

Ross Fork Rock Creek fish passage
FUTURE FISHERIES IMPROVEMENT PROGRAM GRANT APPLICATION

Please fill in the highlighted areas
all sections (IA, IB, IC, etc.) must be addressed or the application will be considered invalid

I. APPLICANT INFORMATION

- A. Applicant Name: Trout Unlimited
- B. Mailing Address: 312 N. Higgins Ave. Suite 200
- C. City: Missoula State: MT Zip: 59802
Telephone: 406-552-2168 E-mail: tscanlon@tu.org
- D. Contact Person: Teresa Scanlon
Address if different from Applicant: _____
City: _____ State: _____ Zip: _____
Telephone: 406-552-2168 (cell) E-mail: tscanlon@tu.org
- E. Landowner and/or Lessee Name (if other than Applicant): Hesse and Sons, LLC
Mailing Address: 280 Ross Fork Road
City: Philipsburg State: MT Zip: 59858
Telephone: 252-922-3308 E-mail: dahlovely@gmail.com

II. PROJECT INFORMATION*

- A. Project Name: Ross Fork Rock Creek Fish Passage Reconnection Project
River, stream, or lake: Ross Fork Rock Creek
Location: Township: 5 N Range: 16W Section: 24
Latitude: 46.177642° Longitude: -113.551652° *within project (decimal degrees)*
County: Granite
- B. Purpose of Project:
To reconnect fish habitat for native westslope cutthroat trout, bull trout, and other wild fish on Ross Fork Rock Creek, a major headwater tributary to Rock Creek.

C. Brief Project Description:

Ross Fork Rock Creek is located in Granite County in the Rock Creek watershed in township 5 north, range 16 west. The Ross Fork Rock Creek watershed is 60,000 acres, and Ross Fork Rock Creek is one of four headwater tributaries to Rock Creek. Ross Fork flows in a northerly direction for 23 miles until the confluence of the Ross Fork, Middle Fork, and West Fork, where the three become Rock Creek. The first 15 miles of Ross Fork are on the Beaverhead-Deerlodge National Forest, and the last eight miles flow through private land. The Ross Fork Fish Passage Reconnection Project, located 0.5 miles downstream of the national forest boundary, will replace a fish passage barrier and reconnect Ross Fork to the mainstem of Rock Creek. An inventory of instream structures in the Rock Creek watershed in 2017 by Trout Unlimited identified this project as the only major upstream fish passage barrier on Ross Fork. Ross Fork is designated critical bull trout habitat and sustains both resident and migratory populations of native Bull, Westslope cutthroat, other trout and non-game fish. The project will connect a major native trout spawning tributary in the Rock Creek watershed.

The project will remove two undersized, five-foot-wide culverts that are located 0.5 miles downstream from the Beaverhead-Deerlodge National Forest boundary on Ross Fork. Because bankfull width on Ross Fork is greater than 10 feet, the culvert causes high velocities which impedes fish from migrating to spawning areas upstream on Ross Fork in the spring.

With support from the Future Fisheries Improvement Program, Trout Unlimited proposes to remove the undersized culverts and replace them with a farm bridge. An additional two rock weirs will be built in the project section to maintain streambed stability after the culverts are removed. The bridge design follows an adapted NRCS farm bridge design and will be a 50-foot long by 18-foot wide rail car bridge. The bridge will be built 6 feet above bankfull and will use a rail car and concrete eco blocks for bridge abutments. The abutments will be backfilled using material from the project site. Locally sourced rock will be placed on the inside of the abutments to prevent scour.

Trout Unlimited will coordinate with the landowner on permitting and project implementation. This project is part of a new Rock Creek Restoration Program established by Trout Unlimited (TU). In 2017, TU conducted an inventory of diversion structures in the watershed found that at least 29 of the 92 identified diversions are partial or full fish passage barriers. As a result, TU launched the Rock Creek Restoration Program and is working in partnership with the Natural Resource Damage Program, United States Fish & Wildlife Service, United States Forest Service, Montana Fish, Wildlife, & Parks, Bureau of Land Management, other state and federal partners, and private landowners to enhance the fishery and reconnect fish passage and habitat in Rock Creek and its tributaries.

D. Length of stream or size of lake that will be treated:

23 miles of Ross Fork Rock Creek reconnected to the mainstem Rock Creek

E. Project Budget:

Grant Request (Dollars): \$ \$21,400

Contribution by Applicant (Dollars): \$ 3,000 In-kind \$ 0

(salaries of government employees are not considered as matching contributions)

Contribution from other Sources (Dollars): \$ 9,920 In-kind \$ 8,500

(attach verification - See page 2 budget template)

Total Project Cost: \$ 42,820

F. Attach itemized (line item) budget – see template

G. Attach **specific project plans, detailed sketches, plan views, photographs, maps, evidence of landowner consent, evidence of public support and fish biologist support, and/or other information necessary to evaluate the merits of the project. If project involves water leasing or water salvage complete a *supplemental questionnaire*** (fwp.mt.gov/habitat/futurefisheries/supplement2.doc).

