1B ☐ Option 2 ☐ Option 3 ☐ I prefer none of these

5. Are there any problems that you feel this project does not address?

_____

_____

_____

GENERAL COMMENTS

_____

_____

_____

_____

_____

_____

_____

Contact Information - OPTIONAL

Name: _____

Street address: _____

City: _____ State: _____ ZIP: _____

Telephone number: _____

Email: _____

For more information: https://flh.fhwa.dot.gov/projects/id/henrys-fork/
Contact: Seth English-Young, FHWA, 360-619-7803, seth.english-young@dot.gov

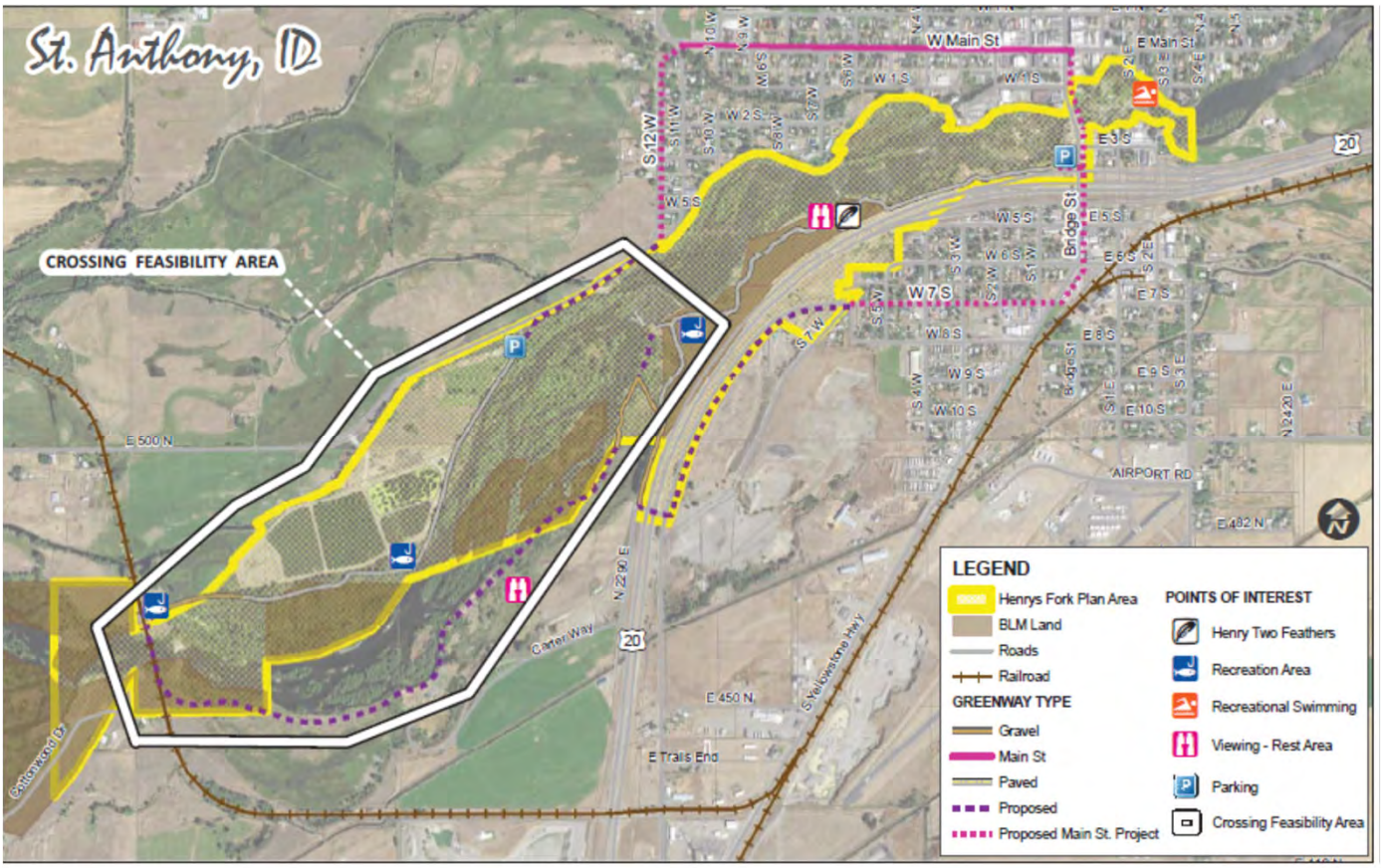
Henry's Fork Pedestrian Bridge Feasibility Study

Purpose of project

Provide options for a pedestrian bridge to cross the Henry's Fork River to improve public safety and access to the Henry's Fork Greenway and adjacent public lands.

Considerations

- Construction and Operating Costs
- Usage and Access
- Public Safety
- Ownership and Right-of-Way
- Environmental Impacts



