FUTURE FISHERIES IMPROVEMENT PROGRAM GRANT APPLICATION

All sections must be addressed, or the application will be considered invalid

I. APPLICANT INFORMATION

A. Applicant Name: Clark Fork Coalition (Brian Chaffin, Executive Director)

Mailing Address: 140 S. 4th St. W. #1

City: Missoula State: MT Zip: 59801

Telephone: 406-550-5503 E-mail: brian@clarkfork.org

B. Contact Person (if different than applicant): Adam Switalski – Clark Fork Coalition Project Mgr.

Address: 140 S. 4th St. W. #1

City: Missoula State: MT Zip: 59801

Telephone: 406-396-1941 (cell) E-mail: adam@clarkfork.org

C. Landowner and/or Lessee Name (if different than applicant): The Nature Conservancy

Mailing Address: 257 W Front St # B

City: Missoula State: MT Zip: 59802

Telephone: 406-214-2036 E-mail: skloetzel@tnc.org

II. PROJECT INFORMATION

A. Project Name: Gold Creek Tributaries Aquatic Organism Passage (AOP) Project

River, stream, or lake: Gold Creek

Location: Township: 14N, 15N Range: 17W Section: 11, 25, 26

Latitude: 46.98889 Longitude: -113.70560 *Within project (decimal degrees)*

County: Missoula

B. Purpose of Project: *(high level, focus on why the project is important)*

The purpose of this project is to increase the native fish populations in Gold Creek and the Lower Blackfoot River. Gold Creek is an important tributary of the Blackfoot River and includes designated Bull Trout Critical Habitat. Gold Creek supports high densities of westslope cutthroat trout populations, providing important spawning and rearing habitat for these and other salmonid species. We will work with the Bureau of Land Management (BLM), Forest Service, The Nature Conservancy, and Montana Fish Wildlife and Parks to improve fish and other aquatic organism passage and reduce chronic sedimentation in 3 tributaries of Gold Creek that are seasonally disconnected by Forest Service roads. We will upsize 3 undersized culverts to much larger, 102-in culverts with stream simulation bed material that will allow for year-round fish and other aquatic organism passage. Additionally, the installation of two hydraulic culvert upgrades and two overflow culverts will significantly increase flood capacity, reduce chronic stream sedimentation, and greatly reduce the risk of catastrophic failure Which could further impact fish habitat and populations.

C. Brief Project Description (attach additional information to end of application). Please include the anticipated construction schedule:

The proposed collaborative project would take place on Gold Creek – the largest tributary to the lower Blackfoot River. Gold Creek and its tributaries historically supported a productive coldwater fishery consisting of native and introduced salmonids. Fisheries values are highlighted by high westslope cutthroat trout densities and Bull Trout Critical Habitat designation by the USFWS. Gold Creek provides thermal refuge for the lower Blackfoot River bull trout during periods of river warming.

Gold Creek has historically contained native cutthroat trout and threatened bull trout. However, following decades of industrial logging and road construction, only remnant populations of bull trout remain, west-slope cutthroat trout populations have been reduced, and several non-native trout species have colonized the area's streams. In 1996, Montana FWP installed 66 habitat structures in the lower 3 miles of the creek resulting in 61 new pools. More recently, the Nature Conservancy has restored several stream crossings and has decommissioned roads in the watershed.

The goal of this project is to increase native fish populations, improve water quality, and improve recreational fishing in the Gold Creek watershed and Lower Blackfoot River. On Spring Creek and two other unnamed tributaries, five stream crossings were found to be undersized and acting as seasonal barriers to fish and other aquatic organisms (see maps and photos). These crossings are on Nature Conservancy lands that are actively being transferred to BLM ownership. The roads are seasonally open and managed by the Forest Service. *The project is planned for implementation in the fall 2025.*

A BLM Engineer designed three, 102-inch aquatic organism passage (AOP) culvert upgrades on two tributaries of Gold Creek - Spring Creek and an unnamed tributary. The new culverts will replace 24-in culverts and were designed to withstand a 100-year flood event. They will be filled 1/3 full of stream simulation material. Rock bands will provide grade control and channel structure. Baffles welded in the pipe will maintain the rock bands and stream simulation material in place. Streambanks and vegetation clump transplants will be installed at the entrance and exit of the culvert to ensure stream connectivity.

Upsizing these culverts will allow for fish and/or other aquatic organism passage through the culvert. Fish will be able to access more spawning and rearing habitat (juvenile feeding, shelter, growth). Aquatic organisms will be able to more easily move along the stream such as the Rocky Mountain tailed frog, signal crayfish, or western pearl shell mussel. The Spring Creek fish population was extirpated 20+ years ago due to cumulative effects of industrial logging and fire, but high-quality habitat exists above the barrier culverts. Installing AOPs could allow for the re-colonization of the stream by native fish once the barriers are removed.

Two other road-stream crossings are proposed for 48-inch and 60-inch hydraulic upgrades. Hydraulic culverts will be installed because there is limited aquatic habitat upstream of the roads. They were also designed to withstand a 100-year flood event, reduce chronic stream sedimentation, and reduce the risk of catastrophic failure. Finally, two 24-in overflow culverts, and an 18-inch ditch relief culvert to be installed to drain areas adjacent to the stream crossings. The 24-inch culverts will be re-purposed from where the AOPs are being installed.

The Clark Fork Coalition will conduct public outreach and engagement on this project, including social media posts, newsletter articles, and hosting field trips for local community members and government agencies to showcase the benefits of restoration work on aquatic habitat, water quality, and watershed health. This will include information on how this project will increase the amount of available fish habitat and improve the quality of habitat. These improvements will lead to increased fish populations and improved angler opportunities in Gold Creek and in the Lower Blackfoot River.

D. What was the cause of habitat degradation and how will the project correct the cause?

The construction of Forest Service roads into the watershed seasonally disconnects 3 tributaries of Gold Creek. Additionally, a legacy of industrial logging and high intensity forest fires added sediment to streams, reduced overstory canopy cover, and created additional stressors on fish populations. While the forest is naturally receiving from deforestation from logging and forest fires, upsizing these culverts will provide year-round stream connectivity for fish and other aquatic organisms and increase hydraulic capacity to withstand a 100-year flood.

E. Length of stream or size of lake that will be treated (project extent): 3 miles of Gold Creek tributaries

Length/size of impact, if larger than project extent (e.g., stream miles opened): 3 stream mi. opened

F. Project Budget Summary:

Grant Request (Dollars):	**$**	**43,585**
Matching Dollars:	**$**	**208,860**
Matching In-Kind Services:*	**$**	

**salaries of government employees are not considered matching contributions*

Other Contributions (not part of this app)	**$**	**25,000**
Total Project Cost:	**$**	**277,445**

G. Attach itemized (line item) budget – *see budget template*

H. Attach project location map(s) that include:

- [X] Extent of the project, including context (relation to major landmark or town)
- [X] Indication of public and private property
- [ ] Riparian buffer locations and widths (if applicable) and grazing locations

I. Attach project plans:

- [X] Detailed sketches or plan views with the location and proposed restoration
- [X] Pre-project photographs (GPS location strongly recommended)
- [ ] If water leasing or water salvage is involved, attach a supplemental questionnaire (*https://myfwp.mt.gov/getRepositoryFile?objectID=36110*)

J. Attach support letters or statements of (e.g., landowner consent, community or public support). For FWP statement, attach provided template. List any other project partners:

This project is a collaborative project with the Clark Fork Coalition, the Bureau of Land Management, The Forest Service, and Montana Fish Wildlife and Parks.

III. MAINTENANCE AND MONITORING (attach additional information to end of application):

A. A 20-year maintenance commitment is required*. Please confirm that you will ensure this protection and describe your approach. Attach any relevant maintenance plans. Yes [X] No [ ]

**If it is a water leasing project, describe the length of the agreement.*

The Clark Fork Coalition has been implementing and maintaining stream restoration projects since 2009. We are committed to our protection and restoration work and have staff dedicated to maintaining and monitoring the effectiveness of these projects. We will inspect the culverts after the first two runoffs to ensure there are not any head cuts, failure of weirs, or loss of stream simulation material. If any problems are identified, we will fix by hand or mechanically if necessary. We will also monitor noxious weeds and treat if necessary.

B. Will grazing be part of or adjacent to the project? If so, describe or attach land management plans, including short term and long term grazing regimes. If the landowner is not the applicant, please describe their involvement in the project. *If you want assistance with grazing plan development, note your need.*

Grazing is not currently allowed or planned in this area.

C. Will the project be monitored to determine if goals were met? If so, what are the short-term and long-term plans to assess benefits and lessons learned? Were pre-project data collected? Will monitoring information be shared with FWP?

The BLM has surveyed the proposed stream crossings for fish and other aquatic organism passage. One proposed AOP upgrade site was found to be seasonal barriers to adult and juvenile fish passage. Several research studies have found that the removal or up-sizing of culverts has restored fish and other aquatic organism connectivity. It is assumed that culvert upsizing to a stream simulation culvert will allow year-round fish passage. Spring Creek is currently unoccupied by fish but may be recolonized following the installation of two AOP culverts. The BLM will electroshock the creek in the future to see if the stream was recolonized.

IV. PROJECT BENEFITS (attach additional information to end of application):

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

The project will benefit the coldwater fish community in Gold Creek. Westslope cutthroat trout are the predominant fish species, but the project will also enhance habitat for Threatened bull trout, brook trout, brown trout, and other coldwater species.

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

Currently, only one unnamed tributary has fish present above the barrier culverts. Additionally, sediment produced on Forest Service roads are chronically delivering sediment at stream crossings. Three 24-inch culverts will be upsized to 102-in culverts with stream simulation material. This will allow for lower velocity, more roughness, and year-round fish and other aquatic organism passage.

This project will increase the amount of available spawning and rearing habitat in tributaries of Gold Creek. Potentially, this project will allow for the re-colonization of Spring Creek – currently un-occupied by fish but is suitable fish habitat. Additionally, two hydraulic upgrades will be installed to reduce chronic sediment delivery associated with these road crossings and reduce the risk of catastrophic failure. Reducing stream sedimentation will improve the quality of spawning habitat.

C. What is the expected improvement to fish populations, both short term and long term? How might the project translate to angler success?

By increasing the amount of spawning and rearing habitat in Gold Creek and its tributaries, it is expected to increase west-slope cutthroat and other trout species population densities. Additionally, it may help in the recovery of the relic Threatened bull trout population. With higher densities of fish, angler success is expected to increase. The entire project area is open to angling. Wild fish populations downstream on the Lower Blackfoot River are also expected to benefit through enhanced wild trout recruitment.

D. Will the project increase public fishing opportunity for wild fish and, if so, how? Is public fishing allowed onsite? Is it allowed by permission? If not, describe how the public would benefit.

The entire project area lies on The Nature Conservancy land and is open to angling. Wild fish populations are expected to increase as a result of the project, leading to more opportunities for angling success. The proposed project will increase trout abundance, bull trout and westslope cutthroat trout conservation, and overall health, productivity and resiliency of Gold Creek at a larger scale. These benefits will ultimately benefit public fishing opportunities in the lower Blackfoot River.

E. Aside from angling, what local or large-scale public benefits will be realized from this project?

Overall public benefits from this project will include increased salmonid population resilience, increased fish density, and benefits to the survival of Threatened bull trout. Most of these culverts are also at risk of catastrophically failing and delivering large amounts of sediment into streams. Upsizing them will minimize this risk and maintain good water quality for downstream users.

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

The project will not interfere with the water or property rights of adjacent landowners. The entire project will take place on TNC property.

G. Will the project result in the development of commercial recreational use on the site (including paid access)? Explain:

No, there is planned development of commercial recreational use at the site of the project.

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

No, the project is not associated with mine reclamation.

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.

V. 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: 5/15/2025

Submittal: **Applications must be signed and received on or before November 15 and May 15 to be considered for the subsequent funding period**. Late or incomplete applications will be rejected.

Mail to:	FWP Future Fisheries Fish Habitat Bureau PO Box 200701 Helena, MT 59620-0701	Email:	Future Fisheries Coordinator FWPFFIP@mt.gov (electronic submissions must be signed) For files over 10MB, use https://transfer.mt.gov and send to mmcgree@mt.gov

BUDGET TEMPLATE SHEET FOR FUTURE FISHERIES PROGRAM APPLICATIONS

Both tables must be completed or the application will be returned

PROJECT COSTS					CONTRIBUTIONS			
WORK ITEMS (Itemize by Category)	NUMBER OF UNITS	UNIT DESCRIPTION *	COST/UNIT	TOTAL COST	FUTURE FISHERIES REQUEST	MATCH (Cash or Services)**	OTHER (Not part of this application)	TOTAL
Personnel* **								
Culvert survey, design, and oversight (Forest Service Engineer, Hydrologist, and Fish Bio)	1	lump sum	$ 12,000.00	$ 12,000.00			$ 12,000.00	$ 12,000.00
CFC Project Management (coordination, oversight, and outreach)	200	hours	$ 50.00	$ 10,000.00		$ 10,000.00		$ 10,000.00
				$ -		$ -		$ -
			Sub-Total	$ 22,000.00	$ -	$ 10,000.00	$ 12,000.00	$ 22,000.00
Travel								
Mileage	1000	miles	$0.700	$ 700.00				$ -
Per diem				$ -				$ -
			Sub-Total	$ 700.00	$ -	$ 700.00	$ -	$ 700.00
Construction Materials** **								
18" DIAMETER ROUND CORRUGATED STEEL PIPE, 16 GA	38	LINEAR FOOT	$24.95	$ 948.10		948.10		$ 948.10
18" D Bands	1	Each	$120.00	$ 120.00		120.00		$ 120.00
48" DIAMETER ROUND CORRUGATED STEEL PIPE, 16 GA	42	LINEAR FOOT	$96.00	$ 4,032.00		4,032.00		$ 4,032.00
48" D Bands	1	Each	$200.00	$ 200.00		200.00		$ 200.00
60" DIAMETER ROUND CORRUGATED STEEL PIPE, 16 GA	50	LINEAR FOOT	$116.50	$ 5,825.00		5,825.00		$ 5,825.00
60" D Bands	1	Each	$220.00	$ 220.00		220.00		$ 220.00
102" DIAMETER ROUND CORRUGATED STEEL PIPE, 16 GA	136	LINEAR FOOT	$206.48	$ 28,081.28	9,085.11	18,996.17		$ 28,081.28
102" D Bands	3	Each	$413.00	$ 1,239.00		1,239.00		$ 1,239.00
2' Baffles -- Installed	8	Each	$1,500.00	$ 12,000.00		12,000.00		$ 12,000.00
Native seed	1	Each	$ 50.00	$ 50.00		$ 50.00		$ 50.00
				$ -				$ -
			Sub-Total	$ 52,715.38	$ 9,085.11	$ 43,630.27	$ -	$ 52,715.38
Equipment, Labor, and Mobilization								
MOBILIZATION	5	LUMP SUM	$2,200.00	$ 11,000.00	$ 2,200.00	$ 8,800.00		$ 11,000.00
CONSTRUCTION SURVEY AND STAKING	5	LUMP SUM	$2,500.00	$ 12,500.00			$ 12,500.00	$ 12,500.00
SOIL EROSION & POLLUTION CONTROL (stream diversions, storm water protection, and the bare soil rehab.)	5	LUMP SUM	$3,500.00	$ 17,500.00		$ 17,500.00		$ 17,500.00
CLEARING AND GRUBBING, DISPOSAL METHOD - SLASH (F), STUI	5	LUMP SUM	$1,500.00	$ 7,500.00	$ 1,500.00	$ 6,000.00		$ 7,500.00
REMOVAL OF EXISTING PIPE, DISPOSAL METHOD SALVAGE	6	EACH	$600.00	$ 3,600.00	$ 600.00	$ 3,000.00		$ 3,600.00
ROADWAY EXCAVATION & EMBANKMENT	385	CUBIC YARD	$30.00	$ 11,550.00	$ 3,600.00	$ 7,950.00		$ 11,550.00
STRUCTURE EXCAVATION & BACKFILL	5	LUMP SUM	$5,000.00	$ 25,000.00	$ 5,000.00	$ 20,000.00		$ 25,000.00
PLACED RIPRAP, CLASS 2	84	CUBIC YARD	$95.00	$ 7,980.00	$ 1,900.00	$ 6,080.00		$ 7,980.00
CRUSHED AGGREGATE SURFACING, COMPACTION METHOD 1	120	CUBIC YARD	$65.00	$ 7,800.00		$ 7,800.00		$ 7,800.00
INSTALL 18" DIAMETER ROUND CORRUGATED STEEL PIPE, 16 GA	38	LINEAR FOOT	$50.00	$ 1,900.00		$ 1,900.00		$ 1,900.00
INSTALL 24" DIAMETER ROUND CORRUGATED STEEL PIPE, 16 GA	64	LINEAR FOOT	$50.00	$ 3,200.00		$ 3,200.00		$ 3,200.00
INSTALL 48" DIAMETER ROUND CORRUGATED STEEL PIPE, 16 GA	42	LINEAR FOOT	$50.00	$ 2,100.00		$ 2,100.00		$ 2,100.00
INSTALL 60" DIAMETER ROUND CORRUGATED STEEL PIPE, 16 GA	50	LINEAR FOOT	$150.00	$ 7,500.00		$ 7,500.00		$ 7,500.00
INSTALL 102" DIAMETER ROUND CORRUGATED STEEL PIPE, 16 G	44	LINEAR FOOT	$400.00	$ 17,600.00	$ 17,600.00	$ -		$ 17,600.00
INSTALL 102" DIAMETER ROUND CORRUGATED STEEL PIPE W/ BAFFLES, 16 GA	92	LINEAR FOOT	$400.00	$ 36,800.00		$ 36,800.00		$ 36,800.00
EQUIPMENT RENTAL, HYDRAULIC EXCAVATOR WITH THUMB	20	HOUR	$150.00	$ 3,000.00	$ 600.00	$ 2,400.00		$ 3,000.00
STREAMBED SIMULATION MATERIAL BED CLASS 2	95	CUBIC YARD	$50.00	$ 4,750.00	$ 1,500.00	$ 3,250.00		$ 4,750.00
CHANNEL ROCK FOR BANKS, CLASS CR-2	65	CUBIC YARD	$150.00	$ 9,750.00		$ 9,750.00		$ 9,750.00
CHANNEL ROCK FOR ROCK WEIRS, CLASS CR-2	70	CUBIC YARD	$150.00	$ 10,500.00		$ 10,500.00		$ 10,500.00
Weed treatment (2 herbicide applications)	1	Lump Sum	$ 500.00	$ 500.00			$ 500.00	$ 500.00
				$ -				
			Sub-Total	$ 202,030.00	$ 34,500.00	$ 154,530.00	$ 13,000.00	$ 202,030.00

(Revised 5/16/2025)

BUDGET TEMPLATE SHEET FOR FUTURE FISHERIES PROGRAM APPLICATIONS

TOTALS	$ 277,445.38	$ 43,585.11	$ 208,860.27	$ 25,000.00	$ 277,445.38

OTHER REQUIREMENTS:

All of the columns in the budget table and the matching contribution table MUST be completed appropriately or the application will be invalid. Please see the example budget sheet for additional clarification.

*Units = feet, hours, inches, etc. Do not use lump sum unless there is no other way to describe the costs.
**Can include in-kind materials. Justification for in-kind labor (e.g. hourly rates used). Do not use government salaries as match. Describe here or in text.

***The Review Panel suggests that design and oversight costs associated with a proposed project not exceed 15% of the total project budget. If design and oversight costs are in excess of 15%, applications may require a justification or minimum of two competitive bids for the cost of undertaking the project. For projects that include a maintenance request, it must not exceed 10% of the total project cost.

****The Review Panel recommends a maximum fencing cost of $1.50 per foot. Additional costs may be the responsibility of the applicant and/or partners.

Additional details:

APPLICATION MATCHING CONTRIBUTIONS

(do not include requested funds or contributions not associated with the application)

CONTRIBUTOR	IN-KIND	CASH	TOTAL	Secured? (Y/N)
Bureau of Land Management	$ -	$ 203,860.38	$ 203,860.38	Y
The Nature Conservancy	$ -	$ 5,000.00	$ 5,000.00	Y
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
TOTALS	$ -	$ 208,860.38	$ 208,860.38	

OTHER CONTRIBUTIONS

(contributions not associated with the application)

CONTRIBUTOR	IN-KIND	CASH	TOTAL	Secured? (Y/N)
BLM staff time for survey, design, construction surveying, construction oversight, and weed treatment	$ 25,000.00	$ -	$ 25,000.00	Y
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
TOTALS	$ 25,000.00	$ -	$ 25,000.00	

MONTANA FISH, WILDLIFE & PARKS

Future Fisheries Improvement Program

Appendix: FWP Statement

Project Title: **Gold Creek AOP Project**

Please describe the potential impact of the project, including the priorities of the Fisheries Division and the importance to Montana's anglers.