H. **Attach land management & maintenance plans that will ensure protection of the reclaimed area.**

III. PROJECT BENEFITS*

A. What species of fish will benefit from this project?:

Bull trout, Westslope cutthroat trout, and other native trout and wild fish.

B. How will the project protect or enhance wild fish habitat?:

Reconnecting Ross Fork will provide an additional 15 miles of spawning and rearing habitat as well as habitat refugia during summer months for fish populations in the mainstem.

C. Will the project improve fish populations and/or fishing? To what extent?:

Yes, the project will likely improve fish populations and fishing potential. It will improve access to an additional 15 miles of habitat in Ross Fork for spawning and rearing from Rock Creek. The connection to Rock Creek has the potential to improve both resident and fluvial fish populations in Ross Fork. There is good public access to fishing Ross Fork on the Beaverhead-Deerlodge Forest, and the forest boundary is half of a mile upstream from the project site. The reconnected habitat in Ross Fork will likely improve recruitment of fish to and fishing in the mainstem of Rock Creek, which is a very popular fishing destination with many public access points.

D. Will the project increase public fishing opportunity for wild fish and, if so, how?:

The project opens spawning habitat in Ross Fork and has the potential to increase recruitment to and fishing in the mainstem of Rock Creek. The project also has the potential to improve both resident and fluvial fish populations in the Ross Fork. There is good public access to fishing Ross Fork a half of a mile upstream from the project site on the Beaverhead-Deerlodge National Forest. The upper mainstem of Rock Creek has two state managed fishing access sites as well as conservation easements that grant access to anglers on private land.

E. The project agreement includes a 20-year maintenance commitment. Please discuss your ability to meet this commitment.

Trout Unlimited will coordinate with the private landowner to ensure that the farm bridge is maintained in the long term. The landowner has also provided match for the project and is already working with Trout Unlimited to identify other conservation project opportunities on the Ross Fork property.

F. What was the cause of habitat degradation in the area of this project and how will the project correct the cause?:

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The existing culverts are undersized and create very high velocities during spring run-off and storm events. The inlet of the culvert gets blocked by woody debris, and the creek overtops during high flows. Increased velocities at the outlet of the culverts actively erode the downstream streambanks, increase sedimentation, and cause channel incision. High stream velocities and the build-up of debris obstructs upstream fish passage in these high flow events. The project will reduce the potential for this crossing to fail thus reducing the risk of channel avulsion in the future. The project will reconnect 23 miles of habitat for spring fish passage.

The undersized culvert will be replaced with a bridge that spans the bankfull width of Ross Fork, reconnect fish passage during high flows, and reduce downstream erosion. Two rock weirs built instream will stabilize the stream grade and repair the stream habitat and channel.

G. What public benefits will be realized from this project?:

The project has the potential to improve the recreational fishery in Ross Fork and Rock Creek, a blue-ribbon fishery. This project will also be a demonstration to neighboring landowners that Trout Unlimited can help people and improve the fishery. Through continued coordination with Rock Creek landowners, Trout Unlimited will continue to implement projects that reconnect fish passage throughout Rock Creek.

H. Will the project interfere with water or property rights of adjacent landowners? (explain):

No, the project will not interfere with water rights of landowners.

I. Will the project result in the development of commercial recreational use on the site?: (explain):

No, the project will not result in the development of recreational use on the site.

J. Is this project associated with the reclamation of past mining activity?:

No

Each approved project applicant must enter into a written agreement with Montana Fish, Wildlife & Parks specifying terms and duration of the project. The applicant must obtain all applicable permits prior to project construction. A competitive bid process must be followed when using State funds.

IV. AUTHORIZING STATEMENT

I (we) hereby declare that the information and all statements to this application are true, complete, and accurate to the best of my (our) knowledge and that the project or activity complies with rules of the Future Fisheries Improvement Program.

Applicant Signature:  Date: 11/28/2018

Sponsor (if applicable): 

***Highlighted boxes will automatically expand.**

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Mail To: Montana Fish, Wildlife & Parks
Fisheries Division
PO Box 200701
Helena, MT 59620-0701

E-mail To: Michelle McGree
mmcgree@mt.gov
(electronic submissions MUST be signed)

Incomplete or late applications will be rejected and returned to applicant.
Applications may be rejected if this form is modified.

