

April 1, 2025

Matt Heimel  
Missoula County Floodplain Administration  
127 E. Main Street Suite 2  
Missoula, MT 59802

Cassie Tripard  
Development Services Division  
435 Ryman St.  
Missoula, MT 59802

Dear Matt and Cassie,

As we recently discussed, attached is a Joint Permit Application for a floodplain permit associated with the Grant Creek Restoration and Flood Control Project. The intent of this permit is to allow the contractor to begin construction of the new Grant Creek floodplain and channel while waiting for FEMA to issue a Conditional Letter of Map Revision (CLOMR). Under this permit the contractor will strip topsoil and begin excavation of the new floodplain, stream channel and floodplain swale. No fill material will be placed within the areas modeled to be inundated during the 1% annual chance (100-year) flood event as depicted on the figure included with the permit application. In addition, no work will be conducted within 50' of the existing Grant Creek channel. Please find the following included in this package:

- Joint Permit Application
- 100-year inundation figure
- Construction plans
- HEC-RAS hydraulic model (note that the existing conditions depicted on the attached inundation figure are modeled in the Plan titled “existing conditions w out levee”).

Please let us know if you have any questions.

Sincerely,



Daniel E. March, PE  
Sr. Hydraulic Engineer

Revised: <u>5/12/2021</u> 310 Form 270 and Instructions may be downloaded from: <a href="http://dnrc.mt.gov/licenses-and-permits/stream-permitting">http://dnrc.mt.gov/licenses-and-permits/stream-permitting</a>	<b>CD/AGENCY USE ONLY</b> Application # <input type="text" value="Click to enter text."/>	Date Received <input type="text" value="Date"/> Date FW: to <input type="text" value="FWP"/> Date <input type="text" value="Date"/>
Date Accepted <input type="text" value="Date"/> Control Number <input type="text" value="Click to enter text."/>	Initials <input type="text" value="Initials"/> Contract Letting Date <input type="text" value="Date"/>	
<i>This space is for all Department of Transportation and SPA 124 permits (government projects).</i>		
Project Name <input type="text" value="Click to enter text."/>	<input type="checkbox"/> Yes <input type="checkbox"/> No	If yes, #C5 of this application does not apply.
MEPA/NEPA Compliance		

## JOINT APPLICATION FOR PROPOSED WORK IN MONTANA'S STREAMS, WETLANDS, FLOODPLAINS & OTHER WATER BODIES

**This is a standardized application to apply for one or all local, state, or federal permits listed below.**

- Refer to instructions to determine which permits apply and submit a signed application to each applicable agency.
- Incomplete applications will result in the delay of the application process.
- The applicant is responsible for obtaining all necessary permits and landowner permission before beginning work.
- **Other laws may apply.**

	<b>PERMIT</b>	<b>AGENCY</b>	<b>FILL OUT SECTIONS</b>	<b>FEES</b>
	310 Permit	Local Conservation District	A - E and G	Inquire locally
	SPA 124 Permit	Department of Fish, Wildlife and Parks	A - E and G	No fee
	318 Authorization 401 Certification	Department of Environmental Quality	A - E and G	\$250 (318); \$400 - \$20,000 (401)
	Navigable Rivers Land Use License, Lease, or Easement	Department of Natural Resources and Conservation, Trust Lands Management Division	A - E and G	\$50, plus additional fee
	Section 404 Permit, Section 10 Permit	U. S. Army Corps of Engineers (USACE)	A - G F1-8	Varies (\$0 - \$100)
<input checked="" type="checkbox"/>	Floodplain Permit	Local Floodplain Administrator	A - G	Varies by city/county (\$25 - \$500+)

### A. APPLICANT INFORMATION

**APPLICANT NAME** (person responsible for project): [City of Missoula](#)

Has the landowner consented to this project?  Yes  No

Mailing Address: [435 Ryman Street, Missoula, MT 59802](#)

Physical Address: [Same](#)

Cellphone: [406.552-6758](#) E-Mail: [SchultzA@ci.missoula.mt.us](mailto:SchultzA@ci.missoula.mt.us)

**LANDOWNER NAME** (if different from applicant):

[Owner #1: Prolo Family Clovis, LLC](#)

Mailing Address: [19841 Glen Una Dr., Saratoga, CA 95070](#)

Physical Address: [4365 Whipporwill Dr, Missoula, MT 59808](#)

Cellphone: [Click here to enter or N/A.](#) Home Phone: [Click here to enter or N/A.](#) E-Mail: [Click here to enter or N/A.](#)

[Owner #2: Dougherty Ranch, LLC](#)

Mailing Address: [1185 E Cooper Lake Shr, Ovando, MT 59854](#)

Physical Address: [N/A](#)

Cellphone: [Click here to enter or N/A.](#) Home Phone: [Click here to enter or N/A.](#) E-Mail: [Click here to enter or N/A.](#)

[Owner #3: Missoula County Airport Authority](#)

Mailing Address: [6053 Aviation Way6 W Missoula, MT 59808](#)

Physical Address: [4439 Corporate Way, Missoula, MT 59808](#)

Cellphone: [Click here to enter or N/A.](#) Home Phone: [406-728-4381](#) E-Mail: [contactus@flymissoula.com](mailto:contactus@flymissoula.com)

**CONTRACTOR/COMPANY NAME (if applicable):** HDR Engineering

**PRIMARY CONTACT NAME:** Dan March, PE

Mailing Address: 910 N. Last Chance Gulch, Suite B, Helena, MT 59601-3395

Physical Address: Same

Work Phone: 406-417-6103 [Click here to enter or N/A](#). E-Mail: daniel.march@hdrinc.com

## B. PROJECT SITE INFORMATION

1. NAME OF **STREAM** or **WATER BODY** at project location Grant Creek

Project Address/Location: Southwest of U.S. Highway 10 W (West Broadway Street), between Reference Post 4.3 to 4.7

Nearest Town Missoula, MT

County Missoula County Geocode: 04-2199-01-4-01-05-0000, 04-2199-01-4-01-10-0000, 04-2200-06-3-01-02-0000, and 04-2199-02-1-01-0000. **04-2199-01-4-01-08-0000**

Choose 1/4 of the Choose. 1/4 of, Section (see below) Township , Range

Latitude (see below) Longitude (see below) Refer to section B1 in the instructions.