Gold Creek supports a mixed fishery of rainbow trout, westslope cutthroat trout, brown trout, and brook trout. Gold Creek is a high priority tributary in the lower Blackfoot River basin because of its significant multi species sport fishery value and its importance as a source of trout recruitment to the mainstem river. Although recent surveys have documented the apparent extirpation of the local bull trout population, subadult bull trout from the Blackfoot River still use lower Gold Creek for seasonal refugia and rearing opportunities. The ongoing conversion of former private timberland to USFS and BLM ownership provides immense public value and creates tremendous angling opportunity throughout Gold Creek and West Fork Gold Creek.

Gold Creek has been a focal area for habitat restoration since the 1990s due to basin-wide impacts from past land uses. The long-term recovery of the drainage will require passive and active restoration, and this proposal contributes to that effort. The project is expected to increase connectivity in the watershed and contribute to the ecological health of the Gold Creek system. This project is consistent with management direction in the Statewide Fisheries Management Plan that calls for improving habitat to support ecosystem function and improving trout recruitment to the mainstem river through connectivity improvements in tributaries.

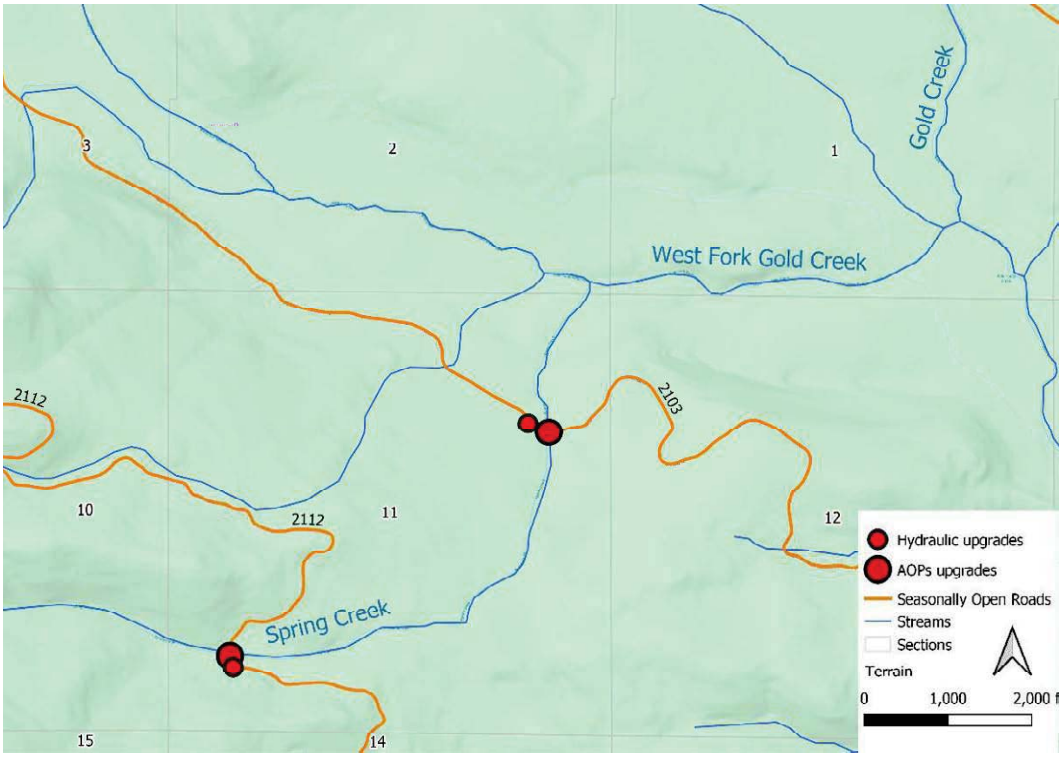
Name of FWP Biologist Patrick Uthe Date: 5/6/2025

Please attach to the FFIP application and materials and submit according to listed deadlines.

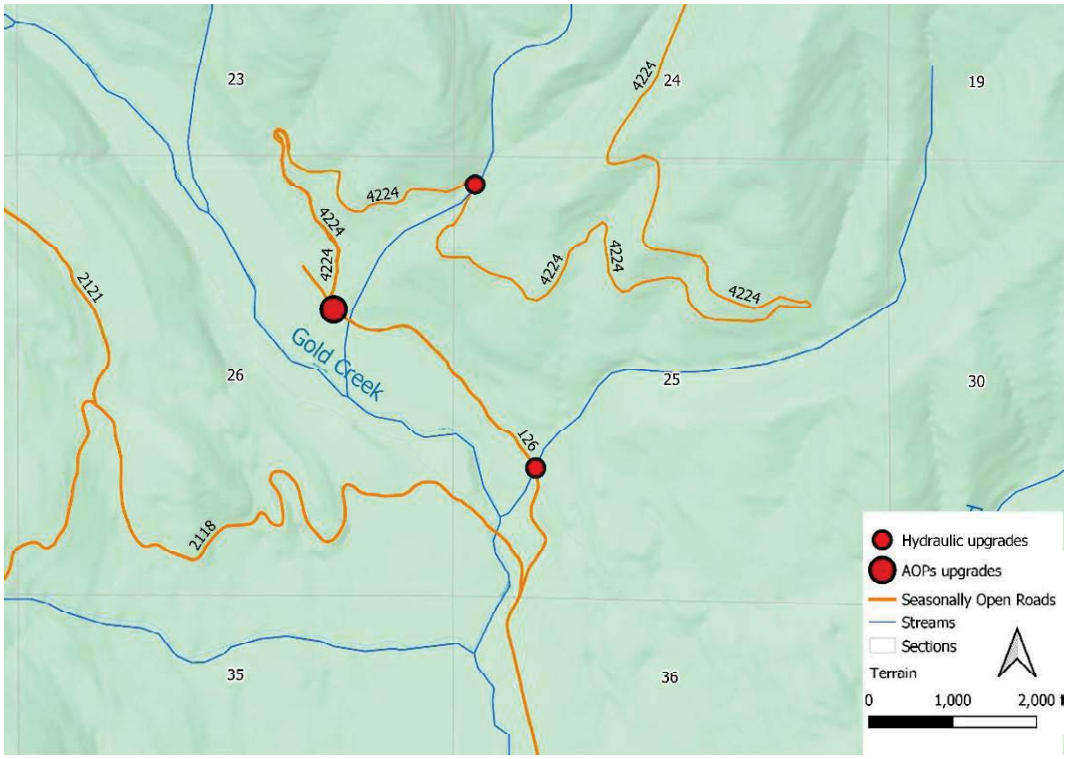
Gold Creek Aquatic Organism Passage (AOP) Project

Maps

Overview map. Missoula is approximately 25 miles southwest of the project area.



Map 1: Two AOPs and two hydraulic upgrades on Spring Creek.



Map 2: One AOP and two hydraulic upgrades on two unnamed tributaries of Gold Creek.

Gold Creek Aquatic Organism Passage (AOP) Project

Photos

Photos of Spring Creek – WTC have been extirpated in the last 20+ years, but removing fish barriers may re-colonize this tributary of Gold Creek.

Inlet and outlet of the uper Spring Creek culvert. It will be replaced with a102-inch AOP.


Inlet and outlet of the lower Spring Creek culvert. It will be replaced with a102-inch AOP.


Inlet and outlet of the lower noname creek culvert. It will be replaced with a102-inch AOP.

Inlet and outlet of the upper noname creek culvert. It will be replaced with a 60-inch hydraulic culvert.

Inlet and outlet of the a second noname creek culvert. It will be replaced with a 48-inch hydraulic culvert.

The Nature Conservancy
Protecting nature. Preserving life.™

The Nature Conservancy in Montana
32 South Ewing Street
Helena, MT 59601

Tel (406) 443-0303
Fax (406) 443-8311

nature.org/montana

April 29, 2025

Future Fisheries Improvement Program
C/O Michelle McGree
P.O Box 200701
1420 E. 6th Avenue
Helena, MT 59620

Dear Ms. McGree,

The Nature Conservancy (TNC) supports the Clark Fork Coalition's (CFC) grant application for the project "Gold Creek Tributaries AOP Culvert Replacements". The Nature Conservancy is the current landowner of the property; however, the lands are in the process of being transferred into Bureau of Land Management (BLM) ownership and management. CFC and the BLM have permission to replace these stream crossings on our lands during this transition.

The Clark Fork Coalition is applying for grant funds from the Future Fisheries Improvement Program to work with the BLM to improve aquatic organism passage in tributaries of Gold Creek - an important westslope cutthroat trout fishery and bull trout Critical Habitat. Additionally, a remnant population of bull trout is present in the headwaters of Gold Creek. Improvements to Gold Creek will benefit fisheries in the lower Blackfoot River as well.

The proposed project to replace 3 undersized culverts with 8-foot AOP culverts will provide year-round stream connectivity for fish and other aquatic organisms and would increase hydraulic capacity. Additionally, the installation of two hydraulic culvert upgrades and two over-top culverts will significantly increase flood capacity, reduce chronic stream sedimentation, and greatly reduce the risk of catastrophic failure.

The BLM is providing the bulk of funding towards these projects through Inflation Reduction Act (IRA) funds. Funds from the Future Fisheries Improvement Program provide required non-federal match and are essential to completing these on-the-ground aquatic restoration projects. TNC will also be providing $5,000 in matching funds for this project.

Thank you for supporting this important conservation project. Please contact me if you have any questions at skloetzel@tnc.org or 406-214-2036.

Sincerely,

Steven Kloetzel
Western Montana Land Steward
The Nature Conservancy in Montana

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Missoula Field Office
3255 Fort Missoula Road
Missoula, MT 59804
https://www.blm.gov/montana-dakotas

5/5/2025

Future Fisheries Improvement Program
C/O Michelle McGree
P.O Box 200701
1420 E. 6th Avenue
Helena, MT 59620

Dear Ms. McGree,

The Bureau of Land Management (BLM) supports the Clark Fork Coalition's grant application for Gold Creek Tributaries AOP Culvert Replacements. The Clark Fork Coalition is applying for grant funds from the Future Fisheries Improvement Program to work with the BLM to improve aquatic organism passage in tributaries of Gold Creek – an important westslope cutthroat trout fisheries and bull trout Critical Habitat. Additionally, a remnant population of bull trout is present in the headwaters of Gold Creek.

The proposed project to replace 3 undersized culverts with 8.5-foot AOP culverts will provide year-round stream connectivity for fish and other aquatic organisms and would increase hydraulic capacity. Additionally, the installation of two hydraulic culvert upgrades and two overflow culverts will significantly increase flood capacity, reduce chronic stream sedimentation, and greatly reduce the risk of catastrophic failure. Improvements to Gold Creek will benefit fisheries in the lower Blackfoot River.

The Clark Fork Coalition and Bureau of Land management have signed a multi-year agreement to actively restore the Gold and Belmont watersheds. Planned cooperative projects include upsizing AOP culverts, installing large wood jams, and storing/ decommissioning roads and stream crossings. The Missoula Field Office of the BLM is providing the bulk of funding towards these projects through Inflation Reduction Act (IRA) funds. Funds from the Future Fisheries Improvement Program provide required non-federal match and are essential to completing these on-the-ground aquatic restoration projects. Additionally, these funds will help to further leverage resources and partnerships to achieve greater outcomes in the watershed.

Thank you for the funding opportunity and your continued work for conservation of natural resources. Please do not hesitate to contact me at ecarey@blm.gov if you have any questions.

Sincerely,

Erin Carey
Missoula Field Manager

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

GOLD CREEK TRIBUTARIES AOP CULVERT REPLACEMENTS

MISSOULA COUNTY

MISSOULA FIELD OFFICE

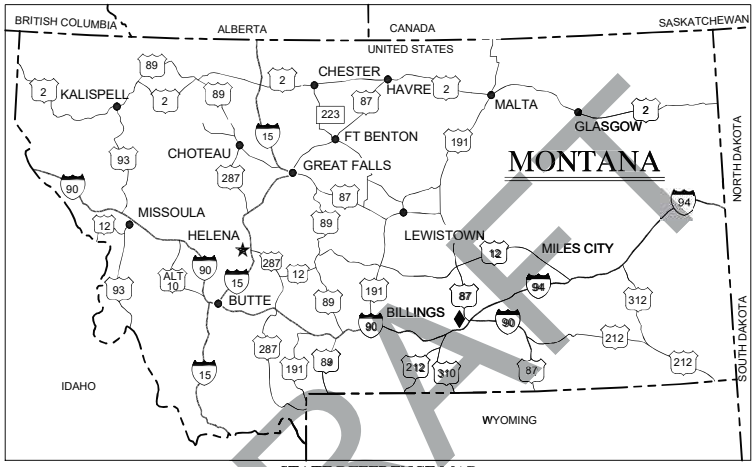
GENERAL ENGINEER'S NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR ALL METHODS, SEQUENCING, AND SAFETY CONCERNS ASSOCIATED WITH THIS PROJECT DURING CONSTRUCTION, UNLESS SPECIFICALLY ADDRESSED OTHERWISE IN THIS PLAN OR ELSEWHERE IN THE CONTRACT DOCUMENTS.
2. THE CONTRACTOR IS TO COMPLY WITH ALL LOCAL, STATE, AND FEDERAL LAWS AND REGULATIONS APPLICABLE TO THE CONSTRUCTION COVERED BY THIS PLAN.
3. THE QUANTITIES AND SITE CONDITIONS DEPICTED IN THIS PLAN ARE FOR INFORMATIONAL PURPOSES ONLY AND ARE SUBJECT TO ERROR AND OMISSION. CONTRACTOR SHALL SATISFY THEMSELVES AS TO ACTUAL QUANTITIES AND SITE CONDITIONS PRIOR TO BIDDING THE WORK FOR THE CONSTRUCTION COVERED BY THIS PLAN.
4. THE CONTRACTOR IS TO VERIFY AND COORDINATE ALL DIMENSIONS AND SITE LAYOUT WITH THE FINAL SITE PLAN PRIOR TO CONSTRUCTION AND CONTACT CONTRACTING OFFICER WITH ANY DISCREPANCIES.
5. COORDINATION BETWEEN ALL PARTIES INVOLVED IS ESSENTIAL TO THE CONTRACT.
6. WHERE STAKING IS SHOWN ON THE DRAWINGS, OR LISTED ON THE SCHEDULE OF ITEMS, CONSTRUCTION CANNOT PROCEED PRIOR TO APPROVAL OF STAKING BY THE CO.
7. ALL CONSTRUCTION STAKING WILL BE PERFORMED BY THE GOVERNMENT.
8. FOLLOWING FINAL ACCEPTANCE OF THE PROJECT WORK IT WILL BE CONTRACTORS RESPONSIBILITY TO REMOVE AND DISPOSE OF ALL CONSTRUCTION STAKES.
9. SUBMIT A TEMPORARY TRAFFIC CONTROL PLAN TO THE CO FOR REVIEW PRIOR TO CONSTRUCTION. AS A MINIMUM, TRAFFIC CONTROL PLAN MUST ADDRESS SIGNING FOR CLOSURE AND PROVISIONS TO PROVIDE SAFETY AT NIGHT.

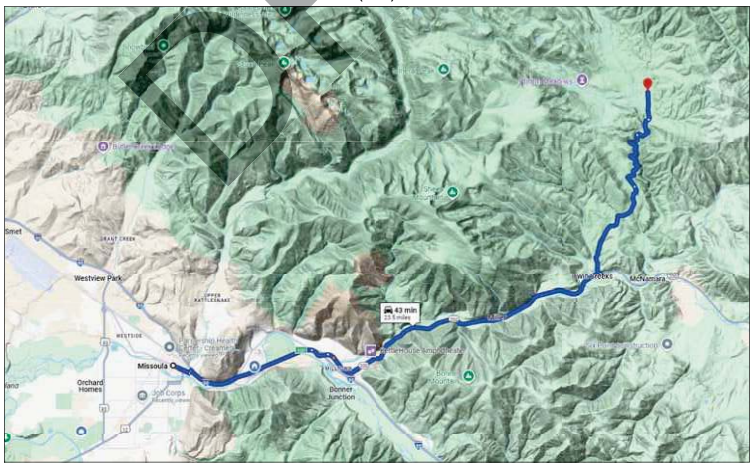
RECOMMENDED BY: _____
FIRST MI. LAST

REVIEWED BY: _____
FIRST MI. LAST

APPROVED BY: _____
FIRST MI. LAST



STATE REFERENCE MAP
(N.T.S)



VICINITY MAP
(N.T.S)

PROJECT DESCRIPTION

THIS PROJECT WILL REPLACE UNDERSIZED CULVERTS IN THE GOLD CREEK DRAINAGE WITH LARGER CULVERTS TO PROMOTE AQUATIC ORGANISM PASSAGE. THE AQUATIC ORGANISM PASSAGEWAYS ARE 102" ROUND STEEL CULVERTS, OTHER CULVERTS OF VARIOUS SIZES WILL BE INSTALLED TO PROMOTE HYDRAULIC CONNECTIVITY. THIS PROJECT IS BEING COMPLETED IN PARTNERSHIP BETWEEN THE BUREAU OF LAND MANAGEMENT, US FOREST SERVICE, AND THE NATURE CONSERVANCY. PROJECT IMPLEMENTATION IS BEING LED BY CLARK FORK COALITION, THROUGH FINANCIAL ASSISTANCE AGREEMENT L23AC00398 LOWER BLACKFOOT TRIBUTARIES RESTORATION PROJECT.

DIRECTIONS TO SITE:

FROM MISSOULA TAKE I90 EAST FOR 5 MILES TO EXIT 109 FOR HWY 200 TOWARD BONNER & GREAT FALLS. CONTINUE ON HWY 200 EAST FOR 10 MILES TO THE GOLD CREEK ROAD. TAKE A LEFT ONTO THE GOLD CREEK ROAD AND FOLLOW FOR 4 MILES TO THE START OF THE PROJECT. SEE AREA MAP FOR SPECIFIC JOB SITE LOCATIONS.