*****Applications must be signed and *received* by the Future Fisheries Program Officer in Helena before December 1 and June 1 of each year to be considered for the subsequent funding period.*****

Ross Fork Rock Creek fish passage

Ross Fork Rock Creek Bridge Budget

Both tables must be completed or the application will be returned

WORK ITEMS (ITEMIZE BY CATEGORY)	NUMBER OF UNITS	UNIT DESCRIPTION*	COST/UNIT	TOTAL COST	CONTRIBUTIONS			
					FUTURE FISHERIES REQUEST	IN-KIND SERVICES**	IN KIND CASH	TOTAL
Personnel								
Survey	4	Hours	\$50.00	\$ 200.00			200.00	\$ 200.00
Permitting	8	Hours	\$50.00	\$ 400.00			400.00	\$ 400.00
Design	5	Hours	\$100.00	\$ 500.00			500.00	\$ 500.00
Oversight	40	Hours	\$50.00	\$ 2,000.00			2,000.00	\$ 2,000.00
Labor	80	Hours	\$25.00	\$ 2,000.00			2,000.00	\$ 2,000.00
			Sub-Total	\$ 5,100.00	\$ -	\$ -	\$ 5,100.00	\$ 5,100.00
Travel								
Mileage	800	Miles	\$0.55	\$ 440.00			440.00	\$ 440.00
Per diem	4	Days	\$25.00	\$ 100.00			100.00	\$ 100.00
			Sub-Total	\$ 540.00	\$ -	\$ -	\$ 540.00	\$ 540.00
Construction Materials***								
Rock	40	Cubic Yard	\$50.00	\$ 2,000.00	2,000.00			\$ 2,000.00
Backfill	40	Cubic Yard	\$30.00	\$ 1,200.00		1,200.00		\$ 1,200.00
Eco Block	12	Each	\$140.00	\$ 1,680.00			1,680.00	\$ 1,680.00
50' Rail Car	1	LS	\$8,500.00	\$ 8,500.00		8,500.00		\$ 8,500.00
Hardware	1	LS	\$500.00	\$ 500.00			500.00	\$ 500.00
			Sub-Total	\$ 13,880.00	\$ 2,000.00	\$ 9,700.00	\$ 2,180.00	\$ 13,880.00
Equipment								
Excavator	80	Hours	\$150.00	\$ 12,000.00	9,000.00		3,000.00	\$ 12,000.00
Dump Truck	40	Hours	\$100.00	\$ 4,000.00	4,000.00			\$ 4,000.00
Skid Steer	40	Hours	\$100.00	\$ 4,000.00	4,000.00			\$ 4,000.00
Trash Pump Rental	5	days	\$100.00	\$ 500.00			500.00	\$ 500.00
Compactor Rental	5	days	\$80.00	\$ 400.00			400.00	\$ 400.00
			Sub-Total	\$ 20,900.00	\$ 17,000.00	\$ -	\$ 3,900.00	\$ 20,900.00
Mobilization								
Mobilization	1	LS	\$2,000.00	\$ 2,400.00	2,400.00			\$ 2,400.00
				\$ -				\$ -
				\$ -				\$ -
				\$ -				\$ -
			Sub-Total	\$ 2,400.00	\$ 2,400.00	\$ -	\$ -	\$ 2,400.00
TOTALS				\$ 42,820.00	\$ 21,400.00	\$ 9,700.00	\$ 11,720.00	\$ 42,820.00

*Units = feet, hours, inches, lump sum, etc.

**Can include in-kind materials. Justification for in-kind labor (e.g. hourly rates used for calculations). Describe here or in text.

***The Future Fisheries Review Panel recommends a maximum fencing cost of \$1.50 per foot

MATCHING CONTRIBUTIONS (do not include requested funds)

CONTRIBUTOR	IN-KIND SERVICE	IN-KIND CASH	TOTAL	Verified? (Y/N)
Landowner	\$ 8,500.00	\$ 9,920.00	\$ 18,420.00	Yes
Trout Unlimited	-	\$ 3,000.00	\$ 3,000.00	Yes
			\$ -	
	\$ -	\$ -	\$ -	
TOTALS		\$ 8,500.00	\$ 12,920.00	\$ 21,420.00