The project is located to the northwest of and outside the city limits of Missoula within Missoula County. The project is located within Section 6 of Township 13 North and Range 19 West and Sections 1 and 12 of Township 13 North and Range 20 West.

2. Is the proposed activity within **SAGE GROUSE** areas designated as general, connected, or core habitat?

Yes  No  Attach consultation letter if required. Refer to section B2 in the instructions. **N/A**

3. Is this a **STATE NAVIGABLE WATERWAY**? The state owns beds of certain navigable waterways.

Yes  No  If yes, send a copy of this application to the appropriate DNRC land office. Refer to section B3 in the instructions.

4. **WHAT IS THE CURRENT CONDITION** of the proposed project site? Describe the existing bank condition, bank slope, height, nearby structures, and wetlands. What vegetation is present? Refer to section B4 in the instructions.

This is a portion of a larger project to relocate Grant Creek. However, this permit only covers shaping of a proposed floodplain, stream channel and floodplain swale within an existing hay field. Work will not include connection to the existing channel. Excavated material will be placed outside of areas modeled to be inundated during the 1% annual chance runoff event (100-year flood). The existing site conditions are those of an agricultural field used to produce hay.

## C. PROPOSED PROJECT OR ACTIVITY INFORMATION

1. **TYPE OF PROJECT** (check all that apply) Refer to section C1 in the instructions.

**Agricultural and Irrigation Projects:** Diversions, Headgates, Flumes, Riparian fencing, Ditches, etc.

**Buildings/Structures:** Accessory Structures, Manufactured Homes, Residential or Commercial Buildings, etc.

**Channel/Bank Projects:** Stabilization, Restoration, Alteration, Dredging, Fish Habitat, Vegetation or Tree Removal, or any other work that modifies existing channels or banks.

**Crossings/Roads:** Bridge, Culvert, Fords, Road Work, Temporary Access, or any project that crosses over or under a stream or channel.

**Mining Projects:** All mining related activity, including; Placer Mining, Aggregate Mining, etc.

**Recreation related Projects:** Boat Ramps, Docks, Marinas, etc.

**Other Projects:** Cistern, Debris Removal, Excavation/Pit/Pond, Placement of Fill, drilling or directional boring, Utilities, Wetland Alteration. Other project type not listed here \_\_\_\_\_

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2. **IS THIS APPLICATION FOR** an annual maintenance permit?  Yes  No

(If yes attach annual plan of operation to this application) – Refer to section C2 in the instructions.

3. **WHY IS THIS PROJECT NECESSARY? STATE THE PURPOSE OR GOAL** of the proposed project. Refer to section C3 in the instructions.

The purpose for the project is to begin the excavation portion of the larger Grant Creek realignment project to restore and enhance floodplain function and promote water quality. This permit is intended to allow the contractor to begin shaping the proposed floodplain and channel to ensure the project is completed prior to deadlines for available ARPA funding. The proposed work under this permit will not include connection to the existing channel and will not place any fill within areas modeled/mapped to be inundated during the 1% annual flood event. Hydraulic models and associated mapping are included with this application.

**4. PROVIDE A BRIEF DESCRIPTION** of the proposed project plan and how it will be accomplished. Refer to section C4 in the instructions.

The City of Missoula Department of Public Works and Mobility is proposing to realign approximately 5,200 lineal feet of Grant Creek to restore and enhance floodplain function and promote water quality. The proposed project will develop a new channel for Grant Creek capable of passing a 1.5-year flood event and a 200-foot-wide floodplain that is capable of passing a 100-year runoff event. The project also includes a 100-foot-wide riparian area buffer on each side of the constructed floodplain for a total project width of 400-feet. In addition to improving floodplain function, the realignment would also remediate Grant Creek by promoting natural streambank and sediment management conditions. The project will also provide temporary stormwater management for an existing stormwater outfall owned by the Montana Department of Transportation (MDT) located near the Whipporwill Drive/West Broadway intersection. The project will also result in creating additional developable property by eliminating a wide swath of shallow Zone A/AE floodplain that has no ecological value and replacing it with a 200-foot-wide floodplain and an additional 200-foot-wide buffer that is a functioning riparian area.

The proposed action includes the following elements:

- Realignment of approximately 4,700 lineal feet of Grant Creek, replacing with approximately 5,200 lineal feet of new channel;
- Establishment of a 1,300-foot-long flood control swale that discharges to the Grant Creek channel;
- Establishment of a 400-foot-wide floodplain/riparian buffer area and setback from the Grant Creek channel;
- Development of a natural stream channel capable of conveying the 1.5-year storm with sinuosity and stable channel design;
- Design of a roadway crossing of the Grant Creek channel at the extension of George Elmer Drive; and,
- Design of a roadway crossing of the proposed floodplain swale at the future Dougherty Drive.

In Grant Creek's existing condition, the 100-year water surface elevations will overtop West Broadway Street and shallow flooding will occur on the adjacent lands to the south and east of the current Grant Creek channel. Flooding of Grant Creek is a potential risk to public health and safety. This project will contain the floodplain to a more compact but ecologically functioning area, and thus improve public health and safety by eliminating the floodplain on a widespread area that could potentially be developed.

As noted previously, this permit is only for excavation of the proposed floodplain, channel and floodplain swale and will not include connection to the existing Grant Creek channel. No fill will be placed in areas modeled to be inundated during the 1% annual chance flood event.

**5. WHAT OTHER ALTERNATIVES** were considered to accomplish the stated purpose of the project? Why was the proposed alternative selected? Refer to section C5 in the instructions.

Two alternatives were considered: The first was to "do nothing" and leave the channel/floodplain as is. This option was discarded in the interest of better ecological function and reduction in floodplain extents. The second option considered the same floodplain/riparian buffer footprint with a channel of constant slope. This option was dismissed after consultation with Montana FWP and other stakeholders, opting instead for a channel that gradually flattens, increases sinuosity and decreases its width/depth ratio. This final design better agrees with natural channel progression.

**6. NATURAL RESOURCE BENEFITS OR POTENTIAL IMPACTS.** Please complete the information below to the best of your ability.

\* Explain any temporary or permanent changes in erosion, sedimentation, turbidity, or increases of potential contaminants. What will be done to minimize those impacts?