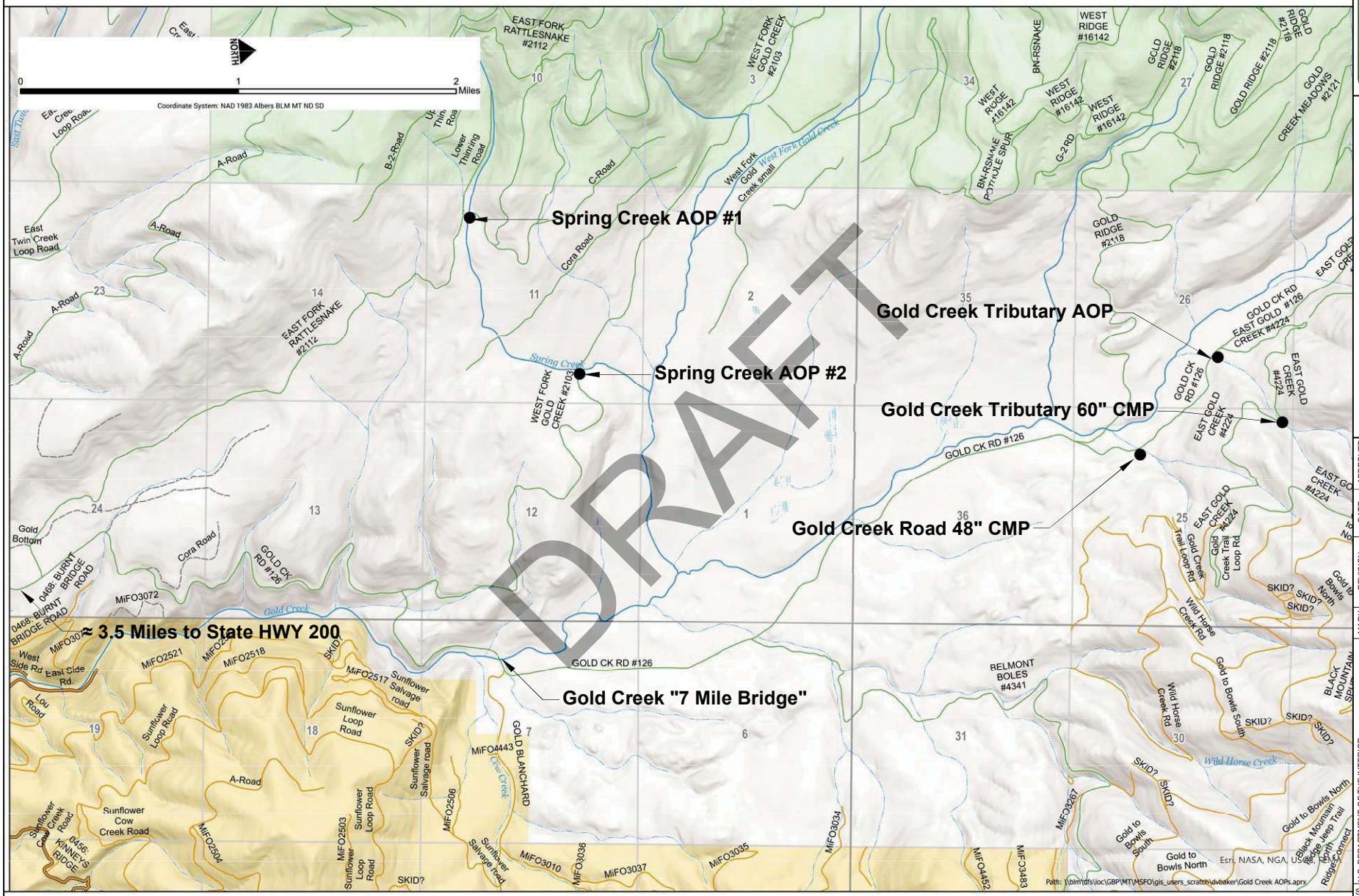
GOLD CREEK TRIBUTARIES AOP
CULVERT REPLACEMENTS

COVER

MARK	REVISION	DATE	APPROVED

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMNET
DISTRICT: WESTERN MONTANA DISTRICT
DESIGN OFFICE: MISSOULA FIELD OFFICE
ISSUED FOR: CONSTRUCTION ISSUE DATE: 3/20/2025

SHEET 1 OF 31



GOLD CREEK TRIBUTARIES AOP
CULVERT REPLACEMENTS

VICINITY MAP

MARK	REVISION	DATE	APPROVED

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMNET
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SHEET 3 OF 31

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(DESIGNED BY: DVB DRAWN BY: DVB CHECKED BY: GLA)

PROJECT SUMMARY

PAY ITEM	DESCRIPTION	UNIT	SPRING CRK AOP #1	SPRING CRK AOP #2	GOLD CRK TRIBUTARY AOP	GOLD CRK TRIBUTARY CMP	GOLD CRK ROAD CMP	PROJECT TOTAL	NOTES
15101	MOBILIZATION	LS	---	---	---	---	---	ALL	INCLUDES TEMPORARY TRAFFIC CONTROL.
15201	CONSTRUCTION SURVEY AND STAKING	LS	---	---	---	---	---	ALL	LICENSED SURVEYOR REQUIRED. ELECTRONIC POINT FILES IN VARIOUS FORMATS AVAIALBLE UPON REQUEST.
15730	SOIL EROSION & POLLUTION CONTROL	LS	---	---	---	---	---	ALL	SEE GENERAL NOTES.
20101	CLEARING AND GRUBBING, DISPOSAL METHOD - SLASH (F), STUMPS (C)	LS	---	---	---	---	---	ALL	SALVAGED TOPSOIL, SOD, STEMS, AND SLASH TO BE PLACED ON DISTURBED AREAS. STUMPS TO BE BURIED OR INCORPORATED INTO ENGINEERED STREAM BANK CONSTRUCTION.
20302	REMOVAL OF EXISTING CORRUGATED STEEL PIPE, DISPOSAL METHOD SALVAGE	EACH	1	2	1	1	1	6	SALAVAGED PIPE TO BE REUSED ON SITE
20410	ROADWAY EXCAVATION & EMBANKMENT	CY	150	15	120	100		385	EXCESS MATERIAL FROM STRUCTURAL EXCAVATION MEETING FP-14 704.06 MAY ALSO BE USED. IN-PLACE QUANTITY NOT ADJUSTED FOR SHRINK/SWELL.
20806	STRUCTURE EXCAVATION & BACKFILL	LS	---	---	---	---	---	ALL	EXCESS MATERIAL FROM STRUCTURAL EXCAVATION MEETING FP-14 704.06 MAY ALSO BE USED FOR ROADWAY EMBANKMENT
25101	PLACED RIPRAP, CLASS 2	CY	20	24	20	10	10	84	COMMERCIAL SOURCE. EXCESS MATERIAL FROM EXCAVATION MEETING MATERIAL MEETING FP-14 SUBSECTION 705.02 MAY BE SALVAGED AND USED
30207	CRUSHED AGGREGATE SURFACING, COMPACTION METHOD 1	CY	40	30	30		20	120	COMMERCIALLY SOURCED MATERIAL MEETING FP-14 SUBSECTION 703.06. GRADATION TO BE APPROVED BY CLARK FORK COALITION REPRESENTATIVE.
60201A	INSTALL 18" DIAMETER ROUND CORRUGATED STEEL PIPE, 16 GA THICKNESS	LF			38			38	PAY ITEM INCLUDES INSTALLATION OF STRUCTURE ONLY. STRUCTURE TO BE FURNISHED BY THE CLARK FORK COALITION
60201B	INSTALL 24" DIAMETER ROUND CORRUGATED STEEL PIPE, 16 GA THICKNESS	LF	28	36				64	PAY ITEM INCLUDES INSTALLATION OF STRUCTURE ONLY. STRUCTURE TO BE SALVAGED FROM ADJACENT STREAM CROSSING
60201C	INSTALL 48" DIAMETER ROUND CORRUGATED STEEL PIPE, 16 GA THICKNESS	LF					42	42	PAY ITEM INCLUDES INSTALLATION OF STRUCTURE ONLY. STRUCTURE TO BE FURNISHED BY THE CLARK FORK COALITION. PAY ITEM INCLUDES BEDDING MATERIAL.
60201D	INSTALL 60" DIAMETER ROUND CORRUGATED STEEL PIPE, 16 GA THICKNESS	LF				50		50	PAY ITEM INCLUDES INSTALLATION OF STRUCTURE ONLY. STRUCTURE TO BE FURNISHED BY THE CLARK FORK COALITION. PAY ITEM INCLUDES BEDDING MATERIAL.
60201E	INSTALL 102" DIAMETER ROUND CORRUGATED STEEL PIPE, 16 GA THICKNESS	LF			44			44	PAY ITEM INCLUDES INSTALLATION OF STRUCTURE ONLY. STRUCTURE TO BE FURNISHED BY THE CLARK FORK COALITION. PAY ITEM INCLUDES BEDDING MATERIAL.
60201F	INSTALL 102" DIAMETER ROUND CORRUGATED STEEL PIPE W/ BAFFLES, 16 GA THICKNESS	LF	44	48				92	PAY ITEM INCLUDES INSTALLATION OF STRUCTURE ONLY. STRUCTURE AND BAFFLES TO BE FURNISHED BY THE CLARK FORK COALITION. CONTRACTOR TO INSTALL BAFFLES. PAY ITEM INCLUDES BEDDING MATERIAL.
62201B	EQUIPMENT RENTAL, HYDRAULIC EXCAVATOR WITH THUMB	HOUR	4	4	4	4	4	20	WORK TO BE LOCATED ADJACENT TO CULVERT INSTALLATIONS AND DONE AT DIRECTION OF CLARK FORK COALITION REPRESENTATIVE.
64801	STREAMBED SIMULATION MATERIAL BED CLASS 2	CY	30	35	30			95	COMMERCIAL SOURCE. MATERIAL FROM THE EXCAVATION MEETING THE GRADATION FOR BED CLASS 2 MAY BE SALVAGED AND USED.
64803A	CHANNEL ROCK FOR BANKS, CLASS CR-2	CY	20	25	20			65	COMMERCIAL SOURCE. MATERIAL FROM THE EXCAVATION MEETING THE GRADATION FOR CHANNEL ROCK, CLASS CR-2 MAY BE SALVAGED AND USED.
64803B	CHANNEL ROCK FOR ROCK WEIRS, CLASS CR-2	CY	20	30	20			70	COMMERCIAL SOURCE. MATERIAL FROM THE EXCAVATION MEETING THE GRADATION FOR CHANNEL ROCK, CLASS CR-2 MAY BE SALVAGED AND USED. .

GENERAL NOTES:

SPECIFICATIONS: CONSTRUCT THE PROJECT IN COMPLIANCE WITH FEDERAL HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF ROAD AND BRIDGES ON FEDERAL HIGHWAY PROJECTS (FP-14) AND APPLICABLE SUPPLEMENTAL SPECIFICATIONS.

DEWATERING & EROSION CONTROL PLAN: SUBMIT A SOIL EROSION AND SEDIMENT CONTROL PLAN ALONG WITH A DEWATERING PLAN TO THE CLARK FORK COALITION REPRESENTATIVE FOR APPROVAL AT LEAST THIRTY (30) DAYS PRIOR TO BEGINNING WORK. SEE SECTION 157 OF THE SUPPLEMENTAL SPECIFICATIONS FOR DETAILS. CONSTRUCT TEMPORARY MEANS TO DIVERT THE FLOW OF THE LIVE STREAM AS NECESSARY TO PERFORM WORK. DO NOT PUMP WATER FROM EXCAVATIONS DIRECTLY INTO THE LIVE STREAM.

TEMPORARY TRAFFIC CONTROL: SUBMIT A TEMPORARY TRAFFIC CONTROL PLAN TO THE CLARK FORK COALITION REPRESENTATIVE FOR APPROVAL AT LEAST 30 DAYS PRIOR TO INTENDED USE.

WELDING: WELD IN ACCORDANCE WITH THE STRUCTURAL WELDING CODE, AWS D1.1. A CERTIFIED WELDER IS REQUIRED.

IN-STREAM WORK: ALL IN-STREAM WORK WILL BE DONE BETWEEN JULY 15TH AND SEPTEMBER 1ST, OR AS DESCRIBED IN PERMIT. ALLOWANCE SHALL BE GIVEN TO THE OWNER TO CAPTURE AND REMOVE FISH AND OTHER AQUATIC ORGANISMS FROM WITHIN THE CONSTRUCTION WORK AREA PRIOR TO AND DURING WORK ACTIVITIES.

GOLD CREEK TRIBUTARIES AOP
CULVERT REPLACEMENTS

PROJECT SUMMARY & GENERAL NOTES

MARK	REVISION	DATE	APPROVED

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMNET
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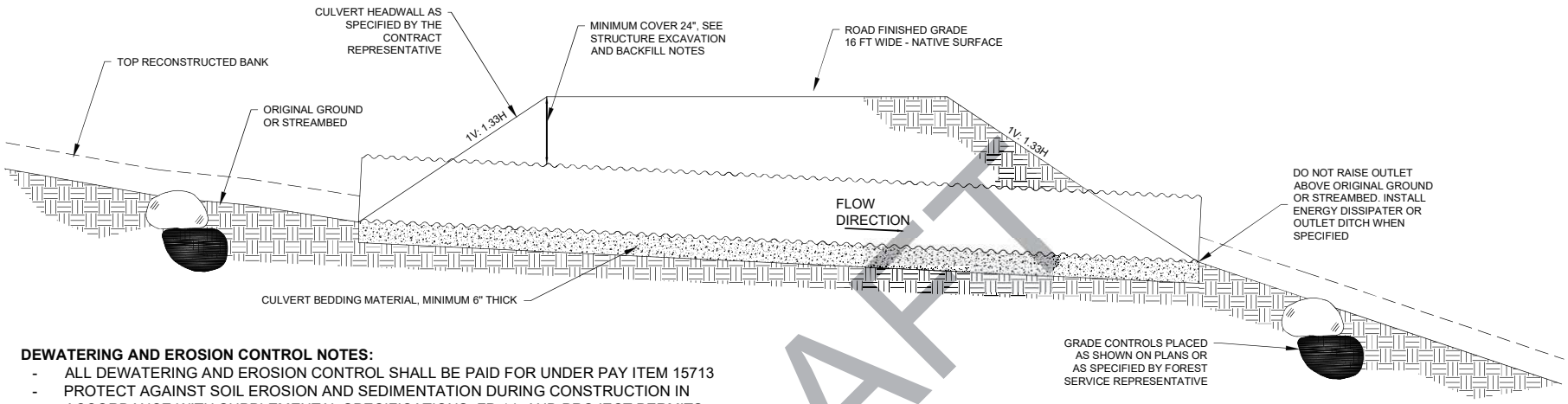
(DESIGNED BY: DVB DRAWN BY: DVB CHECKED BY: GLA)

HYDRAULIC CULVERT DETAIL

NOT TO SCALE



DEWATERING AND EROSION CONTROL NOTES:

- ALL DEWATERING AND EROSION CONTROL SHALL BE PAID FOR UNDER PAY ITEM 15713
- PROTECT AGAINST SOIL EROSION AND SEDIMENTATION DURING CONSTRUCTION IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATIONS, FP-14, AND PROJECT PERMITS
- DEWATERING PLAN SHALL BE SUBMITTED TO THE CLARK FORK COALITION REPRESENTATIVE FOR APPROVAL 14 DAYS PRIOR TO CONSTRUCTION START DATE AND SHALL INCLUDE DRAWINGS THAT DEPICT HOW THE CONTRACTOR PLANS TO DIVERT/PUMP WATER THROUGH THE EXCAVATION SITE
- CONTRACTOR SHOULD ANTICIPATE WATER INFILTRATION IN EXCAVATION AREAS AND PLAN ACCORDINGLY TO MEET SPECIFICATIONS

Hydraulic Culvert Listing

Design		As Built		Corrugated Metal Pipe Steel 2 2/3" x 1/2" Corrugation		De-Watering Plan Required	Headwall Class 1 & 2 (CY)	Notes
Location	Length (Feet)	Length (Feet)	Skew Angle	Diameter (Inch)	Thickness (Inch)			
Spring Creek #1 Sta 1+61	38			24	0.064			Use salvaged CMP from adjacent stream crossing.
Spring Creek #2 Sta 2+10	36			24	0.064		4.0	Use salvaged CMP from adjacent stream crossing.
Gold Creek Tributary AOP Sta 2+12	38			18	0.064		2.0	Culvert to be supplied by Clark Fork Coalition
Gold Creek Tributary CMP	50			60	0.064	X	10.0	Culvert to be supplied by Clark Fork Coalition
Gold Creek Road CMP	42			48	0.064	X	10.0	Culvert to be supplied by Clark Fork Coalition

GOLD CREEK TRIBUTARIES AOP
CULVERT REPLACEMENTS

HYDRAULIC CULVERT DETAIL

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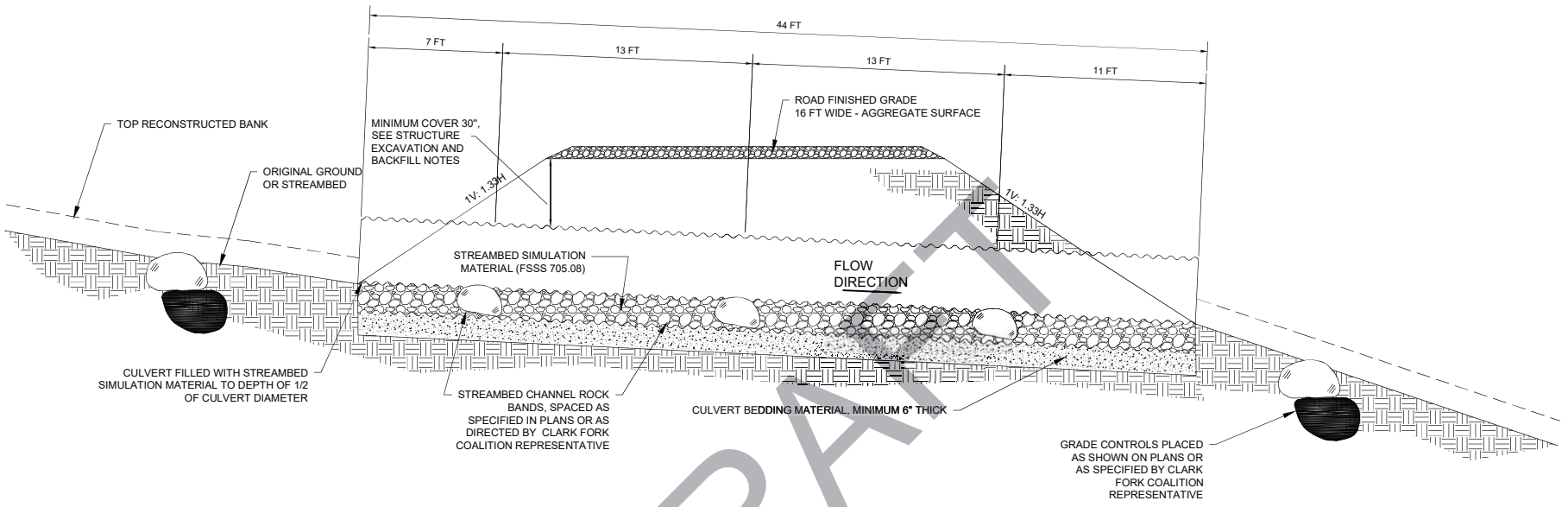
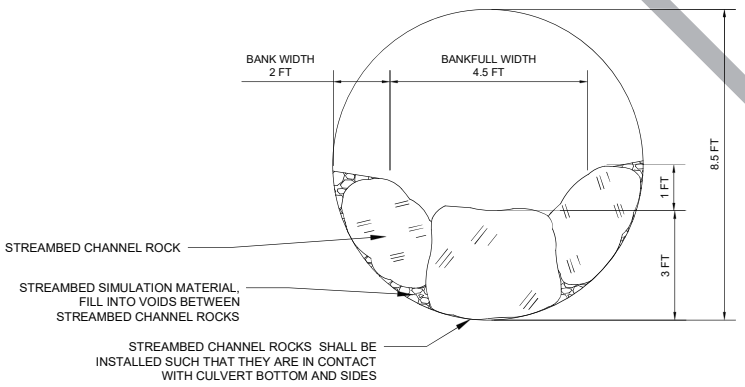
GOLD CREEK TRIBUTARY DETAIL

NOT TO SCALE



CHANNEL ROCK BAND: SECTION VIEW

NOT TO SCALE



CULVERT NOTES:
- CULVERT WILL BE FURNISHED BY THE CLARK FORK COALITION

STREAMBED SIMULATION NOTES:
- -- STREAMBED CHANNEL ROCK AND STREAMBED SIMULATION MATERIAL SHALL BE PLACED AS DIRECTED BY CLARK FORK COALITION
- -- STREAMBED SIMULATION MATERIAL SHALL BE FILLED INTO THE VOID SPACES BETWEEN THE CHANNEL ROCKS
- -- LARGEST STREAMBED CHANNEL ROCK IN A BAND SHALL BE PLACED AT THE CENTER OF THE CULVERT
- LOW FLOW SECTION OF CHANNEL SHALL BE CENTERED IN THE CULVERT
- STREAMBED CHANNEL ROCK AND SIMULATION MATERIAL SIZE PER SUPPLEMENTAL SPECIFICATION 705.08

DEWATERING AND EROSION CONTROL NOTES:
- ALL DEWATERING AND EROSION CONTROL SHALL BE PAID FOR UNDER PAY ITEM 15713
- PROTECT AGAINST SOIL EROSION AND SEDIMENTATION DURING CONSTRUCTION IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATIONS, FP-14, AND PROJECT PERMITS
- DEWATERING PLAN SHALL BE SUBMITTED TO THE FOREST SERVICE REPRESENTATIVE FOR APPROVAL 14 DAYS PRIOR TO CONSTRUCTION START DATE AND SHALL INCLUDE DRAWINGS THAT DEPICT HOW THE CONTRACTOR PLANS TO DIVERT/PUMP WATER THROUGH THE EXCAVATION SITE
- CONTRACTOR SHOULD ANTICIPATE WATER INFILTRATION IN EXCAVATION AREAS AND PLAN ACCORDINGLY TO MEET SPECIFICATIONS