Ross Fork Rock Creek fish passage

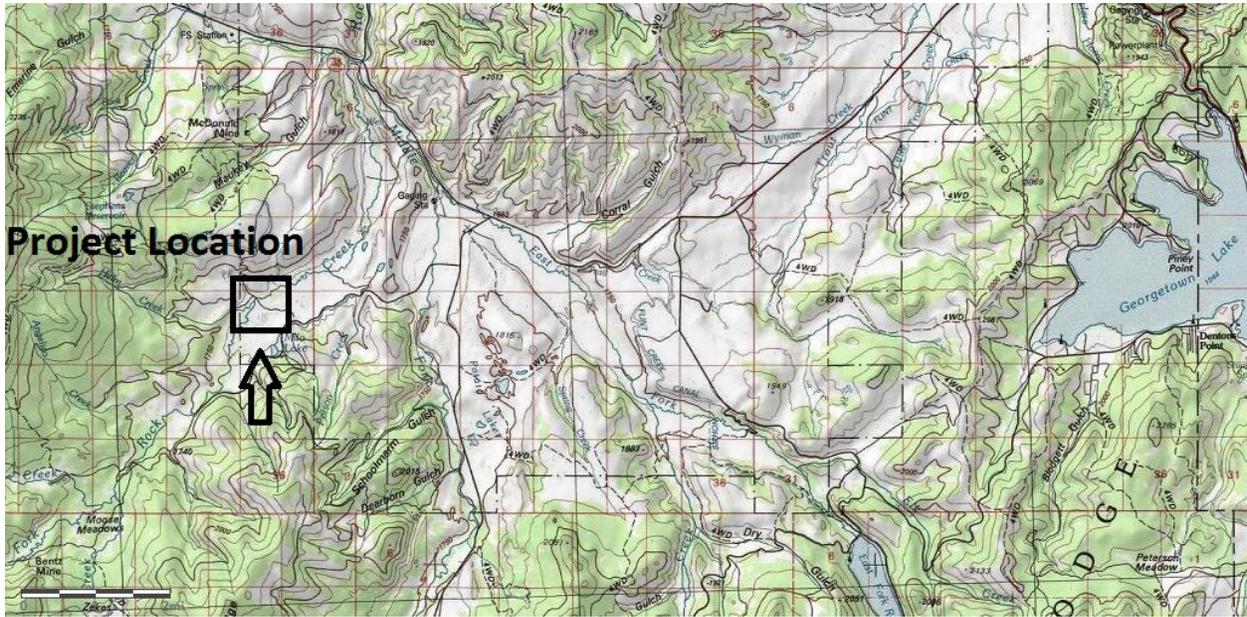
2638 m

38

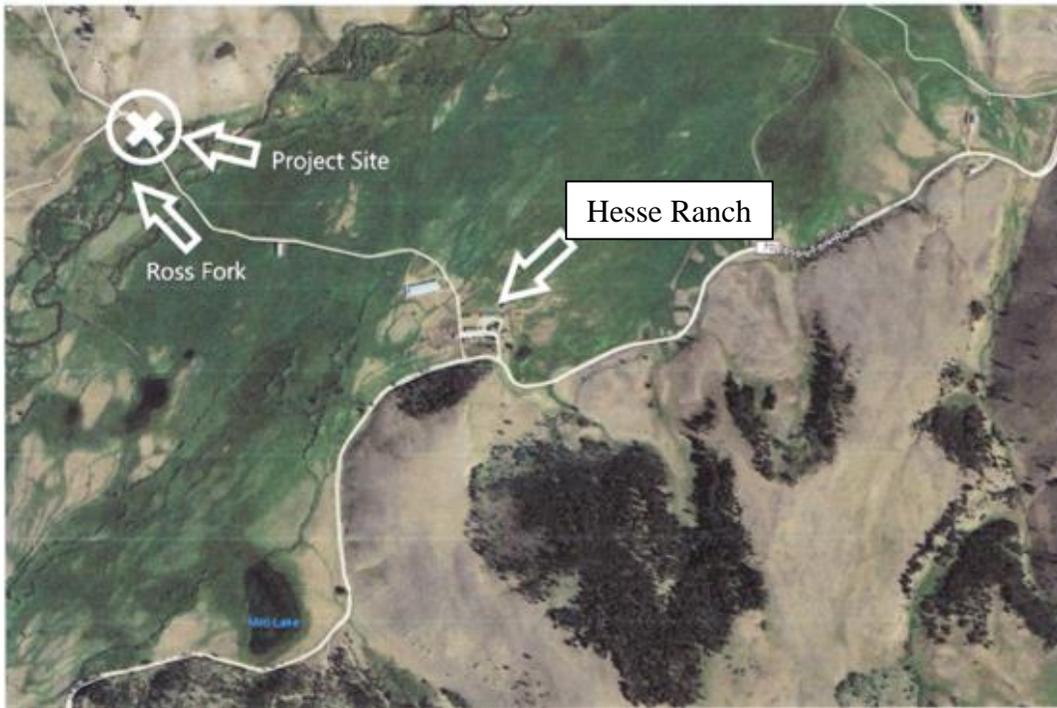
Ross Fork watershed

2742 m

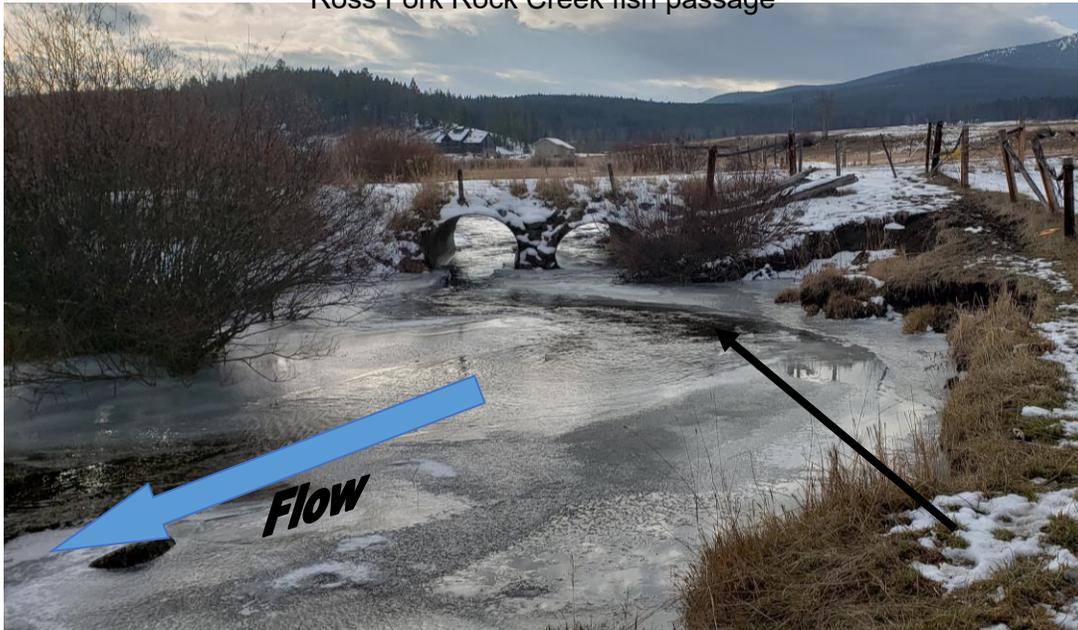
Ross Fork Rock Creek fish passage
Project Location



