

# Grant Creek Re-Alignment - Scope of Work

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# **Scope of Work Description**

As part of the Preliminary Engineering Phase of the Mullan BUILD Project (Spring of 2020), DJ&A's BUILD Team completed 30% conceptual designs for the Grant Creek Re-alignment, George Elmer – North, George Elmer / Broadway Roundabout, and the Grant Creek Trail. In 2021, the City of Missoula successfully received an ARPA Grant to help fund the construction of the Grant Creek Alignment.

This Scope of Work (SOW) captures the anticipated work required to advance the Grant Creek Re-alignment and Grant Creek Trail work to construction. It is possible that the overall right-ofway negotiations because the landowner (Dougherty's) will include a solution that captures the needs of the entire network of infrastructure upgrades (both Creek and George Elmer - North). However, due to the constrained funding, all the design work associated with George Elmer design will be utilized.

This SOW will deliver:

- Project management, and stakeholder engagement.
- RFC/Bidding plan design progression for Grant Creek;
- RFC/Bidding design progression for the Grant Creek Trail; and
- Right-of-Way documentation services.

If desired or funding becomes available, this SOW can be expanded to further advance design of George Elmer and/or to provide construction administration services.

The work breakdown structure (WBS) consists of seven sections. DJ&A will provide the project management of the overall project, including work performed by our subconsultants. Major subconsultants on the project team include HDR. Big Sky PR and Tetra-Tech will be contracted for public involvement and geotechnical services if desired.

# **1.0 Project Management:**

# Task 1.1: Project Management & Contract Administration

**Description:** DJ&A will provide project management and contract administration to support the overall task of managing the project. This requires managing several subconsultants and the whole project team. This includes:

- Internal coordination
- Accounting and invoicing
- Contract management activities
- Project schedule management
- Monthly project reports

#### **Assumptions:**

None

#### **Deliverables:**

None

# 2.0 Project Development and Planning:

# Task 2.1: ARPA Support and Stakeholder Coordination

**Description:** DJ&A will provide support for efforts pertaining to the ARPA Grant process and also with project stakeholder engagement. It is difficult to predict the level of effort require for this task as it will largely be determined by how much effort is required to communicate and coordinate with project stakeholders.

#### Assumptions:

- The level of effort is defined by the number of hours shown in the fee estimate, additional hours can be added at the direction of the City.
- Includes half-hour weekly status meeting's (virtual) with DJ&A PM for up to 20 weeks as well as participation at monthly coordination meetings led by the Clark Fork Coalition.

#### **Deliverables:**

• Meeting minutes

# Task 2.2 and 2.3: 30% (Stage 2), 90% (Stage 3) Steering Committee Meetings and Comment Tracking

**Description:** DJ&A will attend steering committee meetings at the onset (30%) of the project design, as well as, at the 90% and 100% design progression stages. Following these steering committee meetings DJ&A will compile all comments received. DJ&A work to find resolution on each comment and track the entire process. Note that these steering committee meetings will include the following:

- 30% conceptual design review of already progressed work done during the spring of 2020 (Stage 2)
- 90% design review will focus on Grant Creek (Stage 3)
- 3 additional meetings not tied to a specific design review stage

#### Assumptions:

- The design workshops will be attended by City staff and key project stakeholders. It is not intended that this scope include facilitation of them in a public setting (public attending)
- Key project stakeholders will be identified at the onset of the project and are anticipated to include City of Missoula Public Works, City of Missoula Floodplain Administrator, Clark Fork Coalition, Trout Unlimited, Montana Fish Wildlife and Parks, Missoula County Conservation District, Missoula County Floodplain Administrator, and Missoula County Airport Authority.
- Assumed to be a total of 5 ea. Steering Committee Meetings



# **Deliverables:**

• Management of a comment tracking matrix on MS SharePoint

# 3.0 Roadway and Trail Design:

# Task 3.1: Grant Creek Trail 90% Design Progression

**Description:** DJ&A will provide engineering and design services for the Grant Creek Trail design to advance it from a 30% (Stage 2) design to a 90% design (Stage 3). This design stage review will include necessary information required for City of Missoula's Formal Stage 3 (Preliminary Construction Plan Review).

This also includes a 30% plan iteration intended to pick up the resolved 30% plan comments.

The 90% deliverable is intended to advance the following design items: typical section, quantity summaries, plan and profiles, hydraulic and drainage concepts, curb detail, landscaping details, permanent signing concepts, permanent pavement marking concepts, and cross-sections.