GOLD CREEK TRIBUTARIES AOP
CULVERT REPLACEMENTS

GOLD CREEK TRIBUTARY AOP DETAIL

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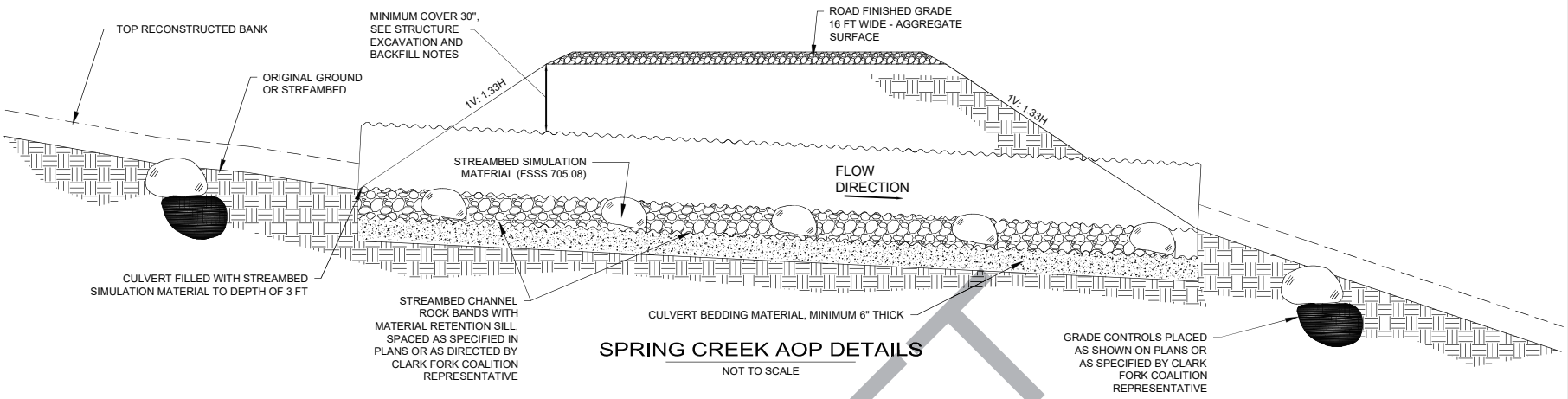
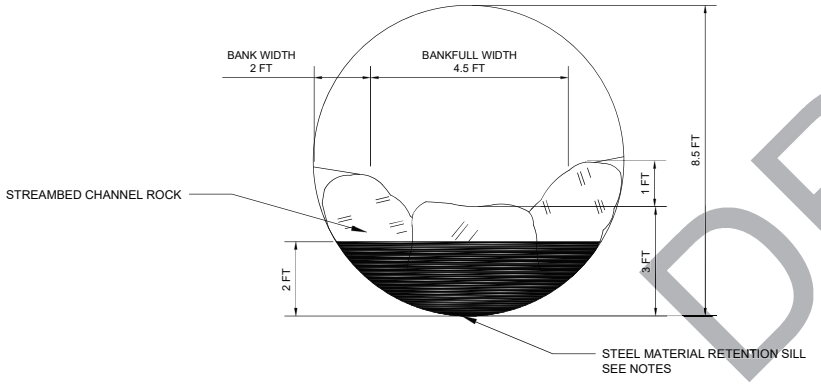


SPRING CREEK AOP DETAILS

NOT TO SCALE

CHANNEL ROCK AND RETENTION SILL: SECTION VIEW

NOT TO SCALE



Retention Sill Spacing			
Location	Total Number of Sills	Start Location from Inlet	Subsequent Spacing
Spring Creek AOP #1	3	7ft	13ft
Spring Creek AOP #2	5	5ft	10ft

STEEL MATERIAL RETENTION SILL NOTES:
- MATERIAL RETENTION SILL SHALL BE STEEL AND CONNECTED TO CULVERT PER MANUFACTURER'S RECOMMENDATIONS. IF WELDED, SPRAY-GALVANIZE (2 COATS) AFTER WELDING
- IF CULVERT SPLICE IS REQUIRED, LOCATE SPLICE AT LEAST 5' FROM MATERIAL RETENTION SILL

STREAMBED SIMULATION NOTES:
- STREAMBED CHANNEL ROCK AND STREAMBED SIMULATION MATERIAL SHALL BE PLACED AS DIRECTED BY CLARK FORK COALITION REPRESENTATIVE
  - STREAMBED CHANNEL ROCK KEY PIECES SHALL BE INSTALLED SUCH THAT THE ROCK IS IN CONTACT WITH THE CULVERT WITH STREAMBED SIMULATION MATERIAL FILLED INTO THE VOID SPACES BETWEEN THE ROCKS
  - LARGEST STREAMBED CHANNEL ROCK IN A BAND SHALL BE PLACED AT THE CENTER OF THE CULVERT
- LOW FLOW SECTION OF CHANNEL SHALL BE CENTERED IN THE CULVERT
- STREAMBED CHANNEL ROCK AND SIMULATION MATERIAL SIZE PER SUPPLEMENTAL SPECIFICATION 705.08
-

STRUCTURE EXCAVATION AND BACKFILL NOTES:
- STRUCTURE EXCAVATION AND BACKFILL SHALL BE IN ACCORDANCE WITH FP-14 AND SUPPLEMENTAL SPECIFICATION SECTIONS 208 AND 209
- COMPACTION METHOD 2 (ROLLER COMPACTION) PER SUPPLEMENTAL SPECIFICATION 209 ON ALL BACKFILL LIFTS
- IT IS ANTICIPATED THAT SUITABLE BACKFILL MATERIAL WILL BE SALVAGED FROM ON-SITE, SOME MIXING AND SORTING MAY BE REQUIRED
- CONSERVE ALL TOPSOIL AND AND GRUBBED VEGETATION IN A MANNER THAT WILL ALLOW REPLANTING OR SCATTERING, AS DIRECTED BY CLARK FORK COALITION REPRESENTATIVE
-

DEWATERING AND EROSION CONTROL NOTES:
- PROTECT AGAINST SOIL EROSION AND SEDIMENTATION DURING CONSTRUCTION IN ACCORDANCE WITH FP-14 AND PROJECT PERMITS
- DEWATERING PLAN SHALL BE SUBMITTED TO THE CO FOR APPROVAL 14 DAYS PRIOR TO CONSTRUCTION START DATE AND SHALL INCLUDE DRAWINGS THAT DEPICT HOW THE CONTRACTOR PLANS TO DIVERT/PUMP WATER THROUGH THE EXCAVATION SITE
- CONTRACTOR SHOULD ANTICIPATE WATER INFILTRATION IN EXCAVATION AREAS AND PLAN ACCORDINGLY TO MEET SPECIFICATIONS

GOLD CREEK TRIBUTARIES AOP
CULVERT REPLACEMENTS

SPRING CREEK AOP DETAIL

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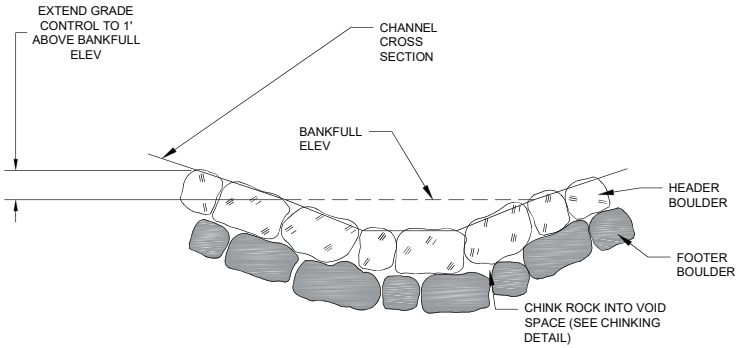
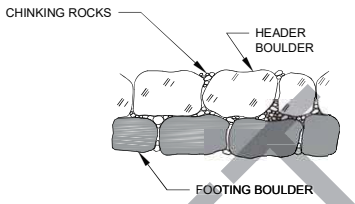
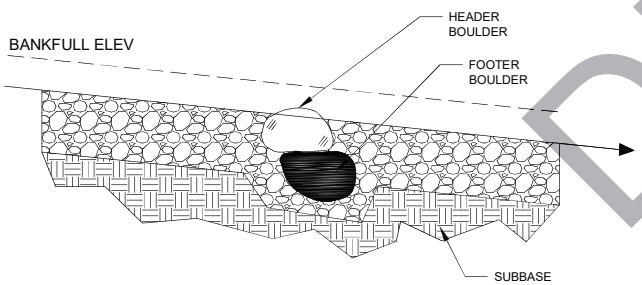


CROSS SECTION VIEW

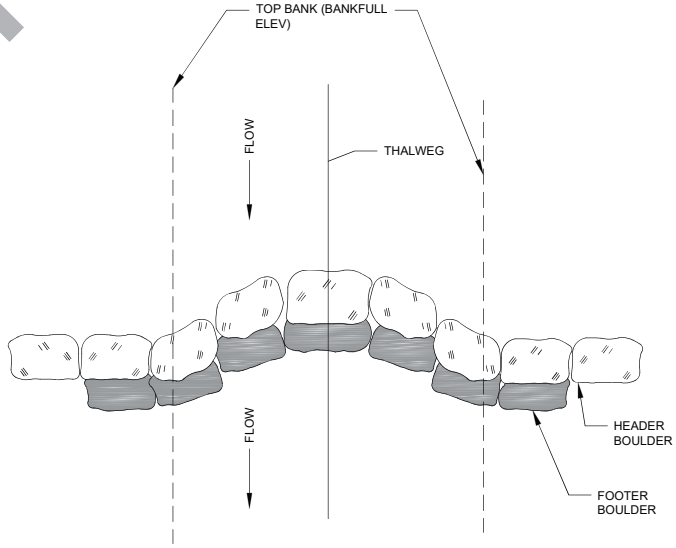


CHINKING DETAIL

GRADE CONTROL NOTES:
- GRADE CONTROL BOULDERS TO BE CLASS CR-2 (SEE SUPPLEMENTAL SPECIFICATION TABLE 705-5)
- INSTALL BOULDERS SUCH THAT THEY PROTRUDE FROM FINIHSED GRADE A MAXIMUM OF 0.25'.



PROFILE VIEW



PLAN VIEW

GOLD CREEK TRIBUTARIES AOP
CULVERT REPLACEMENTS

STREAM GRADE CONTROL DETAIL

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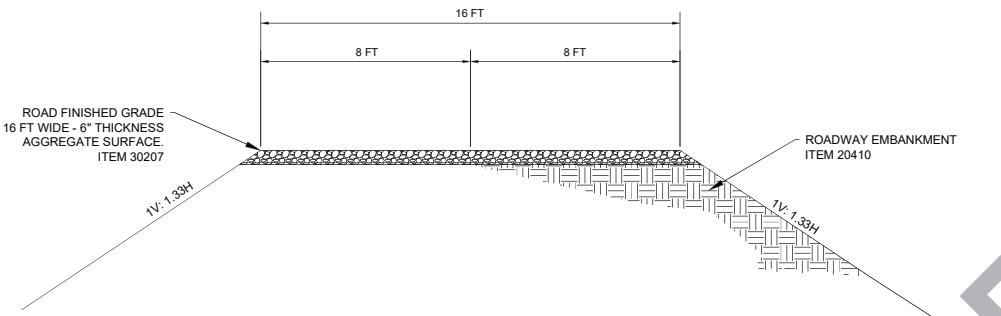
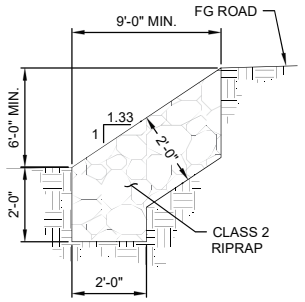


TYPICAL ROAD SECTION W/ AGGREGATE SURFACING

NOT TO SCALE



RIP RAP DETAIL

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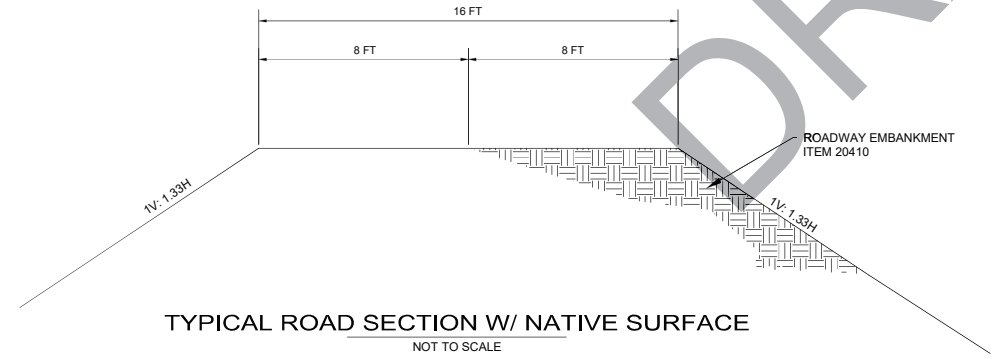
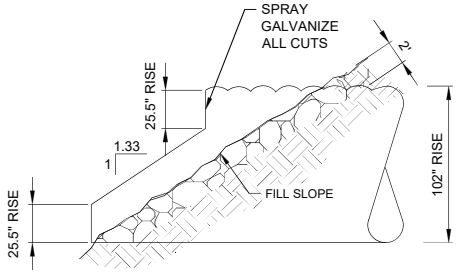


TYPICAL ROAD SECTION W/ NATIVE SURFACE

NOT TO SCALE



STEP BEVELED END DETAIL

NOT TO SCALE

GOLD CREEK TRIBUTARIES AOP
CULVERT REPLACEMENTS

ROUGHENED BOTTOM CULVERT DETAIL

MARK	REVISION	DATE	APPROVED

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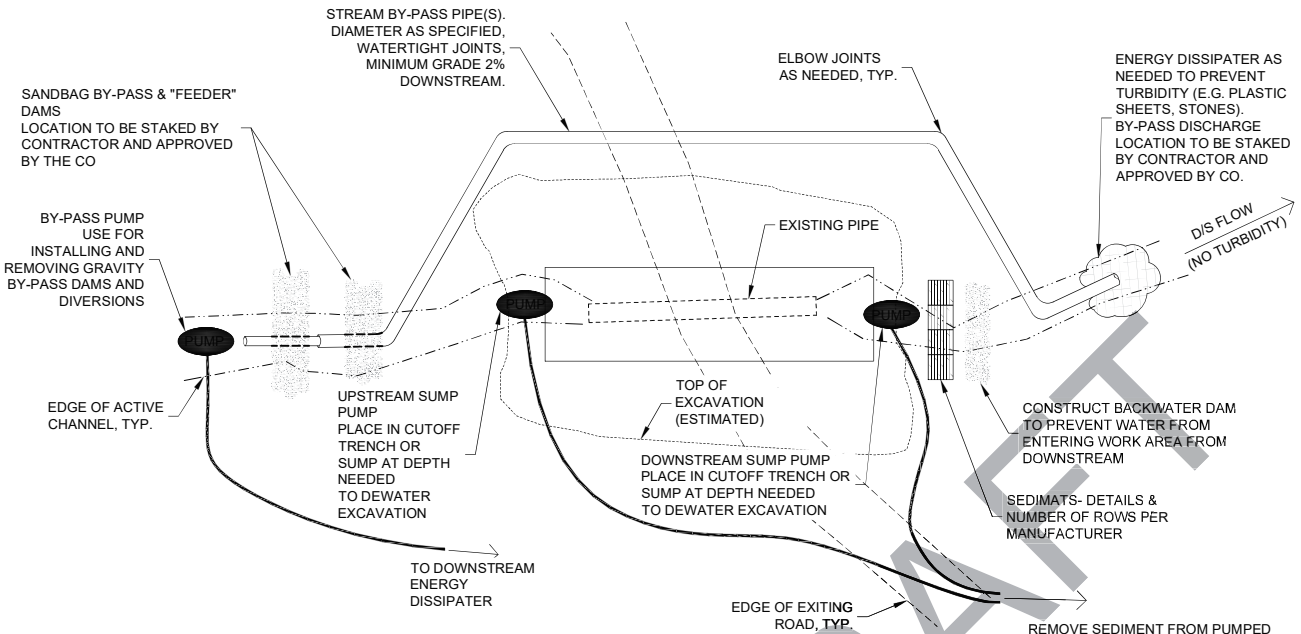
SHEET 3 OF 31

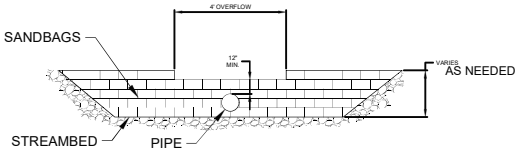
(DESIGNED BY: DVB DRAWN BY: DVB CHECKED BY: GLA)



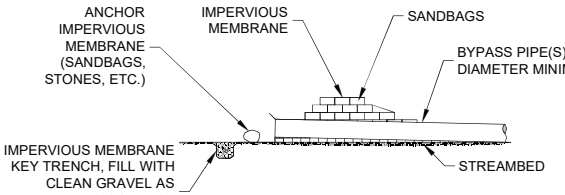
PLAN

NOTES:

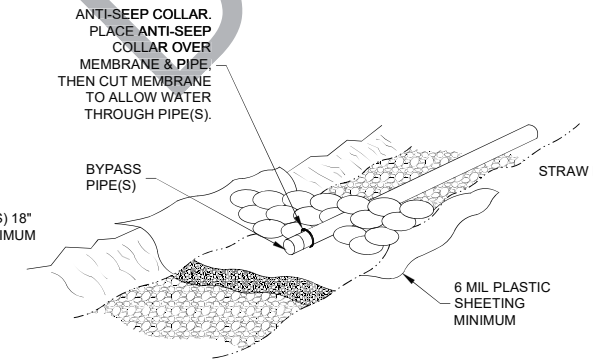
1. DEWATER EXCAVATIONS IN ACCORDANCE WITH FP-14 SECTIONS 208, 209 AND 157, AS APPLICABLE, AND THE REQUIREMENTS SHOWN. PROTECT AGAINST SOIL EROSION AND SEDIMENTATION DURING CONSTRUCTION IN ACCORDANCE WITH FP-14 SECTION 157 AND THE PROJECT PERMITS.
2. DEWATERING IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. DEVELOP AND SUBMIT TO THE USFS REPRESENTATIVE A PROJECT-SPECIFIC DEWATERING PLAN FOR APPROVAL. AT A MINIMUM, THE DEWATERING PLAN MUST INCLUDE DRAWINGS AND A WRITTEN OUTLINE ILLUSTRATING AND DESCRIBING PROPOSED LAYOUT, METHODS, EQUIPMENT AND ANTICIPATED STREAM FLOW VOLUME. APPROVAL OF THE CONTRACTOR'S DEWATERING PLAN DOES NOT RELIEVE THE CONTRACTOR FROM COMPLETING THE WORK AS REQUIRED. IF THE CONTRACTOR'S METHODS ARE NOT PRODUCING ADEQUATE RESULTS, THE CONTRACTOR MUST STOP WORK IMMEDIATELY, RE-EVALUATE, AND SUBMIT A REVISED DEWATERING PLAN. DO NOT PROCEED WITH WORK UNTIL THE REVISED DEWATERING PLAN IS APPROVED BY THE USFS REPRESENTATIVE. RE-SUBMITTAL OF THE DEWATERING PLAN, IF REQUIRED, IS INCIDENTAL TO THE WORK.
3. THIS SHEET ILLUSTRATES THE GENERAL DEWATERING REQUIREMENTS AND POSSIBLE METHODS AND EQUIPMENT AND IS NOT CONSIDERED ADEQUATE OR COMPLETE FOR THIS PROJECT.
4. CONTRACTOR IS RESPONSIBLE FOR SIZING ALL PUMPS, DAMS, BYPASS PIPE, OPEN CHANNELS, AND ANY OTHER MEANS PROPOSED TO DIVERT THE STREAM FLOW.
5. ALL WORK IN THE VICINITY OF THE STREAM IS TO BE COMPLETED IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS. STANDING OR RUNNING WATER IN THE WORK AREA DOES NOT RELIEVE THE CONTRACTOR FROM MEETING THE SPECIFICATIONS.
6. ALL OPEN CHANNEL DIVERSIONS MUST BE LINED WITH IMPERMEABLE MATERIAL.
7. WASH THE NEWLY CONSTRUCTION CHANNEL PRIOR TO RE-WATERING. THIS INCLUDES HOSING THE NEW CHANNEL AND PUMPING THE TURBID WASH WATER ONTO EITHER VEGETATED GROUND OR A SETTLING BASIN IN ACCORDANCE WITH THE APPROVED DEWATERING PLAN. RETURN THE STREAM FLOW TO THE NEWLY CONSTRUCTED CHANNEL SLOWLY AND IN A MANNER TO MINIMIZE SEDIMENTATION.