Project site aerial image



Ross Fork Rock Creek fish passage

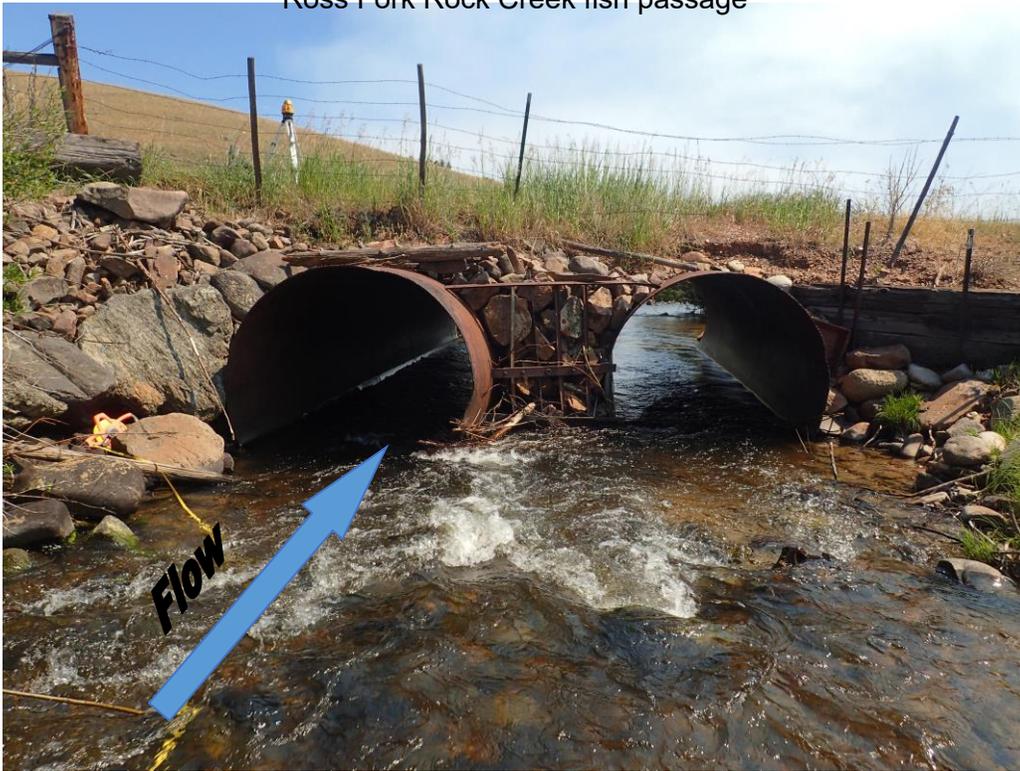


Ross Fork looking upstream at culverts— November 2018



Ross Fork looking downstream at culverts –November 2018

Ross Fork Rock Creek fish passage