Existing Conditions Photos

Henry's Fork Railroad Bridge

Pedestrians on Railroad

Islands in Braided Portion of River

Diversion Weir

Path on South Side of River
near Highway 20

Boardwalk on North Side of River

PEDESTRIAN CROSSING OF THE HENRY'S FORK OF THE SNAKE RIVER


OPTION 3
OPTION 1A & 1B
OPTION 2

OPTION 1A

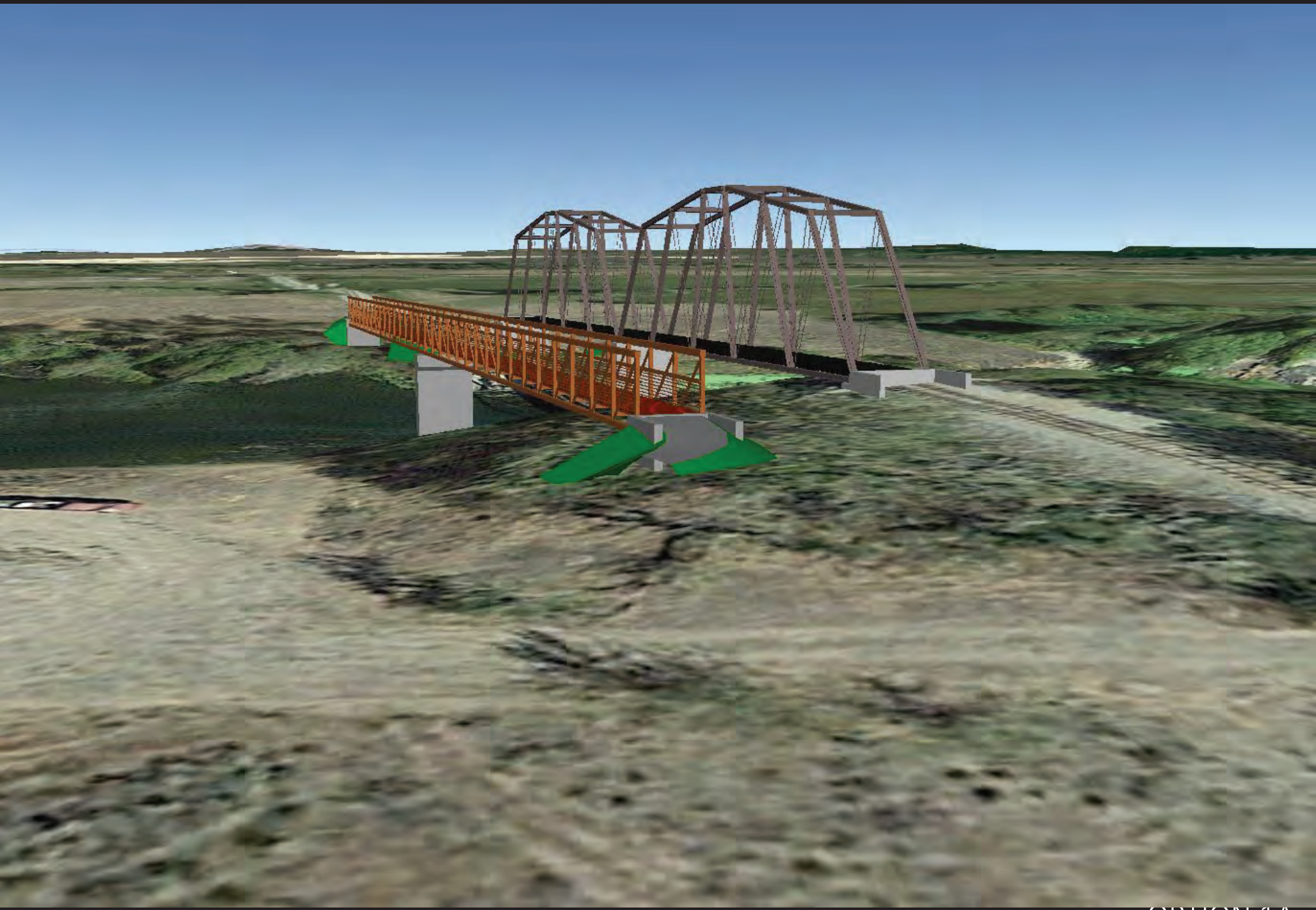