Water quality impacts would be substantially avoided and minimized using standard best management practices (BMPs) that include erosion and sediment control(s) to minimize temporary impacts and abate pollution of surface and ground water resources. The contractor would be responsible for conducting routine site monitoring to ensure all pollution control measures are installed, maintained, and functioning correctly.

- Will the project cause temporary or permanent impacts to fish and/or aquatic habitat? What will be done to protect the fisheries?

Work under this permit will not connect to Grant Creek and therefore no impacts to fish and/or aquatic habitat is anticipated.

- What will be done to minimize temporary or permanent impacts to the floodplain, wetlands, or riparian habitat? The proposed work associated with this permit application is only for excavation in an agricultural field and no fill will be placed within areas modeled to be inundated during the 1% annual chance flood event. The project will not impact wetlands because none exist adjacent to Grant Creek within the project area.

- What efforts will be made to decrease flooding potential upstream and downstream of project?

As previously noted, the project will only involve excavation within areas inundated by the 1% annual chance flood event.

- Explain potential temporary or permanent changes to the water flow or to the bed and banks of the waterbody. What will be done to minimize those changes?

The work associated with this permit does not connect to Grant Creek and, therefore, will have no effect on the water flow regime of Grant Creek.

- How will existing vegetation be protected and its removal minimized? Explain how the site will be revegetated. Include weed control plans.

The proposed work is in an agricultural field (hay meadow) and therefore existing vegetation does not need to be protected. To re-establish permanent vegetation and to reduce the spread and establishment of noxious weeds, disturbed areas would be seeded with desirable plant species, as soon as practicable. Post construction, the site would be monitored until final stabilization is met as required by the MPDES permit.

## D. CONSTRUCTION DETAILS

### 1. PROPOSED CONSTRUCTION DATES.

Include a project timeline. Start date 4/15/2025

Finish date 9/19/2025 How long will it take to complete the project? 5 months Is any portion of the work already completed?  Yes  No (If yes, describe previously completed work.)

Refer to section D1 in the instructions.

#### Construction and Sequencing Schedule:

The first phase of construction will be shaping of the floodplain for Reaches 1 through 4 and the floodplain swale. The new Grant Creek channel will then be constructed. The realigned floodplain and stream channel (Reaches 1, 2, 3, and 4) will be constructed “in the dry” through existing vacant agricultural fields. Connection of the new channel at the upstream and downstream ends will not take place as part of the work proposed by this permit application.

Construction of Reach 5 is not part of the proposed work covered by this permit.

Construction of the floodplain swale will require excavation of material to create the approximately 30-foot-wide swale that will be contained within a 50-foot-wide easement.

Fill material will be placed outside of areas modeled to be inundated during the 1-percent annual chance flood event as depicted on the attached Figure.

### 2. PROJECT DIMENSIONS.

Describe length and width of the project. Refer to section D2 in the instructions.

Refer to the attached plans. No work will be undertaken within 50' of the existing stream channel.

### 3. EQUIPMENT.

List all equipment that will be used for this project. How will the equipment be used on the bank and/or in the water? Note: All equipment used in the water must be clean, drained and dry. Refer to section D3 in the instructions.

Standard construction equipment will be used and will likely include a variety of tracked and wheeled heavy construction equipment including, but not limited to, scrapers, backhoes, dozers, loaders, dump trucks, and compaction equipment. The contractor will provide the equipment that will be used to construct the proposed project.

Will equipment from out of state be used? YES  NO  UNKNOWN

Will the equipment cross west over the continental divide to the project site? YES  NO  UNKNOWN

Will equipment enter the Flathead Basin? YES  NO  UNKNOWN

**4. MATERIALS.** Provide the total quantity and source of materials proposed to be used or removed. Note: This may be modified during the permitting process therefore it is **recommended you do not purchase materials until all permits are issued.** List soil/fill type, cubic yards and source, culvert size, rip-rap size, any other materials to be used or removed on the project. Refer to section D4 in the instructions.

**Table D-1: Materials Proposed within Grant Creek**

Stream	Station	Proposed Structure Type and Dimensions	Linear Feet	Cubic Yards
Grant Creek	Various	Graded gravel substrate (see plans for details, sheet B.1)		571
Grant Creek	Various	Cobble patch substrate (see plans for details, sheet H.1)		275
Grant Creek		Channel plug (see plans for details, sheets E.1 and E.2)		278
Grant Creek	Various	Brush Matrix (see plans for details, sheet H.1)	4854	

## **E. REQUIRED ATTACHMENTS**

- PLANS AND/OR DRAWINGS** of the proposed project. **Include:**
  - Plan/Aerial view
  - an elevation or cross section view
  - dimensions of the project (height, width, depth in feet)
  - location of storage or stockpile materials dimensions and location of fill or excavation sites
  - drainage facilities
  - location of existing/proposed structures, such as buildings, utilities, roads, or bridges
  - an arrow indicating north
  - Site photos
- ATTACH A VICINITY MAP OR A SKETCH** which includes: The water body where the project is located, roads, tributaries, other landmarks. Place an "X" on the project location. Provide written directions to the site. This is a plan view (looking at the project from above).
- ATTACH ANNUAL PLAN OF OPERATION** if requesting a Maintenance 310 Permit.
- ATTACH AQUATIC RESOURCE MAP.** Document the location and boundary of all waters of the U.S. in the project vicinity, including wetlands and other special aquatic sites. Show the location of the ordinary high-water mark of streams or waterbodies. **if requesting a Section 404 or Section 10 Permit.** Ordinary high-water mark delineation included on plan or drawings and/or a separate wetland delineation.

## **F. ADDITIONAL INFORMATION FOR U.S. ARMY CORPS OF ENGINEERS (USACE) SECTION 404, SECTION 10 AND FLOODPLAIN PERMITS.**

*Section F should only be filled out by those needing Section 404, Section 10, and/or Floodplain permits.*

Applicants applying for Section 404 and/or Section 10 permits complete F 1- 8. Applicants applying for Floodplain permits, complete all of Section F. Refer to section F in the instructions.

FOR QUESTIONS RELATING TO SECTION F, QUESTIONS 1-8 PLEASE CONTACT THE USACE BY TELEPHONE AT 406-441-1375 OR BY E-MAIL [MONTANA.REG@USACE.ARMY.MIL](mailto:MONTANA.REG@USACE.ARMY.MIL).

