

## CHECKLIST ENVIRONMENTAL ASSESSMENT

<b>Project Name:</b>	West Fork of Swift Creek Stabilization Project
<b>Proposed Implementation Date:</b>	Summer 2014
<b>Proponent:</b>	Montana Department of Natural Resources and Conservation
<b>Location:</b>	Section 12, Township 34 north, Range 24 west
<b>County:</b>	Flathead

### I. TYPE AND PURPOSE OF ACTION

In the spring of 2012, the West Fork of Swift Creek began to down cut in its channel as well as cut away at the stream banks directly adjacent to the West Fork Road at which time a segment of the road was moved to the North as an emergency action; this road is heavily used during both recreation and forest management activities. Furthermore, this road is the only east to west connector at the north end of the Stillwater State Forest.

Montana Department of Natural Resources and Conservation (DNRC), Stillwater Unit, proposes to install rock weirs and modify approximately 165 feet of stream bank along the West Fork of Swift Creek in the Stillwater State Forest to stabilize the stream channel and protect road infrastructure. This would include protecting the 50-foot permanent bridge over the West Fork of Swift Creek as well as the adjacent road. This project is located on Section 12, Township 34 north, Range 24 west. The Trust beneficiary is Common Schools.

Furthermore, this area was analyzed under the Lower Herring Timber Sale Checklist Environmental Assessment (CEA) (March 2013). This CEA will focus on a narrow set of actions and associated resource concerns that were not fully analyzed in the recent Lower Herring Timber Sale CEA.

### II. PROJECT DEVELOPMENT

#### 1. PUBLIC INVOLVEMENT, AGENCIES, GROUPS OR INDIVIDUALS CONTACTED:

*Provide a brief chronology of the scoping and ongoing involvement for this project. List number of individuals contacted, number of responses received, and newspapers in which notices were placed and for how long. Briefly summarize issues received from the public.*

During the fall of 2013, discussions occurred with NWLO hydrologists, Forest Management Bureau, and Unit staff. After going through the permitting process with Fish Wildlife and Parks and The Army Corps of Engineers, it was determined that the scoping of this project was adequate at these levels due to the high hazard to a public road and bridge, and the minimum scope of the project.

#### 2. OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION, LIST OF PERMITS NEEDED:

*Examples: cost-share agreement with U.S. Forest Service, 124 Permit, 3A Authorization, Air Quality Major Open Burning Permit.*

Montana DNRC, Stillwater Unit has requested and received approval on the following permits:

1. Montana Dept. of Fish, Wildlife and Parks: 124 permit (Stream Protection Act) for in-stream activities- approved September 30, 2013.
2. Montana Dept. of Environmental Quality: 318 Authorization (Short term Exemption from Water Quality Standards) - approved September 30, 2013.
3. The Army Corps of Engineers: 404 permit (to install grade control structures) – approved December 11, 2013.

## **Montana Department of Environmental Quality (DEQ)**

DNRC, classified as a major open burner by DEQ, is issued a permit from DEQ to conduct burning activities on state lands managed by DNRC. As a major open-burning permit holder, DNRC agrees to comply with the limitations and conditions of the permit.

A Short-term Exemption From Montana's Surface Water Quality Standards (318 Authorization) may also be required from DEQ if activities such as if removing a native log-sill crossing on a stream would introduce sediment above natural levels into streams, and if Montana Department of Fish, Wildlife and Parks (DFWP) recommends it.

## **Montana/Idaho Airshed Group**

DNRC is a member of the Montana/Idaho Airshed Group, which regulates prescribed burning, including both slash and broadcast burning related to forest-management activities performed by DNRC. As a member of the Airshed Group, DNRC agrees to only burn on days approved for good smoke dispersion as determined by the Smoke Management Unit in Missoula, Montana.

## **Montana Department of Fish, Wildlife and Parks (DFWP)**

A Stream Protection Act Permit (124 Permit) is required from DFWP for activities that may affect the natural shape and form of a stream's channel, banks, or tributaries. Such activities include the installation and/or replacement of numerous stream crossing culverts.

## **United States Fish and Wildlife Service (USFWS)**

In December 2011, the U.S. Fish and Wildlife Service issued an Incidental Take Permit under Section 10 of the Endangered Species Act. The Permit applies to select forest management activities affecting the habitat of grizzly bear, Canada lynx, and three fish species — bull trout, westslope cutthroat trout, and Columbia redband trout — on project area lands covered under the HCP. DNRC and the USFWS will coordinate monitoring of certain aspects of the conservation commitments to ensure program compliance with the HCP.

## **U.S. Army Corps of Engineers (Federal Clean Water Act)**

A 404 permit is required when any activity will result in the discharge or placement of dredged or fill material into waters of the United States, including wetlands.

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### **3. ALTERNATIVE DEVELOPMENT:**

*Describe alternatives considered and, if applicable, provide brief description of how the alternatives were developed. List alternatives that were considered but eliminated from further analysis and why.*

#### No Action Alternative

Under this alternative, the bank stabilization would not occur. The existing stream banks would continue to erode from natural events, causing further damage to the road, placing both the new bridge structure and water quality at risk.