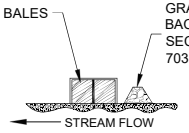
BYPASS DAM ELEVATION VIEW



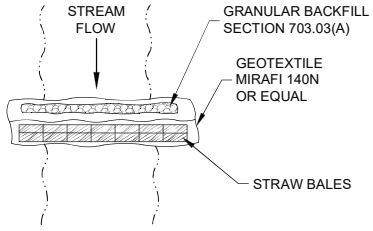
BYPASS DAM PROFILE VIEW



SANDBAG BYPASS DAM DETAILS



SECTION VIEW



PLAN VIEW

GEOTEXTILE-WRAPPED STRAW BALE SEDIMENT CONTROL WEIR

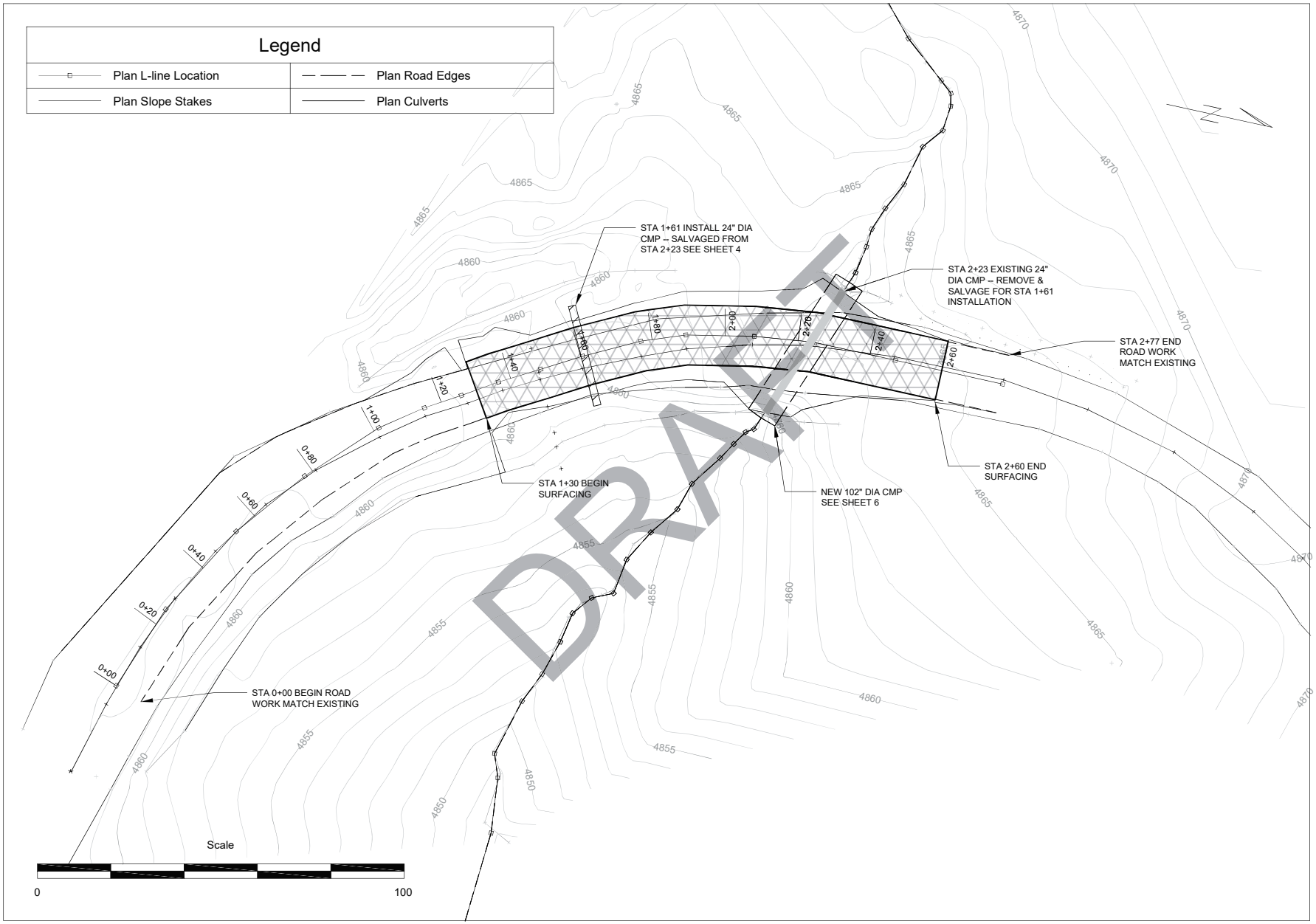
GOLD CREEK TRIBUTARIES AOP
CULVERT REPLACEMENTS

DEWATERING TYPICAL

MARK	REVISION	DATE	APPROVED

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMNET
DISTRICT: WESTERN MONTANA DISTRICT
DESIGN OFFICE: MISSOULA FIELD OFFICE
ISSUED FOR: CONSTRUCTION
ISSUE DATE: 3/20/2025

(DESIGNED BY: DVB DRAWN BY: DVB CHECKED BY: GLA)



GOLD CREEK TRIBUTARIES AOP
CULVERT REPLACEMENTS

SPRING CREEK AOP #1-- PLAN

MARK	REVISION	DATE	APPROVED

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMNET
DISTRICT: WESTERN MONTANA DISTRICT
DESIGN OFFICE: MISSOULA FIELD OFFICE

ISSUED FOR: CONSTRUCTION ISSUE DATE: 3/20/2025

SHEET 3 OF 31

(DESIGNED BY: DVB DRAWN BY: DVB CHECKED BY: GLA)

Plan Legend

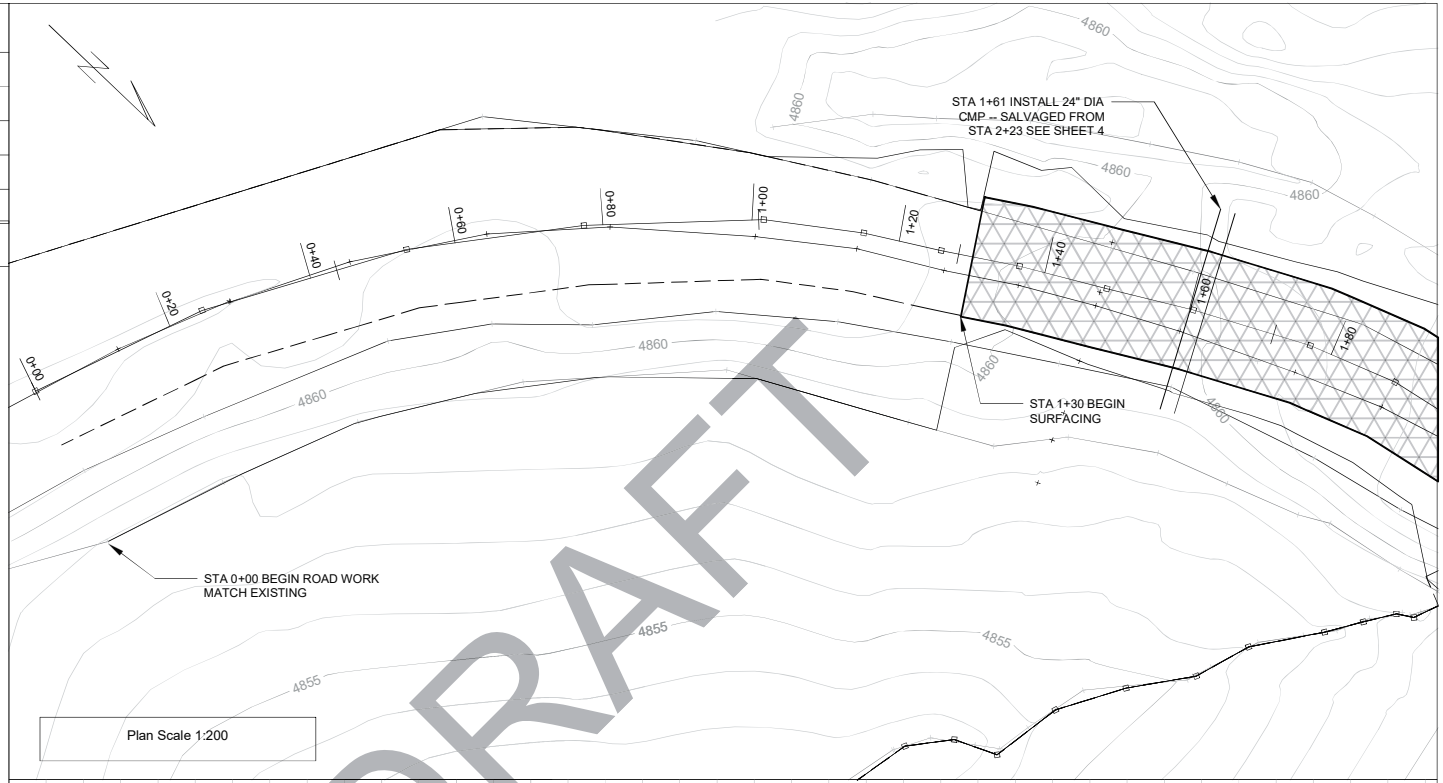
- Plan Center Line
- Plan Existing Road
- Plan Slope Stakes
- Plan Road Edges
- Plan Culverts

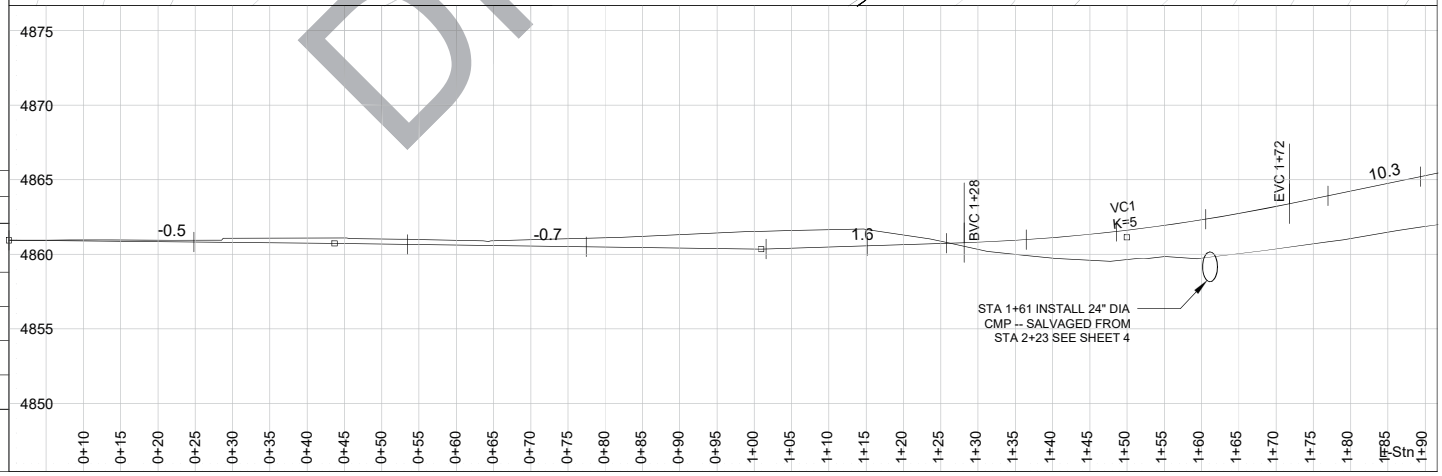
L-Stn ft.	Cut Dp. ft.	SG Cut V. Cu. Yd.	SG Fill V. Cu. Yd.
0+00	0	17.9	0.0
0+20	0	4.5	0.0
0+25	0	14.2	0.0
0+40	0	12.2	0.0
0+53	0	5.7	0.0
0+60	0	18.3	0.0
0+77	1	3.2	0.0
0+80	1	28.6	0.0
1+00	1	2.6	0.0
1+02	1	21.8	0.0
1+15	1	7.3	0.0
1+20	1	6.4	0.0
1+26	0	1.6	0.1
1+28	0	2.6	1.2
1+36	-1	0.6	1.4
1+40	-1	0.7	7.1
1+49	-2	0.0	15.6
1+60	-3	0.0	0.9
1+61	-3	0.0	0.9
1+61	-3	0.0	16.9
1+72	-3	0.0	9.1
1+77	-3	0.0	6.0
1+80	-3	0.0	20.6
1+89	-3	0.0	21.5
1+98			
Pg. Tot.		148.2	101.3
Cum. Tot.		148.2	101.3

Profile Legend

- Profile Existing Topopgraphy
- Profile Subgrade
- Profile Culverts
- Approx. Excavation Limits

Profile Vert Scale 1:100
Profile Horz Scale 1:200





GOLD CREEK TRIBUTARIES AOP CULVERT REPLACEMENTS

SPRING CREEK AOP #1-- ROADWAY PLAN & PROFILE (1 OF 2)

MARK	REVISION	DATE	APPROVED

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMNET
DISTRICT: WESTERN MONTANA DISTRICT
DESIGN OFFICE: MISSOULA FIELD OFFICE
ISSUED FOR: CONSTRUCTION ISSUE DATE: 3/20/2025

SHEET 3 OF 31

(DESIGNED BY: DVB DRAWN BY: DVB CHECKED BY: GLA)

Plan Legend

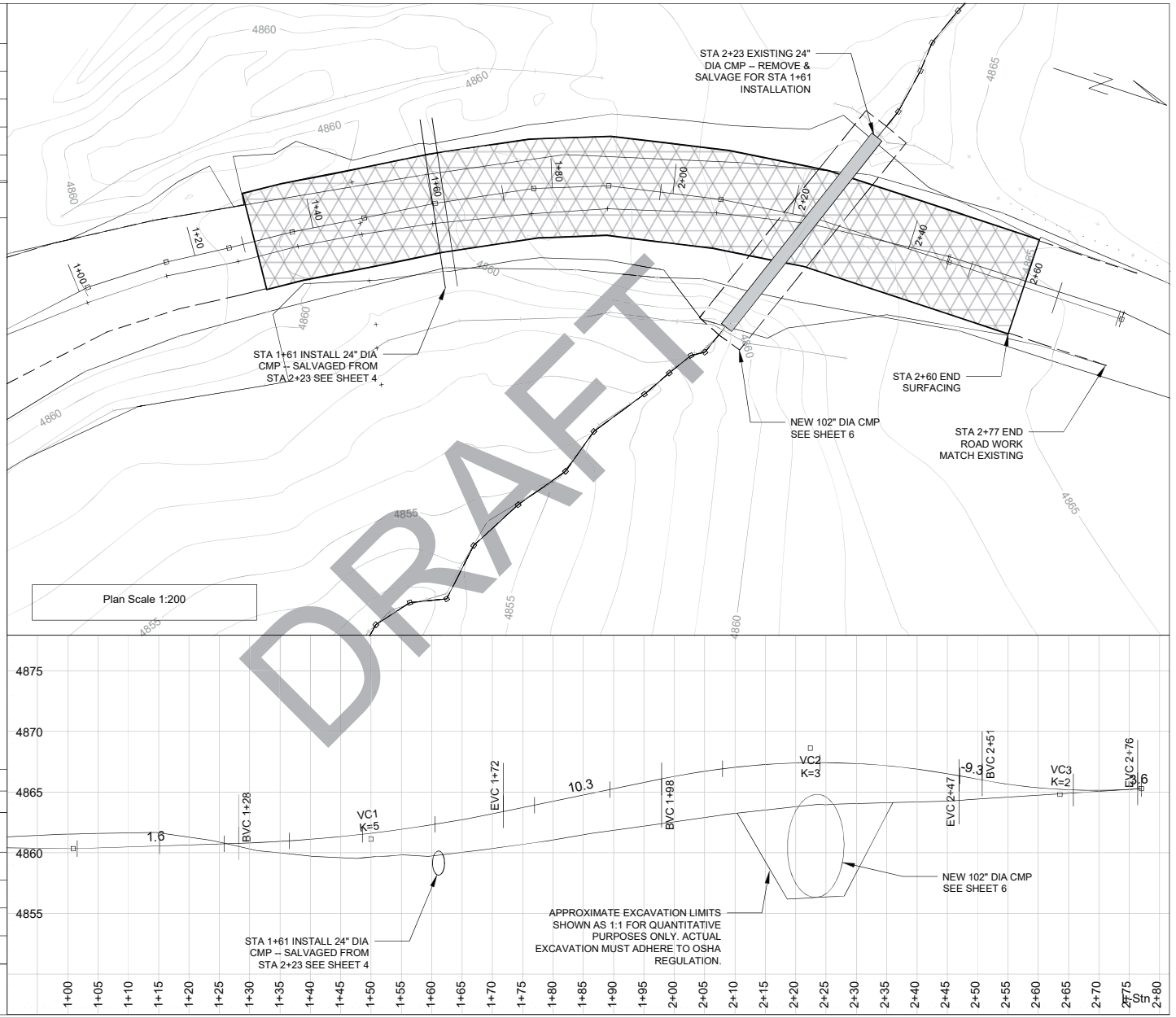
- Plan Center Line
- Plan Existing Road
- Plan Slope Stakes
- Plan Road Edges
- Plan Culverts

L-Stn ft.	Cut Dp. ft.	SG Cut V. Cu. Yd.	SG Fill V. Cu. Yd.
1+00	1	2.6	0.0
1+02	1	21.8	0.0
1+15	1	7.3	0.0
1+20	1	6.4	0.0
1+26	0	1.6	0.1
1+28	0	2.6	1.2
1+36	-1	0.6	1.4
1+40	-1	0.7	7.1
1+49	-2	0.0	15.6
1+60	-3	0.0	0.9
1+61	-3	0.0	0.9
1+61	-3	0.0	16.9
1+72	-3	0.0	9.1
1+77	-3	0.0	6.0
1+80	-3	0.0	20.6
1+89	-3	0.0	21.5
1+98	-4	0.0	5.5
2+00	-4	0.0	29.8
2+08	-4	0.0	95.1
2+20	-4	0.0	45.2
2+24	-3	0.0	106.8
2+40	-3	0.0	10.0
2+47	-2	0.0	0.2
2+47	-2	0.0	3.6
2+51	-2	0.2	3.8
2+60	-1	0.3	1.8
2+76	0	0.0	0.0
2+77	0	0.0	0.0
2+77	0		
Pg. Tot.		44.1	403.1
Cum. Tot.		148.8	403.1

Profile Legend

- Profile Existing Topopgraphy
- Profile Subgrade
- Profile Culverts
- Approx. Excavation Limits

Profile Vert Scale 1:100
Profile Horz Scale 1:200



GOLD CREEK TRIBUTARIES AOP CULVERT REPLACEMENTS

SPRING CREEK AOP #1-- ROADWAY PLAN & PROFILE (2 OF 2)

MARK	REVISION	DATE	APPROVED

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMNET
DISTRICT: WESTERN MONTANA DISTRICT
DESIGN OFFICE: MISSOULA FIELD OFFICE
ISSUED FOR: CONSTRUCTION ISSUE DATE: 3/20/2025

SHEET 3 OF 31

(DESIGNED BY: DVB DRAWN BY: DVB CHECKED BY: GLA)

Plan Legend

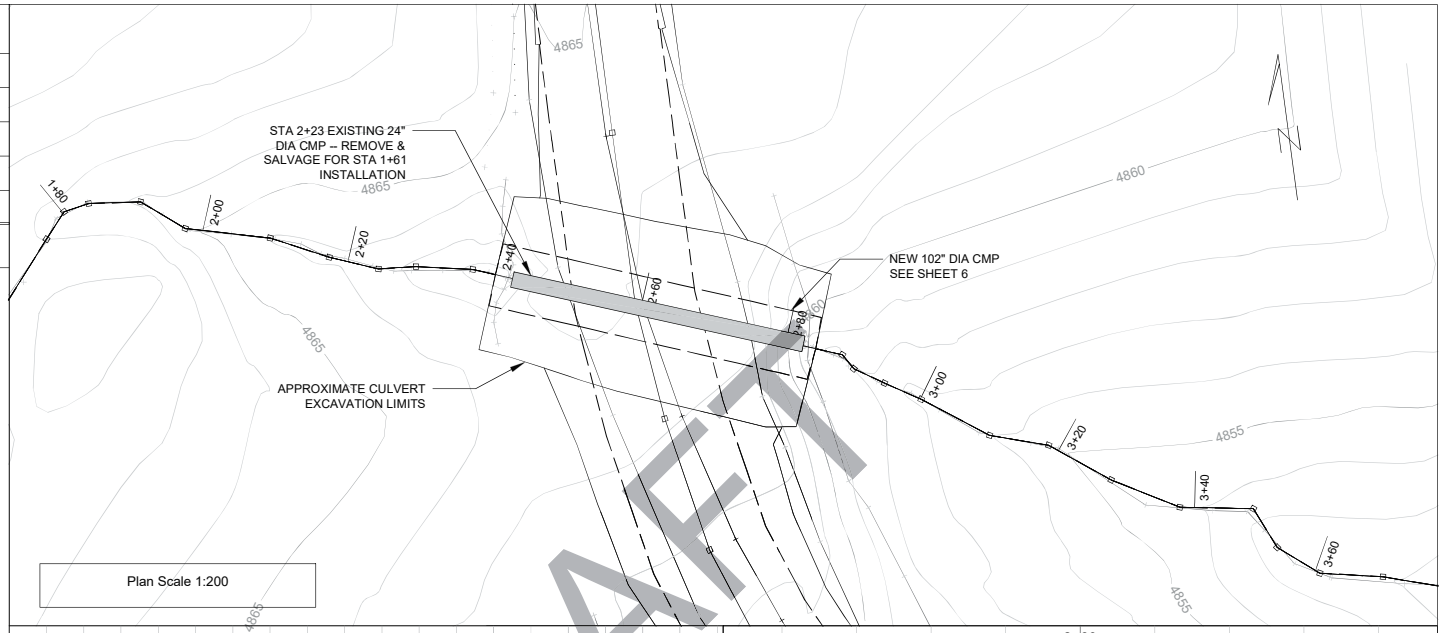
- Plan Center Line
- Plan Existing Road
- Plan Slope Stakes
- Plan Road Edges
- Plan Culverts