1. Identify the specific **Nationwide Permit(s)** that you want to use to authorize the proposed activity. Refer to section F1 in the instructions.

The proposed work associated with this permit will not require a Clean Water Act (CWA) Section 404 permit since there are no wetlands or waters of the US within the work area.

2. Provide the **quantity of materials** proposed to be used in waters of the United States. What is the length and width (or square footage or acreage) of impacts that are occurring within waters of the United States? How many cubic yards of fill material will be placed below the ordinary high-water mark, in a wetland, stream, or other waters of the United States? Note: Delineations are required of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Refer to section F2 in the instructions.

No fill will be placed within waters of the United States as part of the proposed work associated with this permit application.

3. How will the proposed project avoid or minimize **impacts to waters of the United States**? Attach additional sheets if necessary. Refer to section F3 in the instructions.

No fill will be placed within waters of the United States as part of the proposed work associated with this permit application.

The following conservation measures and construction Best Management Practices (BMPs) will be implemented for the project:

- Develop and maintain an erosion control plan in accordance with the DEQ MPDES permit.
- The contractor will plan, install, inspect, and maintain temporary and permanent erosion and sediment control (i.e., BMPs) to provide economical, effective, and continuous erosion and sediment control, prevent pollution during and after completion of construction activities, and preserve existing aquatic resources.
- The contractor will implement a spill prevention and waste disposal plan.
- The contractor will be responsible for conducting routine site monitoring to ensure all pollution control measures are installed, maintained, and functioning correctly as specified in the permit.
- Do not spill or dump material from equipment into regulated aquatic resources.
- To the extent possible, locate staging or storage areas at least 50 feet (15.2 m) horizontally from any aquatic resource, top of stream bank, or the highest anticipated water level during the construction period, whichever is furthest from the resource.
- Store and handle petroleum products, chemicals, and other deleterious materials to prevent their entering regulated aquatic resources.
- Clean, maintain, and operate equipment so that petroleum-based products do not leak or spill into any regulated aquatic resource.
- Reduction of project duration and length of time soils are allowed to remain unprotected.
- Minimize the site disturbance to only the area absolutely necessary to complete the project.

4. Will the project impact greater than 0.10-acre of wetland and/or more than 300 linear feet of stream or other waters? If yes, describe how the applicant is going to **compensate (mitigation bank, in-lieu fee program, or permittee responsible)** for these unavoidable impacts to waters of the United States. Refer to section F4 in the instructions.

No. No fill will be placed within waters of the United States as part of the proposed work associated with this permit application.

5. Is the activity proposed within any component of the **National Wild and Scenic River System**, or a river that has been officially designated by Congress as a “**study river**”? Refer to section F5 in the instructions.  
 Yes  No

6. Does this activity require permission from the USACE because it will alter or temporarily or permanently occupy or use a **USACE authorized civil works project**? (**Examples include USACE owned levees, Fort Peck Dam, and others**)? Refer to section F6 in the instructions.  
 Yes  No

7. List the **ENDANGERED AND THREATENED SPECIES** and **CRITICAL HABITAT(s)** that might be present in the project location. Refer to section F7 in the instructions.

A Biological Assessment (BA) was completed for the proposed project and submitted to the US Army Corps of Engineers as part of a permit application for the larger project. A list of federally listed endangered, threatened, proposed, and candidate species to be considered for this project was generated based on the USFWS Information for Planning and Consultation (IPaC) tool. The BA evaluated the project’s potential effect on Canada lynx (*Lynx canadensis*), grizzly bear (*Ursus arctos horribilis*), North American wolverine (*Gulo gulo luscus*), yellow-billed cuckoo (*Coccyzus americanus*), and bull trout (*Salvelinus confluentus*) and designated bull trout critical habitat (includes Grant Creek). The project was determined to have **no effect** on Canada lynx, grizzly bear, wolverine, and yellow-billed cuckoo. The project rendered a **may affect, not likely to adversely affect** bull trout and bull trout critical habitat. Note that the work associated with this permit application will maintain a minimum 50’ buffer between any disturbed areas and Grant Creek.

8. List any **HISTORIC PROPERTY(S)** that are listed, determined to be eligible or are potentially eligible (over 50 years old) for listing on the National Register of Historic Places.” Refer to section F8 in the instructions.  
No structures are being affected by the project and there will be no impact on any historic properties.

9. List **all applicable local, state, and federal** permits and indicate whether they were issued, waived, denied, or pending. Note: All required local, state, and federal permits, or proof of waiver must be issued prior to the issuance of a floodplain permit. Refer to section F9 in the instructions.

Floodplain Permit – PENDING

Stormwater Discharge General Permit – Contractor’s responsibility - PENDING

10. List the **NAMES AND ADDRESSES OF LANDOWNERS** adjacent to the project site. This includes properties adjacent to and across from the project site. (Some floodplain communities require certified adjoining landowner lists).

Names of Adjacent Landowner: Missoula VA 3885 W Broadway, Missoula, MT  
Name of Adjacent Landowner: KJKJ Properties 4094 Whippoorwill Dr. Missoula, MT  
Name of Adjacent Landowner: Steve Wayne Jensen 4213 Whippoorwill Dr, Missoula, MT  
Name of Adjacent Landowner: Click here to enter name Click here to enter Address

11. Floodplain Map Number 30063C1190E and 30063c1195E Refer to section F11 in the instructions.

12. Does this project comply with **local planning or zoning regulations**? Refer to section F12 in the instructions.  
 Yes  No

## G. SIGNATURES/AUTHORIZATIONS

Some agencies require original signatures. **After completing the form**, make the required number of copies and **then sign each copy**. Send the copies with original signatures and additional information required directly to each applicable agency.

The statements contained in this application are true and correct. The applicant possess' the authority to undertake the work described herein or is acting as the duly authorized agent of the landowner. The applicant understands that the granting of a permit does not include landowner permission to access land or construct a project. Inspections of the project site after notice by inspection authorities are hereby authorized. Refer to section G in the instructions.

APPLICANT (Person responsible for project):

Print Name: Andy Schultz, P.E.