#### Action Alternative

Under this alternative, grade control structures would be installed in West Fork of Swift Creek. Additionally, approximately 165 feet of upper bank modification would be completed to provide an accessible floodplain. The engineering designs for this project are attached for further detail.

### III. IMPACTS ON THE PHYSICAL ENVIRONMENT

- *RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.*
- *Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.*
- *Enter "NONE" if no impacts are identified or the resource is not present.*

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#### 4. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:

*Consider the presence of fragile, compactable or unstable soils. Identify unusual geologic features. Specify any special reclamation considerations. Identify direct, indirect, and cumulative effects to soils.*

Soils in the project area were described in the Lower Herring Timber Sale Checklist Environmental Assessment (DNRC 2013). No unique geologic features are present in the project area and this project would not be expected to change soil productivity due to compaction, displacement and/or erosion.

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#### 5. WATER QUALITY, QUANTITY AND DISTRIBUTION:

*Identify important surface or groundwater resources. Consider the potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality. Identify direct, indirect, and cumulative effects to water resources.*

Streams in the project area were described in the Lower Herring Timber Sale Checklist Environmental Assessment (DNRC 2013). The Water Resources Analysis of that EAC noted that channel stability was poor in proposed project area due to downcutting and headcutting.

Installation of the proposed grade control structures would reduce the risk of downcutting in the project area. Upper bank modifications would provide a stable area for overbank flows to access while reducing the risk of increased channel erosion. The design provides for modifying the upper banks of the stream and creating areas to slow the velocity of the water flow; these side areas would provide small meanders to the existing channel.

Direct and indirect and cumulative effects of the proposed action would be reduced channel degradation and downcutting over the long-term. Short-term impacts would be a short-term increase in potential stream turbidity from the grade control structure installation during spring flows following project implementation. No additional risk of short-term sediment delivery from the bank modifications would be expected because of the existing raw, unstable condition of the banks. A cumulative long-term reduction of sediment delivery risk would result from increased bank stability.

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#### 6. AIR QUALITY:

*What pollutants or particulate would be produced (i.e. particulate matter from road use or harvesting, slash pile burning, prescribed burning, etc)? Identify the Airshed and Impact Zone (if any) according to the Montana/Idaho Airshed Group. Identify direct, indirect, and cumulative effects to air quality.*

The project area is located in Airshed 2. Some particulate matter may be introduced into the airshed from the burning of potential slash piles. Broadcast and slash burning would be conducted when conditions favor good to excellent smoke dispersion and according to existing rules and regulations; therefore, direct, indirect, and cumulative impacts are expected to be minor and temporary. Thus, effects to air quality are expected to be minimal.

If dry weather conditions occur during the construction window (July 2014 to September 2014), excavation activities would be expected to produce minor levels of airborne particulates derived from upper bank modifications and weir installations.

Short-term direct and indirect impacts to air quality may occur in the immediate project area; however, no long-term direct, indirect and cumulative impacts would be expected to occur.

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**7. VEGETATION COVER, QUANTITY AND QUALITY:**

*What changes would the action cause to vegetative communities? Consider rare plants or cover types that would be affected. Identify direct, indirect, and cumulative effects to vegetation.*

Using the Natural Heritage Program (NHP) database, no sensitive, threatened, or endangered plant species have been documented within the project area.

This project would convert four sites (approximately 0.04 acres) along the upper bank of the West Fork of Swift Creek to accessible floodplain. These disturbed areas would be covered with erosion control measures and eventually would return to natural brush and vegetation. Furthermore, some vegetation may be disturbed by heavy equipment while accessing the stream channel to install the rock weirs for grade control.

Therefore, a short-term very low, direct and indirect impact to vegetation would be expected to occur under the Action Alternative.

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**8. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:**

*Consider substantial habitat values and use of the area by wildlife, birds or fish. Identify direct, indirect, and cumulative effects to fish and wildlife.*

No appreciable changes to terrestrial or avian life or habitat beyond what was described in the Lower Herrig Timber Sale Checklist Environmental Assessment (DNRC 2013) would be expected.

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**9. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:**

*Consider any federally listed threatened or endangered species or habitat identified in the project area. Determine effects to wetlands. Consider Sensitive Species or Species of special concern. Identify direct, indirect, and cumulative effects to these species and their habitat.*

No appreciable changes to terrestrial or avian wildlife or their habitat beyond what was described in the Lower Herrig Timber Sale Checklist Environmental Assessment (DNRC 2013) would be expected.

Because all proposed work would be completed during no-flow conditions when the stream is dry, the risk of adversely affecting aquatic species is low.

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**10. HISTORICAL AND ARCHAEOLOGICAL SITES:**

*Identify and determine direct, indirect, and cumulative effects to historical, archaeological or paleontological resources.*

The DNRC has no record of any cultural resources within the project's area of potential effect. If previously unknown cultural or paleontological materials are identified during project related activities, a DNRC archaeologist will be contacted and all work will cease until a professional assessment of such resources can be made.

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**11. AESTHETICS:**

*Determine if the project is located on a prominent topographic feature, or may be visible from populated or scenic areas. What level of noise, light or visual change would be produced? Identify direct, indirect, and cumulative effects to aesthetics.*

The project area is not located on a prominent topographic area or visible from a densely populated area.