#### Assumptions:

- The engineering design work will largely utilize the already completed 30% design as the starting point including documented decisions made during the agency reviews.
- The Grant Creek Trail will be designed to City of Missoula Standards and also reference NACTO, Complete Streets, Bicycle Facilities Master Plan, and Pedestrian Facilities Master Plan.
- Trail typical section layouts will be based upon input from the Mullan Master Planning effort, traffic projections, and stakeholder discussions.
- Section depths will be based upon traffic projections and geotechnical investigation.
- Decisions made for the overall Mullan BUILD project will be utilized to further this design.
- The design basis report from the 30% phase will be utilized as a working document and modified accordingly to capture design decisions and intent.

#### **Deliverables:**

- Progress set 90% plans for Grant Creek Trail;
- Progress set 90% typical section details;
- Progress set City of Missoula standard drawing list;
- Progress set 90% Design Basis Report; and
- Preparation of draft design exceptions, if necessary

# Task 3.2: Grant Creek Trail RFC Design Progression

**Description:** DJ&A will provide engineering and design services for the Grant Creek Trail design to advance it from a 90% design to a RFC (100%) design. This design stage review will include necessary information required for City of Missoula's Stage 4 (Ready for Construction Stage).

The RFC deliverable is intended to advance the following design items: typical section, quantity summaries, plan and profiles, hydraulic and drainage concepts, and cross-sections.

# DJ &C

# Assumptions:

- The engineering design work will largely utilize the already completed 90% design as the starting point including documented decisions made during the agency reviews.
- The Grant Creek Trail will be designed to City of Missoula Standards and also reference NACTO, Complete Streets, Bicycle Facilities Master Plan, and Pedestrian Facilities Master Plan.
- Trail typical section layouts will be based upon input from the Mullan Master Planning effort, traffic projections, and stakeholder discussions.
- Section depths will be based upon traffic projections and geotechnical investigation.
- Decisions made for the overall Mullan BUILD project will be utilized to further this design.
- The design basis report from the 90% phase will be utilized as a working document and modified accordingly to capture design decisions and intent.

#### **Deliverables:**

- Progress set RFC plans for Grant Creek Trail;
- Progress set RFC typical section details;
- Progress set City of Missoula standard drawing list;
- Progress set RFC Design Basis Report
- Engineers cost estimate; and
- Preparation of draft design exceptions, if necessary

# Task 3.3: QAQC Review

**Description:** DJ&A will provide services for adherence to the project Quality Assurance and Quality Control Plan (QA/QC Plan).

#### Assumptions:

• All deliverables will be reviewed for adherence to the QA/QC Plan.

# **Deliverables:**

• QA/QC checklists and reviewer initials

# 4.0 Hydraulics and Grant Creek (HDR):

# Task 4.1: Project Management and Quality Assurance/Quality Control Services

#### **Description of Work:**

The scope, schedule, and budget will be monitored so that the project moves forward in a timely manner. Each deliverable will be reviewed to verify work products meet the standard of care.

#### <u>Sub Tasks:</u>

#### 4.1.01 - Project Management & Coordination of Work

This task includes project management services during the entire life of the project, including:

- Monthly Invoicing and Monthly Reports
- Project Delivery Administration: Budget & Schedule Controls
- Quality Assurance/Quality Control Services
  - Review of each deliverable according to HDR's quality management procedures.
  - o Quality Assurance/Quality Control is integrated into each deliverable's budget.

#### 4.1.02 – Kickoff Meetings

The goal of the meeting will be to verify project objectives, determine data available, establish lines of communication and participant roles, discuss potential stakeholders and discussion of project history. Primary project objectives include:

- Relocate stream and floodplain closer to natural valley low point.
- Improve movement of fluvial fishes (bull trout) upstream past project reach.
- Provide adequate holding water (pools) for fish security. It has been discussed that the project reach is migration only (no spawning or rearing).
- Minimize sediment impacts to channel morphology. Channel slope and entrenchment decreases within the project reach relative to upstream causing concern for sediment transport continuity.

#### Assumptions:

- Project management effort is a function of the project duration and is based on the schedule included with this scope of services. Notice to Proceed (NTP) is anticipated in April 2022, with the current scope assumed to be completed with submittal of the final design in June 2023. Additional project coordination or an extended project schedule may require a contract amendment.
- Kickoff meeting will be conducted via conference call.



#### **Deliverables:**

- Monthly invoice and project status updates.
- Kickoff Meeting summary memorandum.

# Task 4.2: Public Outreach

#### **Description of Work:**

The project to date has generated considerable interest from numerous stakeholders. This task involves gathering input from interested parties through a series of meetings along with team meetings to keep the City informed of project progress.