4/1/2025

Signature of Applicant

Date

LANDOWNER:

Print Name: Prolo Family Clovis, LLC

Signature of Landowner

Date

LANDOWNER:

Print Name: Dougherty Ranch LLC – Brian Dougherty

LANDOWNER:

Print Name: Dougherty Ranch LLC – Sean Dougherty

Signature of Applicant

Date

Signature of Landowner

Date

LANDOWNER:

Print Name: Missoula County Airport

Signature of Applicant

Date

\*CONTRACTOR'S PRIMARY CONTACT (if applicable):

Print Name: Daniel March, P.E., Project Engineer

Daniel March, P.E. Project Engineer



3-31-2025

Signature of Contractor/Agent

Date

\*Contact agency to determine if contractor signature is required.

## G. SIGNATURES/AUTHORIZATIONS

Some agencies require original signatures. **After completing the form**, make the required number of copies and **then sign each copy**. Send the copies with original signatures and additional information required directly to each applicable agency.

The statements contained in this application are true and correct. The applicant possess' the authority to undertake the work described herein or is acting as the duly authorized agent of the landowner. The applicant understands that the granting of a permit does not include landowner permission to access land or construct a project. Inspections of the project site after notice by inspection authorities are hereby authorized. Refer to section G in the instructions.

APPLICANT (Person responsible for project):

Print Name: Andy Schultz, P.E.

Signature of Applicant

4/1/2025

Date

LANDOWNER:

Print Name: Prolo Family Clovis, LLC

4/1/2025

Signature of Landowner

Date

LANDOWNER:

Print Name: Dougherty Ranch LLC – Brian Dougherty

04/01/25

Signature of Applicant

Date

LANDOWNER:

Print Name: Dougherty Ranch LLC – Sean Dougherty

04/01/25

Signature of Landowner

Date

LANDOWNER:

Print Name: Missoula County Airport

4/3/2025

Date

\*CONTRACTOR'S PRIMARY CONTACT (if applicable):

Print Name: Daniel March, P.E., Project Engineer

Daniel March, P.E. Project Engineer

3-31-2025

Signature of Contractor/Agent

Date

\*Contact agency to determine if contractor signature is required.

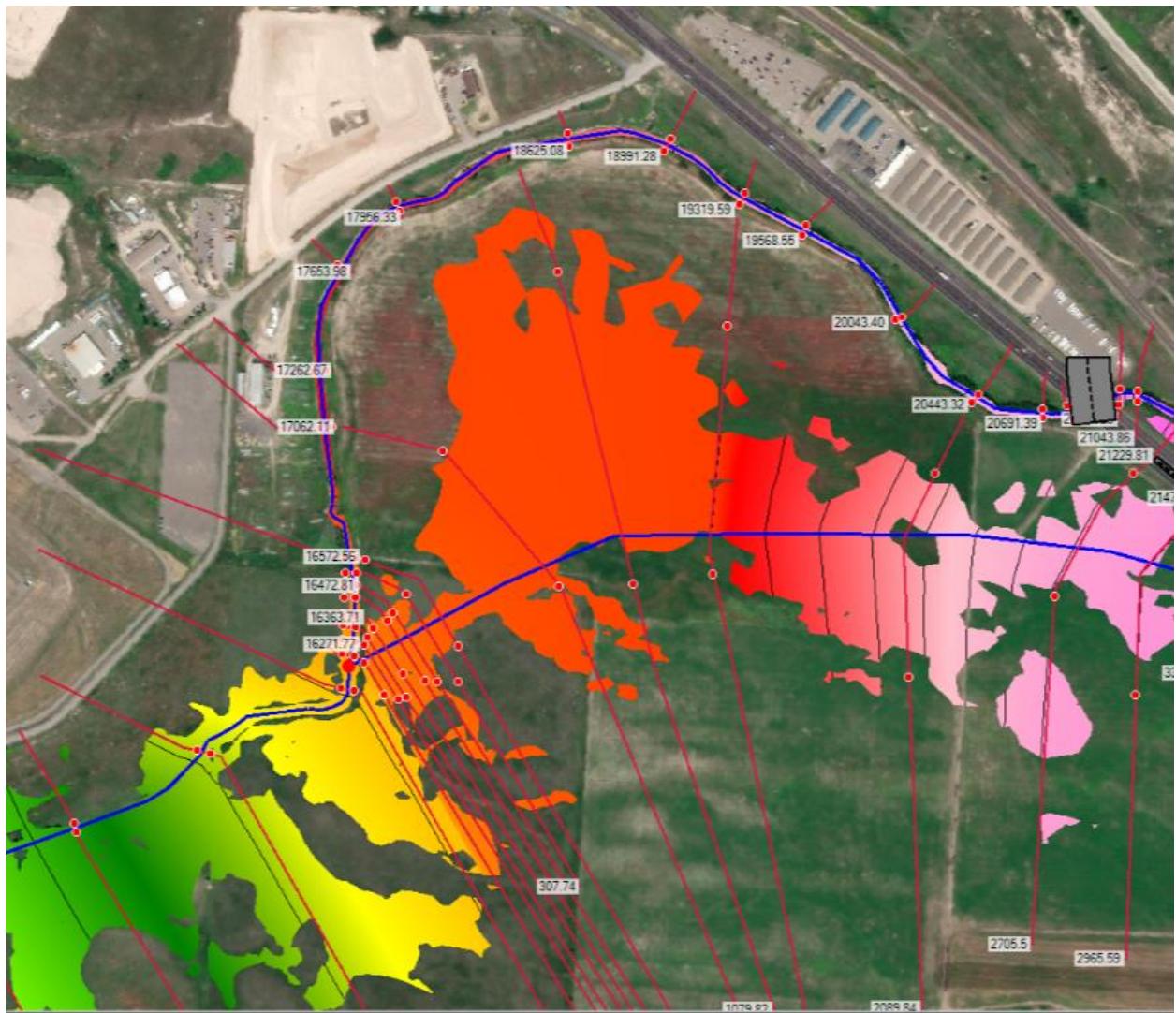


Figure 1 - Modeled 1% Annual Chance Flood Inundation, Existing Conditions

## Memorandum

To: Matt Heimel  
Floodplain Administrator  
Community and Planning Services Department  
Missoula County

Cassie Tripard  
Floodplain Administrator  
Development Services Division  
City of Missoula

From: Dan March, P.E.  
HDR Engineering, Inc.