Increased noise from machinery operation would occur during short periods of time within the operating season. This operation would last approximately one week. Thus, direct, indirect, and cumulative effects to aesthetics are expected to be minimal.

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**12. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY:**

*Determine the amount of limited resources the project would require. Identify other activities nearby that the project would affect. Identify direct, indirect, and cumulative effects to environmental resources.*

No demand for limited environmental resources or other activities demanding limited environmental resources were identified; therefore, no direct, indirect, or cumulative impacts would occur under either alternative.

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**13. OTHER ENVIRONMENTAL DOCUMENTS PERTINENT TO THE AREA:**

*List other studies, plans or projects on this tract. Determine cumulative impacts likely to occur as a result of current private, state or federal actions in the analysis area, and from future proposed state actions in the analysis area that are under MEPA review (scoped) or permitting review by any state agency.*

- Lower Herring Timber Sale Checklist Environmental Assessment (DNRC 2013).

This project was developed in compliance with the State Forest Land Management Plan (SFLMP), the Administrative Rules for Forest Management (Forest Management Rules; ARM 36.11.401 through 471), and conservation commitments contained in the Montana DNRC Forested State Trust Lands Habitat Conservation Plan (HCP), as well as other applicable State and federal laws.

<b>IV. IMPACTS ON THE HUMAN POPULATION</b>
<ul style="list-style-type: none"><li>• <i>RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.</i></li><li>• <i>Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.</i></li><li>• <i>Enter "NONE" if no impacts are identified or the resource is not present.</i></li></ul>



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**14. HUMAN HEALTH AND SAFETY:**

*Identify any health and safety risks posed by the project.*

No unusual safety considerations are associated with the proposed project. Warning signs would be located along the West Fork Road cautioning recreational and administrative traffic of construction activities.

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**15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:**

*Identify how the project would add to or alter these activities.*

The proposed activities would be expected to have a positive effect in the Stillwater State Forest by maintaining this key east-west connector in our transportation system for both forest management and recreation activities.

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**16. QUANTITY AND DISTRIBUTION OF EMPLOYMENT:**

*Estimate the number of jobs the project would create, move or eliminate. Identify direct, indirect, and cumulative effects to the employment market.*

It is unknown exactly how the number or status of jobs would be affected by the proposed activities; however, the cost to implement the proposed activities is expected to be approximately \$40,000 and this would be expected to have a positive direct, indirect and cumulative impact to the regional employment market.

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**17. LOCAL AND STATE TAX BASE AND TAX REVENUES:**

*Estimate tax revenue the project would create or eliminate. Identify direct, indirect, and cumulative effects to taxes and revenue.*

It is unknown exactly how tax revenue would be affected by the proposed activities; however, the cost to implement the proposed activities is expected to be approximately \$40,000 and this would be expected to have a positive direct, indirect and cumulative impact to tax revenue at one or more governmental levels.

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**18. DEMAND FOR GOVERNMENT SERVICES:**

*Estimate increases in traffic and changes to traffic patterns. What changes would be needed to fire protection, police, schools, etc.? Identify direct, indirect, and cumulative effects of this and other projects on government services*

This project may delay traffic for short periods of time (up to one week) while the construction is active. No additional government services would be required.

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**19. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS:**

*List State, County, City, USFS, BLM, Tribal, and other zoning or management plans, and identify how they would affect this project.*

This project was developed in compliance with the State Forest Land Management Plan (SFLMP), the Administrative Rules for Forest Management (Forest Management Rules; ARM 36.11.401 through 471) and conservation commitments contained in the Montana DNRC Forested State Trust Lands Habitat Conservation Plan (HCP) as well as other applicable state and federal laws.

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**20. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES:**

*Identify any wilderness or recreational areas nearby or access routes through this tract. Determine the effects of the project on recreational potential within the tract. Identify direct, indirect, and cumulative effects to recreational and wilderness activities.*

Like much of the forest, the north end of the Stillwater State Forest is used for hunting, berry picking, sightseeing and other recreational opportunities.

If the No-Action Alternative is chosen, the stream will further erode the stream bank while destabilizing both the stream and West Fork Road. Depending on annual precipitation, this road could close permanently within the next couple of years.

By choosing the Action Alternative and stabilizing this portion of the West Fork of Swift Creek, we will stabilize both the stream and the West Fork Road. This will ensure the public has continued uninterrupted access to this part of the forest and protect the long term water quality in West Fork of Swift Creek.

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**21. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING:**

*Estimate population changes and additional housing the project would require. Identify direct, indirect, and cumulative effects to population and housing.*

No measurable direct, indirect, or cumulative impacts related to population and housing would be expected due to the relatively small size of the stream stabilization project.

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**22. SOCIAL STRUCTURES AND MORES:**

*Identify potential disruption of native or traditional lifestyles or communities.*

No direct, indirect, or cumulative impacts related to social structures and mores would be expected under either alternative.

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**23. CULTURAL UNIQUENESS AND DIVERSITY:**

*How would the action affect any unique quality of the area?*

No direct, indirect, and cumulative impacts related to cultural uniqueness and diversity would be expected under either alternative.

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**24. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:**

*Estimate the return to the trust. Include appropriate economic analysis. Identify potential future uses for the analysis area other than existing management. Identify direct, indirect, and cumulative economic and social effects likely to occur as a result of the proposed action.*

The proposed activities would be expected to have a positive effect in the Stillwater State Forest by maintaining this key east-west connector in our transportation system for both forest management and recreation activities.