OPTION 1A

OPTION 1A

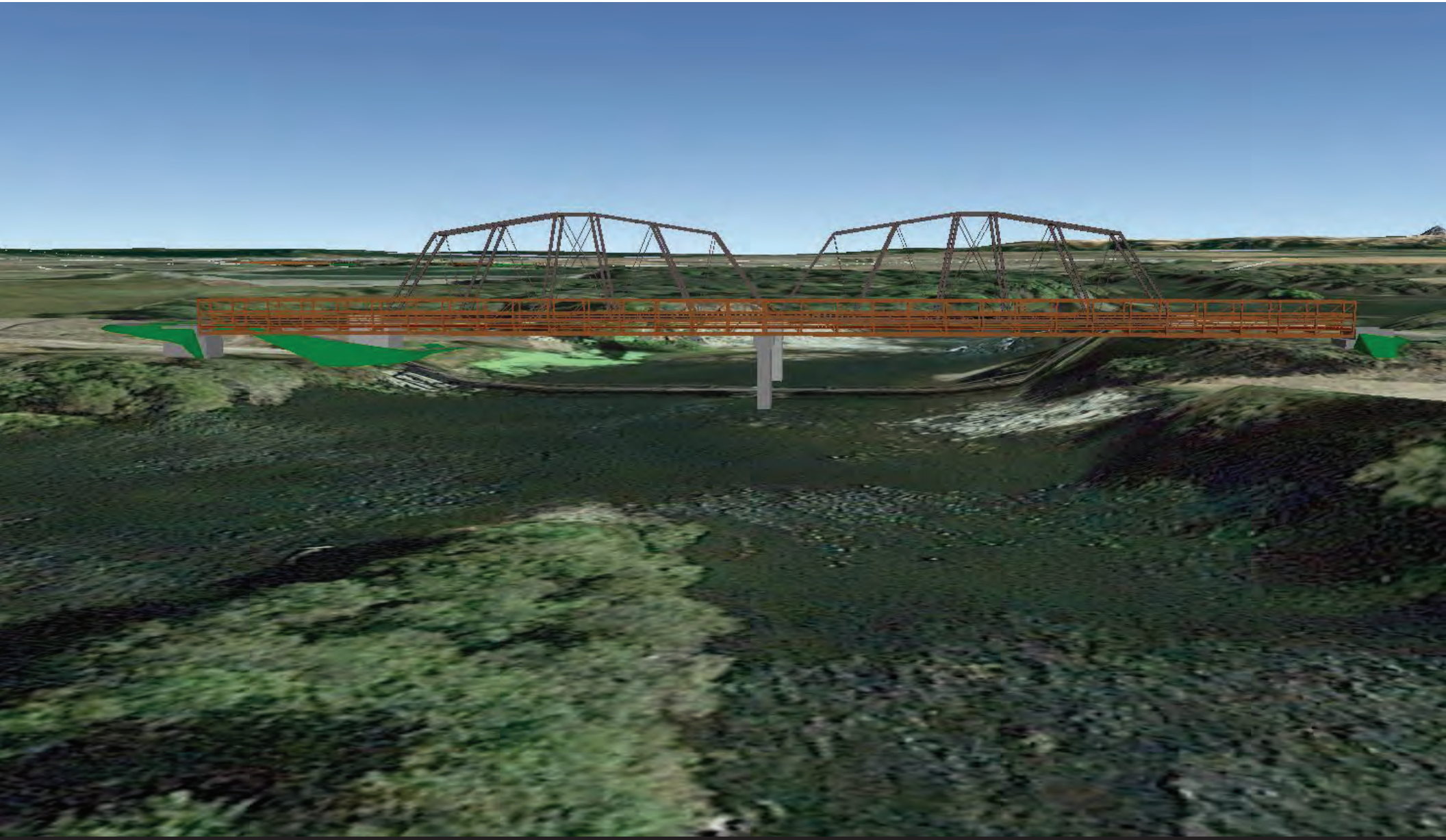
OPTION 1A


OPTION 1A

OPTION 1A



OPTION 1A



OPTION 1A

OPTION 1A

OPTION 1B

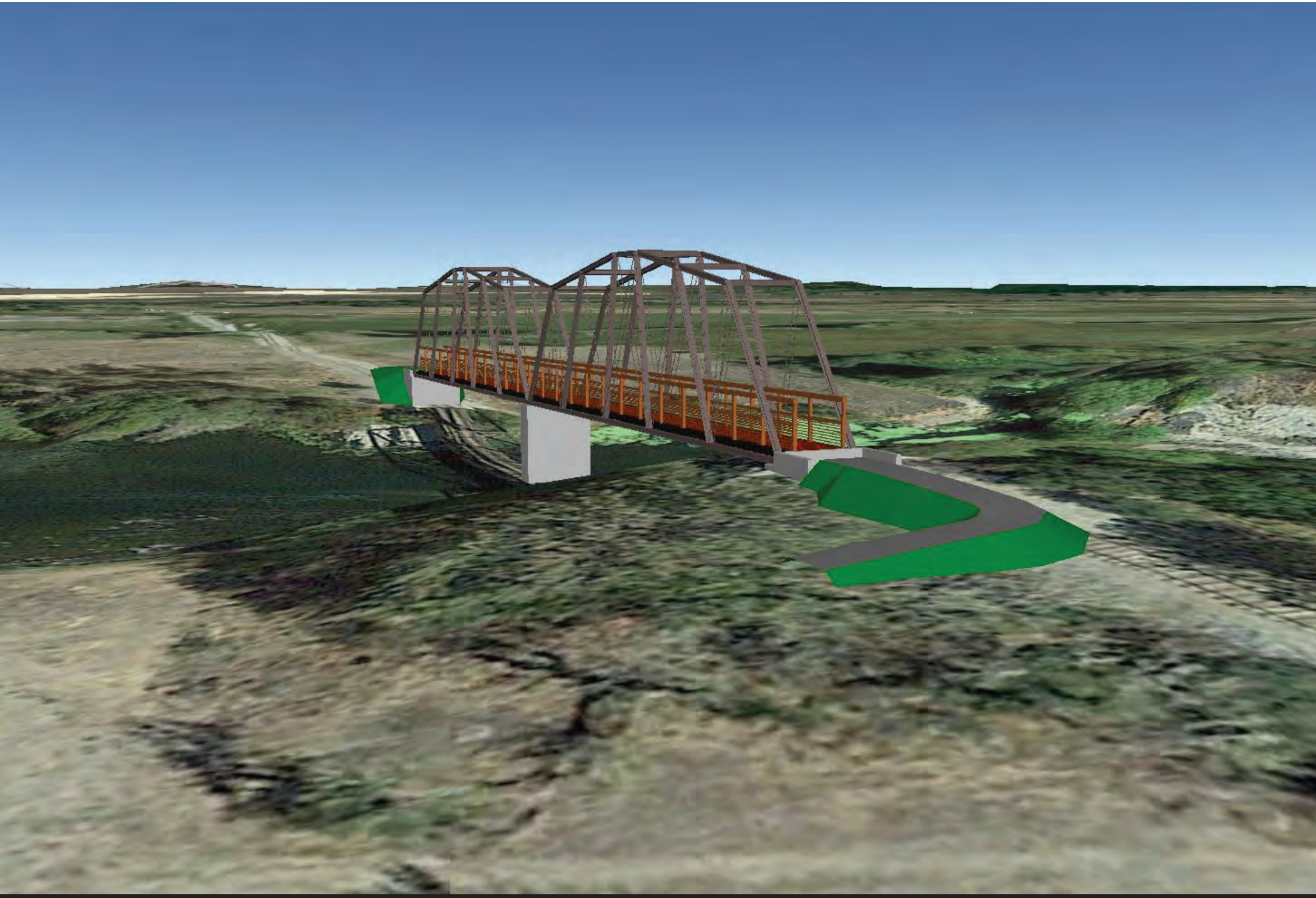
OPTION 1B

OPTION 1B

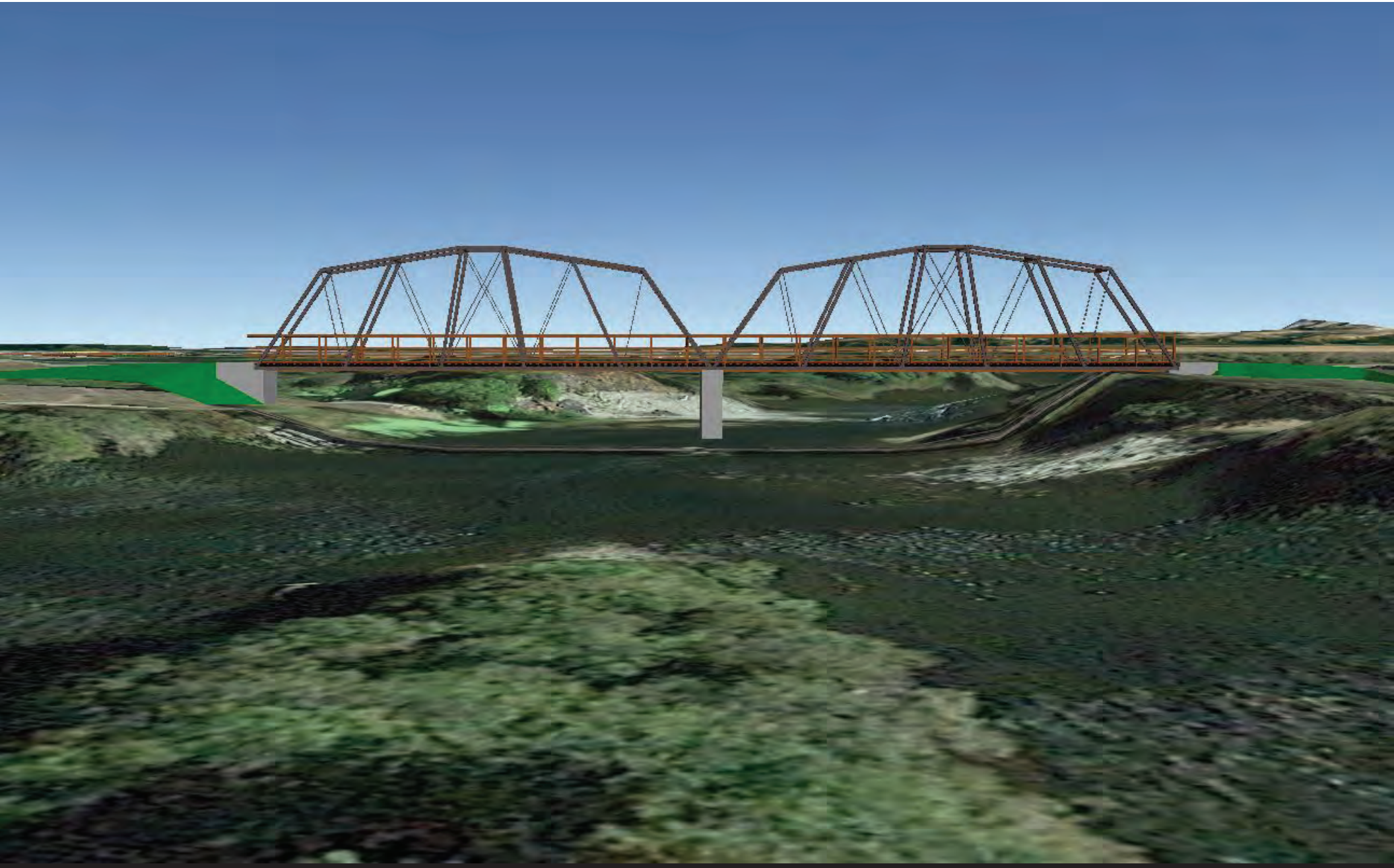
OPTION 1B

OPTION 1B

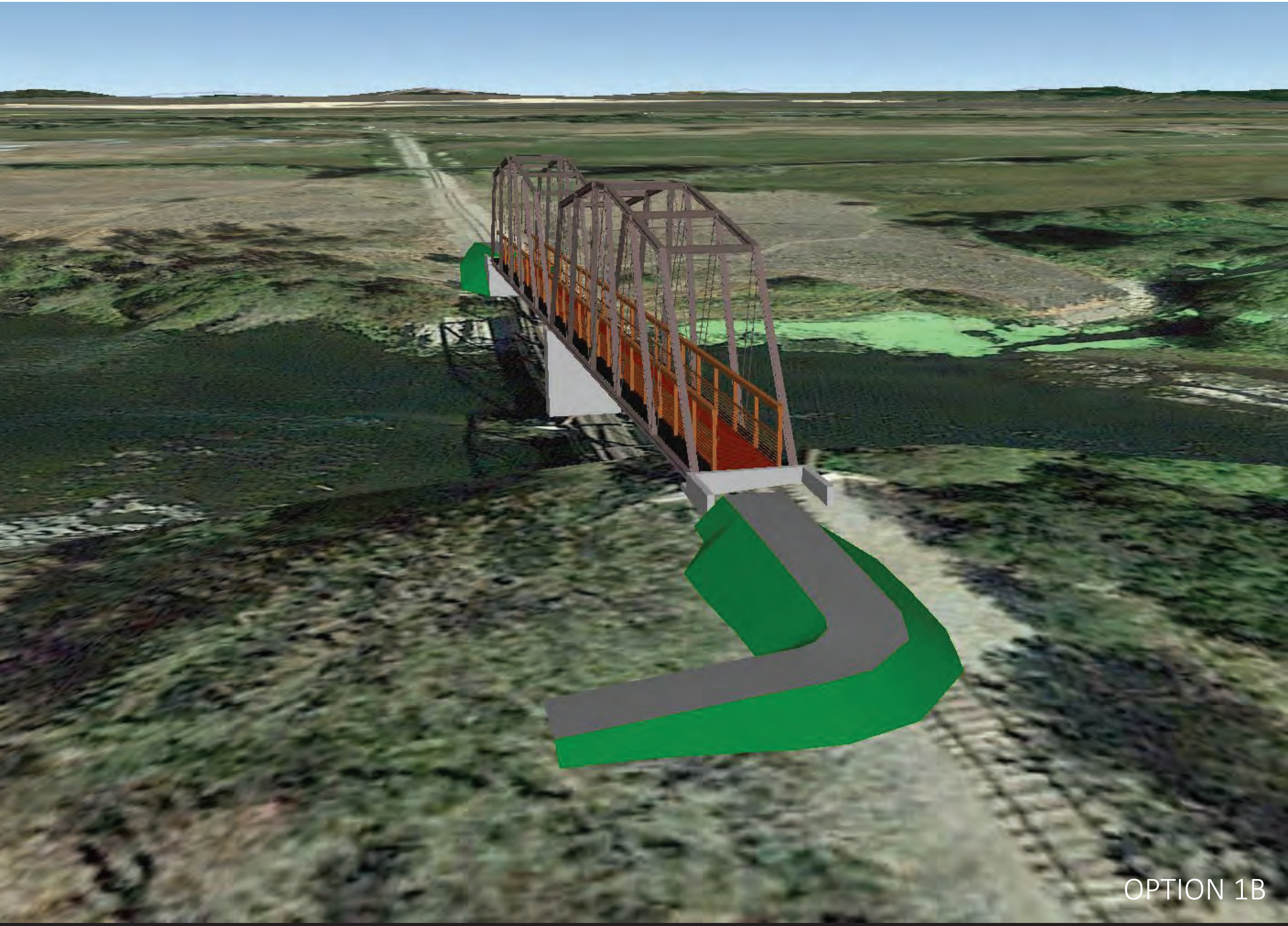
OPTION 1B