Date: 4/11/2025

Subject: No Rise Certification – Lower Grant Creek

The purpose of this memorandum is to serve as a qualitative encroachment analysis for the proposed Grant Creek Restoration and Flood Control project. The work associated with this assessment is a portion of the larger project to relocate Grant Creek and the associated floodplain and covers the shaping of a proposed floodplain, stream channel, and floodplain swale within an existing hay field. Work will not include connection to or filling of the existing channel. Excavated material will be placed outside of areas modeled to be inundated during the 1%-annual-chance runoff event (100-year flood).

A qualitative assessment was selected after consulting with the local floodplain administrators. A qualitative assessment was selected for the following reasons:

1. The work proposed under this floodplain permit is within a Zone A SFHA modeled to be sheet flow.
2. Proposed work within the area modeled to be inundated during the 1%-annual-chance flood will involve excavation and shaping of the proposed floodplain and channel. This work is at or below the existing ground level.
3. All fill generated during topsoil removal and excavation of the proposed floodplain, stream channel and swale will be placed outside areas modeled to be inundated during the currently effective 1%-annual-chance flood.
4. A quantitative assessment could be completed. Because the proposed fill locations are outside of the inundated area of the effective hydraulic model, all modifications to the hydraulic model would be in a location outside of the wetted perimeter of the river or below the existing ground surface and would not cause a rise in the base flood elevations.

The proposed site plan is shown in Figure 1, which also displays the effective floodplain boundary of Lower Grant Creek as illustrated on 7/6/2015, per the Effective Flood Insurance Rate Maps (FIRM) 30063C1190E and 30063C1195E. Modeled inundation boundaries and proposed fill areas are presented on Figure 2.

In conclusion, proposed construction inside the 1%-annual-chance flood inundation area will be excavation and shaping of the new channel. All excavated material will be placed outside this inundation area. For the reasons noted above, construction within the proposed site will have no impact to the base flood elevations and this evaluation supports a No Rise Certification.

## Engineering "No-Rise" Certification

Community: Missoula County Unincorporated Areas  
Community ID: 300048  
County: Missoula  
State: Montana

Community: City of Missoula  
Community ID: 300049  
County: Missoula  
State: Montana

Applicant: City of Missoula  
Date: 4/11/2025

Engineer: Daniel E. March, P.E.  
Address: 910 N. Last Chance Gulch, Suite B, Helena, MT 59601  
Phone: 406.417-6103

### Site Data

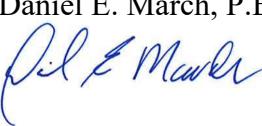
1. **Location:** Section 6 Township 13N Range 20W and Sections 1 and 2 of Township 13 North Range 20W  
**Street Address:** Southwest of U.S. Highway 10 W (West Broadway Street), between Reference Post 4.3 to 4.7
2. **Panel(s) No. of NFIP map(s) affected:** 30063C1190E and 30063C1195E
3. **Type of development:** Stream Restoration
4. **Description of the Development:** The proposed work includes the excavation and shaping of the proposed floodplain, stream channel and floodplain swale associated with the larger Grant Creek Restoration and Flood Control project. The work proposed under this permit does not include connection to the existing channel and will not place any of the excavated material within areas modeled/mapped to be inundated during the 1%-annual-chance flood event.

5. **Name of flooding source:** Lower Grant Creek

### COMMENTS:

This is to certify that I am a duly qualified engineer licensed to practice in the State of Montana. It is to further certify that the attached technical data supports the fact that the proposed development described above will not create any increase to the 100-year elevations on said flooding source above at the published cross sections in the Flood Insurance Study for the above community dated 7/6/2015 and will not create any increase to the 100-year flood elevations at unpublished cross sections in the vicinity of the proposed development.

Name: Daniel E. March, P.E.,

Signature: 