If the No-Action Alternative is chosen, the stream will further erode the stream bank while destabilizing both the stream and West Fork Road. Depending on annual precipitation, this road could close permanently within the next couple of years, resulting in lost revenue to the Trust, potential degraded water quality and minimized recreation experiences.

By choosing the Action Alternative and stabilizing this portion of the West Fork of Swift Creek, we will stabilize both the stream and the West Fork Road for long term water quality, and ensure a key east-west connector remains in place for forest management while ensuring the public has continued uninterrupted access to this part of the forest.

<b>EA Checklist Prepared By:</b>	<b>Name:</b> Dave Ring	<b>Date:</b> April 14, 2014
	<b>Title:</b> Forest Management Supervisor	

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**V. FINDING**

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**25. ALTERNATIVE SELECTED:**

An Interdisciplinary team (ID Team) has completed the Checklist Environmental Analysis (CEA) for the proposed West Fork of Swift Creek Stabilization Project. Following a thorough review of the CEA and Department policies and rules, the decision has been made to select the Action Alternative.

The Action Alternative meets the intent of the project objectives as stated in Section I – *Type and Purpose of Action*. Specifically, the project would:

- Stabilize a segment of the West Fork of Swift Creek stream channel
- Protect infrastructure downstream of the project including a 50' bridge and the West Fork Road

DNRC is required by law to administer these trust lands to produce the largest measure of reasonable and legitimate return over the long run (*Enabling Act of February 22, 1889; 1972 Montana Constitution, Article X Section 11; and, 77-1-212 MCA*). The action alternative was designed to be in full compliance of State Forest Land Management Plan (SFLMP), the Administrative Rules for Forest Management (Forest Management Rules; ARM 36.11.401 through 471), and conservation commitments contained in the Selected Alternative in the Final EIS of the Montana DNRC Forested State Trust Lands Habitat Conservation Plan (HCP) and associated Record of Decision (ROD), as well as other applicable state and federal laws.

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**26. SIGNIFICANCE OF POTENTIAL IMPACTS:**

The identified resource management concerns have been fully addressed in the environmental analysis that was conducted. The project design was completed by a consulting engineering firm to meet the purpose while reducing environmental impacts over the long term. Specific project design features and various recommendations of the resource management specialists have been implemented to ensure that this project will fall within the limits of acceptable environmental change. Taken individually and cumulatively, the proposed activities are common practices, and no project activities will be conducted on important fragile or unique sites. I find there will be no significant impacts to the human environment as a result of implementing the Action Alternative. In summary, I find that the identified adverse impacts will be controlled, mitigated, or avoided by the design of the project to the extent that the impacts are not significant.

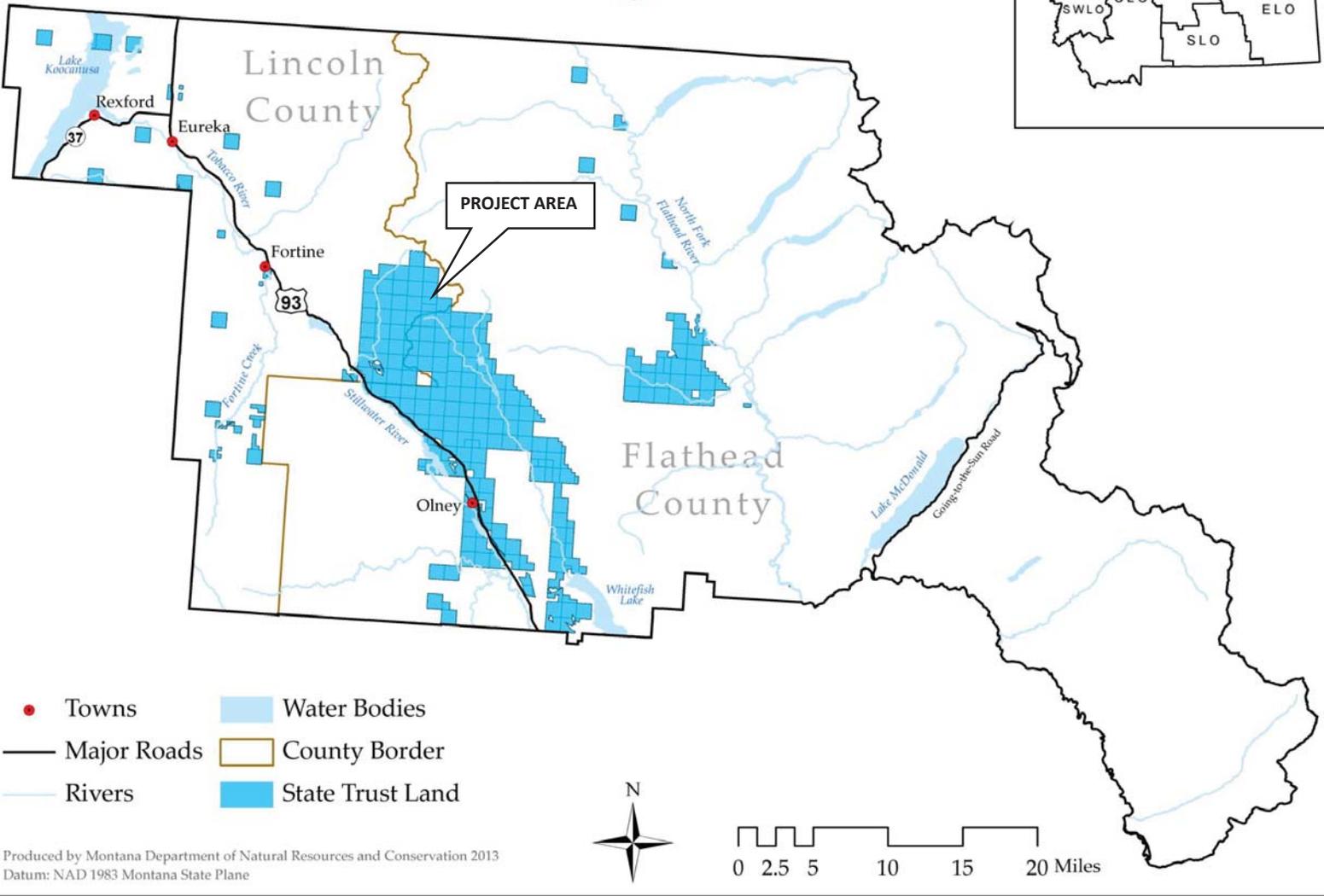
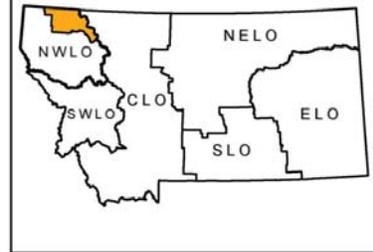
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**27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:**