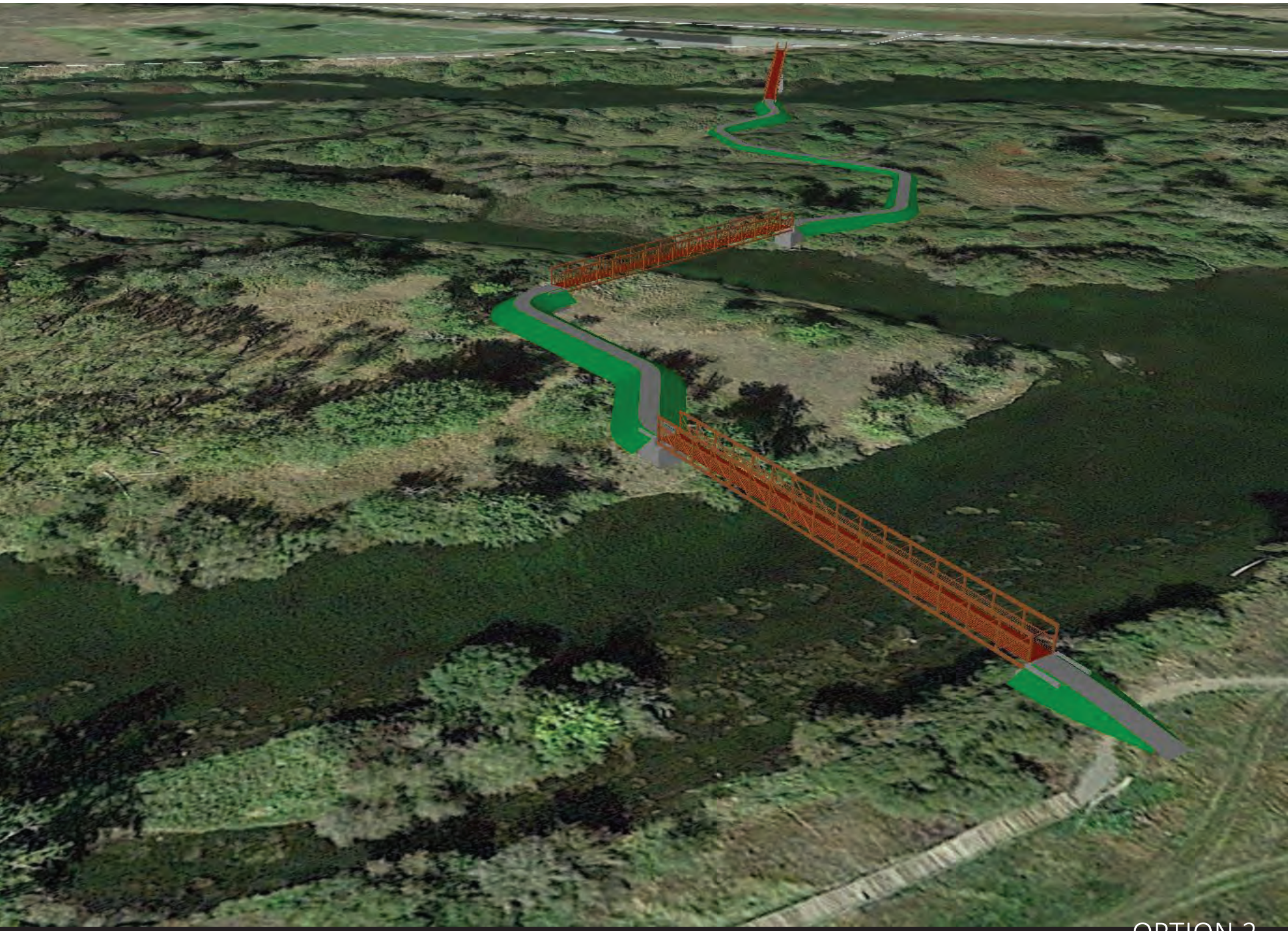
OPTION 1B



OPTION 1B


OPTION 1B

OPTION 2



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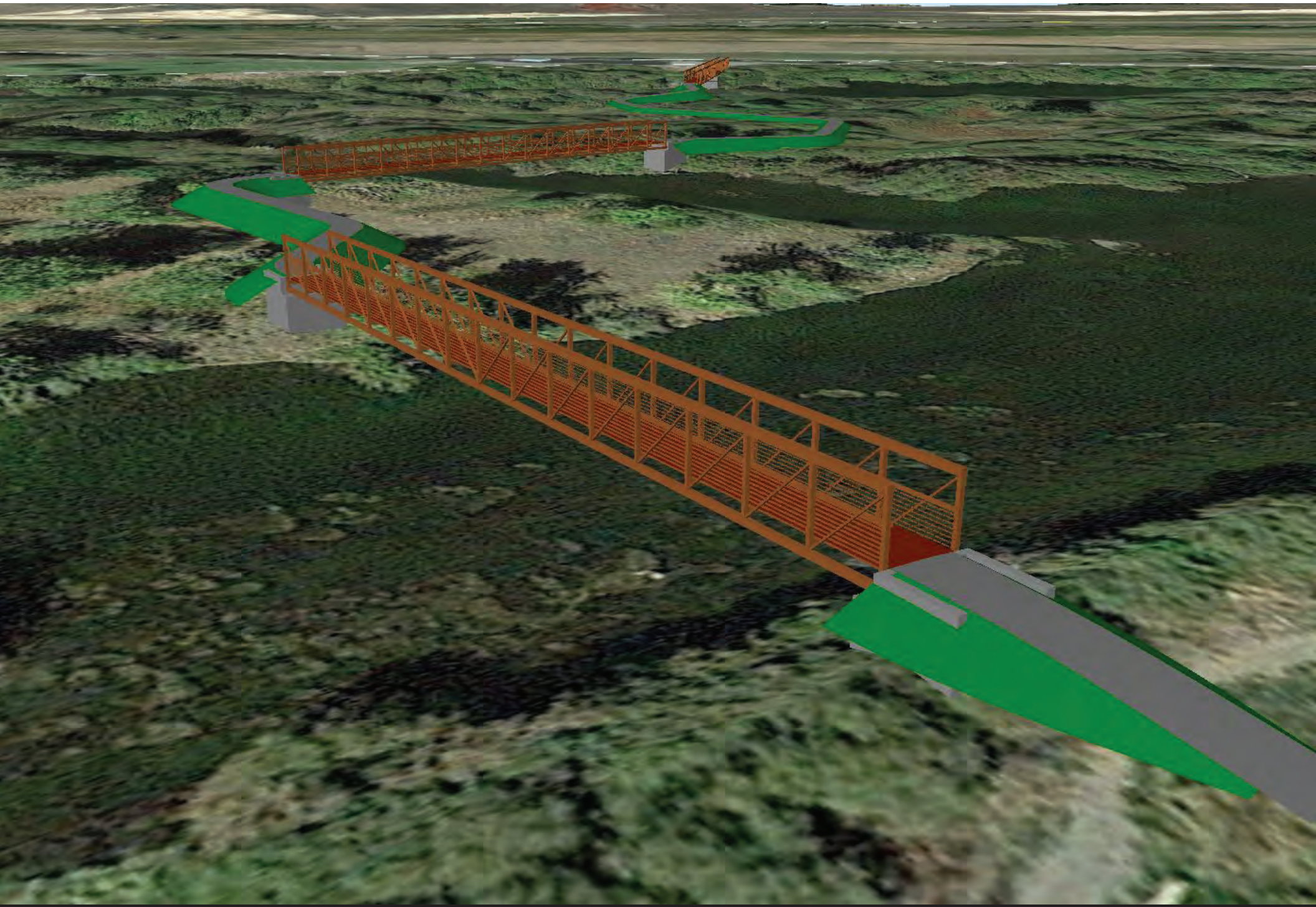

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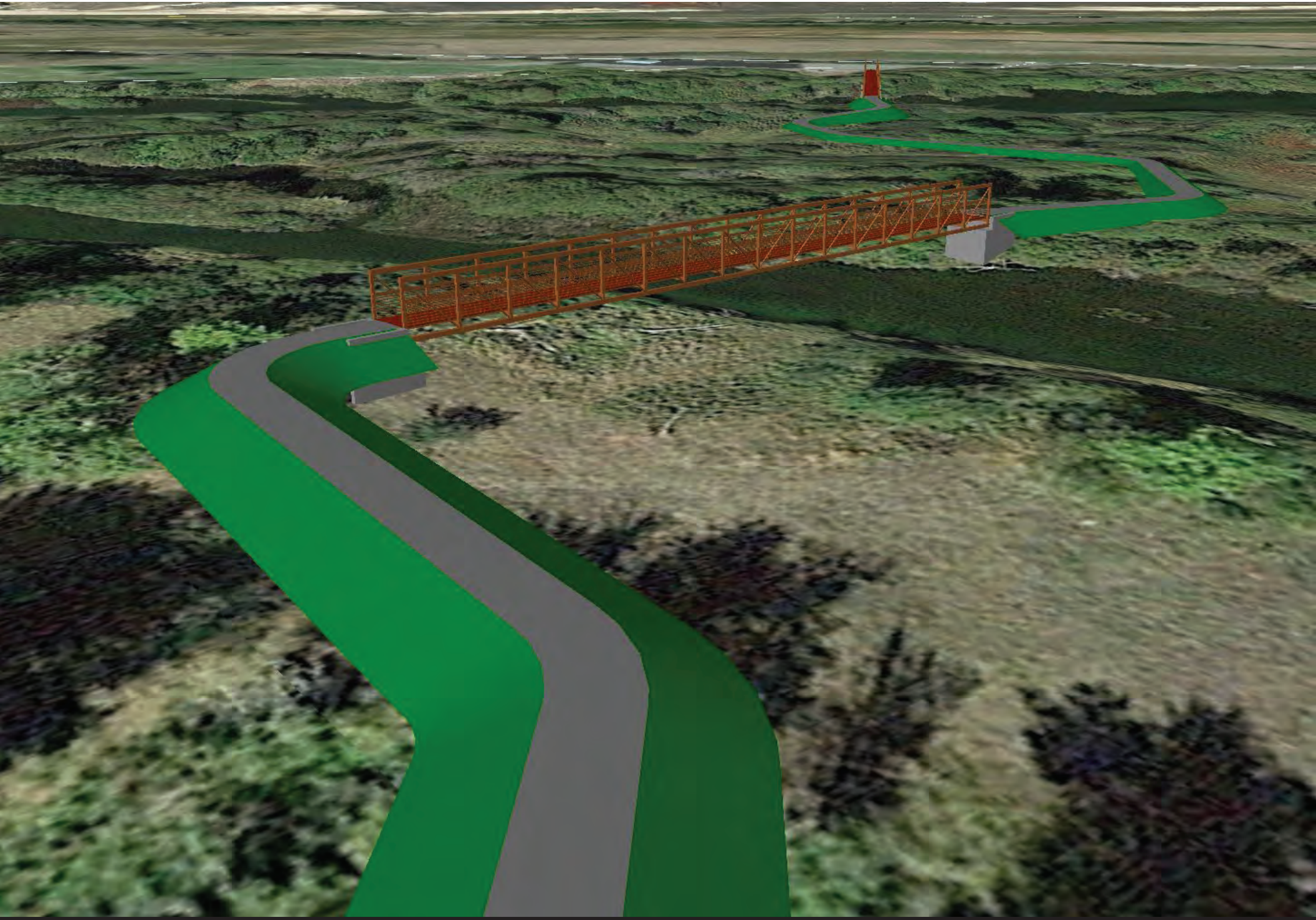

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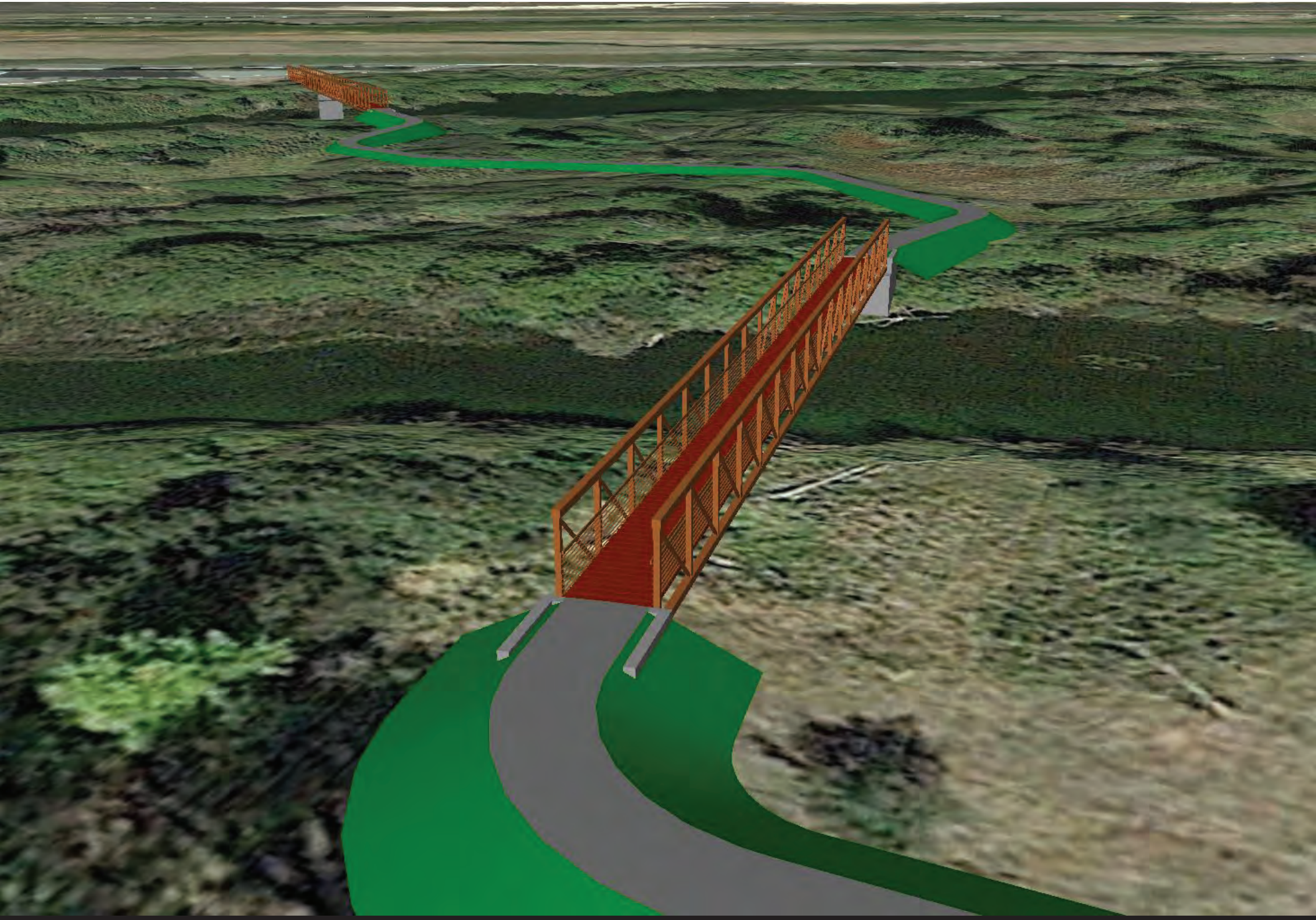