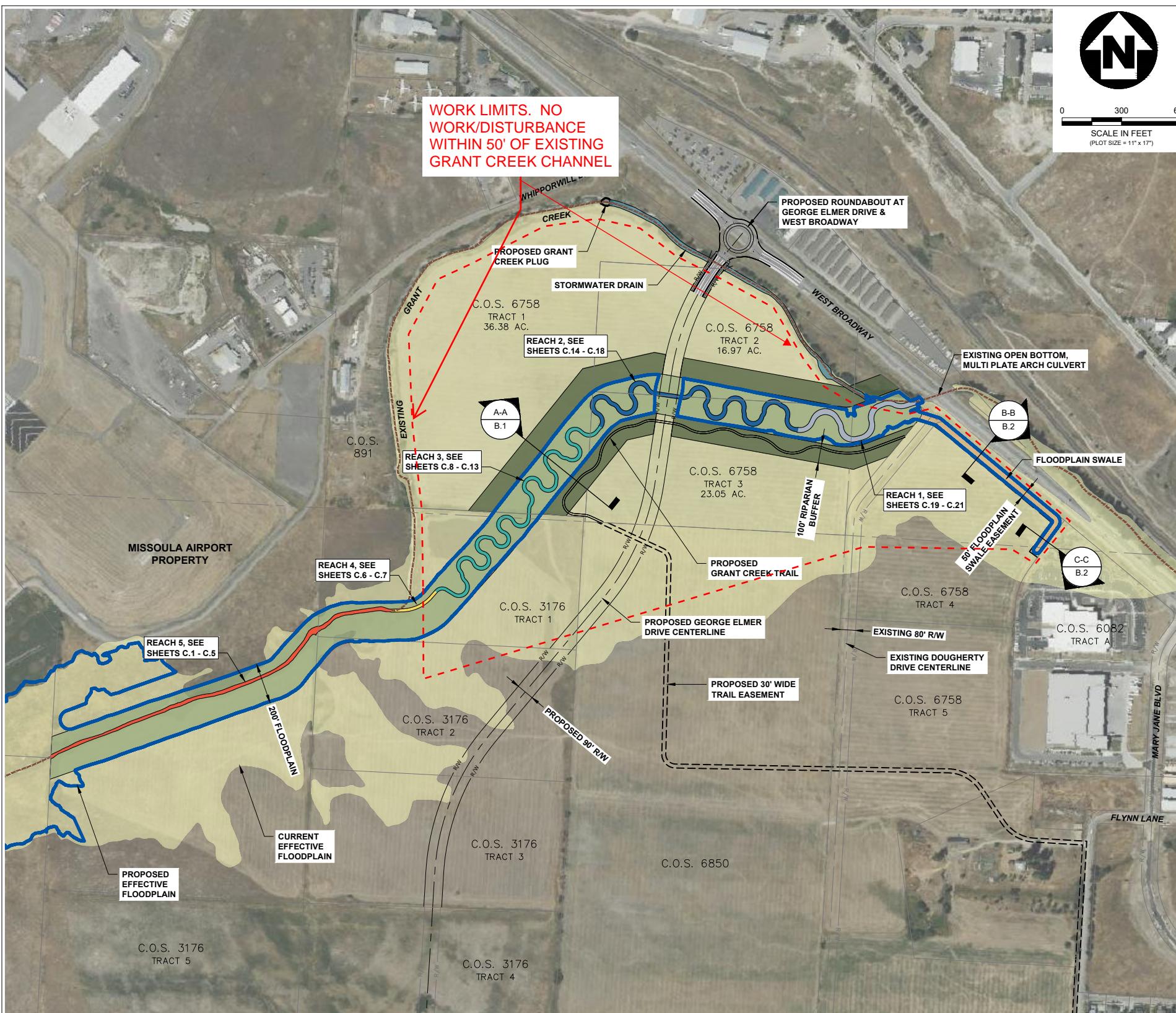
Date: 4/11/2025

Title: Water Resources Engineer

License No.: PEL-PE-LIC-9687



## SHEET INDEX



## A. GENERAL INFORMATION

- A.1 COVER
- A.2 PROJECT OVERVIEW AND SHEET INDEX
- A.3 LEGEND AND ABBREVIATIONS
- A.4 GENERAL NOTES
- A.5 GRANT CREEK - MASS HAUL VIEW AND ESTIMATED QUANTITIES
- A.6 FLOODPLAIN SWALE - MASS HAUL VIEW AND ESTIMATED QUANTITIES
- A.7 EARTHWORK STOCKPILING AND - ALTERNATE BID SCHEDULES
- A.8 SURVEY CONTROL POINTS
- A.9 FLOODPLAIN CENTERLINE ALIGNMENT

## B. TYPICAL SECTIONS

- B.1 GRANT CREEK FLOODPLAIN AND CHANNEL
- B.2 FLOODPLAIN SWALE
- B.3 GRANT CREEK TRAIL TYPICAL SECTION

## C. GRANT CREEK PLAN, PROFILE & CROSS SECTIONS

- REACH 5**
- C.1 PLAN AND PROFILE - STA 500+00 TO STA 510+50
- C.2 PLAN AND PROFILE - STA 510+50 TO STA 519+16.68
- C.3 CROSS SECTIONS - STA 500+00 TO STA 506+00
- C.4 CROSS SECTIONS - STA 508+00 TO STA 514+00
- C.5 CROSS SECTIONS - STA 516+00 TO STA 518+00
- REACH 4**
- C.6 PLAN AND PROFILE - STA 400+00 TO STA 402+56.84
- C.7 CROSS SECTIONS - STA 400+00 TO STA 402+00
- REACH 3**
- C.8 PLAN AND PROFILE - STA 300+00 TO STA 311+75
- C.9 PLAN AND PROFILE - STA 311+75 TO STA 323+36
- C.10 CROSS SECTIONS - STA 300+00 TO STA 305+30
- C.11 CROSS SECTIONS - STA 306+90 TO STA 312+25.13
- C.12 CROSS SECTIONS - STA 314+00 TO STA 319+70
- C.13 CROSS SECTIONS - STA 321+50 TO STA 323+10
- REACH 2**
- C.14 PLAN AND PROFILE - STA 200+00 TO STA 209+50
- C.15 PLAN AND PROFILE - STA 209+50 TO STA 218+64.90
- C.16 CROSS SECTIONS - STA 200+00 TO STA 205+75
- C.17 CROSS SECTIONS - STA 207+00 TO STA 211+25
- C.18 CROSS SECTIONS - STA 213+00 TO STA 218+50
- REACH 1**
- C.19 PLAN AND PROFILE - STA 100+00 TO STA 108+21.80
- C.20 CROSS SECTIONS - STA 100+00 TO STA 106+50
- C.21 CROSS SECTIONS - STA 108+00

## D. FLOODPLAIN SWALE PLAN, PROFILE & CROSS SECTIONS

- D.1 PLAN AND PROFILE - STA 0+00 TO STA 13+00
- D.2 CROSS SECTIONS - STA 3+00 TO STA 12+00

## LEGEND

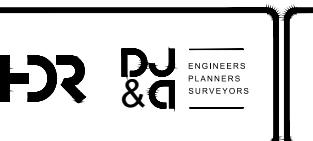
200' FLOODPLAIN
100' RIPARIAN BUFFER
FLOODPLAIN SWALE
STORMWATER DRAIN
CURRENT EFFECTIVE FLOODPLAIN
PROPOSED EFFECTIVE FLOODPLAIN
REACH 5 STREAM CHANNEL
REACH 4 STREAM CHANNEL
REACH 3 STREAM CHANNEL
REACH 2 STREAM CHANNEL
REACH 1 STREAM CHANNEL
EXISTING GRANT CREEK
PROPERTY LINE
SECTION LINE
PROPOSED TRAIL
PROPOSED TRAIL EASEMENT

## FLOODPLAIN DESIGN CRITERIA

REACH 5				
REACH LENGTH	STREAM LENGTH	SINUOSITY	RADIUS OF CURVATURE (MIN)	STREAM SLOPE
1,900 FT	1916.68 FT	1	N/A	0.09%
REACH 4				
REACH LENGTH	STREAM LENGTH	SINUOSITY	RADIUS OF CURVATURE (MIN)	STREAM SLOPE
300 FT	256.84 FT	0.9	200 FT	-0.35%
REACH 3				
REACH LENGTH	STREAM LENGTH	SINUOSITY	RADIUS OF CURVATURE (MIN)	STREAM SLOPE
1,168 FT	2,336 FT	2	40 FT	0.04%
REACH 2				
REACH LENGTH	STREAM LENGTH	SINUOSITY	RADIUS OF CURVATURE (MIN)	STREAM SLOPE
1,097 FT	1,864.9 FT	1.7	45 FT	0.22%
REACH 1				
REACH LENGTH	STREAM LENGTH	SINUOSITY	RADIUS OF CURVATURE (MIN)	STREAM SLOPE
587 FT	821.8 FT	1.4	60 FT	0.78%

REVISION	DATE	DESCRIPTION
-	-	-

DESIGNER	DM	PROJ. NO.	7065.01
DRAWN	JW	DATE	08/01/2024
CHECKED	DM	SURVEYED	DJ&A, P.C.