#### Sub Tasks:

- Project Meetings.

Stakeholder Meetings: HDR proposes four project stakeholder meetings in support of the project objectives and conceptual design of the Grant Creek Realignment project. Project stakeholders are anticipated to include (among others):

- City of Missoula Public Works
- City of Missoula Floodplain Administrator
- Clark Fork Coalition
- Trout Unlimited
- Montana Fish Wildlife and Parks
- Missoula County Conservation District
- Missoula County Floodplain Administrator
- Missoula County Airport Authority

Project stakeholders will play a critical role in the collaborative process by confirming project goals, design criteria, and evaluation and weighing the tradeoffs between alternatives.

Milestone Meetings: Two additional meetings will be held to present project findings and to gather input from project partners. These meetings will be held the onset of the project to review the existing 30% plans and at the completion of the 90% plan review. HDR will present project progress and project partners will provide comment and direction for next steps.

Quarterly Conference Calls: HDR will attend quarterly (four times per year) conference calls with the City and DJ&A throughout the project duration to discuss project status, communicate goals and decisions needed and other topics that arise through the course of the project.

#### Assumptions:

- DJ&A will lead public outreach meetings with HDR providing a support role.
- Meetings will take place via conference call.
- HDR project manager or project engineer will attend the stakeholder meetings in person and one additional team member via phone conference. Meetings are assumed to last 4 hours.
- HDR project manager or project engineer will attend the milestone meetings in person and up to two additional team members via phone conference. Meetings are assumed to last 3 hours.
- Quarterly conference calls will be held virtually and will last 1 hour.
- HDR will prepare meeting summaries for the stakeholder meetings and the milestone meetings.

#### **Deliverables:**

• Summary minutes for milestone meetings (PDF delivered via email).

# Task 4.3 – Geomorphology

#### **Description of Work:**

This task involves data gathering and assessment to determine a range of acceptable channel dimensions and evaluate the project site relative to the larger geomorphic setting of Grant Creek.

#### Sub Tasks:

#### 4.3.01 – Geomorphic Assessment.

The objective of this task is to determine geomorphic context and limitations for the project site that must be considered for project design features. To put the watershed into geomorphic context, HDR will document, summarize and synthesize existing information. This information includes, but is not limited to, geomorphology (e.g., reach types, land and channel stability, sediment availability, transport capacity), current and historical land use, past analyses (FEMA, highway alignment and/or surveys), and channel dimensions (plan, profile and cross section). Physical conditions to consider within the project reach include the floodplain width, sediment

types, fish passage, lateral and vertical stability and controls on such, land use, channel modifications, and other factors influencing the existing and proposed channels.

Casual observations indicate stream channel slope and confinement reduces considerably from upstream to downstream of the project reach resulting in the likelihood of discontinuity in sediment transport rates. Past reports have discussed the need for a sediment basin immediately downstream of the Broadway culverts. The need for this as a project component will be analyzed. Sediment basin maintenance and impacts on geomorphic characteristics and fish passage will be of primary concern.

As part of this task HDR will perform:

- Historical aerial photograph review and comparison
- Site visit to determine representative channel dimensions (width/depth ratios, bankfull width, etc.)
- Map lateral and vertical controls
- Evaluate and summarize channel reach characteristics
- Determine range of proposed geomorphic channel characteristics for proposed channel and floodplain
- Collection of geotechnical test pit data along the proposed channel route to document soil stratigraphy and gradation.

#### Assumptions:

- No additional topographic data collection will be needed.
- 3 test pits will be excavated along the proposed channel route with soil samples collected for gradation analysis.
- Site access for data collection will be obtained by the project partners (assumed to be the Clark Fork Coalition).
- A single project partner review and comment response cycle is anticipated for this deliverable.
- A project peer review will be funded separately by project partners during the 90% comment review period

#### **Deliverables:**

• Geomorphic Setting Technical Memorandum (Draft and Final, PDF via email).

# Task 4.4 – Environmental Compliance

#### **Description of Work:**

This task involves preparation of a NEPA/MEPA document to evaluate the environmental effects of the Grant Creek realignment, George Elmer – North, George Elmer / Broadway

Roundabout, and the Grant Creek Trail. These design elements were not included in the NEPA documentation of the Mullan BUILD project approved by the Federal Highway Administration. This task also involves preparation of a Biological Assessment (BA) to comply with Section 7 of the Endangered Species Act.