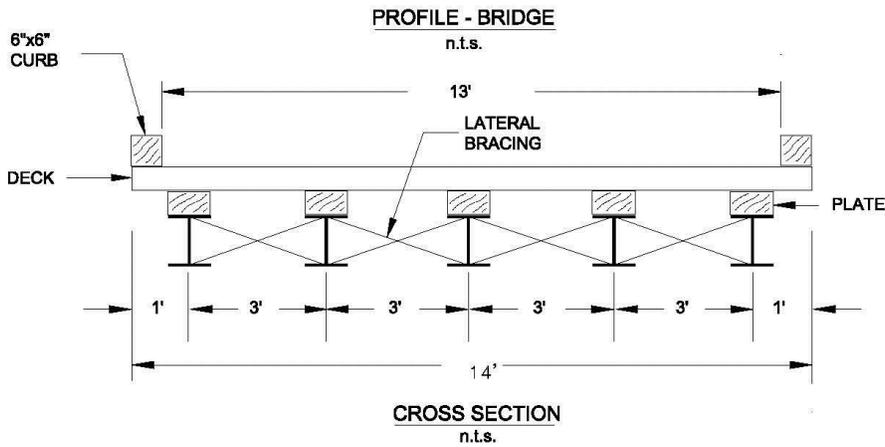
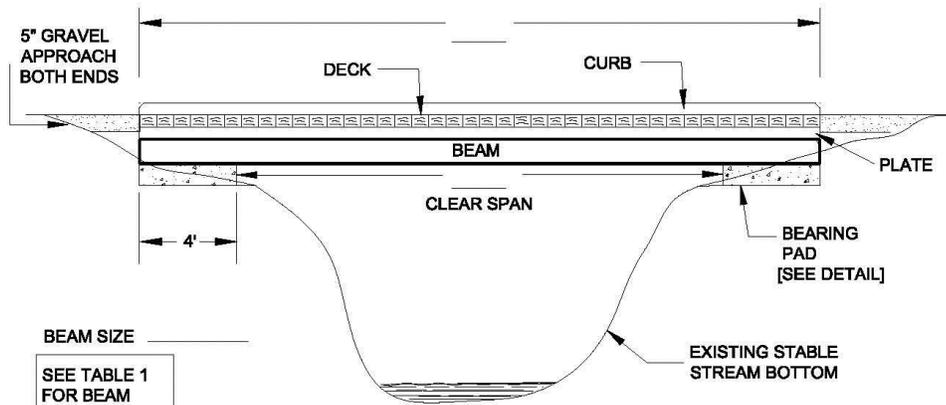


Culvert inlet –July 2017



Culvert outlet –July 2017

Ross Fork Rock Creek fish passage
NRCS Bridge Design Framework

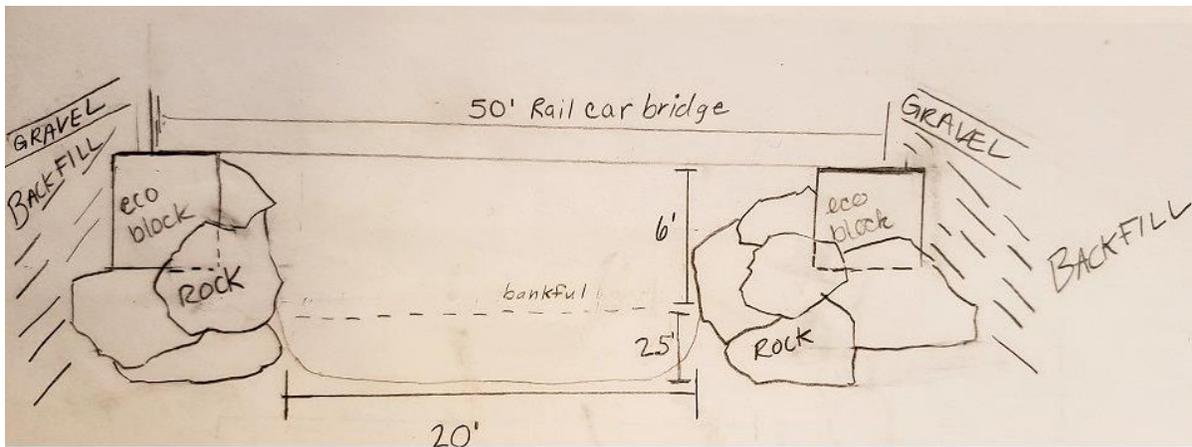
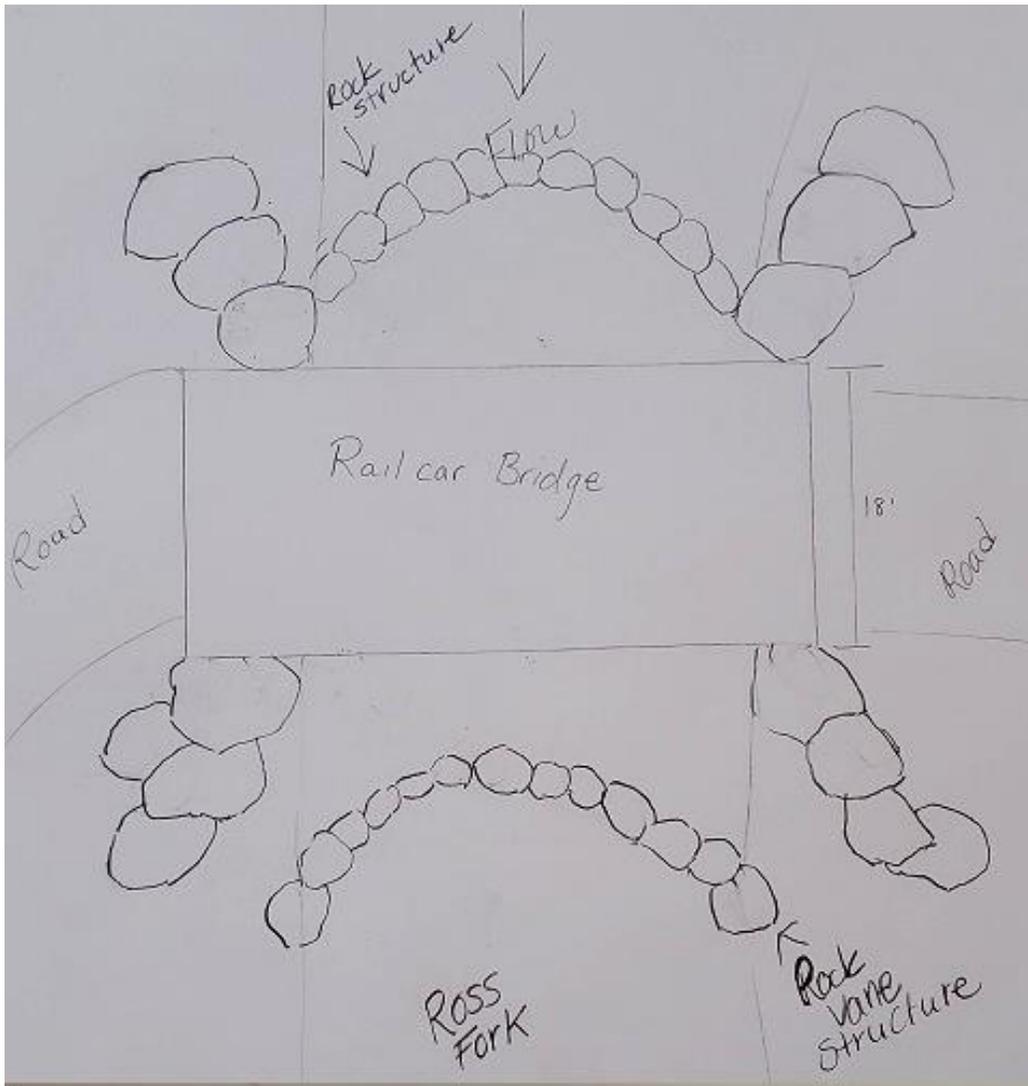