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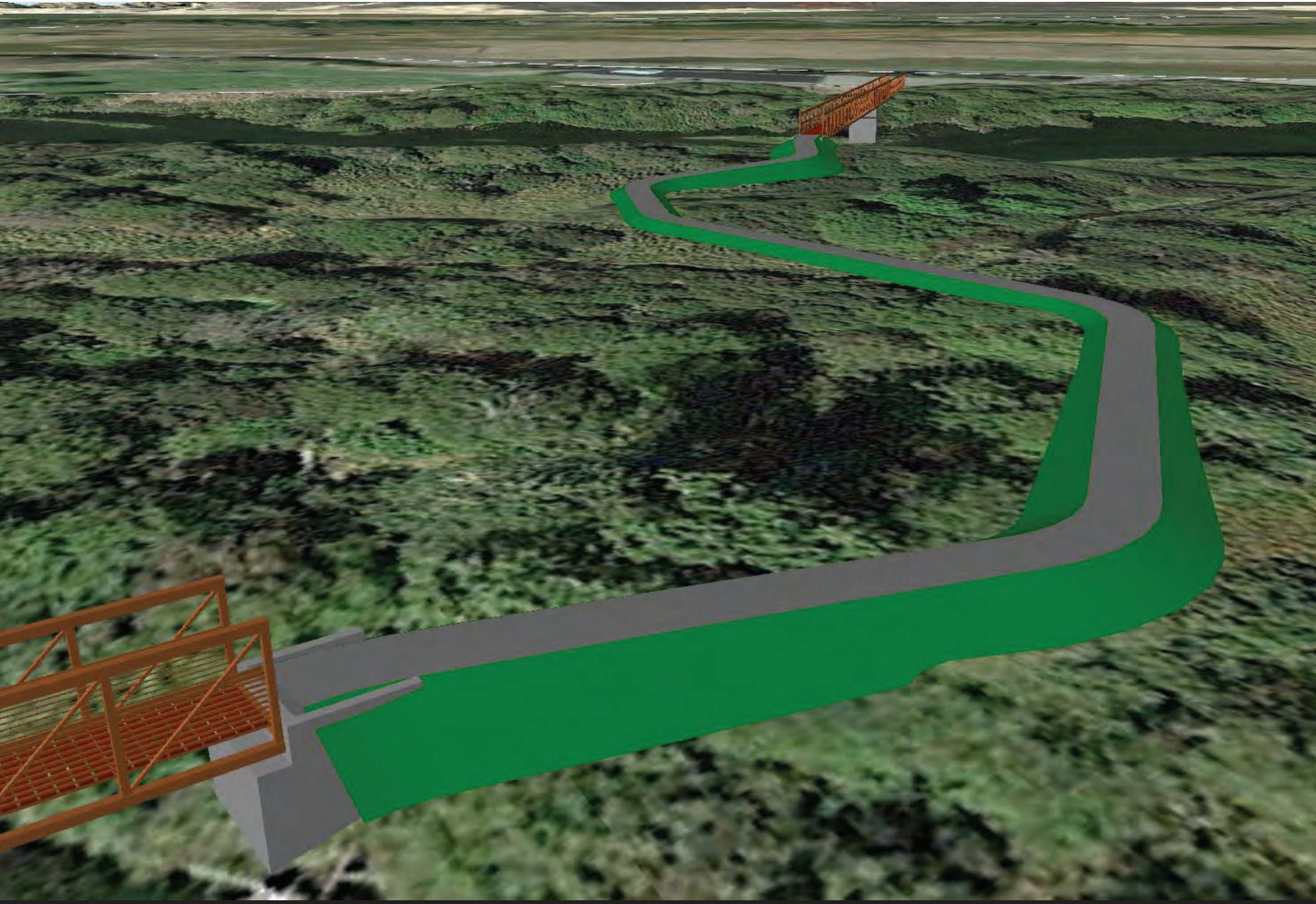

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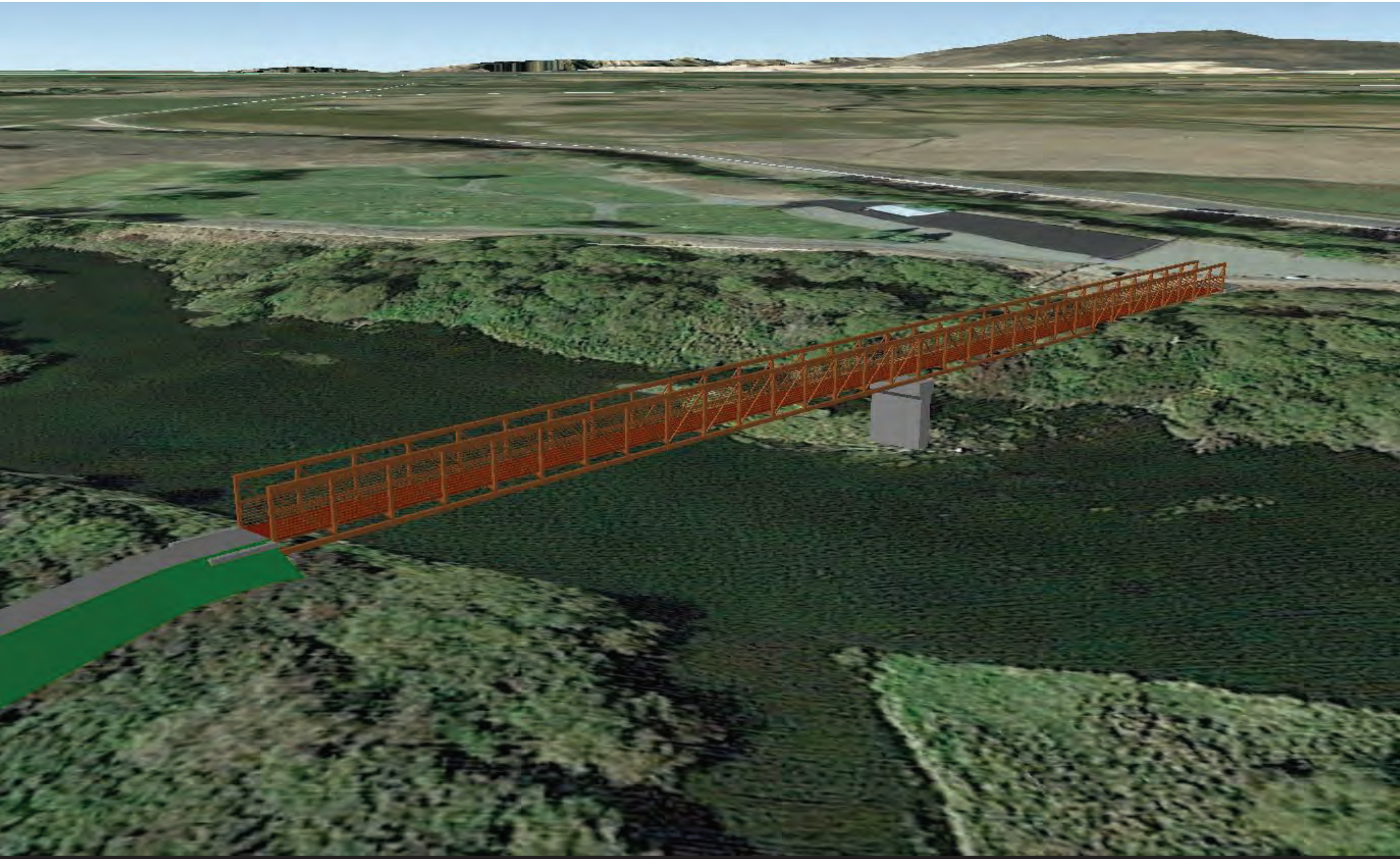