EIS                       More Detailed EA                       No Further Analysis

<b>EA Checklist Approved By:</b>	<b>Name:</b> Brian Manning
	<b>Title:</b> Unit Manager
<b>Signature:</b> /s/ Brian Manning	
<b>Date:</b> April 15, 2014	

### WEST FORK of SWIFT CREEK STABILIZATION PROJECT STILLWATER UNIT

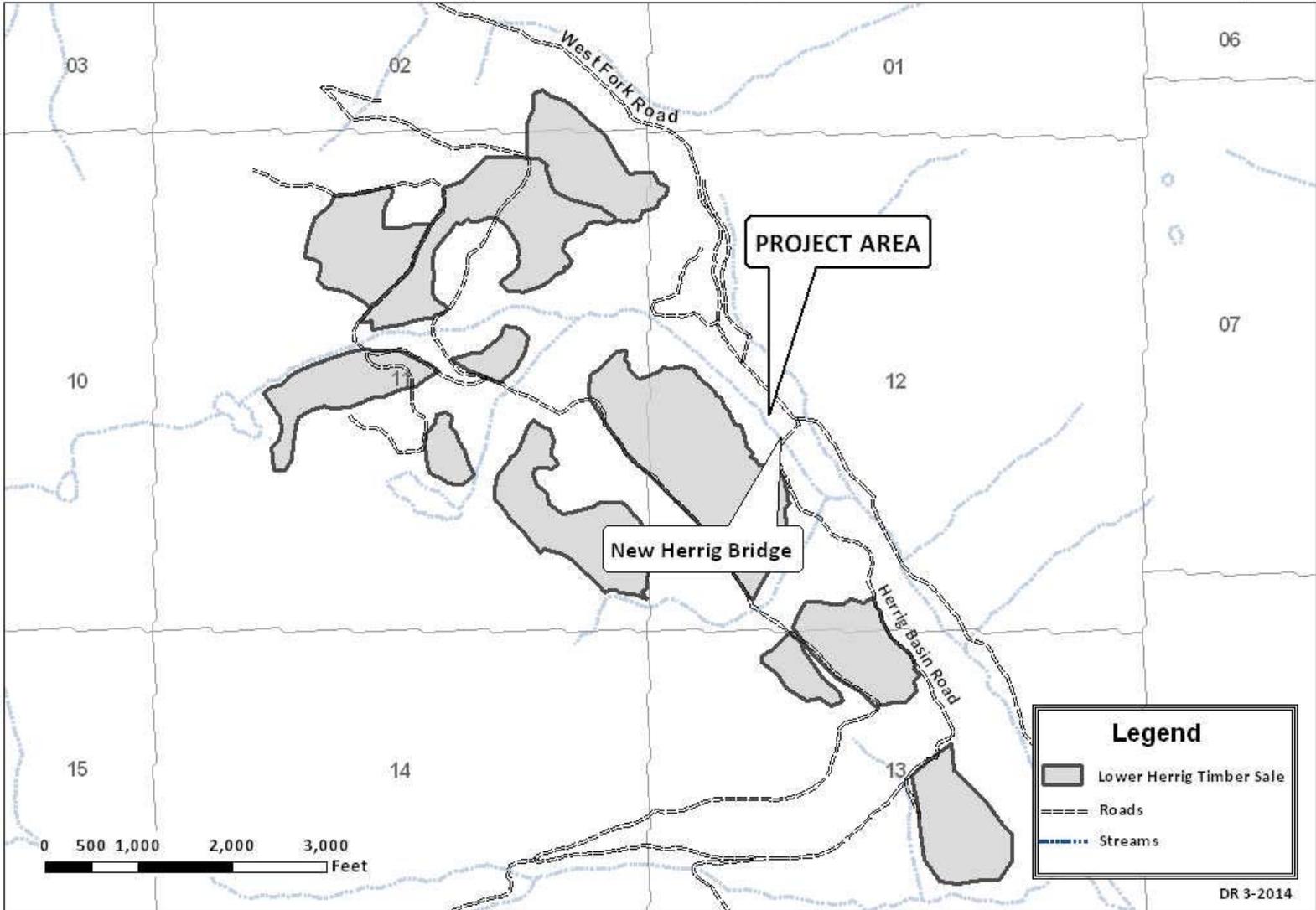




# West Fork of Swift Creek Stabilization Project

Attachment A, page 2 of 2

Section 12 of T34N R24W



DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION  