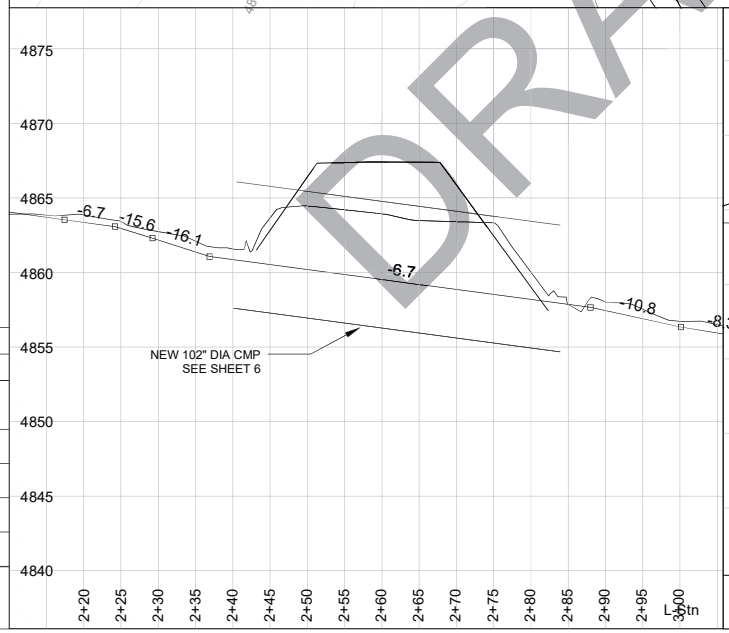
L-Stn ft.	Cut Dp. ft.	SG Cut V. Cu. Yd.	SG Fill V. Cu. Yd.
B 2+40	1	0.1	0.0
2+40	1	185.2	0.0
2+84	0	0.3	0.0
B 2+84	0		
Pg. Tot.		185.6	0.0
Cum. Tot.		185.6	0.0

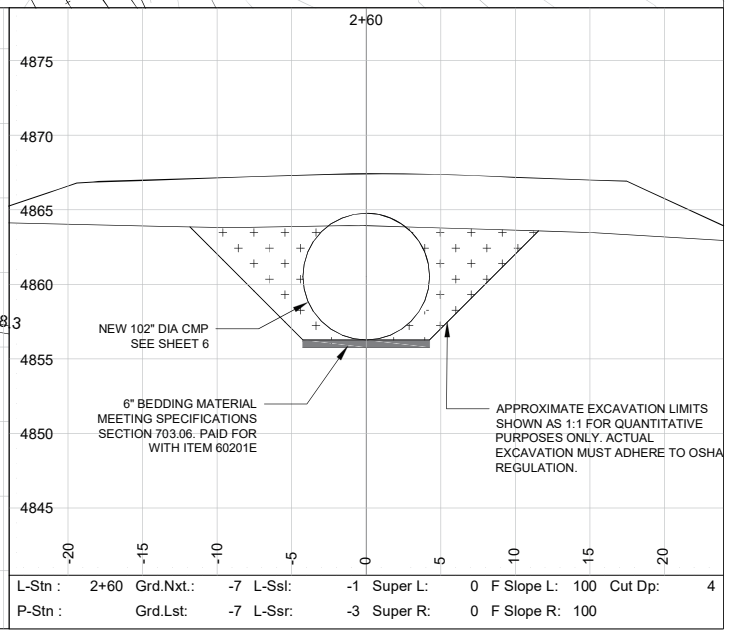
Profile Legend

- Profile Existing Topopgraphy
- Profile Subgrade
- Profile Culverts
- Profile Finished Road

Profile Vert Scale 1:100
Profile Horz Scale 1:200







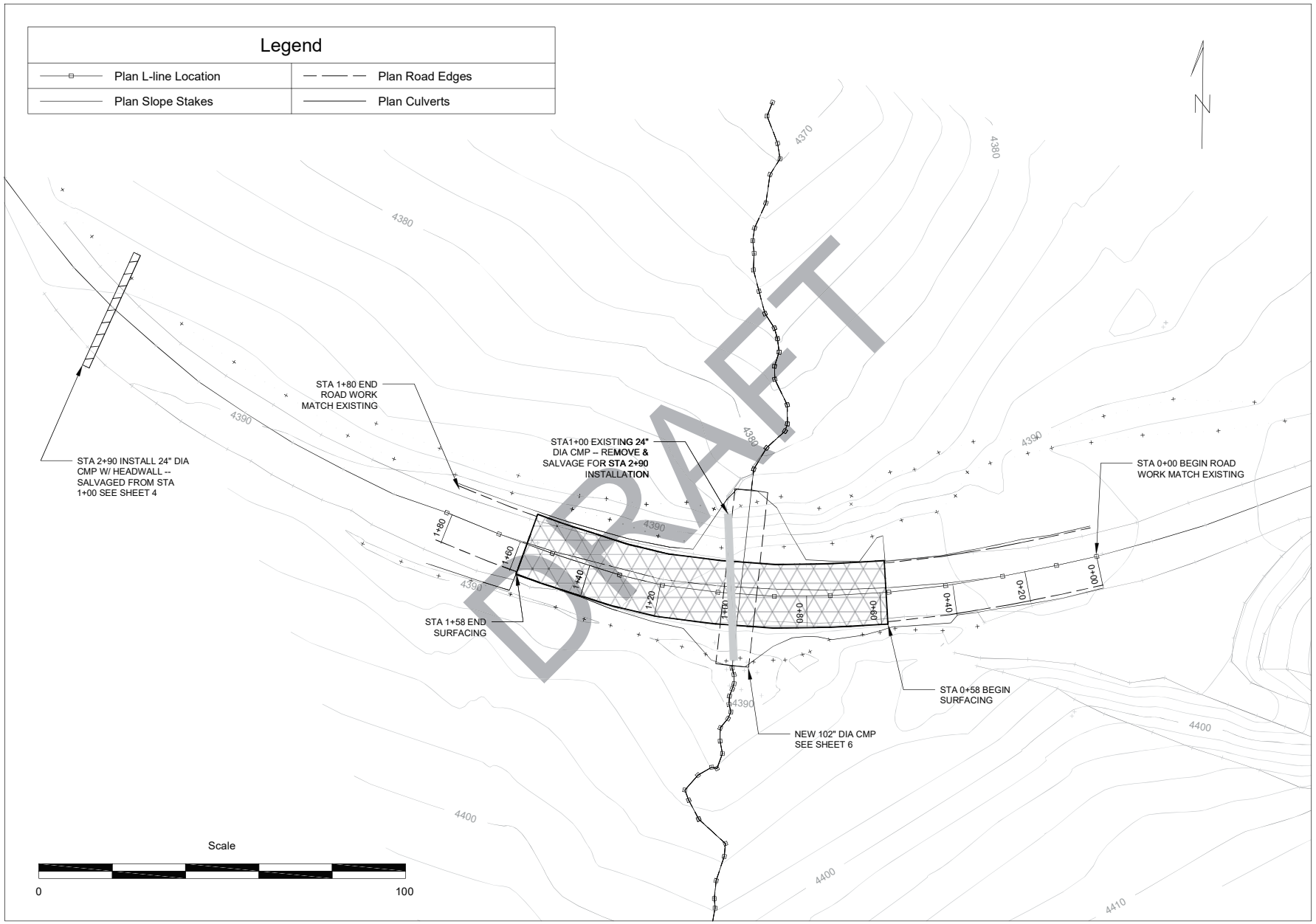
GOLD CREEK TRIBUTARIES AOP CULVERT REPLACEMENTS

SPRING CREEK AOP #1-- STREAM PLAN, PROFILE, & SECTION

MARK	REVISION	DATE	APPROVED

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMNET
DISTRICT: WESTERN MONTANA DISTRICT
DESIGN OFFICE: MISSOULA FIELD OFFICE
ISSUED FOR: CONSTRUCTION
ISSUE DATE: 3/20/2025

(DESIGNED BY: DVB DRAWN BY: DVB CHECKED BY: GLA)



GOLD CREEK TRIBUTARIES AOP
CULVERT REPLACEMENTS

SPRING CREEK AOP #2-- PLAN

MARK	REVISION	DATE	APPROVED

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMNET
DISTRICT: WESTERN MONTANA DISTRICT
DESIGN OFFICE: MISSOULA FIELD OFFICE

ISSUED FOR: CONSTRUCTION ISSUE DATE: 3/20/2025

SHEET 3 OF 31

(DESIGNED BY: DVB DRAWN BY: DVB CHECKED BY: GLA)

Plan Legend

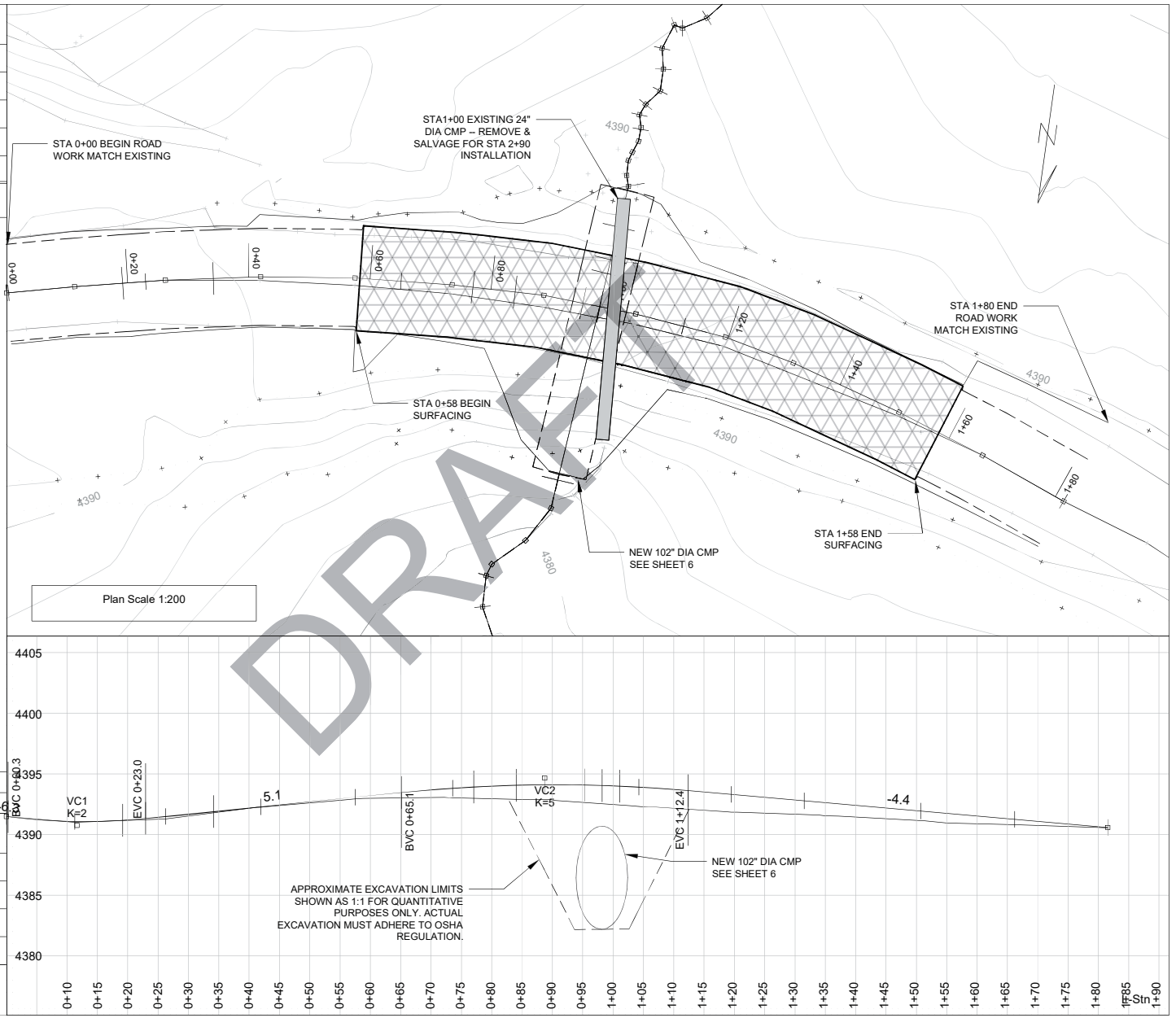
- Plan Center Line
- Plan Existing Road
- Plan Slope Stakes
- Plan Road Edges
- Plan Culverts

L-Stn ft.	Cut Dp. ft.	SG Cut V. Cu. Yd.	SG Fill V. Cu. Yd.
0+00	0	0.0	0.0
0+00	0	0.0	0.0
0+00	0	1.0	1.0
0+11	0	0.9	0.9
0+20	0	0.2	0.3
0+23	0	0.2	0.4
0+26	0	0.7	1.2
0+40	0	0.1	0.1
0+42	0	0.4	1.3
0+58	0	0.4	0.1
0+60	0	0.6	0.2
0+65	0	0.3	1.5
0+74	-1	0.0	2.5
0+80	-1	0.0	28.8
0+89	-1	0.0	149.2
1+00	-2	0.0	60.1
1+04	-2	0.0	53.0
1+12	-2	0.0	5.7
1+19	-1	0.0	0.4
1+20	-1	0.0	7.2
1+31	-1	0.0	3.7
1+40	-1	0.0	3.2
1+51	-1	0.4	2.1
1+60	-1	1.3	2.2
1+66	0	4.5	2.6
1+80	0	0.7	0.1
1+82	0	0.0	0.0
1+82	0		
Pg. Tot.		11.7	327.8
Cum. Tot.		11.7	327.8

Profile Legend

- Profile Existing Topopgraphy
- Profile Subgrade
- Profile Culverts
- Approx. Excavation Limits

Profile Vert Scale 1:100
Profile Horz Scale 1:200



GOLD CREEK TRIBUTARIES AOP CULVERT REPLACEMENTS

SPRING CREEK AOP #2– ROADWAY PLAN & PROFILE

MARK	REVISION	DATE	APPROVED

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMNET
DISTRICT: WESTERN MONTANA DISTRICT
DESIGN OFFICE: MISSOULA FIELD OFFICE

ISSUED FOR: CONSTRUCTION
ISSUE DATE: 3/20/2025

(DESIGNED BY: DVB DRAWN BY: DVB CHECKED BY: GLA)

Plan Legend

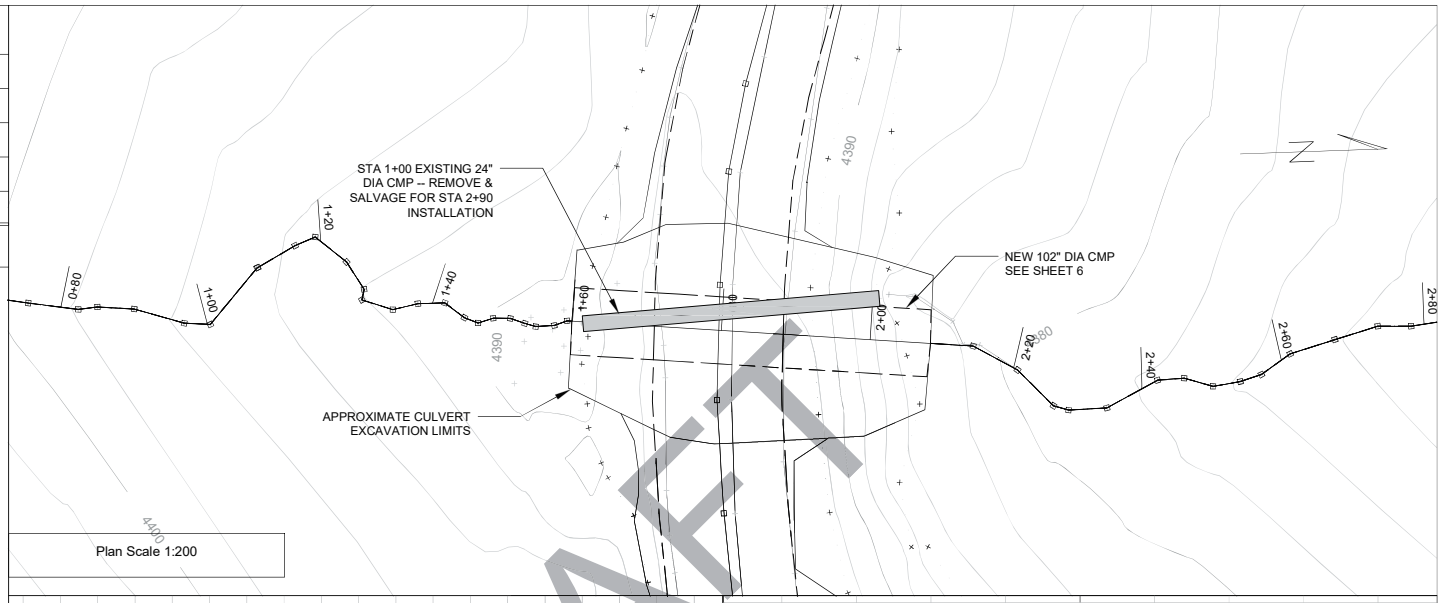
- Plan Center Line
- Plan Existing Road
- Plan Slope Stakes
- Plan Road Edges
- Plan Culverts

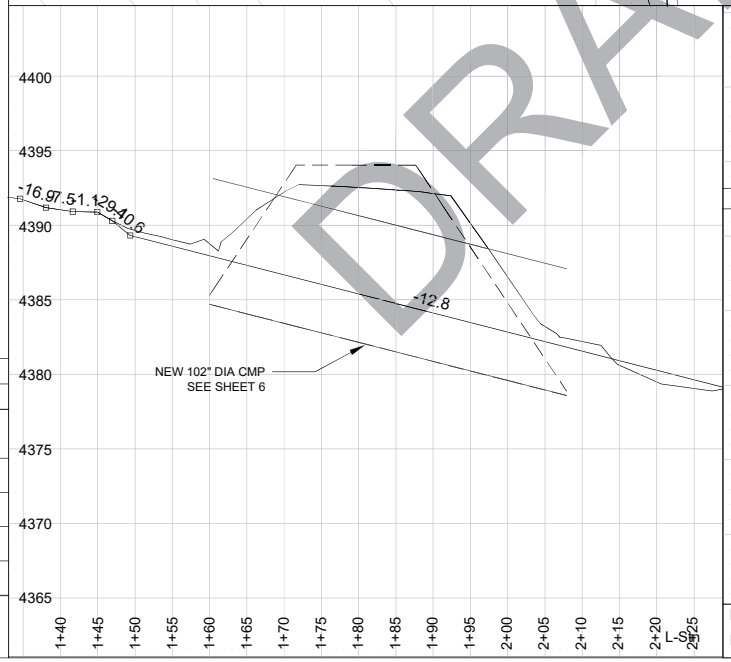
L-Stn ft.	Cut Dp. ft.	SG Cut V. Cu. Yd.	SG Fill V. Cu. Yd.
B 1+60	1	0.3	0.0
1+60	1	255.5	0.0
2+08	1	0.2	0.0
B 2+08	1		
Pg. Tot.		256.0	0.0
Cum. Tot.		256.0	0.0

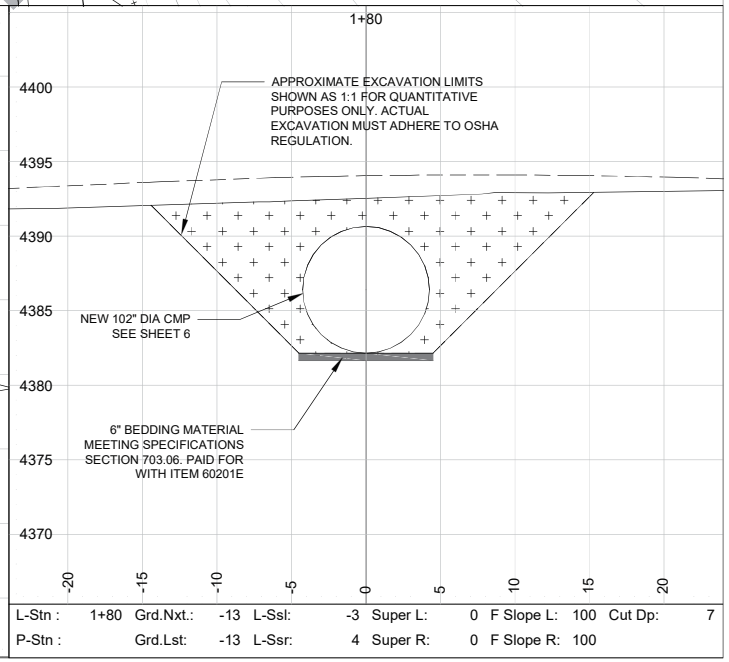
Profile Legend

- Profile Existing Topopgraphy
- Profile Subgrade
- Profile Culverts
- Profile Finished Road