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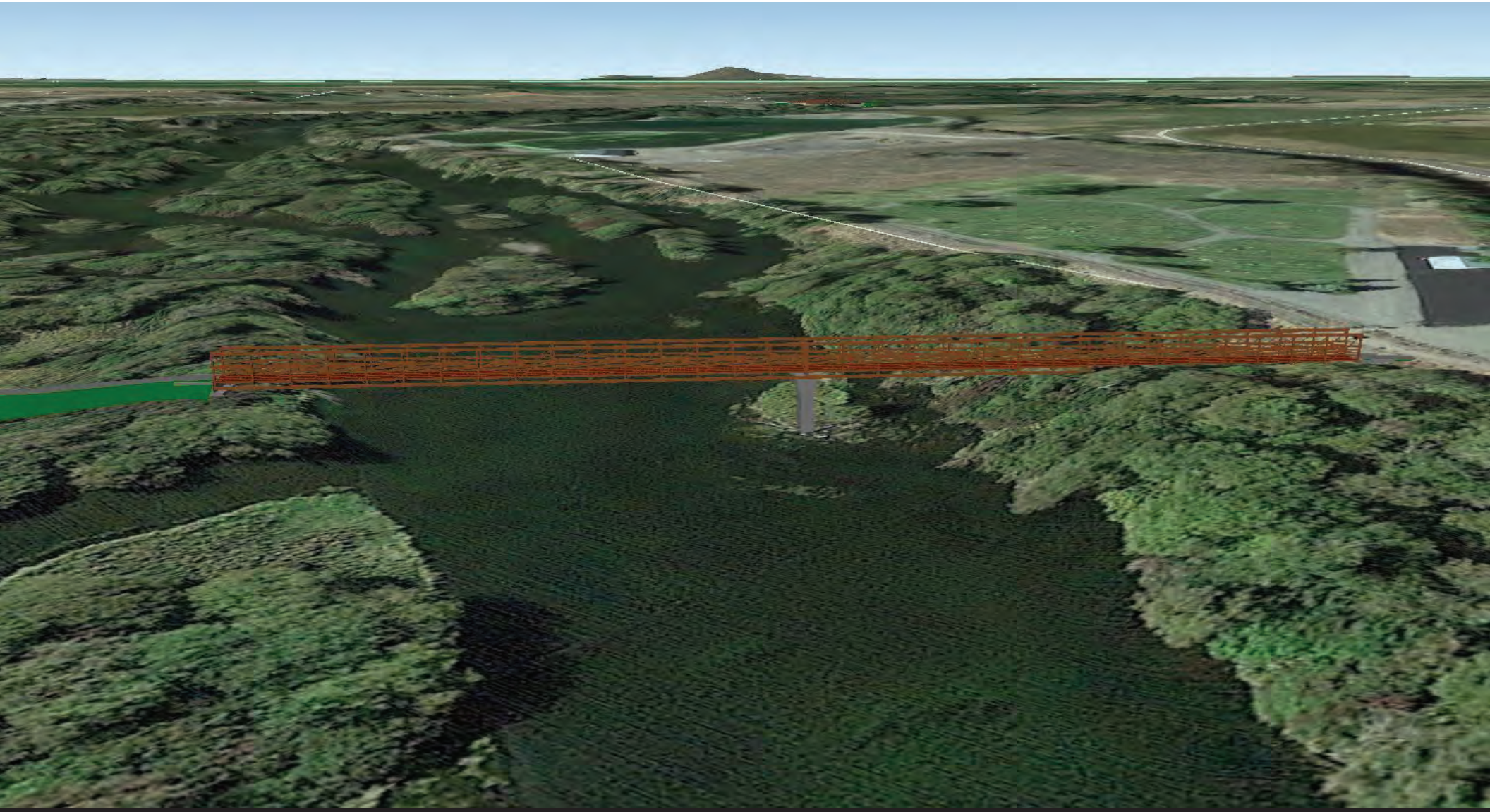

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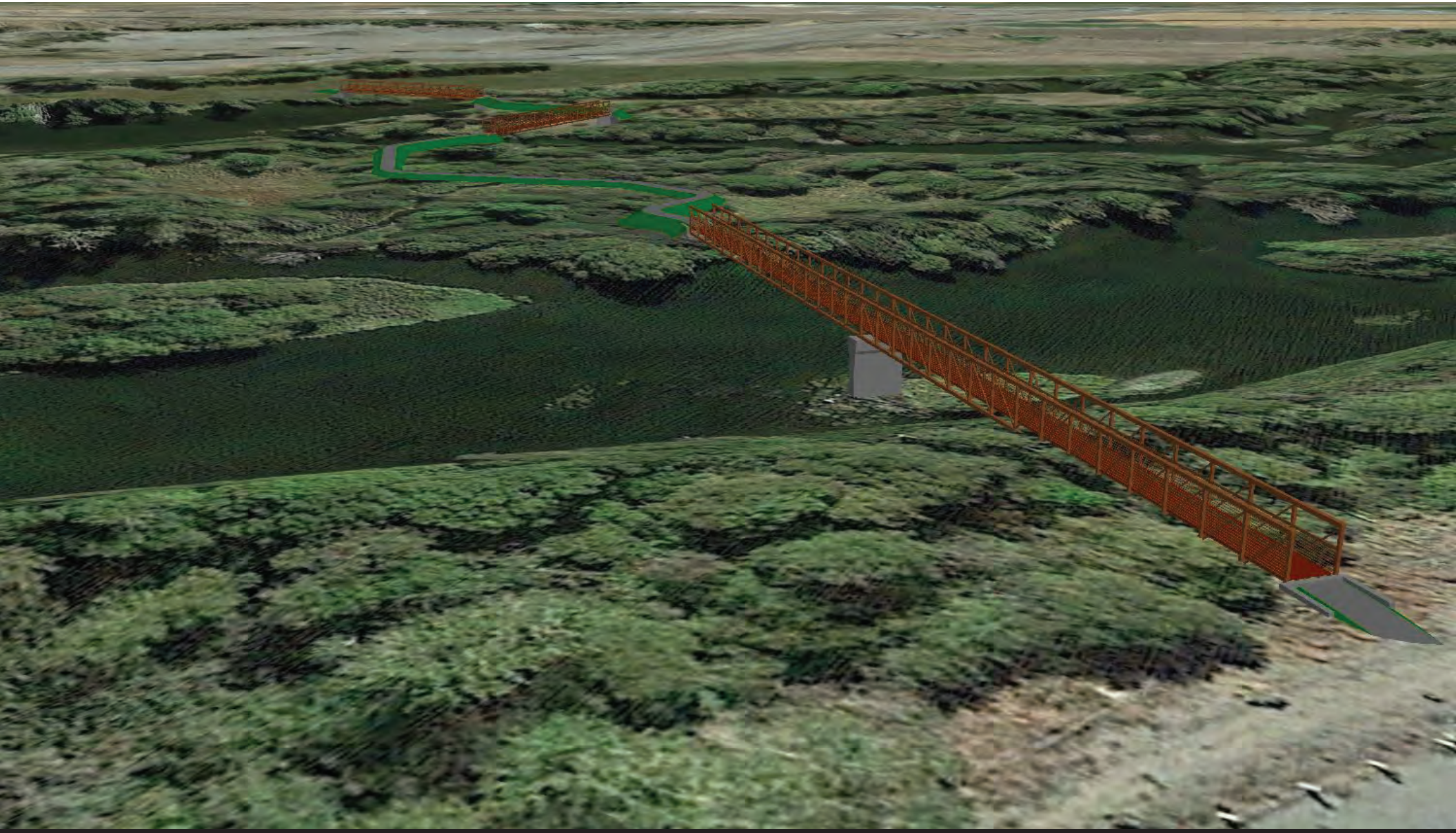