NORTHWESTERN LAND OFFICE

CONSTRUCTION PLANS FOR:

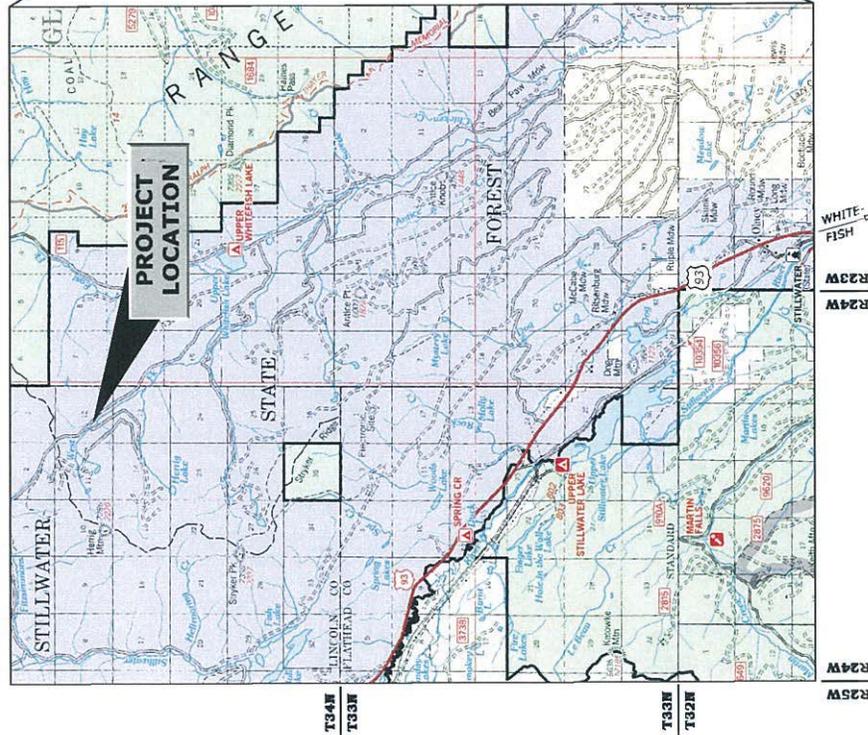
## WEST FORK SWIFT CREEK ROAD AND BRIDGE STABILIZATION

STILLWATER STATE FOREST  
FLATHEAD COUNTY, MONTANA



INDEX TO SHEETS	
NO.	DESCRIPTION
1	COVER SHEET
2	GENERAL PROJECT LAYOUT
3-4	ROAD SECTIONS
5	BRIDGE RIPRAP DETAILS
6	GRADE CONTROL STRUCTURE DETAILS

SUMMARY OF ESTIMATED QUANTITIES		
ITEM	UNIT	QUANTITY
EXCAVATION	CY	310
BANK RIPRAP	CY	270
BRIDGE RIPRAP	CY	120
GRADE CONTROL STRUCTURES	EA.	4