# Assumptions:

- It is assumed the USACE will be the lead federal agency for the project due to their jurisdiction of Grant Creek and as the agency that developed the original NEPA document for the restoration/flood control project.
- The level of effort for NEPA documentation is assumed to be brief memo or checklist format. Environmental studies completed for the Mullan BUILD project will be utilized to the extent possible. Field investigations will not be necessary. NEPA documentation requirements exceeding the level of effort identified in the budget will require a contract amendment.
- Grant Creek is designated as critical habitat for the federally listed bull trout. A BA will be required by the USACE to evaluate project effects on bull trout prior to issuing a Section 404 permit. The BA will utilize information contained within the Mullan BUILD BA to the extent possible. The BA will be suitable to allow for the USACE to consult with the U.S. Fish and Wildlife Service (USFWS).

# **Deliverables**

- Draft and Final Environmental Document (PDF)
- Draft and Final Biological Assessment (PDF)

# Task 4.5 - 90% Design (Stage 3)

# **Description of Work:**

HDR will prepare 90% design drawings based upon the 30% design completed under a previous project and data gathered during Tasks 2 and 3. The major elements of this task will include coordination with project partners, preparation of technical specifications, preparation of construction drawings to a 90% level of completion, preparation of an Engineer's Opinion of Probable Construction Cost (OPCC); and preparation of permitting support documentation. HDR will perform the following services as part of this task:

- Develop additional assumptions, hydraulic modeling, and design calculations necessary to bring the design to a 90% level of completion;
- Prepare construction drawings to a 90% level of completion which will include plans, profiles, elevations, sections, details, and notes necessary to construct the project;
- Develop technical specifications;



- Develop a Class II OPCC per the American Association of Cost Estimating (AACE) guidelines; and
- Prepare permit applications.

#### Sub Tasks:

4.5.01 – Develop Physical and Biological Design Criteria.

Salient background information collected during Task 3 and project stakeholder meetings will be reviewed and used to develop design criteria that influence type, size, configuration, and performance of potential project features. Information relating to the fisheries resources gathered during stakeholder meetings will be used to develop a biological basis of design. Known information relating to the project reach such as seasonal hydrology, and stream flow versus water stage relationships will be used to develop a physical basis of design. The resulting information and synthesis of available data will then be used to develop a list of design criteria that will be used to carry the existing 30% design to 90%.

#### 4.5.02-90% Design

HDR will prepare 90% design drawings based upon the 30% design completed under a previous task and will incorporate results from Task 2, Task 3, and Task 04.01. The major elements of this task will include coordination with project partners, preparation of technical specifications, preparation of construction drawings to a 90% level of completion, preparation of an Engineer's Opinion of Probable Construction Cost (OPCC); and preparation of permitting support documentation. HDR will perform the following services as part of this task:

- Develop additional assumptions, hydraulic modeling, and design calculations necessary to bring the stream design to a 90% level of completion;
- Develop assumptions, hydraulic modeling and design calculations necessary to bring stormwater design from the Broadway and Whippoorwill Drive intersection to Grant Creek to a 90% level of completion;
- Prepare construction drawings to a 90% level of completion which will include plans, profiles, elevations, sections, details, and notes necessary to construct the project;
- Develop technical specifications;
- Develop a Class II OPCC per the American Association of Cost Estimating (AACE) guidelines; and
- Prepare supporting documentation for permits including figures, tables, and narratives describing the areas of impact, cut and fill volumes, dewatering strategy, and construction methods. These documents will be updated per the 30% design submittal review comments.
- Prepare a Joint Permit application and supporting documentation for permits including figures, tables, and narratives describing the areas of impact, cut and fill volumes, dewatering strategy, and construction methods.
- Prepare a Conditional Letter of Map Revision (CLOMR) application.



#### **Assumptions**

- Hydrologic and hydraulic computations will be performed with the information available at the time of design to bring the overall design to a level of completion to 90%.
- Storm water outlet into Grant Creek channel from the direction of West Broadway and Whippoorwill Drive intersection will need to be routed to the new Grant Creek channel. Input from Stakeholders will be required to determine the preferred alternative. For budgetary purposes it is assumed that stormwater will be routed via culvert to Grant Creek floodplain.
- A "channel maintenance area" will be required to address reduced sediment transport immediately downstream of Broadway.
- For the purpose of developing a design budget HDR anticipates that the following design sheets will be required:
  - o Cover, Index, and Project Location
  - Standard Abbreviations and Symbology
  - o Project Plan, Survey Control, and Key Map
  - Partial Plan and Profile for Grant Creek (4 sheets)
  - o Stormwater Plan and Profile (2 sheets)
  - o Stormwater Details
  - Stream Channel Cross Sections
  - o Stream Channel Details
  - Revegetation Plan
  - o Civil and Structural Sections I
  - o Civil and Structural Sections II
  - o General Structural Details
  - o Construction Staging, Care of Water, and Staging Plan
- All construction drawings will be prepared on standard 11"x17" formatted sheets using HDR's CAD standards.
- All construction drawings will be prepared using AutoCAD and Civil3D software using version 2021 or later.
- NPDES NOIs or SWPPP, if required, are not included as part of this scope.
- Client will provide review comments within two weeks of receipt.
- Joint Permit application to be submitted to:
  - o Montana Fish Wildlife and Parks (SPA 124 permit)
  - o US Army Corps of Engineers (404 permit)
  - o Montana Department of Environmental Quality (401 certification)
  - Missoula County Floodplain Administrator
  - o City of Missoula Floodplain Administrator
- Permit application fees are not included.