BILL OF MATERIALS			
	CLEAR SPAN LENGTH = 20'	CLEAR SPAN LENGTH = 30'	CLEAR SPAN LENGTH = 40'
I-BEAMS	5@28'=140 L.F.	5@38'=190 L.F.	5@48'= 240 L.F.
DECK (14'X3"X10" BOARDS)	33 EA.	45 EA.	57 EA.
WOOD PLATE (3" X 8" or 3" X 6")	5@ 28' = 140 L.F.	5@ 38' = 190 L.F.	5@ 48' = 240 L.F.
WOOD CURB (6" X 6")	2@ 28' = 56 L.F.	2@ 38' = 76 L.F.	2@ 48' = 96 L.F.
LATERAL BRACING (2 1/2"X2 1/2"X3/8")	24 EA. (APPROX. 55 L.F.)	32 EA. (APPROX. 75 L.F.)	40 EA. (APPROX. 90 L.F.)
BEARING PAD CONCRETE	2.8 CU. YD.	2.8 CU. YD.	2.8 CU. YD.
#5 BARS	618 L.F. = 645 LBS.	618 L.F. = 645 LBS.	618 L.F. = 645 LBS.
ALTERNATE BEARING PAD CONC.	1.04 CU. YD./FT. PAD HEIGHT	1.04 CU. YD./FT. PAD HEIGHT	1.04 CU. YD./FT. PAD HEIGHT
#5 BARS (ALT. BEARING PAD)	119 LBS./ FT. PAD HEIGHT	119 LBS./ FT. PAD HEIGHT	119 LBS./ FT. PAD HEIGHT
4" X 1/2" PLATE BOLTS	75 EA.	100 EA.	125 EA.
10" X 5/8" CURB BOLTS	16 EA.	22 EA.	26 EA.
5 1/2" X 1/2" LAG BOLTS (DECK)	132 EA.	180 EA.	228 EA.
1/2" X 6" ANCHOR BOLTS	20 EA.	20 EA.	20 EA.