VICINITY MAP

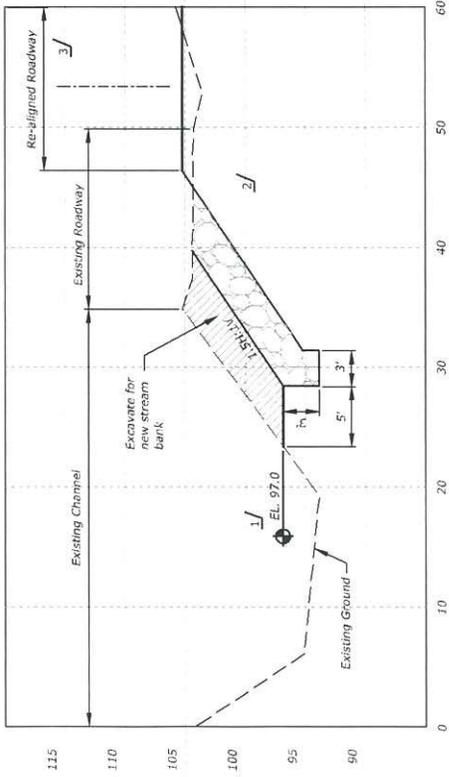


LOCATION MAP

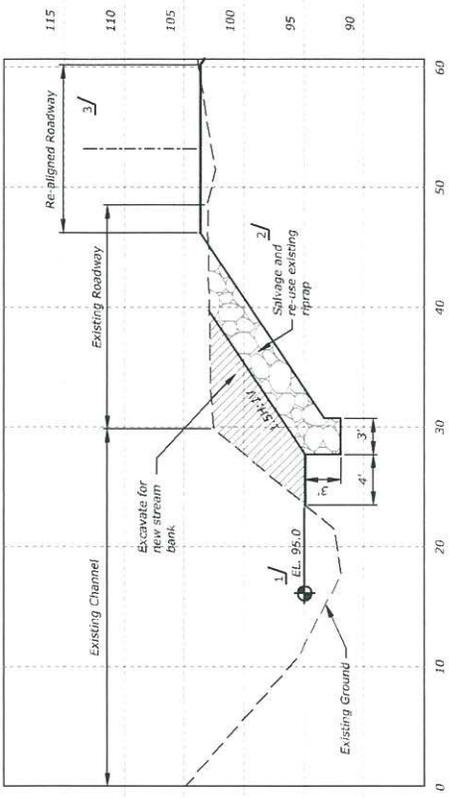








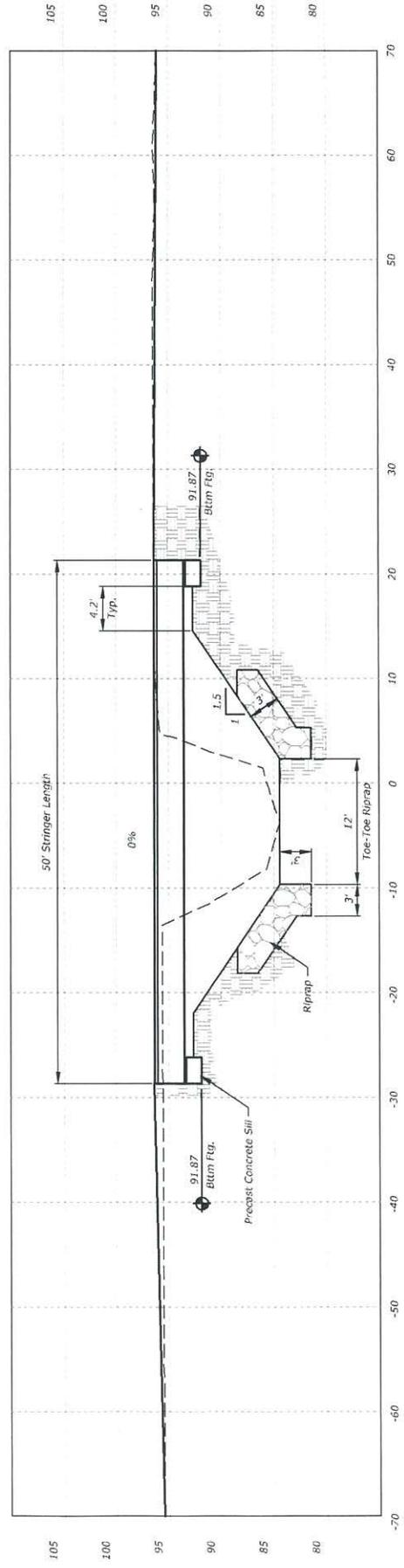
**1 SECTION**  
Scale: 1" = 10'-0"