- Compensatory mitigation requirements are currently unknown. The City will be responsible for costs associated with mitigation, if required. A debit/credit mitigation analysis may be required pending advancement of final design and further coordination with the USACE. These services can be added by contract amendment.
- City to submit CLOMR application to FEMA.
- CLOMR application fee not included in proposed budget.
- Level of effort to address FEMA comments on the CLOMR application are unknown. For budgetary purposes 20 hours of effort are included. Any additional required effort may require a budget amendment.

#### **Deliverables**

- Electronic copies of model files and calculations used to support design development;
- Electronic copies of CAD files;
- Electronic pdf files of the 90% construction drawings and specifications; and
- Electronic pdf file of Class II OPCC.
- Completed Joint Permit Application;
- CLOMR application package; and
- Draft Final Design Report.

# Task 4.6 - Final Design and Project Bidding

#### 4.6.01 - Final Design

HDR will prepare final construction documents and assist City of Missoula with the bidding process. HDR will perform the following services as part of this task:

- Prepare final sealed construction drawings and technical specifications;
- Prepare a final OPCC;
- Review and provide tracked changes mark-ups to Bid Announcement, Bidding Requirements, Bid Proposal forms, Schedule of Bid Items, State and Federal forms, Contract Forms, General Conditions; and General Requirements provided by City of Missoula utilizing Div. 0 of the MPWSS;
- Attend a pre-bid meeting at the project site and assist with describing the project details to potential bidders;
- Provide electronic responses to questions asked at the pre-bid meeting for distribution by City of Missoula;
- Respond to up to four (4) pre-bid related Requests for Information (RFIs) during the bid period;
- Assist City of Missoula with review and selection of bids received.

# **Assumptions**

- HDR will prepare pre-bid materials and The City of Missoula will perform all coordination of pre-bid meeting attendees,
- A two-hour pre-bid meeting will be attended by HDR's Project Manager or Project Engineer. Travel time and all travel expenses are included as part of the proposed cost for this task.
- For budgetary purposes, HDR anticipates that each RFI will require up to 1.5 hour for review and preparation of responses.
- Client will provide comments to deliverables within two weeks of receipt.

#### **Deliverables**

- Response to 90% Design comments.
- Electronic copies of sealed bid drawings;
- Electronic copies of final Engineer's OPCC;
- Tracked-changes version of bid documents;
- Attendance at pre-bid meeting and preparation of responses to questions received at pre-bid meeting;
- Electronic responses to RFIs
- Final Design Report

# 5.0 Bridges and Structures:

DJ&A will provide engineering services for developing construction documents for the proposed crossing of Grant Creek at George Elmer Drive. This crossing was analyzed during preliminary design and four options were submitted for evaluation by the City of Missoula. DJ&A will work in partnership with the City of Missoula and other stakeholders to assist in the selection of the preferred crossing alternative. The preferred alternative will then be advanced to final design and construction documents.

The proposed crossing at Grant Creek and George Elmer Drive has four preliminary design options. The preliminary design options are:

- Option 1: (2) Corrugated Steel Pipe Arch Culverts
- Option 2: (1) Corrugated Steel Structural Plate Single Radius Arch Culvert
- Option 3: (1) Corrugated Steel Structural Plate Single Radius Arch Culvert with Headwall
- Option 4: (1) Precast Concrete Open Bottom Culvert with Headwall

Anticipated tasks include project management and client coordination, assisting the City and stakeholders in selecting the preferred design alternative, design drawing preparation, structural analysis and calculations, specification preparation, cost estimating, and internal quality control reviews.