Profile Vert Scale 1:100
Profile Horz Scale 1:200







L-Stn :	1+80	Grd.Nxt.:	-13	L-Ssl:	-3	Super L:	0	F Slope L:	100	Cut Dp:	7
P-Stn :		Grd.Lst:	-13	L-Ssr:	4	Super R:	0	F Slope R:	100		

GOLD CREEK TRIBUTARIES AOP CULVERT REPLACEMENTS

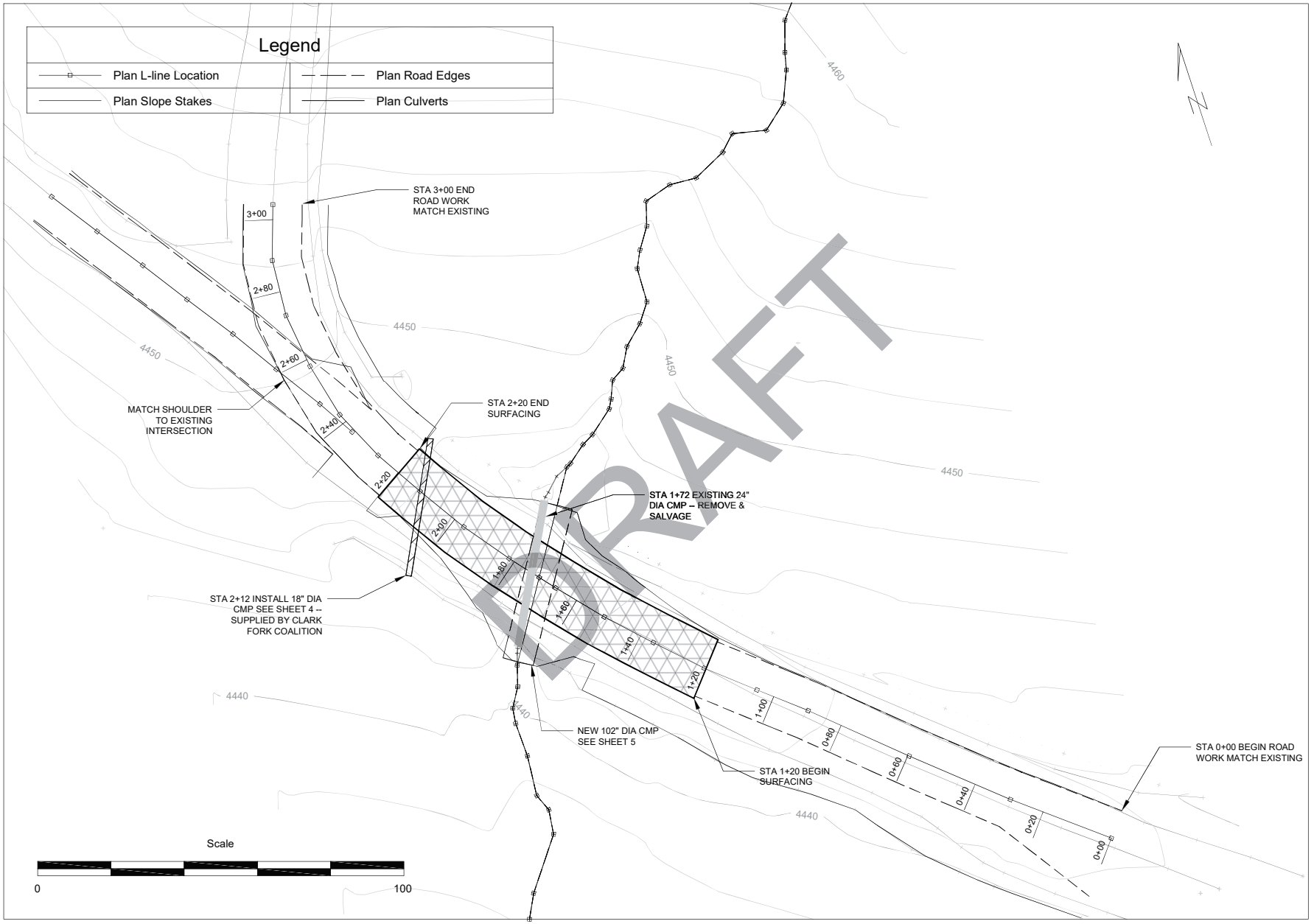
SPRING CREEK AOP #2-- STREAM PLAN, PROFILE, & SECTION

MARK	REVISION	DATE	APPROVED

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMNET
DISTRICT: WESTERN MONTANA DISTRICT
DESIGN OFFICE: MISSOULA FIELD OFFICE
ISSUED FOR: CONSTRUCTION
ISSUE DATE: 3/20/2025

SHEET 5 OF 31

(DESIGNED BY: DVB DRAWN BY: DVB CHECKED BY: GLA)



GOLD CREEK TRIBUTARIES AOP CULVERT REPLACEMENTS

GOLD CREEK TRIBUTARY AOP -- PLAN

MARK	REVISION	DATE	APPROVED

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMNET
DISTRICT: WESTERN MONTANA DISTRICT
DESIGN OFFICE: MISSOULA FIELD OFFICE

ISSUED FOR: CONSTRUCTION ISSUE DATE: 3/20/2025

(DESIGNED BY: DVB DRAWN BY: DVB CHECKED BY: GLA)

Plan Legend

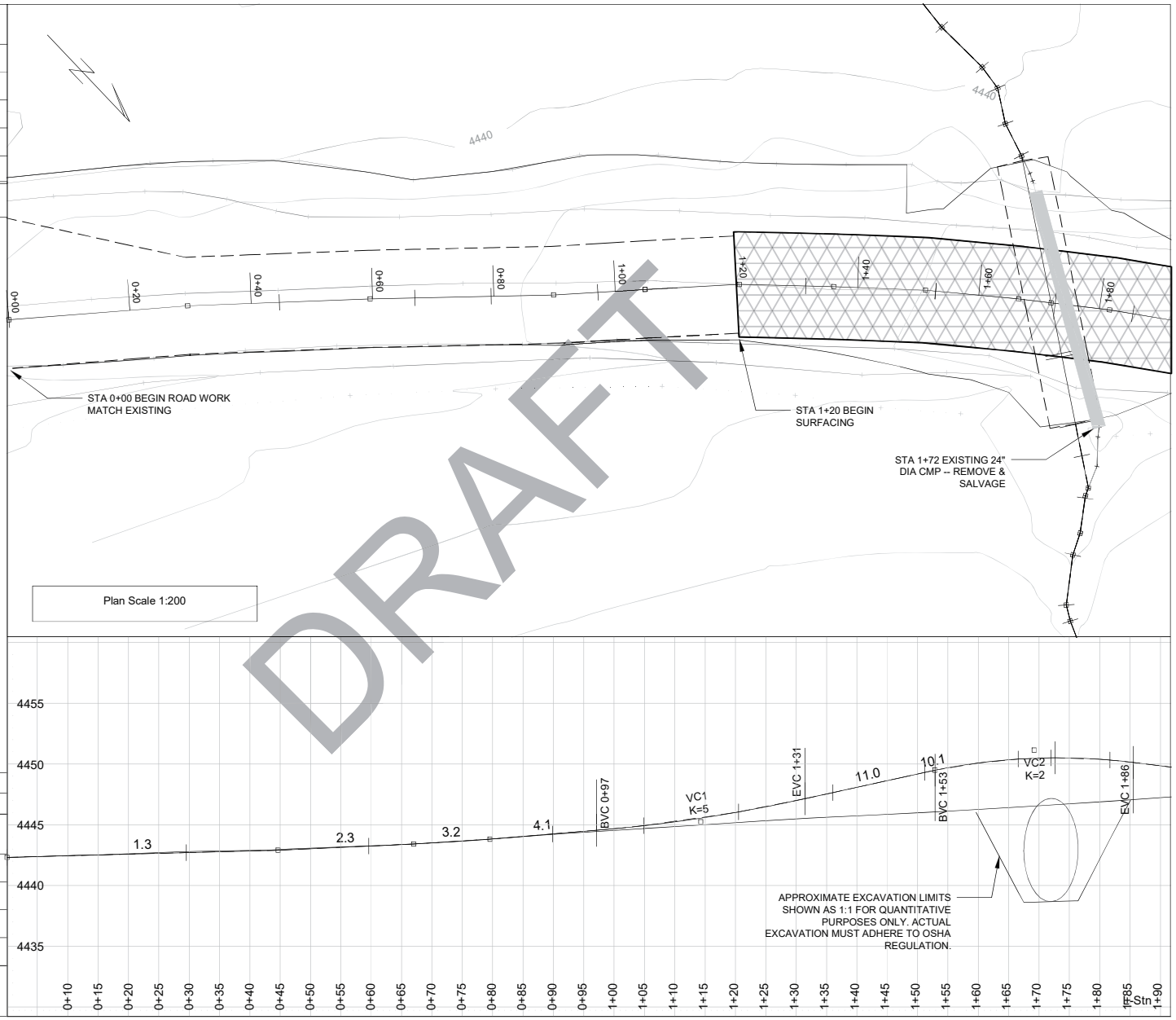
- Plan Center Line
- Plan Existing Road
- Plan Slope Stakes
- Plan Road Edges
- Plan Culverts

L-Stn ft.	Cut Dp. ft.	SG Cut V. Cu. Yd.	SG Fill V. Cu. Yd.
0+00	0	0.0	0.0
0+00	0	10.2	2.8
0+20	0	8.7	0.5
0+30	0	10.3	0.4
0+40	0	4.4	0.2
0+45	0	13.1	0.4
0+60	0	0.3	0.0
0+60	0	5.1	0.2
0+67	0	8.7	0.3
0+80	0	0.3	0.0
0+80	0	7.6	0.3
0+90	0	6.2	0.4
0+97	0	2.5	0.3
1+00	0	4.1	0.7
1+05	0	9.5	5.6
1+20	-1	0.3	0.1
1+20	-1	4.5	5.9
1+31	-2	1.2	4.6
1+36	-2	0.7	5.2
1+40	-2	0.8	21.7
1+51	-3	0.0	4.2
1+53	-3	0.0	0.0
1+53	-3	0.0	28.8
1+60	-4	0.0	57.9
1+67	-4	0.0	70.6
1+72	-4	0.0	93.1
1+80	-4	0.0	13.1
1+82	-3	0.0	20.4
1+86	-3	0.0	26.0
1+97			
Pg. Tot.		98.5	363.7
Cum. Tot.		98.5	363.7

Profile Legend

- Profile Existing Topopgraphy
- Profile Subgrade
- Profile Culverts
- Approx. Excavation Limits

Profile Vert Scale 1:100
Profile Horz Scale 1:200



GOLD CREEK TRIBUTARIES AOP CULVERT REPLACEMENTS

GOLD CREEK TRIBUTARY AOP -- ROADWAY PLAN & PROFILE (1 OF 2)

MARK	REVISION	DATE	APPROVED

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMNET
DISTRICT: WESTERN MONTANA DISTRICT
DESIGN OFFICE: MISSOULA FIELD OFFICE
ISSUED FOR: CONSTRUCTION
ISSUE DATE: 3/20/2025

SHEET 3 OF 31

(DESIGNED BY: DVB DRAWN BY: DVB CHECKED BY: GLA)

Plan Legend

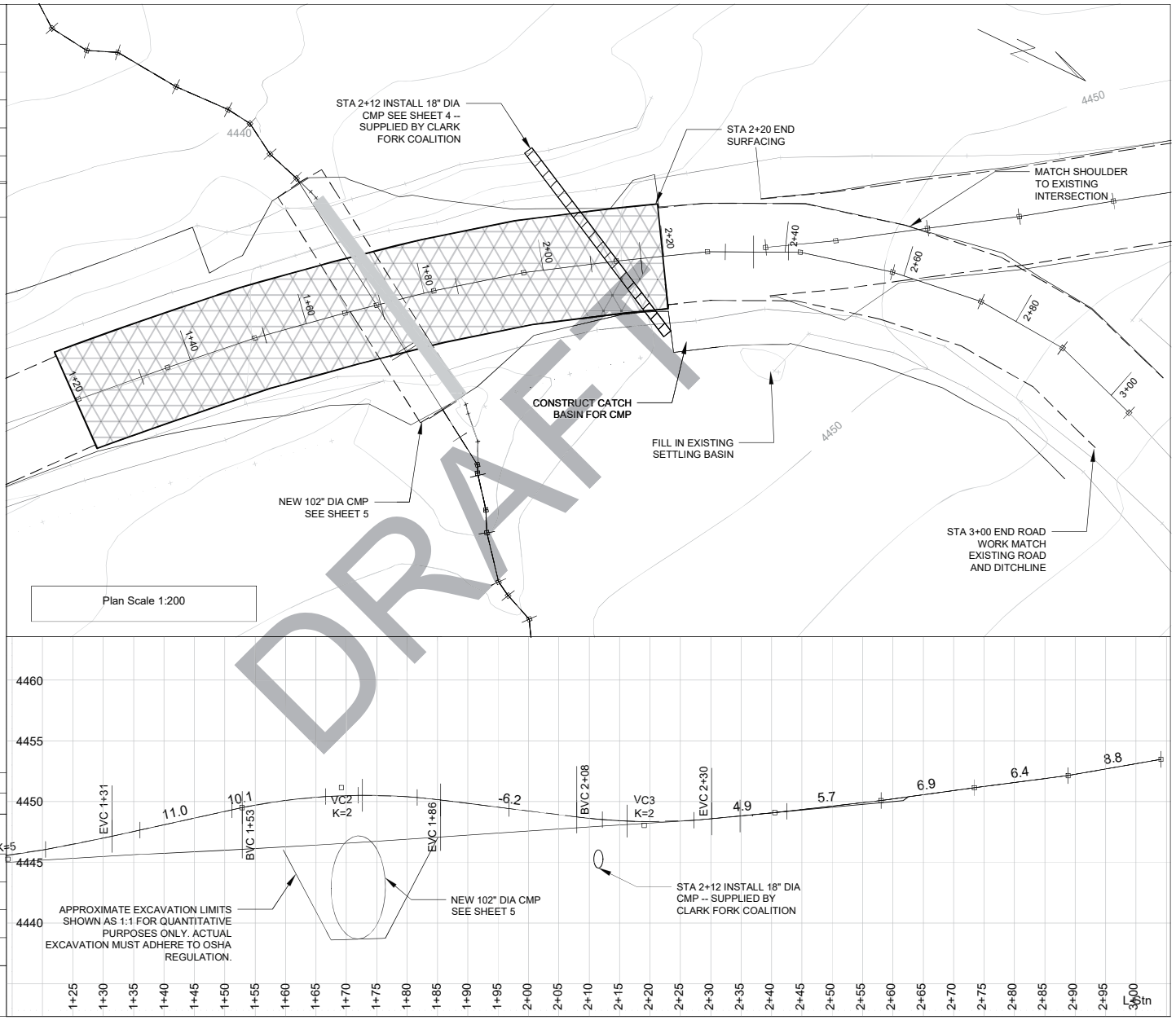
- Plan Center Line
- Plan Existing Road
- Plan Slope Stakes
- Plan Road Edges
- Plan Culverts

L-Stn ft.	Cut Dp. ft.	SG Cut V. Cu. Yd.	SG Fill V. Cu. Yd.
1+20	-1	0.3	0.1
1+20	-1	4.5	5.9
1+31	-2	1.2	4.6
1+36	-2	0.7	5.2
1+40	-2	0.8	21.7
1+51	-3	0.0	4.2
1+53	-3	0.0	0.0
1+53	-3	0.0	28.8
1+60	-4	0.0	57.9
1+67	-4	0.0	70.6
1+72	-4	0.0	93.1
1+80	-4	0.0	13.1
1+82	-3	0.0	20.4
1+86	-3	0.0	26.0
1+97	-2	0.0	3.2
2+00	-2	0.0	4.7
2+08	-1	0.0	0.7
2+12	-1	0.0	0.0
2+12	-1	1.2	0.1
2+20	0	2.3	0.4
2+27	0	0.9	0.1
2+30	0	2.5	0.4
2+40	0	0.1	0.0
2+41	0	0.5	0.0
2+42	0	3.7	0.6
2+58	0	0.5	0.1
2+60	0	2.9	1.2
2+73	0	1.5	0.5
2+80	0	2.2	0.3
2+89	0	2.6	0.3
3+00	0	0.8	0.1
3+04	0		
Pg. Tot.		29.2	364.3
Cum. Tot.		120.2	376.4

Profile Legend

- Profile Existing Topopgraphy
- Profile Subgrade
- Profile Culverts
- Approx. Excavation Limits

Profile Vert Scale 1:100
Profile Horz Scale 1:200



GOLD CREEK TRIBUTARIES AOP CULVERT REPLACEMENTS

GOLD CREEK TRIBUTARY AOP -- ROADWAY PLAN & PROFILE (2 OF 2)

MARK	REVISION	DATE	APPROVED

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMNET
DISTRICT: WESTERN MONTANA DISTRICT
DESIGN OFFICE: MISSOULA FIELD OFFICE
ISSUED FOR: CONSTRUCTION
ISSUE DATE: 3/20/2025

SHEET 3 OF 31

(DESIGNED BY: DVB DRAWN BY: DVB CHECKED BY: GLA)

Plan Legend

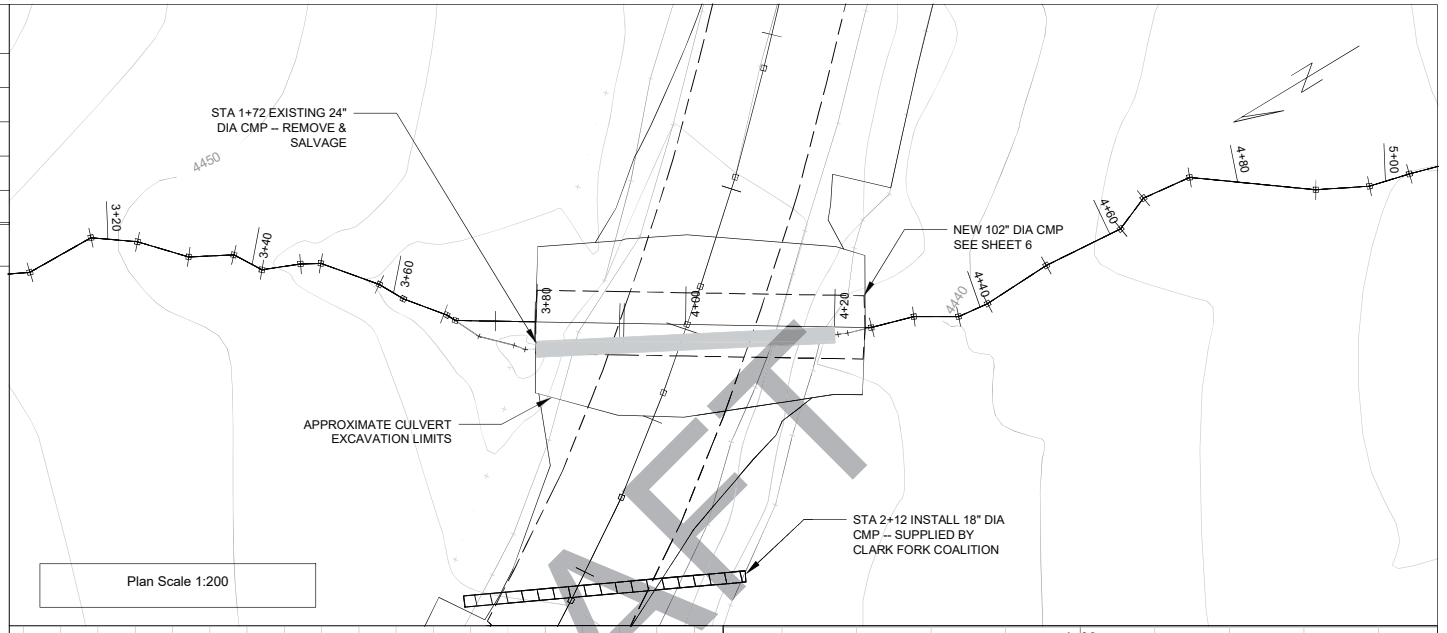
- Plan Center Line
- Plan Existing Road
- Plan Slope Stakes
- Plan Road Edges
- Plan Culverts