**2 SECTION**  
Scale: 1" = 10'-0"

**FOOTNOTES:**

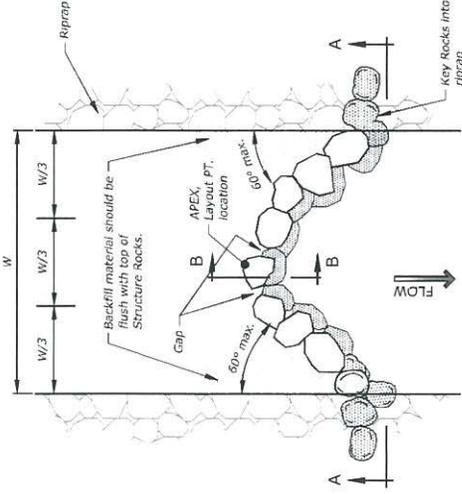
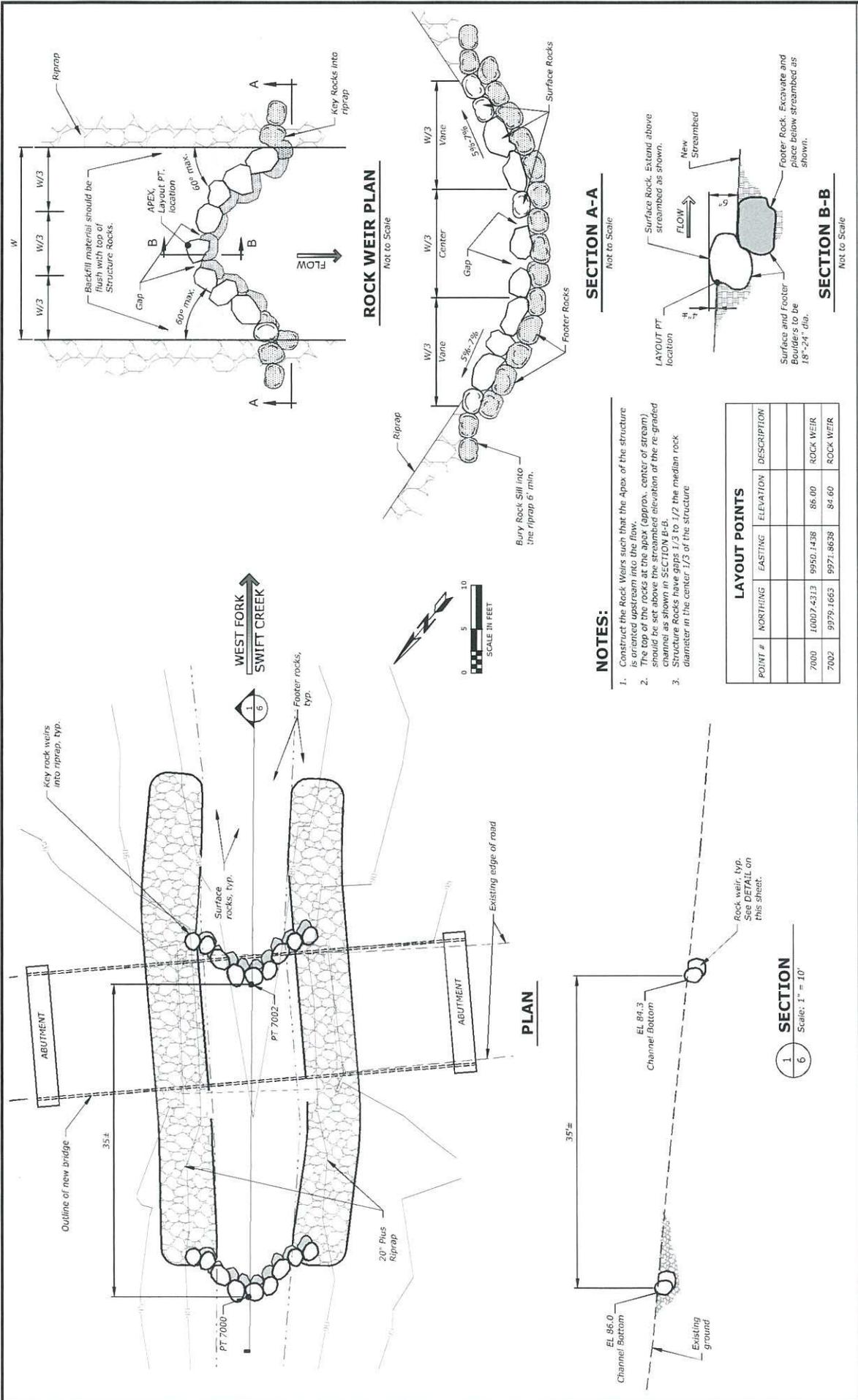
- 1/ Estimated "Flood Prone" bank elevation. Final elevation may be adjusted by the Engineer.
- 2/ Additional riprap may be required to be hauled from the designated source.
- 3/ New road alignment and grade shown for informational purposes only. Actual lines and grades to be constructed as stene in the field.



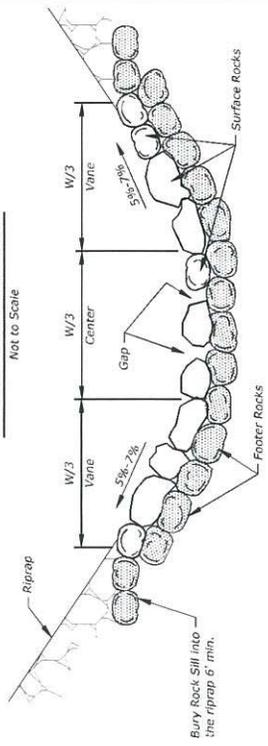
**3 SECTION**  
Scale: 1" = 10'-0"

BY: _____		DESIGN DESCRIPTION		DRAWN: _____		CHECKED: _____		DATE: _____		PROJECT: _____		SHEET	
DATE: _____		PROJECT NO.: _____		DATE: _____		DATE: _____		DATE: _____		DATE: _____		4	
DNRC NORTHWESTERN LANDS OFFICE STILLWATER STATE FOREST												WEST FORK SWIFT CREEK SECTIONS	
												6	

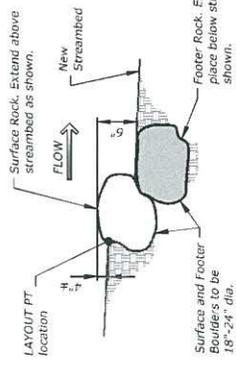




**ROCK WEIR PLAN**  
Not to Scale



**SECTION A-A**  
Not to Scale



**SECTION B-B**  
Not to Scale

**NOTES:**

1. Construct the Rock Weirs such that the Apex of the structure is oriented upstream into the flow.
2. The top of the rocks at the apex (approx. center of stream) should be set above the streambed elevation of the re-graded channel as shown in SECTION B-B.
3. Structure footer rock gaps to 1/2 the median rock diameter in the center 1/3 of the structure.

**LAYOUT POINTS**

POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
7000	10007.4313	9950.1438	86.00	ROCK WEIR
7002	9979.1663	9971.8638	84.60	ROCK WEIR