# Task 5.1: Single Concept Design Selection

#### Assumptions:

- Review preliminary design alternatives
- Prepare advantages/disadvantages list for each of the four culvert crossing options. Prepare a 1-page summary table with pros/cons and present to City in review meeting
- 2-hour Concept Review Meeting with City of Missoula and stakeholders
- Only one alternative will be selected as the preferred. This will be developed to final construction documents.

#### **Deliverables:**

• 1-page table comparing advantages/disadvantages for each culvert option

# 6.0 Right-of-Way:

# Task 6.1: Right-of-Way Design and Exhibits

#### **Description:**

- Perform site survey checks to ensure tie-ins are correct and accurate.
- Prepare Right-of-Way (R/W) exhibits in accordance with Missoula County and/or City Standards.
- Create bargain and sale deeds and associated exhibits.

#### Assumptions:

- There will be four parcels subject to R/W acquisition and/or construction permits.
- There will be four parcels subject to approach modifications with no need for R/W acquisition.
- There will be a maximum of 8 permanent easement exhibits and 8 temporary easement exhibits.
- This scope does also include any Temporary Construction Easements (TCE's) as identified with the 30% plan package. If additional TCE's are identified or requested by the CM, they can be added with an amendment.
- The City or County will perform all landowner outreach and negotiations

# **Deliverables:**

- Right-of-Way agreement and legal exhibit creation
- Permanent and Temporary Easement Exhibit creation

# 7.0 Deliverable Package:

# Task 7.1: 30% Plan Iteration and 90% Design Progression Package

**Description:** DJ&A will provide a 30% plan iteration that captures the initial resolved comments and a 90% plan, specifications and estimate package at the conclusion of the PE phase. This package will be one of the primary deliverables of the PE phase. This task includes the work to compile and submit for review. The following designs will be included in the 90% Package:

- Grant Creek Trail
- Grant Creek Design

# Assumptions:



• The actual content, organization, and details of this submittal will follow the organization of the 30% submittal package

#### **Deliverables:**

- Plan Package
- Specifications outline with draft special provisions
- Estimate
- Supporting documents and files as requested

#### Task 7.2: RFC Design Progression Package

**Description:** DJ&A will provide an RFC plan, specifications and estimate package including stamps at the conclusion of the PE phase. This package will be one of the primary deliverables of the PE phase. This task includes the work to compile and submit for review. The following designs will be included in the RFC Package:

- Grant Creek Trail
- Grant Creek Design

This task also includes support during bidding to include:.

- Prepare final sealed construction drawings and technical specifications;
- Prepare a final OPCC;
- Review and provide tracked changes mark-ups to Bid Announcement, Bidding Requirements, Bid Proposal forms, Schedule of Bid Items, State and Federal forms, Contract Forms, General Conditions; and General Requirements provided by City of Missoula;
- Attend a pre-bid meeting at the project site and assist with describing the project details to potential bidders;
- Provide electronic responses to questions asked at the pre-bid meeting for distribution by City of Missoula;
- Respond to up to four (4) pre-bid related Requests for Information (RFIs) during the bid period;
- Assist City of Missoula with review and selection of bids received.

#### Assumptions:

• The actual content, organization, and details of this submittal will follow the organization of the 100% submittal package.

#### **Deliverables:**

RFC Plan Package



- Specifications outline with special provisions
- Cost Estimate
- Bid tab
- Supporting documents and files as requested

# **Project Schedule**

The following milestones provide a general target for the enclosed scope and beyond. These dates are the goals that the initial schedule will be created around, however, significant adjustments are likely going to be necessary as work progresses. The official project preconstruction schedule will be maintained as part of this scope (task 1.1) and will be provided to the agency for a baseline review prior to official implementation.

- April 2022: Notice-to-Proceed and kickoff.
- July 2022: 30% steering committee review & stakeholder engagement.
- <u>August 2022</u>: 30% comment resolution and plan iteration.
- <u>September 2022</u>: begin formal Right-of-Way process.
- <u>February 2023</u>: 90% design progression submittal and steering committee review.
- September 2023: RFC design submittal.
- <u>October 2023</u>: Bid advertisement
- <u>Summer 2024</u>: Construction