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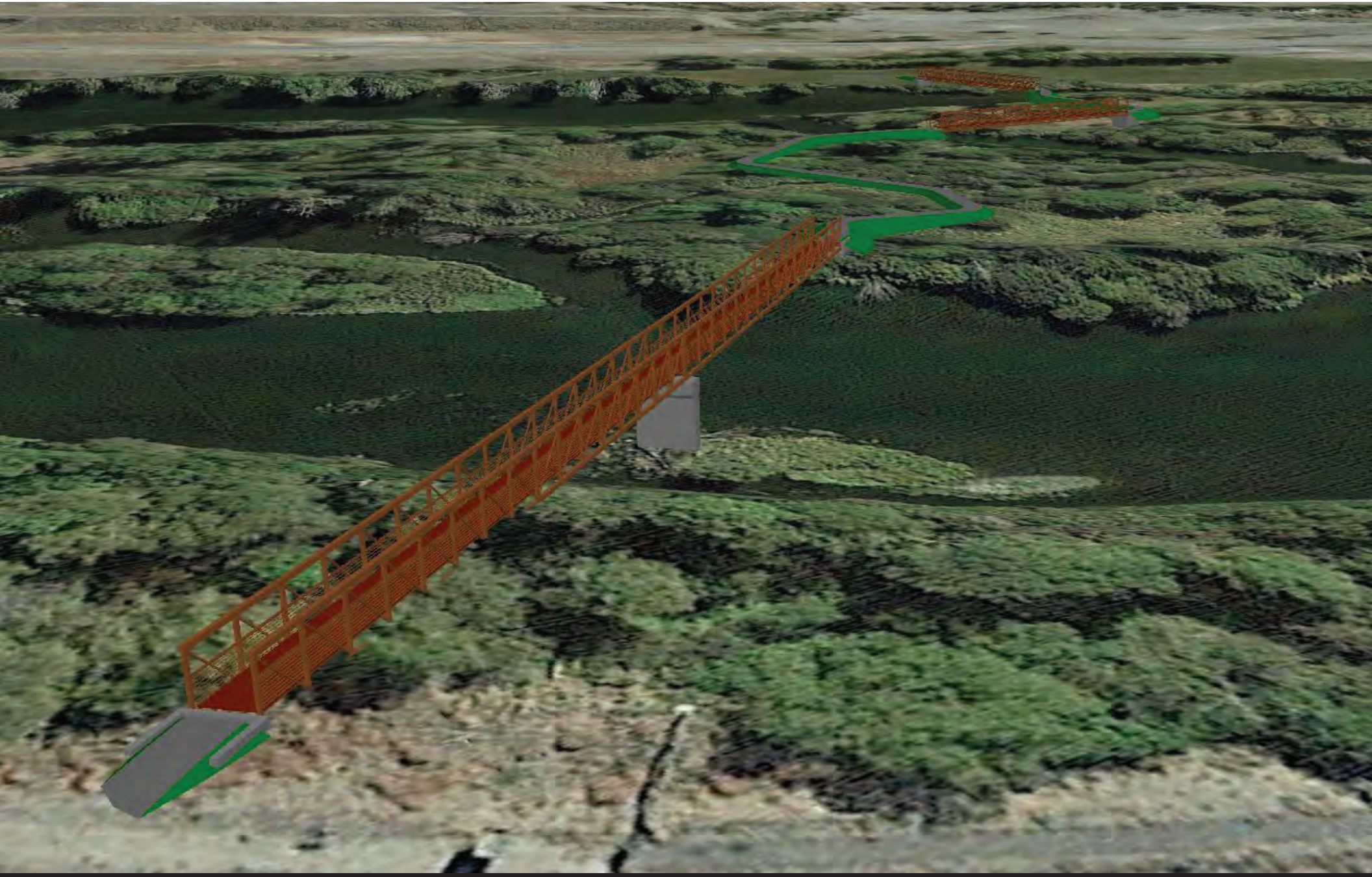
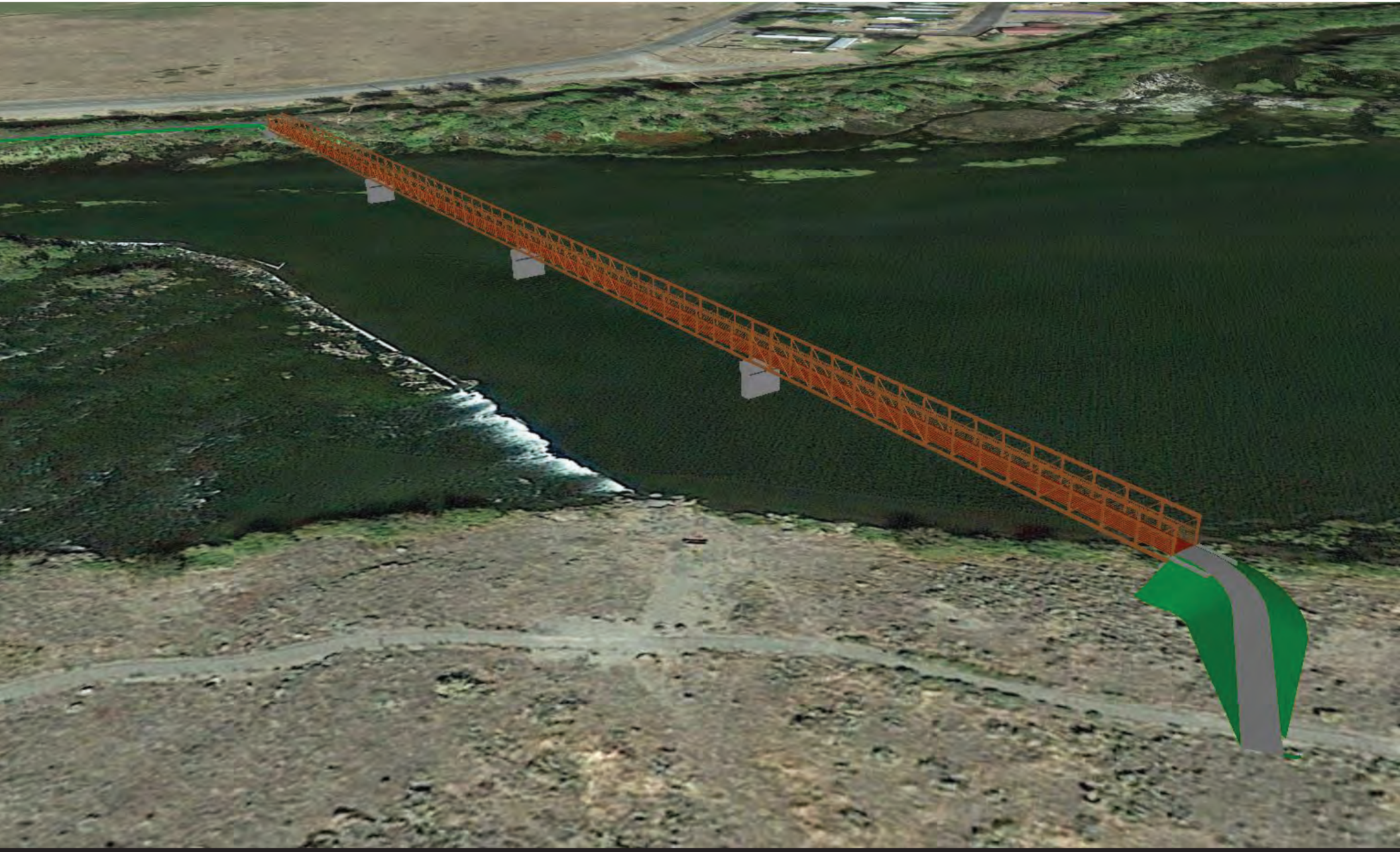