GRANT CREEK  
RFC PLANS

FIGURE 1 - WORK LIMITS

SHEET  
OF  
A.2 A.9

- E. STORMWATER DRAIN PLAN, PROFILE & DETAILS**
- E.1 PLAN AND PROFILE - STA 0+00 TO STA 19+00
- E.2 ENLARGED GRANT CREEK PLUG - PLAN, PROFILE, AND SECTION VIEWS

- F. TRAIL PLAN, PROFILE AND CROSS SECTIONS**
- F.1 VICINITY MAP
- F.2 PLAN & PROFILE - STA 10+00 TO 12+30
- F.3 PLAN & PROFILE - STA 12+30 TO 14+80
- F.4 PLAN & PROFILE - STA 14+80 TO 17+30
- F.5 PLAN & PROFILE - STA 17+30 TO 19+80
- F.6 PLAN & PROFILE - STA 19+80 TO 22+30
- F.7 PLAN & PROFILE - STA 22+30 TO 24+80
- F.8 PLAN & PROFILE - STA 24+80 TO 27+30
- F.9 PLAN & PROFILE - STA 27+30 TO 29+80
- F.10 PLAN & PROFILE - STA 29+80 TO 32+30
- F.11 PLAN & PROFILE - STA 32+30 TO 33+00
- F.12 - F.19 CROSS SECTIONS

## G. REVEGETATION PLAN

- G.1 PLANTING PLAN
- G.2 PLANTING SCHEDULE
- G.3 PLANTING DETAILS

## H. CONSTRUCTION DETAILS

- H.1 CONSTRUCTION DETAILS (1 OF 2)
- H.2 CONSTRUCTION DETAILS (2 OF 2)

## I. GRANT CREEK CROSSING

- I.1 ROAD PLAN AND PROFILE
- I.2 CULVERT GENERAL LAYOUT

## J. DOUGHERTY DRIVE CROSSING

- J.1 ROAD PLAN AND PROFILE
- J.2 CULVERT GENERAL LAYOUT

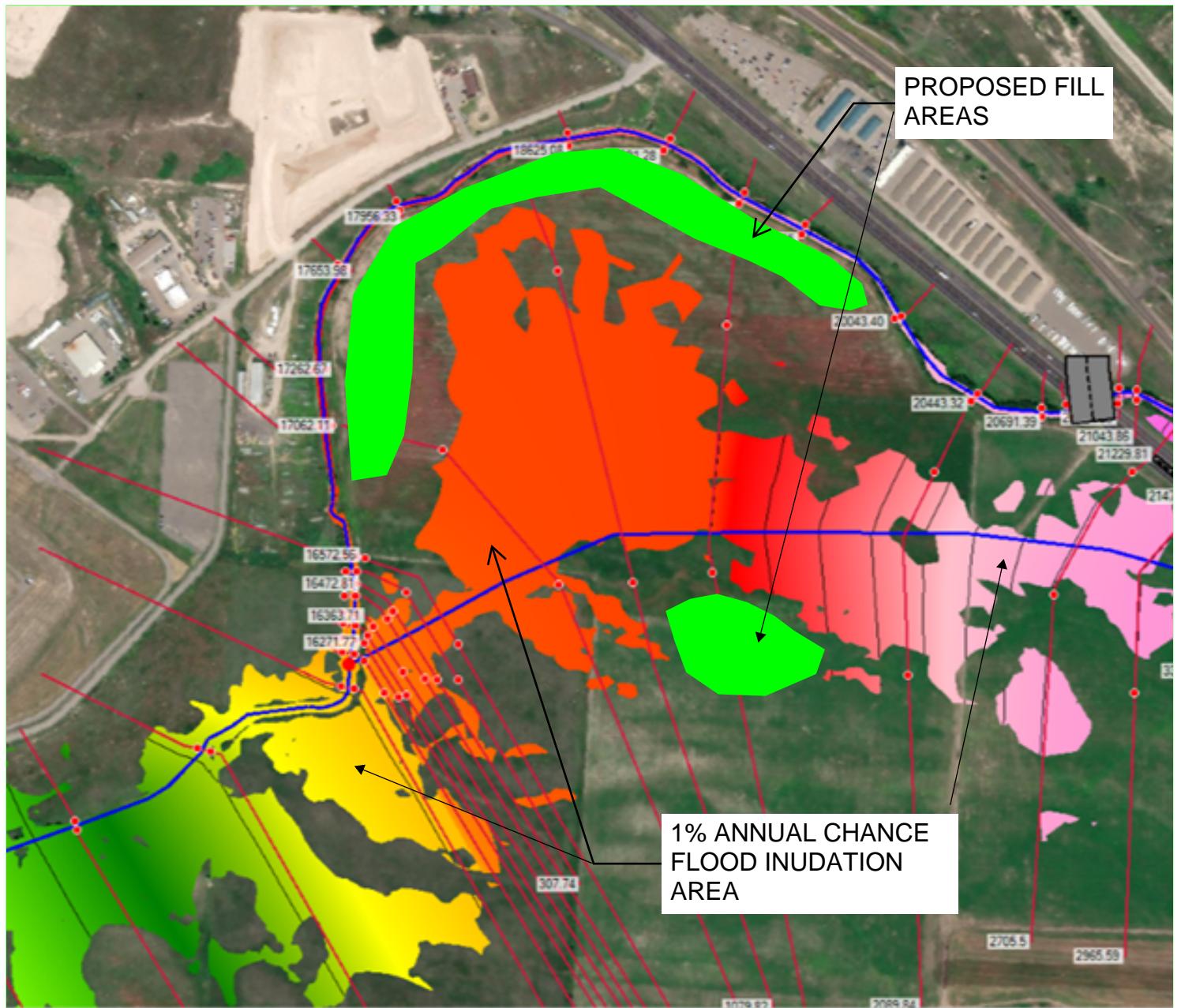


Figure 2 - Modeled 1% Annual Chance Flood Inundation, Existing Conditions