Project: Contract Number:	Grant Creek and Re-Alignment Design - City of Missoula (REV 4) 7065.01		Prepared By: Donny Pfeifer Checked By: Paul Druyvestein															ite - EXHIBIT B 3.15.22			
					1				DJ	&A							BMD	HDR	BSPR	Kittleson	Tetra - Tech
	Labor Classifications		Principal Engineer	Project Manager	Senior Project Engineer - QA/QC	Design Engineer II	Project Engineer	Bridge Structural Engineer	Survey Project Manager	Chief Surveyor II, PLS	Survey CADD/Tech	Curvey Crew (2- Person)	Right-of-Way Manager	Accounting	Administrative Support	Marketing Coordinator	SUE II - Vac Contractor	HDR - See Attached Cost Summary	BSPR - See Attached Cost Summary	Kittleson - See Attached Cost Summary	TetraTech - See Attached Cost Summary
		Average Hourly Rate	\$55.25	\$50.00	\$47.00	\$30.00	\$40.25	\$40.50	\$38.50	\$32.00	\$28.75	\$52.00	\$51.00	\$36.40	\$26.00	\$40.00	See Attach	See Attach	See Attach	See Attach	See Attach
Task Order Kern	Task Description	Nataa		1	r	r	1		1								r	r		r	
1 ask Order Item	I ask Description	Notes													_						
1.0	Project Management and Contract Administration	(20 months * 2 hrs + startup)	5	50										20	10						
1.1			Ŭ	00										20	10						
2.0	Project Development and Planning																				
2.1	ARPA Support and Stakeholder Coordination	(20 * .5 hr + 20 * 1hr)	5	60		4	20														
2.2	30% Steering Committee Meetings and Comment Tracking (Stage 2)	2 hr wrkp + 4 prp + tracking		10		20	6														
2.3	90%Steering Committee Meetings and Comment Tracking (Stage 3)	2 hr wrkp + 4 prp + tracking		10		30	6														
3.0	Roadway and Trail Design																				
3.1	Grant Creek Trail 90% Design Progression (Stage 3)			10		40	20														
3.2	Grant Creek Trail RFC Design Progression (Stage 4)			10		20	10														
3.3	QAQC Review		2	8	8	8	4														
4.0	Hydraulics and Grant Creek - HDR																				
4.1	Project Management and QA/QC			-														\$16,300			
4.2	Public Outreach - HDR			-														\$15,837			
4.3	Geomorphology																	\$10,370			
4.4	Environmental Compliance																	\$16,415			
4.5	90% Design and Project Ridding			1														\$142,477			
4.0																		φ <b>20,00</b> 5			
5.0	Bridges and Structures																				
5.1	Single Concept Design Selection					6	6	5													
						-	-	-													
6.0	Right-of-Way																				
6.1	Document Design & Creation					20	4		30		70	5	4								
7.0	Deliverable Package																				
7.1	30% Plan Iteration and 90% Design Progression Package (Stage 3)			8		40	8	4													
7.2	RFC Design Progression Package & Bidding Support (Stage 4)			40		40	20	10													
1				1	1	1											1				

															BMC	HDR	BSPR	Kittleson	Tetra-Tech
Total Hours Per Personnel	12	206	8	228	104	19	30	0	70	5	4	20	10	0					
Total Labor Cost Per Personnel	\$663.00	\$10,300.00	\$376.00	\$6,840.00	\$4,186.00	\$769.50	\$1,155.00	\$0.00	\$2,012.50	\$260.00	\$204.00	\$728.00	\$260.00	\$0.00					
Subconsultant Fees (See attached for details)															\$0	\$228,084	\$0	\$0	\$0
																		·	·

 Rates shown above are for budgeting purposes only. Additional staff may be billed and at rates utilized at the time services are performed.
The Estimated schedule has an NTP in February 2022 with anticipated RFC package completion by September 2023. Duration of 20 months. Notes:



Total Hours Per Task	Total Cost Per Task
85	\$3,764,25
89	\$4,201.25
36	\$1,341.50
46	\$1,641.50
	40 505 00
/0	\$2,505.00
40	\$1,502.50
30	\$1,287.50
	<b>1</b> 00 / 00
17	\$624.00
133	\$4,392.50
60	\$2,084.00
110	\$4,410.00
716	\$27,754,00
/10	φ21,104.00

Total Direct Labor Hours	716
Total Direct Labor Cost	\$27,754
General Overhead (197.20%)	\$54,731
Direct Expenses	\$0
DJ&A Profit	\$9,898
Subtotal	\$92,383
Subconsultants - Total Cost	\$228,084
Subconsultant Fee (5%)	\$11,404
Total Fee Estimate	<u>\$331,871</u>