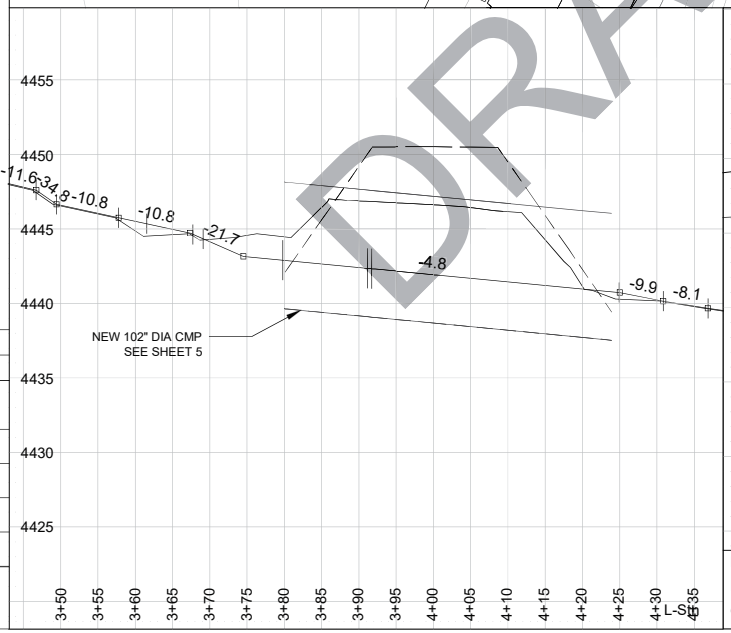
L-Stn ft.	Cut Dp. ft.	SG Cut V. Cu. Yd.	SG Fill V. Cu. Yd.
B 3+80	2	0.4	0.0
3+80	2	167.5	0.0
4+24	0	0.2	0.0
B 4+24	0		
Pg. Tot.		168.1	0.0
Cum. Tot.		168.1	0.0

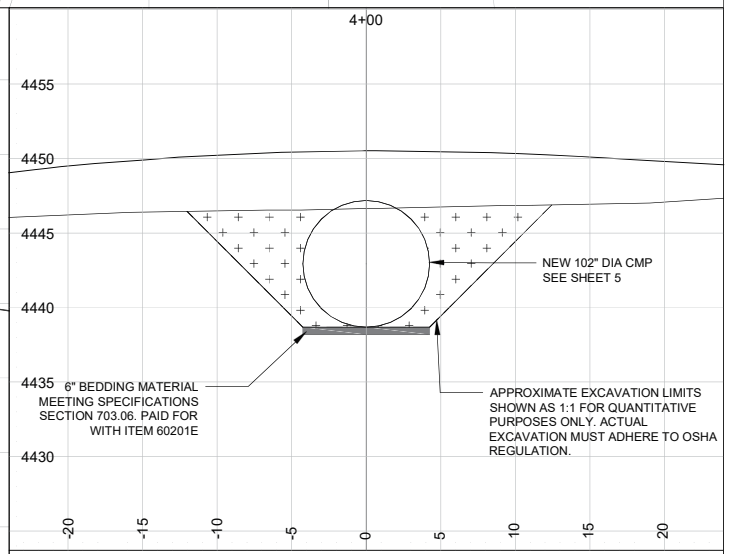
Profile Legend

- Profile Existing Topopgraphy
- Profile Subgrade
- Profile Culverts
- Profile Finished Road

Profile Vert Scale 1:100
Profile Horz Scale 1:200







L-Stn :	4+00	Grd.Lst:	-5	Super L:	0	F Slope R:	100
P-Stn :		L-Ssl:	-2	Super R:	0	Cut Dp:	5
Grd.Nxt.:	-5	L-Ssr:	2	F Slope L:	100		

3

GOLD CREEK TRIBUTARIES AOP CULVERT REPLACEMENTS

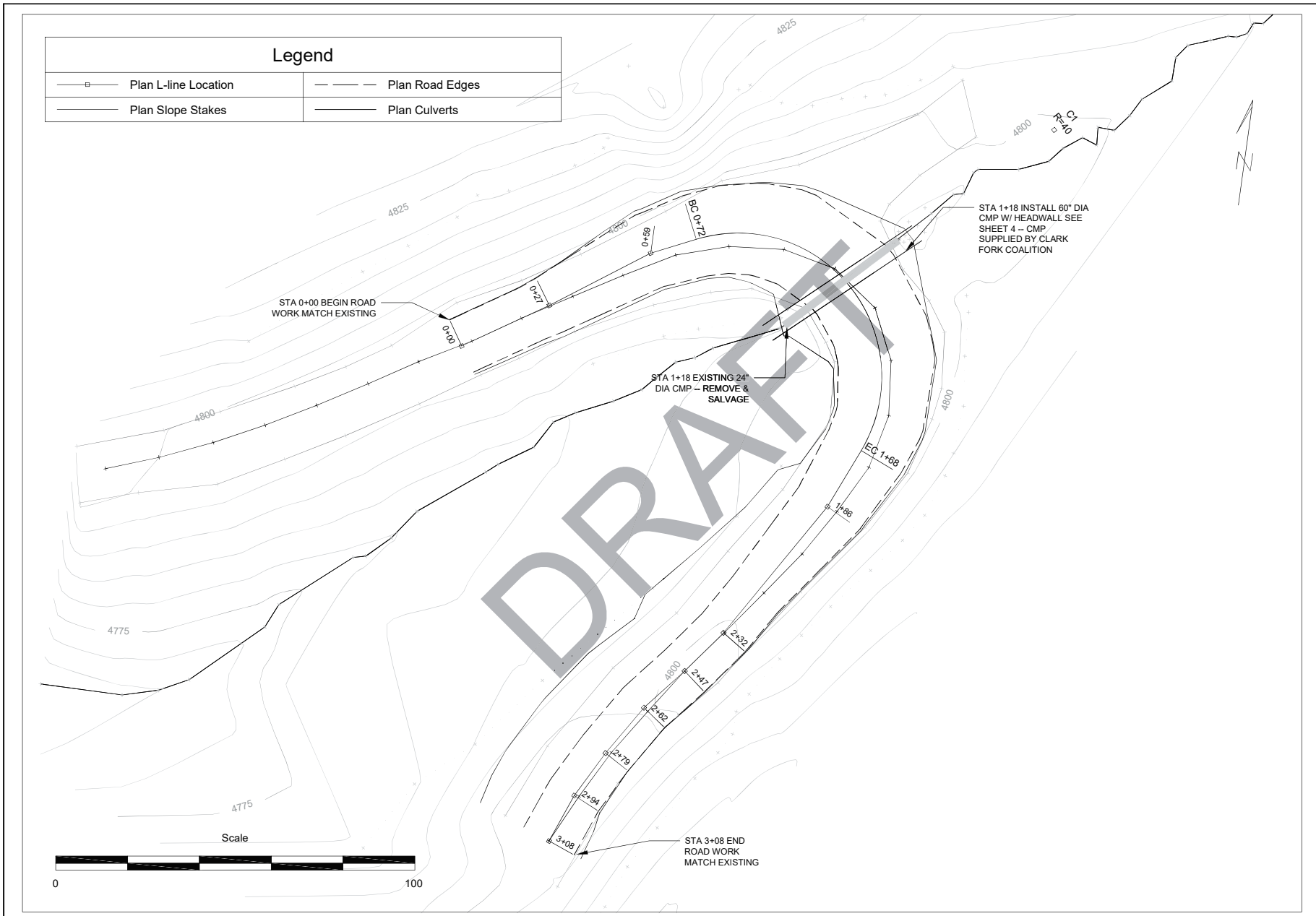
GOLD CREEK TRIBUTARY AOP -- STREAM PLAN, PROFILE, & SECTION

MARK	REVISION	DATE	APPROVED

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMNET
DISTRICT: WESTERN MONTANA DISTRICT
DESIGN OFFICE: MISSOULA FIELD OFFICE
ISSUED FOR: CONSTRUCTION
ISSUE DATE: 3/20/2025

SHEET 3 OF 31

(DESIGNED BY: DVB DRAWN BY: DVB CHECKED BY: GLA)



GOLD CREEK TRIBUTARIES AOP
CULVERT REPLACEMENTS

GOLD CREEK TRIBUTARY CMP -- PLAN

MARK	REVISION	DATE	APPROVED

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMNET
DISTRICT: WESTERN MONTANA DISTRICT
DESIGN OFFICE: MISSOULA FIELD OFFICE

ISSUED FOR: CONSTRUCTION ISSUE DATE: 3/20/2025

SHEET 3 OF 31

(DESIGNED BY: DVB DRAWN BY: DVB CHECKED BY: GLA)

Plan Legend

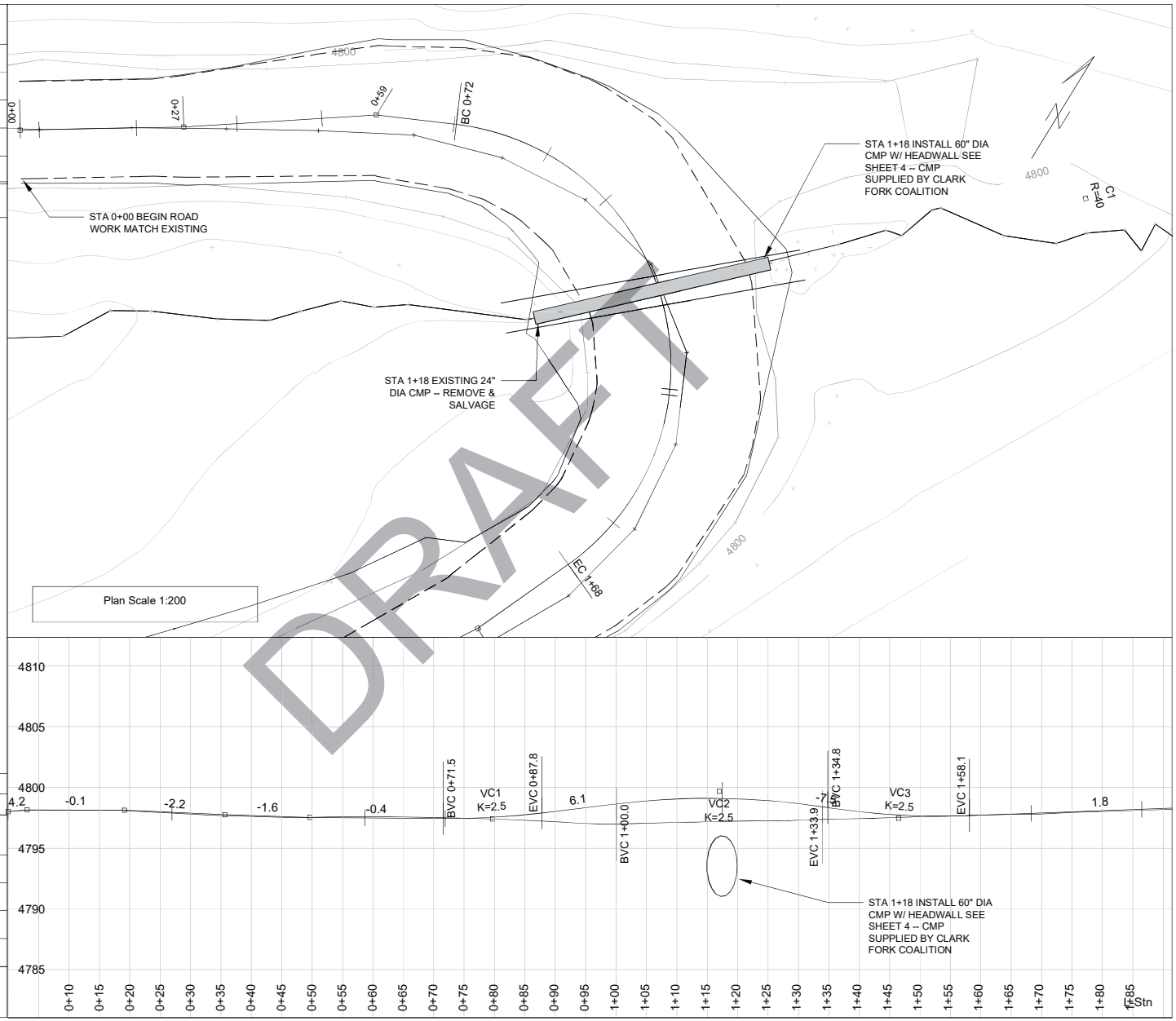
- Plan Center Line
- Plan Existing Road
- Plan Slope Stakes
- Plan Road Edges
- Plan Culverts

L-Stn ft.	Cut Dp. ft.	SG Cut V. Cu. Yd.	SG Fill V. Cu. Yd.
0+00.0	0.0	0.0	0.0
0+00.0	0.0	0.2	0.2
0+03.1	0.0	0.4	1.5
0+19.1	0.0	0.0	0.1
0+20.0	0.0	0.0	0.9
0+26.9	-0.1	0.0	1.2
0+35.7	-0.1	0.1	0.5
0+40.0	-0.1	1.0	1.0
0+49.6	0.0	2.4	0.7
0+58.7	0.1	0.5	0.1
0+60.0	0.1	3.8	0.9
0+71.5	0.1	0.1	0.0
0+71.9	0.1	1.6	1.0
0+80.0	-0.2	0.3	2.7
0+87.8	-0.7	0.0	16.2
1+00.0	-1.6	0.0	0.1
1+00.0	-1.7	0.0	43.1
1+17.4	-1.9	0.0	7.5
1+20.0	-1.8	0.0	28.1
1+33.9	-1.0	0.0	1.1
1+34.8	-0.9	0.0	4.5
1+40.0	-0.6	2.1	5.9
1+58.1	0.0	0.4	0.3
1+60.0	0.0	1.7	1.3
1+68.3	-0.1	2.2	1.7
1+80.0	-0.1	1.6	0.7
1+86.5	-0.1	4.2	1.2
2+00.0			
Pg. Tot.		22.6	122.5
Cum. Tot.		22.6	122.5

Profile Legend

- Profile Existing Topopgraphy
- Profile Subgrade
- Profile Culverts
- Approx. Excavation Limits

Profile Vert Scale 1:100
Profile Horz Scale 1:200



GOLD CREEK TRIBUTARIES AOP CULVERT REPLACEMENTS

GOLD CREEK TRIBUTARY CMP -- PLAN & PROFILE (1 OF 2)

MARK	REVISION	DATE	APPROVED

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMNET
DISTRICT: WESTERN MONTANA DISTRICT
DESIGN OFFICE: MISSOULA FIELD OFFICE
ISSUED FOR: CONSTRUCTION ISSUE DATE: 3/20/2025

SHEET 3 OF 31

(DESIGNED BY: DVB DRAWN BY: DVB CHECKED BY: GLA)

Plan Legend

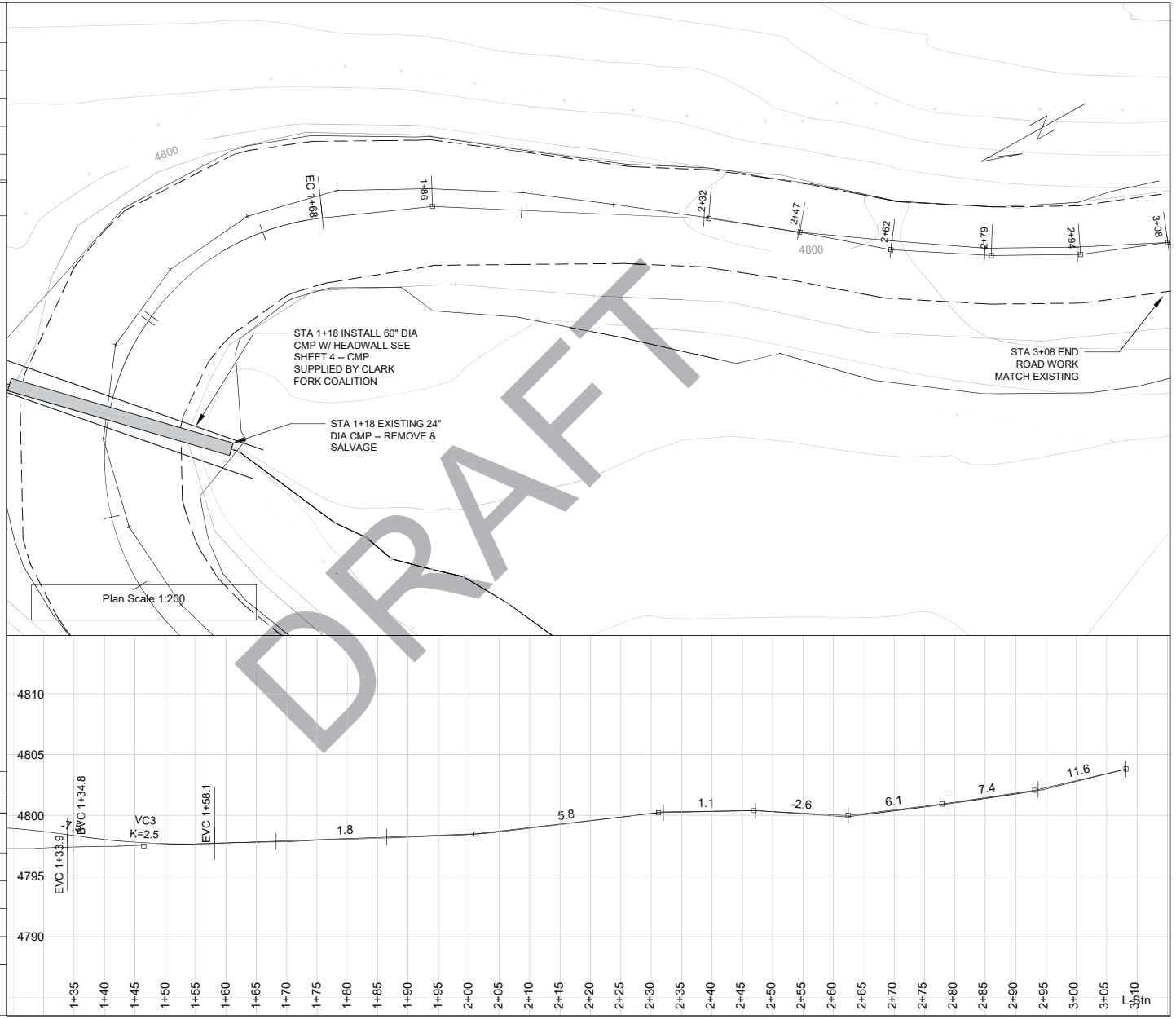
- Plan Center Line
- Plan Existing Road
- Plan Slope Stakes
- Plan Road Edges
- Plan Culverts

L-Stn ft.	Cut Dp. ft.	SG Cut V. Cu. Yd.	SG Fill V. Cu. Yd.
1+33.9	-1.0	0.0	1.1
1+34.8	-0.9	0.0	4.5
1+40.0	-0.6	2.1	5.9
1+58.1	0.0	0.4	0.3
1+60.0	0.0	1.7	1.3
1+68.3	-0.1	2.2	1.7
1+80.0	-0.1	1.6	0.7
1+86.5	-0.1	4.2	1.2
2+00.0	0.0	0.4	0.1
2+01.2	0.0	8.5	1.6
2+20.0	0.0	6.4	1.6
2+31.2	0.0	0.5	0.1
2+32.0	0.1	4.7	1.1
2+40.0	0.0	4.3	1.0
2+46.9	0.0	0.2	0.0
2+47.2	0.0	9.2	2.1
2+60.0	-0.1	2.0	0.4
2+62.4	-0.1	14.1	2.0
2+77.9	-0.1	1.1	0.1
2+79.0	-0.1	1.0	0.1
2+80.0	-0.1	13.4	1.4
2+93.1	-0.1	0.6	0.1
2+93.7	-0.1	6.5	0.8
3+00.0	-0.1	7.8	1.2
3+08.2	0.0		
Pg. Tot.		92.9	30.4
Cum. Tot.		103.3	136.2

Profile Legend

- Profile Existing Topopgraphy
- Profile Subgrade
- Profile Culverts
- Approx. Excavation Limits

Profile Vert Scale 1:100
Profile Horz Scale 1:200



GOLD CREEK TRIBUTARIES AOP CULVERT REPLACEMENTS

GOLD CREEK TRIBUTARY CMP -- ROADWAY PLAN & PROFILE (2 OF 2)

MARK	REVISION	DATE	APPROVED

U.S. DEPARTMENT OF THE INTERIOR
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SHEET 3 OF 31

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