OPTION 2

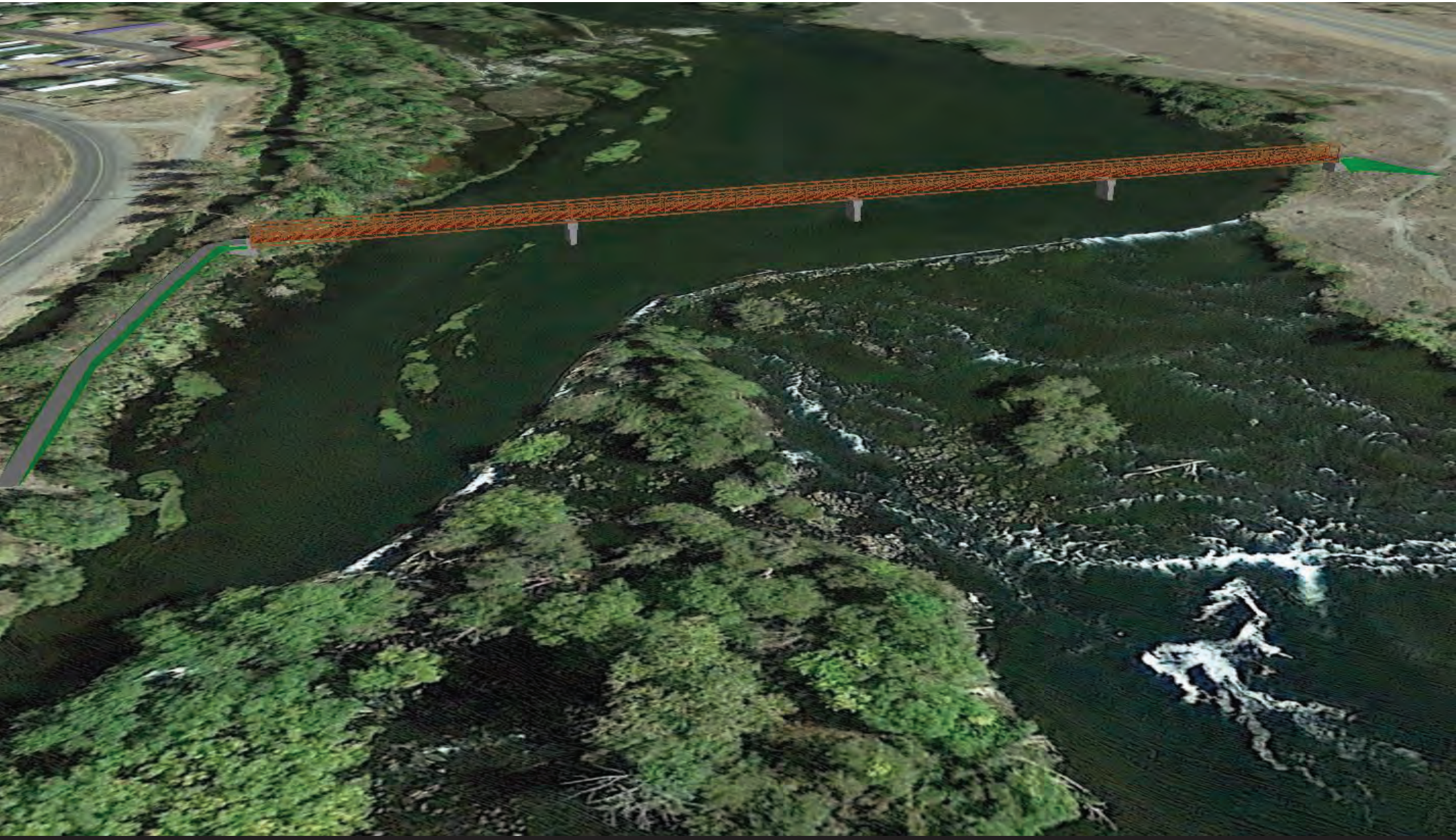
OPTION 2

OPTION 3



OPTION 3

OPTION 3



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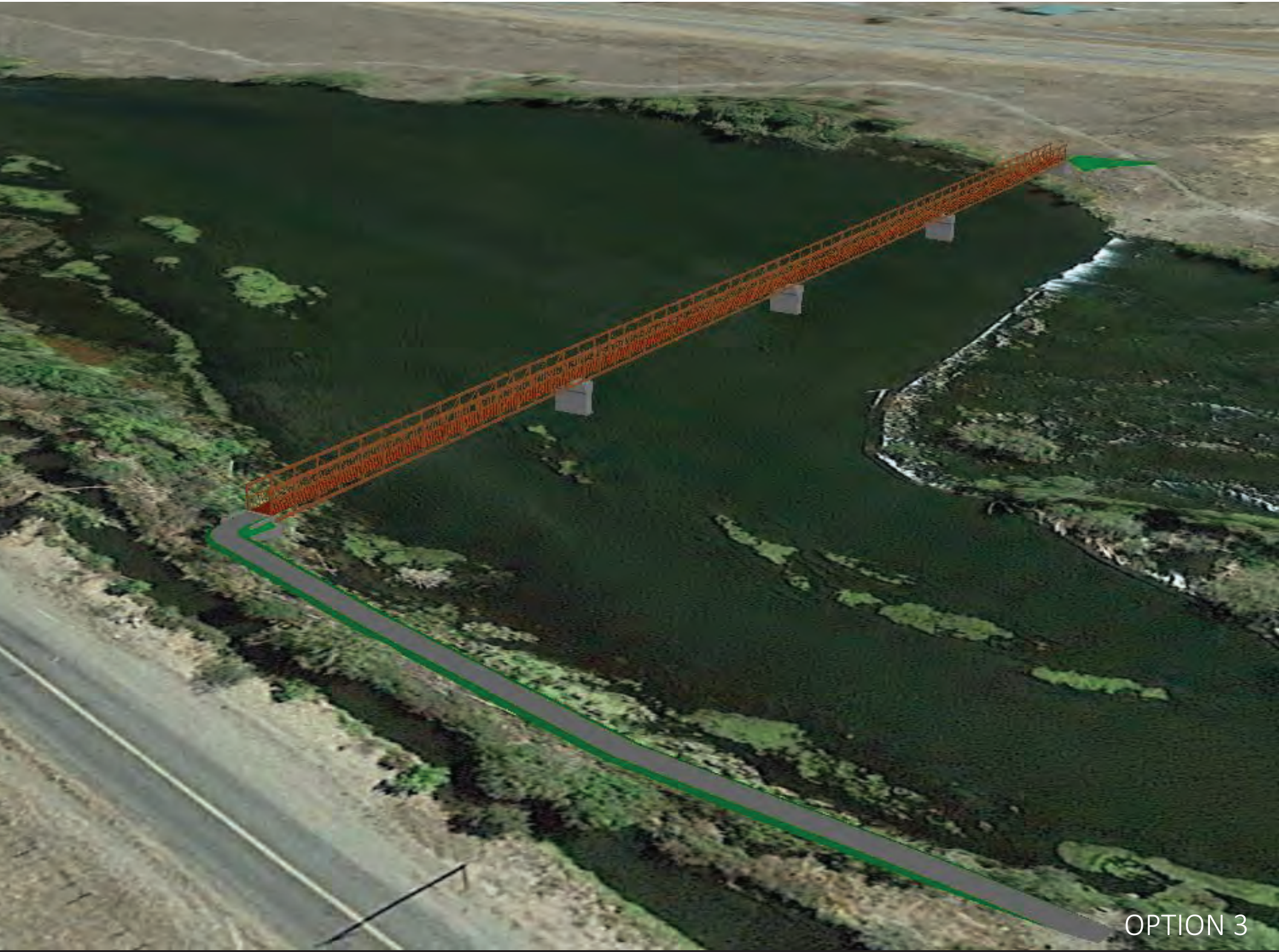
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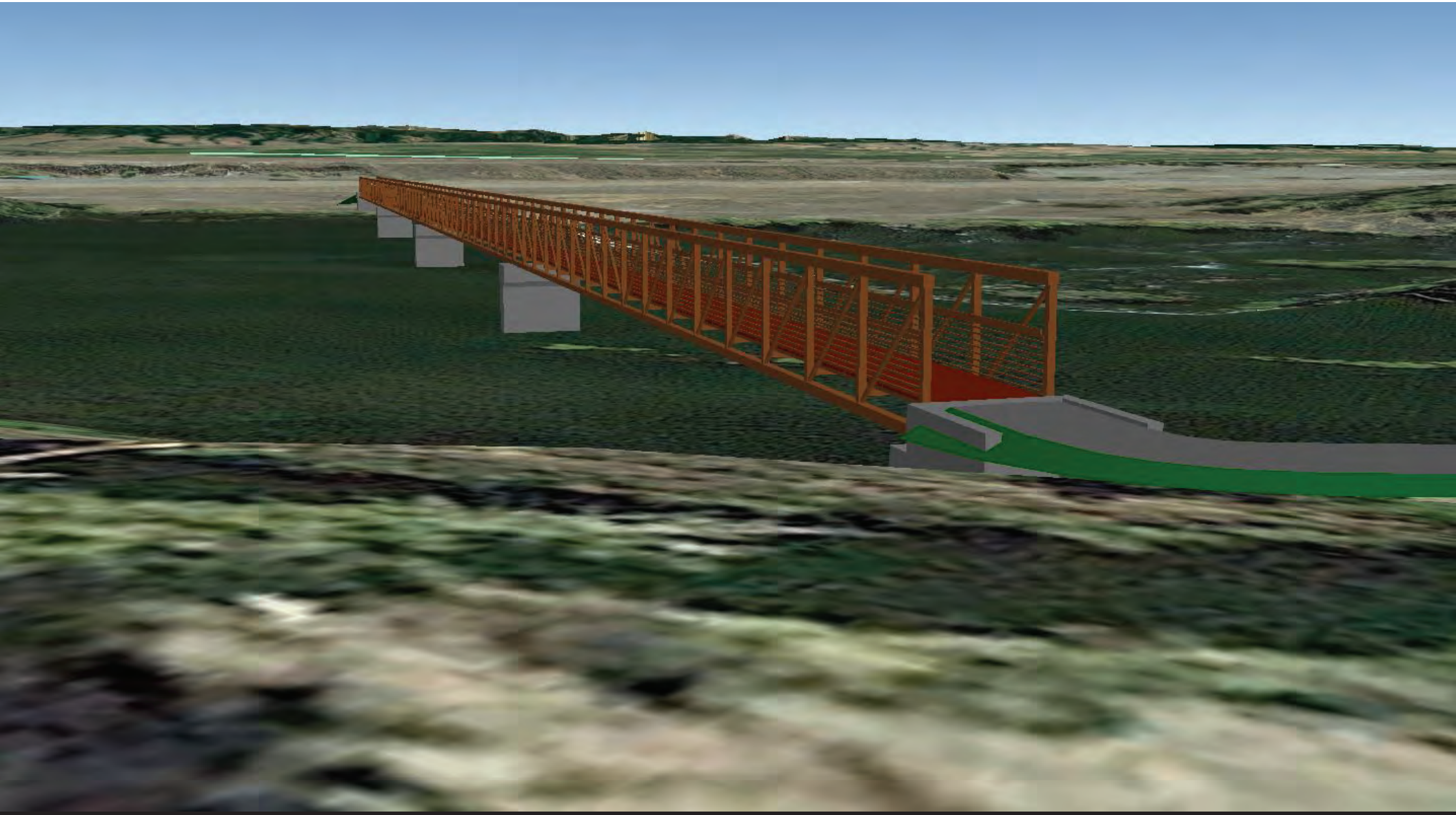
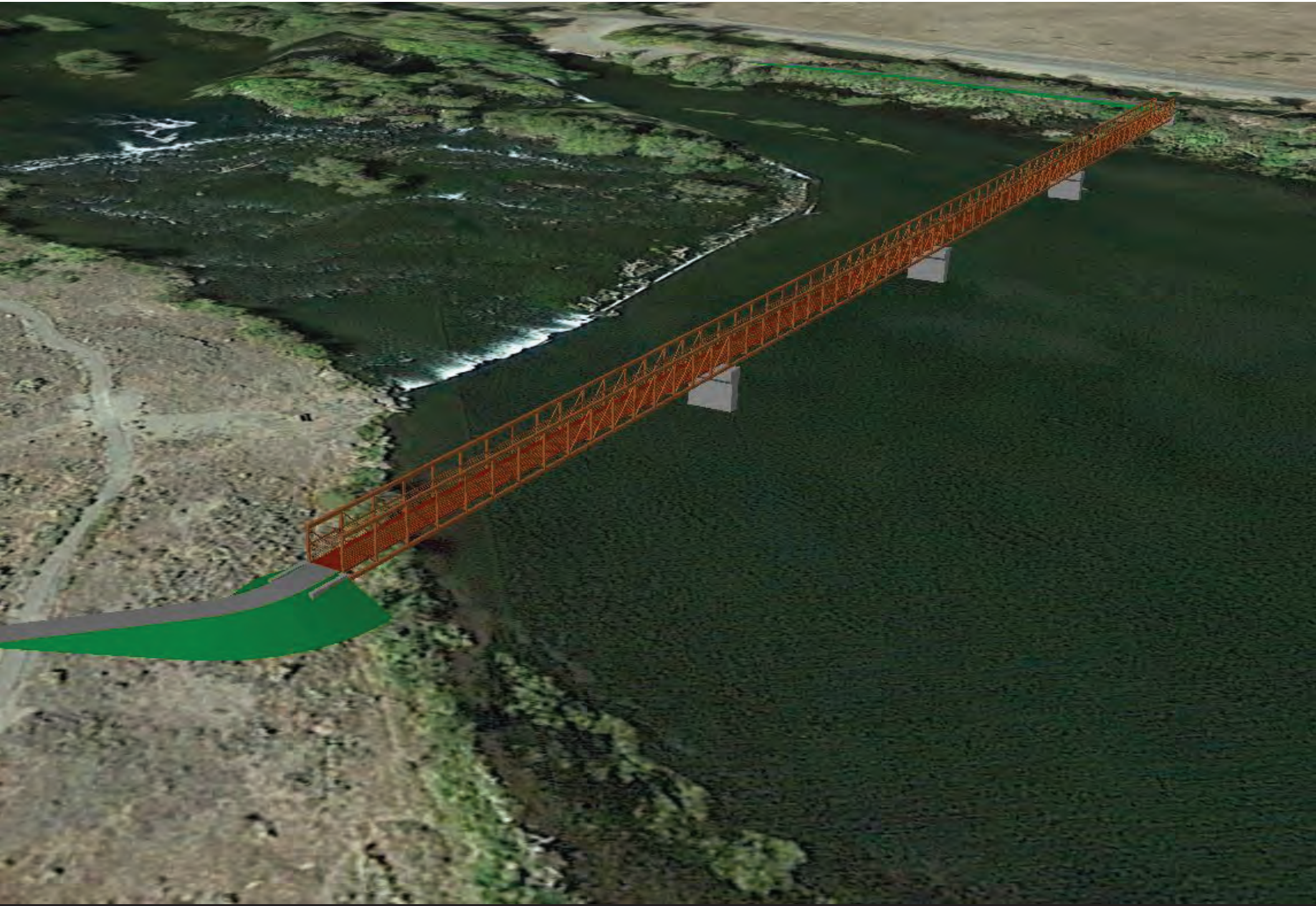


OPTION 3



OPTION 3