		1 - Project	Principal Engineer - Craig Caprara	2 - Project Manager General - Dan March	3 - Quality Control Reviewer - Dan Harmon	4 - Administrator - Chris Kelly	5 - Environmental Scientist 2 - Lisa Daneilski	6 - Biologist 2 - Jake Venard	7 - Engineer Water Resources Sr - Ben Fennelly	8 - Engineer Water Resources - Lief Sande	9 - Environmental Scientist 2 - Jon Schick	10 - Engineer Water Resources - Josh Robbins	11 - CADDTechnician General 1 - Joel Wright	12 - Admin Asst Word Processor - Devie Bessette	13 - Accountant - Paden Kaufman			HDR			Other Direct Cost	Total Budget	Task Fraction of Total
Task	Task Description	Status P	PJM32	PJM15	QCR10	ADM10	SEN20	SBI20	EWR30	EWR20	SEN20-1	EWR20- 1	CGE01	ADM02	ACT03	TOTAL HOURS	LABOR COSTS	% of Hrs to Escalate	% Esc.	LABOR INCL. ESCALATION	EXPENSES	TOTAL COST	
Task 1	Project Management and QA/QC						1		1	[	1												
01.01	Project Management & Coordination of Work .		4	48											30	82	\$ 12,685	67%	\$ 297.46	\$ 12,982	\$ 148	\$ 13,130	6%
01.02	Kickoff Meeting .			6	3					3		6				18	\$ 3,170	0%	\$-	\$ 3,170	\$-	\$ 3,170	1%
	Subtotal (excluding optional)		4	54	3	0	0	0	0	3	0	6	0	0	30	100	\$ 15,855		\$ 297	\$ 16,153	\$ 148	\$ 16,300	7%
Task 2	Public Outreach																						
02.01	Project Meetings			40			8	8				28		4		88	\$ 14,781	33%	\$ 170.73	\$ 14,952	\$ 885	\$ 15,837	7%
	Subtotal (excluding optional)		0	40	0	0	8	8	0	0	0	28	0	4	0	88	\$ 14,781		\$ 171	\$ 14,952	\$ 885	\$ 15,837	7%
									-								. ,.		·	• • • •		,	170
Task 3	Geomorphology																						
03.01	Geomorphic Assessment .			32					2			24		2		60	\$ 9,732	100%	\$ 340.63	\$ 10,073	\$ 298	\$ 10,370 ¢	5%
	Subtotal (excluding optional)		0	32	0	0	0	0	2	0	0	24	0	2	0	60	\$ 9,732	100%	<u>⊸</u> - \$ 341	\$ 10,073	\$ 298	\$	5%
							і. Г		1											-			0,0
Task 4	Environmental Compliance										100					400	45.570	1000/	<u> </u>	<b>A</b> 10.11E		<b>A 10.115</b>	70/
04.01	Environmental Compliance .			6							100					106	\$ 15,570	100%	\$ 544.95	\$ 16,115	\$ 300	\$ 16,415	/%
	Subtotal (excluding optional)		0	6	0	0	0	0	0	0	100	0	0	0	0	106	\$ 15,570		\$ 545	\$ 16,115	\$ 300	\$ 16,415	7%
Task 5	90% Design (Stage 3)						1		1	[													
05.01	Develop Physical and Biological Design Criteria			4				16				8				28	\$ 5,218	100%	\$ 182.61	\$ 5,400	\$ 600	\$ 6,000	3%
05.02	90% Design			140	4		56	4	28	80	40	280	288	12		932	\$ 131,862	100%	\$ 4,615.17	\$ 136,477	\$-	\$ 136,477	60%
	Subtotal (excluding optional)		0	144	4	0	56	20	28	80	40	288	288	12	0	960	\$ 137,080		\$ 4,798	\$ 141,877	\$ 600	\$ 142,477	62%
Task 6	Final Design and Project Bidding (Stage 4)																						
06.01	Final Design			40		8	8		2	16	16	40	30	24		184	\$ 25,493	100%	\$ 892.24	\$ 26,385	\$ 300	\$ 26,685	12%
	Subtotal (excluding optional)		0	40	0	8	8	0	2	16	16	40	30	24	0	184	\$ 25,493		\$ 892	\$ 26,385	\$ 300	\$ 26,685	12%
Tack 7	Construction Oversight (Euture Task)			I					1		1										·		
07.01	Construction Oversight															No Hours			\$ -	\$ -	\$ -	\$ -	0%
01.01	Subtotal (oveluding optional)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	e		¢ -	¢ -	¢ -	¢ .	078
			0	0	U	U							U	U	U	U	÷ -		φ -	φ -	Ψ -	φ -	0%
				040	_						450		040	10		1400				A 005	A 0.555		
			4	316	7	8	72	28	32	99	156	386	318	42	30	1498	\$ 218,511		\$ 7,044	\$ 225,555	\$ 2,530	\$ 228,085	