 <p>Natural Resources Conservation Service United States Department of Agriculture</p>	<p>TIMBER BRIDGE FOR LIVESTOCK AND FARM EQUIPMENT</p>	Date _____ Designed _____ Drawn _____ Checked _____ Approved _____	File Name DETAIL NO. TB-2 Drawing Name AL-ENG-578-002 ISSUE DATE: 5/12 Sheet of _____
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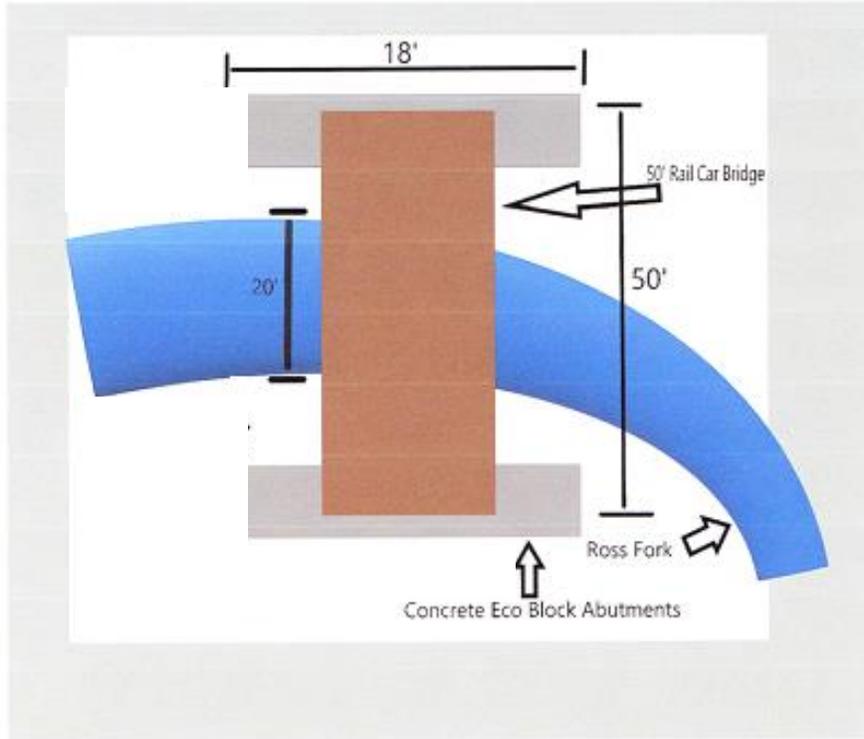
Ross Fork Rock Creek fish passage

Ross Fork Bridge Design

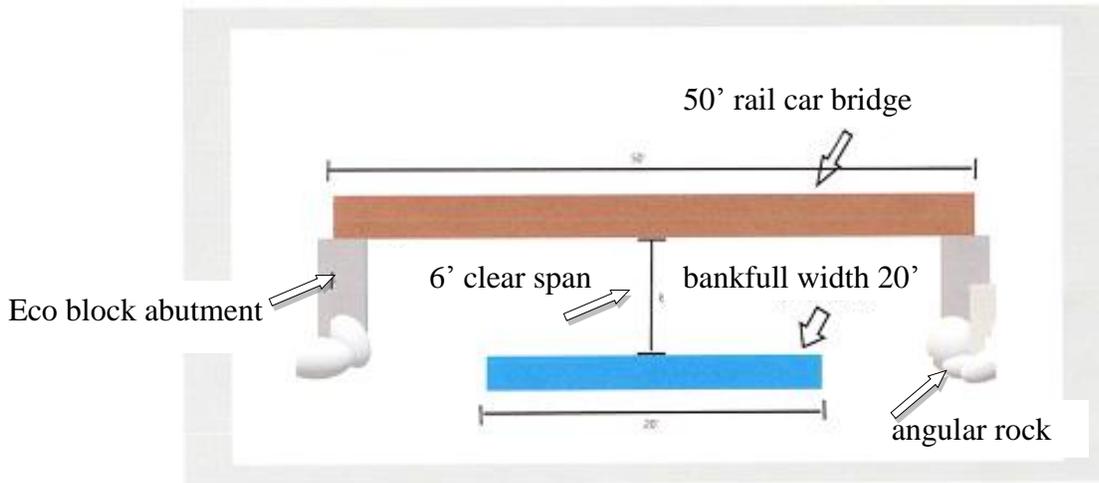


Ross Fork Rock Creek fish passage

Plan Top View



Plan Side View



Ross Fork Rock Creek fish passage

November 28, 2018

To the Future Fisheries Program & Board:

My grandfather started our Ross Fork Valley family ranch over half a century ago, and while he is no longer around, we can honor his legacy by matching his passion for wildlife stewardship, and we hope we're making him proud wherever he is now. The Ross Fork of Rock Creek is considered part of our family.

It is in the spirit of our deep familial connection to the river that we not only support Trout Unlimited's application to the Future Fisheries Program to restore year-round fish passage by replacing a bridge on a pivotal stretch of the Ross Fork, but we also see it as our mission as landowners to explore such collaborations. My family is passionate about finding creative solutions to improve the habitat for wildlife, even when meeting yearly operating costs is an increasingly difficult struggle.

We understand that we are very fortunate to have these "problems." But, we also understand that the threats facing Westslope Cutthroat, Bull Trout, and the other species dependent on healthy watersheds represent an issue that, with assistance, we can improve in a real and lasting way that resonates far beyond our ranch. Owning a stretch of land around what is considered critical natal habitat of the Rock Creek fishery, with the help of Trout Unlimited and a potential partnership with the Future Fisheries Program, we look forward to using our ownership to reinvigorate one of Rock Creek's most important "nurseries."

Thank you for your consideration, and for your efforts to save watersheds. Please let me know if there's anything else that I can say on behalf of the river or my family.

Regards,

Douglas Hesse
Co-owner of Hesse and Sons, LLC